IBRO 2019

The 10th IBRO World Congress of Neuroscience

Joint Meeting of
International Brain Research Organization &
Federation of Asian-Oceanian Neuroscience Societies

SEPTEMBER 21 - 25 | DAEGU, KOREA

Program Book

INTERNATIONAL BRAIN IBRO RESEARCH ORGANIZATION
Federation of Asian-Oceanian Neuroscience Societies
KBRI Korea Brain Research Institute
The Korean Society for Brain and Neural Sciences
Ministry of Science and ICT
DAEGU METROPOLITAN CITY
KOREA TOURISM ORGANIZATION
dcvb DAEGU Convention & Visitors Bureau

IBRO 2019

The 10th IBRO World Congress of Neuroscience

Joint Meeting of
International Brain Research Organization &
Federation of Asian-Oceanian Neuroscience Societies

SEPTEMBER 21 - 25 | DAEGU, KOREA

Program Book

Program at a Glance

Day 1 ··· Sat. (Sept. 21)

Time	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)
07:30-08:30	Registration				
08:30-09:20	Registration				
09:20-09:30	Registration				
09:30-10:00	Registration				
10:00-11:30	International Brain Initiative Session (Room 325, 3F)				
11:30-11:40	International Brain Initiative Session (Room 325, 3F)				
11:40-12:00	International Brain Initiative Session (Room 325, 3F)				
12:00-12:30	Presidential Highlighted Session: The Global Gender Equality Imperative in STEM Education (Room 324, 3F)				Luncheon Seminar
12:30-12:40	Presidential Highlighted Session: The Global Gender Equality Imperative in STEM Education (Room 324, 3F)				Luncheon Seminar
12:40-13:30	Presidential Highlighted Session: The Global Gender Equality Imperative in STEM Education (Room 324, 3F)				Luncheon Seminar
13:30-14:20	**Invited Lecture** **Presidential Lecture** Stanislas Dehaene (Convention Hall, 5F)				
14:20-14:50	Opening Ceremony (Convention Hall, 5F)				
14:50-15:20	Opening Ceremony (Convention Hall, 5F)				
15:20-15:50	International Brain Bee Awards (Convention Hall, 5F)				
15:50-16:00	Break				
16:00-17:00	Parallel Symposia (1)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	New technology-Neurotool	Cognition and behavior
17:00-17:50	Parallel Symposia (1)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	New technology-Neurotool	Cognition and behavior
17:50-18:00	Parallel Symposia (1)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	New technology-Neurotool	Cognition and behavior
18:00-19:00					
19:00-20:00					
20:00-21:00					

Day 2 ··· Sun. (Sept. 22)

Time	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30-08:30	Registration					
08:30-09:20	**Invited Lecture** **Keynote Speaker** Peter Mombaerts (Convention Hall, 5F)					Exhibition / Poster
09:20-09:30	Break					Exhibition / Poster
09:30-10:00	Parallel Symposia (2)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
10:00-11:30	Parallel Symposia (2)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
11:30-11:40	Break					Exhibition / Poster
11:40-12:00	**Invited Lecture** **Keynote Speaker** Joseph Takahashi (Convention Hall, 5F)					Exhibition / Poster
12:00-12:30	**Invited Lecture** **Keynote Speaker** Joseph Takahashi (Convention Hall, 5F)					Exhibition / Poster
12:30-12:40	Break					Exhibition / Poster
12:40-13:30	Luncheon Seminar, Poster Session (1)					Exhibition / Poster
13:30-14:20	Luncheon Seminar, Poster Session (1)					Exhibition / Poster
14:20-14:50	Luncheon Seminar, Poster Session (1)					Exhibition / Poster
14:50-15:20	Break					Exhibition / Poster
15:20-15:50	Parallel Symposia (3)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
15:50-16:00	Parallel Symposia (3)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
16:00-17:00	Parallel Symposia (3)	Disorders of the nervous system	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
17:00-17:50	Break					Exhibition / Poster
17:50-18:00	**Invited Lecture** **Torsten Wiesel Lecture** Hee-Sup Shin (Convention Hall, 5F)					Exhibition / Poster
18:00-19:00	Banquet (Hotel Inter-Burgo EXCO)					
19:00-20:00	Banquet (Hotel Inter-Burgo EXCO)					
20:00-21:00	Banquet (Hotel Inter-Burgo EXCO)					

Day 3 ··· Mon. (Sept. 23)

Time	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30-08:30	Registration					
08:30-09:20	**Invited Lecture** **Keynote Speaker** Jerold Chun (Convention Hall, 5F)					Exhibition / Poster
09:20-09:30	Break					Exhibition / Poster
09:30-10:00	Parallel Symposia (4)	Disorders of the nervous system	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: neuronal excitability and synapse function	Cognition and behavior
10:00-11:30	Parallel Symposia (4)	Disorders of the nervous system	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: neuronal excitability and synapse function	Cognition and behavior
11:30-11:40	Break					Exhibition / Poster
11:40-12:00	**Invited Lecture** **IBRO-Kavli Lecture** Steven E. Hyman (Convention Hall, 5F)					Exhibition / Poster
12:00-12:30	**Invited Lecture** **IBRO-Kavli Lecture** Steven E. Hyman (Convention Hall, 5F)					Exhibition / Poster
12:30-12:40	Break					Exhibition / Poster
12:40-13:30	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
13:30-14:20	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
14:20-14:50	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
14:50-15:20	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
15:20-15:50	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
15:50-16:00	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
16:00-17:00	Luncheon Seminar, Poster Session (2)					Exhibition / Poster
17:00-17:50	Social Tour					Exhibition / Poster
17:50-18:00	Social Tour					Exhibition / Poster
18:00-19:00	Social Tour					Exhibition / Poster
19:00-20:00	Social Tour					Exhibition / Poster
20:00-21:00	Social Tour					Exhibition / Poster

Presidential Highlighted Session: High Level Dialogue on Neuroscience and the Future of Education & Learning
IBE-UNESCO Reception
(Hotel Inter-Burgo Daegu)

Day 4 ··· Tue. (Sept. 24)

Time	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30-08:30	Registration					
08:30-09:20	**Invited Lecture** **Keynote Speaker** Hailan Hu (Convention Hall, 5F)					Exhibition / Poster
09:20-09:30	Break					Exhibition / Poster
09:30-10:00	Parallel Symposia (5)	Disorders of the nervous system	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
10:00-11:30	Parallel Symposia (5)	Disorders of the nervous system	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior
11:30-11:40	Break					Exhibition / Poster
11:40-12:00	**Invited Lecture** **Dana Neuroethics Lecture** Judy Illes (Convention Hall, 5F)					Exhibition / Poster
12:00-12:30	**Invited Lecture** **Dana Neuroethics Lecture** Judy Illes (Convention Hall, 5F)					Exhibition / Poster
12:30-12:40	Break					Exhibition / Poster
12:40-13:30	Luncheon Seminar, Poster Session (3)					Exhibition / Poster
13:30-14:20	Luncheon Seminar, Poster Session (3)					Exhibition / Poster
14:20-14:50	Luncheon Seminar, Poster Session (3)					Exhibition / Poster
14:50-15:20	Break					Exhibition / Poster
15:20-15:50	Parallel Symposia (6)	Disorders of the nervous system	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems/ network functions, computational neuroscience	Cognition and behavior
15:50-16:00	Parallel Symposia (6)	Disorders of the nervous system	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems/ network functions, computational neuroscience	Cognition and behavior
16:00-17:00	Parallel Symposia (6)	Disorders of the nervous system	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems/ network functions, computational neuroscience	Cognition and behavior
17:00-17:50	Break					Exhibition / Poster
17:50-18:00	**Invited Lecture** **Keynote Speaker** Masanobu Kano (Convention Hall, 5F)					Exhibition / Poster
18:00-19:00	Chairpersons' Dinner By invitation only (Hotel Inter-Burgo EXCO)					
19:00-20:00	Chairpersons' Dinner By invitation only (Hotel Inter-Burgo EXCO)				KAOS-KBRI Brain Show (Hotel Inter-Burgo EXCO, Iris Hall, B1)	
20:00-21:00	Chairpersons' Dinner By invitation only (Hotel Inter-Burgo EXCO)				KAOS-KBRI Brain Show (Hotel Inter-Burgo EXCO, Iris Hall, B1)	

Day 5 ··· Wed. (Sept. 25)

Time	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30-08:30	Registration					
08:30-09:20	**Invited Lecture** **Keynote Speaker** Yukiko Gotoh (Convention Hall, 5F)					Exhibition / Poster
09:20-09:30	Break					Exhibition / Poster
09:30-10:00	Parallel Symposia (7)	New technology-Neurotool	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems/ network functions, computational neuroscience	Cognition and behavior
10:00-11:30	Parallel Symposia (7)	New technology-Neurotool	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems/ network functions, computational neuroscience	Cognition and behavior
11:30-11:40	Break					Exhibition / Poster
11:40-12:00	**Invited Lecture** **Plenary Lecture** Erwin Neher (Convention Hall, 5F)					Exhibition / Poster
12:00-12:30	**Invited Lecture** **Plenary Lecture** Erwin Neher (Convention Hall, 5F)					Exhibition / Poster
12:30-12:40	Break					Exhibition / Poster
12:40-13:30	Luncheon Seminar, Poster Session (4)					Exhibition / Poster
13:30-14:20	Luncheon Seminar, Poster Session (4)					Exhibition / Poster
14:20-14:50	Luncheon Seminar, Poster Session (4)					Exhibition / Poster
14:50-15:20	Break					Exhibition / Poster
15:20-15:50	Parallel Symposia (8)	New technology-Neurotool	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: systems/ network functions, computational neuroscience	Development
15:50-16:00	Parallel Symposia (8)	New technology-Neurotool	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: systems/ network functions, computational neuroscience	Development
16:00-17:00	Parallel Symposia (8)	New technology-Neurotool	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: systems/ network functions, computational neuroscience	Development
17:00-17:50	Break					Exhibition / Poster
17:50-18:00	Closing Ceremony (Convention Hall, 5F)					Exhibition / Poster
18:00-19:00	Closing Ceremony (Convention Hall, 5F)					Exhibition / Poster
19:00-20:00	Closing Ceremony (Convention Hall, 5F)					Exhibition / Poster
20:00-21:00	Closing Ceremony (Convention Hall, 5F)					Exhibition / Poster

Contents

IBRO 2019
The 10th IBRO World Congress of Neuroscience

Welcome Messages

Greetings,

We are privileged and honored to welcome you to the 10th World Congress of Neuroscience (International Brain Research Organization; IBRO 2019) between 21st – 25th of September, 2019 at EXCO Convention Center, Daegu, Korea. Having been held every four years since 1982, the IBRO World Congress is now one of the most prestigious international scientific meetings. The 10th Congress will be organized in collaboration with Federation of Asian-Oceanian Neuroscience Societies (FAONS), and we are expecting over 3500 participants from around the world to attend. It will be a fascinating opportunity for participants to share the latest information and knowledge in the diverse areas of the brain research and neuroscience.

IBRO and FAONS aim to promote neuroscience research and communication among researchers around the world. One of its foremost emphases is on supporting education of young investigators in developing countries. We plan to meet the aims and standards of IBRO and FAONS with an excellent scientific and educational programs. Plenary and keynote lectures including the Nobel lecture by Professor Erwin Neher and 40 symposia with nearly two hundred experts in various fields of neuroscience will be the centerpiece of the whole conference. In addition, we will have over 1500 poster presentations, 18 luncheon seminars and gatherings for special topics to bring rich contents for all participants from academia, industry and governments.

We invite you to enjoy and take advantage of this unique event to promote your science and other interests as much as possible. Our organizers will make every effort to deliver excellent scientific programs and diverse viewpoints unparalleled among neuroscience meetings. On behalf of the Local Organizing Committee, we thank IBRO, FAONS, Ministry of Science and ICT, city of Daegu, and all sponsors and exhibitors for their contribution to IBRO 2019.

And once again, welcome.

Pann-Ghill Suh

Co-chair of Local Organizing Committee, IBRO 2019

President, Korea Brain Research Institute

Sung-Oh Huh

Co-chair of Local Organizing Committee, IBRO 2019

President, 2019 Korean Society for Brain and Neural Sciences

As President of IBRO, it is a great pleasure for me to welcome the global neuroscience community to the 10th IBRO World Congress taking place this year in Daegu, South Korea. We are expecting it to be an exceptional event that will bring together the best of neuroscience from around the world, all supported by our outstanding co-hosts, the Korea Brain Research Institute (KBRI) and The Korean Society for Brain and Neural Sciences (KSBNS).

Especially noteworthy this year will be our featured speakers including Stanislas Dehaene (France), Erwin Neher (Germany), Judy Illes (Canada) and Hee-Sup Shin (South Korea), as well as our keynote speakers Joseph Takahashi (USA), Jerold Chun (USA), Hailan Hu (China), Yukiko Gotoh (Japan), Masnobu Kano (Japan) and Peter Mombaerts (Germany). Additionally, there will be 38 scientific symposia showcasing cutting-edge research in cognition and behavior, development, disorders of the nervous system, glia and glia-neuron interactions, neurotools, physiology, sensory and motor systems, and homeostatic and neuroendocrine systems.

We are also very excited to highlight the achievements of young researchers, engagement and outreach efforts, increasing diversity in neuroscience, neuroethics, global coordination of big brain projects and education, learning and the brain. These concerns will be addressed through events organised by Young IBRO, the Alba Network, WISET Center for Women in Science, Engineering and Technology, UNESCO's International Bureau of Education, the International Brain Bee, the International Brain Initiative and the Global Neuroethics Summit. It is my hope, with our collective energy and expertise, that we will find ways to effect positive change together.

Since our first congress more than three decades ago in 1982, the field of neuroscience has made immense progress and has extended its reach across an astounding range of disciplines, national borders and policy landscapes. In fact, it is now a truly global, multidisciplinary research enterprise armed with powerful new tools and technologies that can improve the understanding of ourselves, our world and our wellbeing like never before.

I am looking forward to seeing you all in Daegu and celebrating this momentous period of knowledge and discovery in neuroscience.

Pierre Magistretti

President, IBRO

Organizations

Co-organized by

International Brain Research Organization

IBRO is the global federation of neuroscience organizations that aims to promote and support neuroscience around the world through training, teaching, collaborative research, advocacy and outreach. More than 90 international, national, and regional scientific organizations constitute IBRO's Governing Council which, together with the five IBRO Regional Committees, address the needs and advance the work of individual scientists and research communities. In addition, IBRO has partnerships with like-minded scientific societies and organizations to identify priorities and help bridge gaps in knowledge, investment, and resources in the field of brain research.

Website | https://ibro.org

Federation of Asian-Oceanian Neuroscience Societies

The purpose of the Federation is to promote the advancement of neuroscience research and education in the Asian Oceanian regions, which include Asian countries, Australia, New Zealand and Islands in the Pacific and Indian Oceans. The Federation shall aim also at contributing to the advancement of neuroscience worldwide. The FAONS Congress and FAONS Symposium are typically organized on an alternating 2 year cycle by representatives from a Neuroscience Society that is a member of FAONS. The position of FAONS President on the FAONS Council is assumed by the President of the Neuroscience Society that is hosting either the Congress or the Symposium.

Website | www.faons.org

Co-hosted by

Korea Brain Research Institute

KBRI is the national brain research institute in Korea, aiming to become the world's leading brain research organization. KBRI covers all fields of neuroscience, from basic brain science to brain engineering. KBRI is striving to launch 'Korea Brain Initiative,' a bold and ambitious national flagship project to facilitate the development of novel neurotechnologies and explore unknown frontiers of the brain.

Website | www.kbri.re.kr

Korean Society for Brain and Neural Sciences

The KSBNS pursues the development of research, exchanges, publication activities and networking among society members. KSBNS organizes annual meetings for neuroscientists, the largest of the kind in Korea, and publishes an SCIE journal, Experimental Neurobiology. KSBNS covers broad areas of neuroscience research from cellular to systems and cognitive neurosciences.

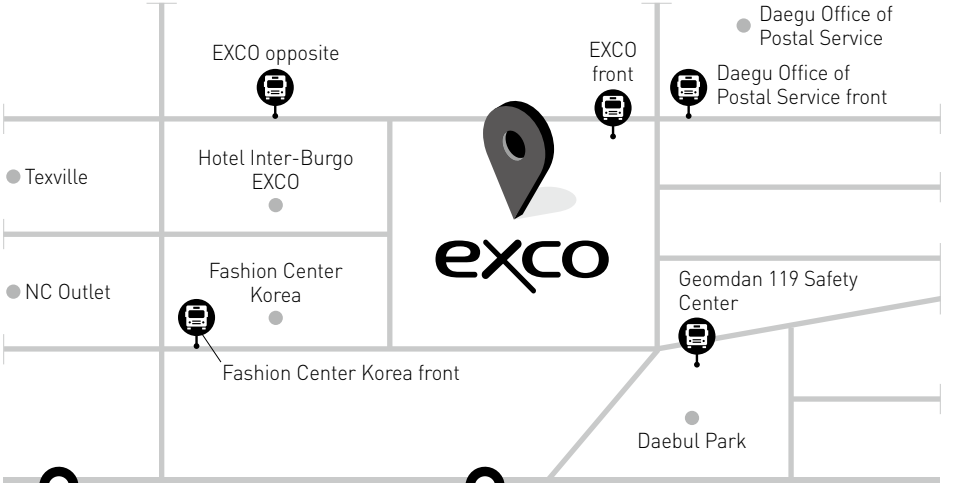
Website | www.ksbns.org

Local Organizing Committee

Chairs	Pann-Ghill Suh	Korea Brain Research Institute
	Sung-Oh Huh	Hallym University
Secretary General	Jaesang Kim	Ewha Womans University
IBRO 2019 Sacretariat	Sung-Jin Jeong	Korea Brain Research Institute
	Hee-Jun Cho	Daegu Metropolitan City
	Hae-Ryung Jung	Korea Brain Research Institute
	Sumi Lee	Korea Brain Research Institute
Treasurer	Cheil Moon	Daegu Gyeongbuk Institute of Science & Technology
Planning Committee	Young Jun Oh	Yeonsei University
	Woong Sun	Korea University
	Il-Ju Cho	Korea Institute of Science and Technology
	Ji-Yeon Lee	Seoul National University
	Sun-Wook Hwang	Korea University
	Seong-Woon Yu	Daegu Gyeongbuk Institute of Science & Technology
Academic Programs Committee	Bong-Kiun Kaang	Seoul National University
	Se-Young Choi	Seoul National University
	Eun-Mi Hur	Seoul National University
	Jaewon Ko	Daegu Gyeongbuk Institute of Science & Technology
International Affairs Committee	Uhtaek Oh	Korea Institute of Science and Technology
	Inah Lee	Seoul National University
	Seung-Hee Lee	Korea Advanced Institute of Science and Technology
	Nak-Won Choi	Korea Institute of Science and Technology
Event Managing Committee	Kyu-Chang Wang	Seoul National University
	Mi-Ryoung Song	Gwangju Institute of Science and Technology
	Gi-Hoon Son	Korea University
Public Relations Committee	Hyewhon Rhim	Korea Institute of Science and Technology
	Chan Young Shin	Konkuk University
	Hyo Jung Kang	Chung-Ang University
	Sung Hoon Lee	Chung-Ang University

General Information

INTERNATIONAL
BRAIN RESEARCH
ORGANIZATION



From **Dongdaegu Station**

- **Distance** | 4.67km
- **Time** | About 15 minutes
- **Cost** | About KRW 6,300~7,000 by taxi

From **Daegu International Airport**

- **Distance** | 3.96km
- **Time** | About 10 minutes
- **Cost** | About KRW 4,600~5,000 by taxi

Venue

EXCO Convention Center, the official congress venue for IBRO 2019 has been launched as the first regional exhibition and convention center in April 2001 and hosted various exhibitions and convention events.

Address

90, Yutongdanji-ro, Buk-gu, Daegu 41515, Korea

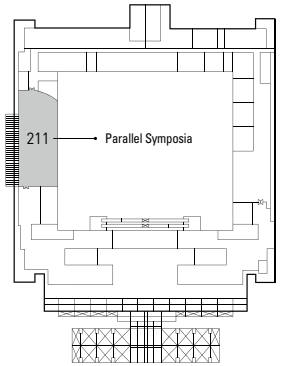
Tel

+82-53-601-5037, 5071

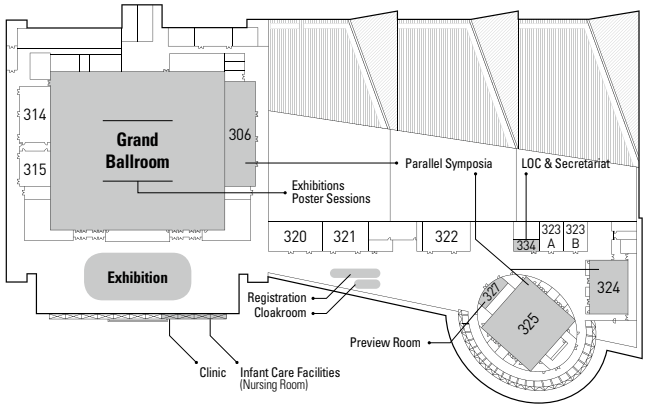
Website

www.exco.co.kr

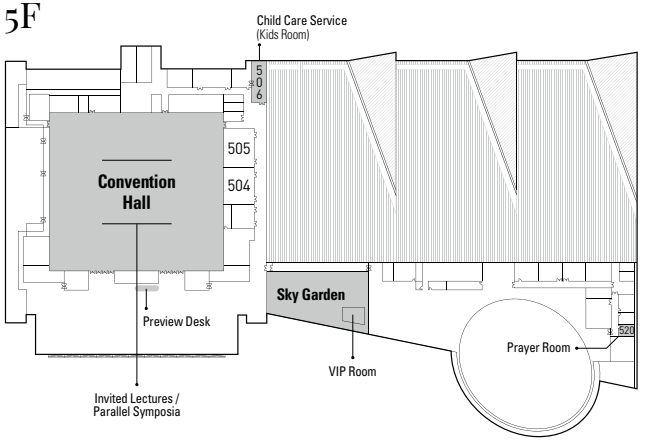
2F



3F



5F



2F	
211	Parallel Symposia

5F	
Convention Hall	Invited Lectures / Parallel Symposia
506	Child Care Service (Kids Room)
520	Prayer Room

3F	
306, 324, 325	Parallel Symposia
Grand Ballroom	Exhibitions & Poster Sessions
327	Preview Room
334	LOC & Secretariat
Lobby	Exhibition Registration Cloakroom Clinic Infant Care Facilities (Nursing Room)

Congress Information

Registration

Before attending the sessions, participants have to register in person at the Registration Desk (in the lobby, 3F) and to collect their Congress bag and name badge. The badge needs to be worn while attending in order to be admitted to all the sessions and social events.

Registration desk

- Location | Lobby, 3F, EXCO
- Operating hours

DAY 1 Sat. (Sept. 21)	DAY 2 Sun. (Sept. 22)	DAY 3 Mon. (Sept. 23)	DAY 4 Tue. (Sept. 24)	DAY 5 Wed (Sept. 25)
07:30 - 17:00	07:30 - 17:00	07:30 - 13:00	07:30 - 17:00	07:30 - 15:00

* Opening time can be changed.

Exhibitions

Exhibitor badges will be distributed at the registration desk as well and each exhibitor must wear it during the exhibition.

- Location | Grand Ballroom, 3F, EXCO
- Operating hours

DAY 1 Sat. (Sept. 21)	DAY 2 Sun. (Sept. 22)	DAY 3 Mon. (Sept. 23)	DAY 4 Tue. (Sept. 24)	DAY 5 Wed (Sept. 25)
Set-Up	08:30-18:00	08:30-18:00	08:30-18:00	08:30-17:00

Social Program

Banquet

- Date & Time | Sun. (Sept. 22), 18:30 - 20:30
- Venue | Hotel Inter-Burgo EXCO, Grand Ballroom A+B, B1
- Attendees | Only to those who purchased the entrance ticket during on-line registration can be admitted.

Chairpersons' Dinner

- Date & Time | Tue. (Sept. 24). 18:00 - 20:00
- Venue | Hotel Inter-Burgo EXCO, Grand Ballroom B, B1
- Attendees | By invitation only

Wireless Lan

You can access the Wireless Internet within Exco Convention Center.

Audio, Photo, Video And Mobile Phone Policy

Audio, photo and video recording by various devices (including cameras, laptops, PDAs, mobile phones, watches and tablet PCs) are strictly prohibited during all oral sessions, unless prior permission is obtained from the Congress organizer. Mobile phones must also be switched off or set to silent mode while attending sessions. Recording and photography in the poster areas are also strictly prohibited.

Useful Information

Daegu

Daegu Metropolitan City is located in the middle of South Korea. With the fine transportation network linked in all directions, it is a point leading to numerous cultural heritages and tourist attractions to well display Korean culture. So, it has been the center of history, administration, education, and culture of Korea.

Cloakroom

- Limited space will be available and on a first-come, first-served basis at the convention center.
- Deposited items must be retrieved before the closing hour. Non-compliance may result in loss of the item.
- Valuables, fragile items, etc. will not be accepted.
- Items will be released to any person presenting the storage tag.
- Congress organizers are not responsible for lost or misplaced items and claimed lost/found items will only be released with the proof of identification/confirmation of ownership.

Cloakroom opening hours and location

DATE	HOURS	LOCATION
Sat. (Sept. 21)	07:30 - 18:30	Registration Desk, 3F, EXCO
Sun. (Sept. 22)	07:30 - 18:30	
Mon. (Sept. 23)	07:30 - 15:00	
Tue. (Sept. 24)	07:30 - 18:30	
Wed. (Sept. 25)	07:30 - 18:30	

Infant Care Facilities

An infant care room with privacy for parents and guardians caring for their infants is available at the EXCO Convention Center.
The room is equipped with a sofa and a private area for diaper change or nursing, as well as an outlet for electricity and a water dispenser.
Parents and guardians are responsible for their infant care supplies. The infant caring room is also unsupervised. IBRO2019 is not responsible for accidents or injuries that may occur in this area.

- Location | 3rd floor lobby, EXCO

Useful Information

Child Care Service

On-site child care service is provided through IBRO 2019. This will provide attendees with children additional flexibility in their schedules and having a reliable, affordable, and dependable option for the accompanying child. For the service, all guidelines and policies will be provided at the time of the check-in.

- Location | Room 506, 5th floor, EXCO
- Age | From 4 to 10 years old
- Fee | Payment must be settled at the entrance of the room.
  Half day (AM or PM) : 50 USD
  1 hour : 20 USD
- Opening Hours

CHILD CARE SERVICE	OPEN	CLOSE	LUNCH TIME (CLOSED)
Sat. (Sept. 21)	10:00	18:00	12:00 - 13:30
Sun. (Sept. 22)	08:30	18:00	12:30 - 14:40
Mon. (Sept. 23)	08:30	12:30	
Tue. (Sept. 24)	08:30	18:00	12:30 - 14:40
Wed. (Sept. 25)	08:30	18:00	12:30 - 14:40

EBS Little Socium (Job Experience Program)

The EBS Little Socium is a job experience theme park where children can experience their future dream jobs in realistic environments.
There are four zones (moral, auto, creaty, and symbi) with a total of 60 type of jobs represented.
As IBRO2019 attendees, you can download and print the provided coupon for a special discount on the entrance fee.

* Special discount coupon can be found at IBRO 2019 official website.

All policies and fees are established by the EBS Little Socium, and all questions should be addressed to their staffs.

- Location | B1 Floor, EXCO
- Operating Hours | Full day : 10:00-18:30
  Half day (1) : 10:00-14:00
  Half day (2) : 14:30-18:30
- Age | 3 - 13-year-old
- Fees/Payment | Payment must be made on-site and directly to the EBS Little Socium.
- Special Remarks | All programs are conducted in Korean language.

Accommodation

Hotel Inter-Burgo EXCO (Headquarter hotel)

- Address | B2 611, Gukchaebosang-ro, Jung-gu, Daegu
- Tel | +82-53-380-0114
- Distance from the venue | 395m (2 min. on foot)

Novotel Ambassador Daegu

- Address | 1674, Sangyeok 2-Dong, Buk-gu, Daegu
- Tel | +82-53-664-1101
- Distance from the venue | 5.5km (20 min. by car)

Union Tourist Hotel Daegu

- Address | 17 Taepyeong-ro, Taepyeongno 2-ga, Jung-gu, Daegu
- Tel | +82-53-252-2221
- Distance from the venue | 5.8km (17 min. by car)

Toyoko INN Daegu Dongseong-ro

- Address | 15, Dongseong-ro 1-gil, Jung-gu, Daegu
- Tel | +82-53-428-1045
- Distance from the venue | 7km (25 min, by car)

Hotel Inter-Burgo DAEGU

- Address | 57-19, Manchon-dong, Suseong-gu, Daegu
- Tel | +82-53-602-7173
- Distance from the venue | 7.17km (17 min. by car)

Queen Vell Hotel

- Address | 200 Dongchon-ro, Dong-gu, Daegu
- Tel | +82-53-282-1000
- Distance from the venue | 8.43km (20 min. by car)

Eldis Regent Hotel

- Address | 2033, Dalgubeol-daero, Jung-gu, Daegu
- Tel | +82-53-253-7711
- Distance from the venue | 8.8km (20 min. by car)

The Grand Hotel

- Address | 305, Dongdaegu-ro, Suseong-gu, Daegu
- Tel | +82-53-742-0001
- Distance from the venue | 8.86km (20 min. by car)

Useful Information

Shuttle Bus Service

IBRO 2019 provides complimentary shuttle buses between the conference hotels and EXCO.
The schedules may change depending on the situation and for the latest schedules, please visit the Information Desk. The bus stop locations are posted on the website at the Notice board (www.ibro2019.org).

Daily Shuttle Bus Schedule Between Hotel and the Conference Center (EXCO)

Sat. (Sept. 21)

Departure	Departure Time		
	1st round	2nd round	3rd round
Hotel Inter-Burgo DAEGU	08:00	09:00	10:00
Novotel Ambassador DAEGU			
The Grand Daegu Hotel			
Eldis Regent Hotel			
Queen Vell Hotel			
Union Tourist Hotel Daegu			
Toyoko INN Daegu Dongseong-ro			

Departure	Departure Time		Arrival
	1st round	2nd round	
EXCO	18:30	19:00	Hotel Inter-Burgo DAEGU
			Novotel Ambassador DAEGU
			The Grand Daegu Hotel
			Eldis Regent Hotel
			Queen Vell Hotel
			Union Tourist Hotel Daegu
			Toyoko INN Daegu Dongseong-ro

Sun. (Sept. 22)

Departure	Departure Time		
	1st round	2nd round	3rd round
Hotel Inter-Burgo DAEGU	07:00	08:00	09:00
Novotel Ambassador DAEGU			
The Grand Daegu Hotel			
Eldis Regent Hotel			
Queen Vell Hotel			
Union Tourist Hotel Daegu			
Toyoko INN Daegu Dongseong-ro			

Departure	Departure Time			Arrival
	1st round	2nd round	3rd round (After the Banquet)	
EXCO	18:30	19:00	20:50	Hotel Inter-Burgo DAEGU
				Novotel Ambassador DAEGU
				The Grand Daegu Hotel
				Eldis Regent Hotel
				Queen Vell Hotel
				Union Tourist Hotel Daegu
				Toyoko INN Daegu Dongseong-ro

Useful Information

Shuttle Bus Service

Daily Shuttle Bus Schedule Between Hotel and the Conference Center (EXCO)

Mon. (Sept. 23)

Departure	Departure Time		
	1st round	2nd round	3rd round
Hotel Inter-Burgo DAEGU	07:00	08:00	09:00
Novotel Ambassador DAEGU			
The Grand Daegu Hotel			
Eldis Regent Hotel			
Queen Vell Hotel			
Union Tourist Hotel Daegu			
Toyoko INN Daegu Dongseong-ro			

Departure	Departure Time		Arrival
	1st round	2nd round	
EXCO	15:00	18:30	Hotel Inter-Burgo DAEGU
			Novotel Ambassador DAEGU
			The Grand Daegu Hotel
			Eldis Regent Hotel
			Queen Vell Hotel
			Union Tourist Hotel Daegu
			Toyoko INN Daegu Dongseong-ro

Tue. (Sept. 24)

Departure	Departure Time		
	1st round	2nd round	3rd round
Hotel Inter-Burgo DAEGU	07:00	08:00	09:00
Novotel Ambassador DAEGU			
The Grand Daegu Hotel			
Eldis Regent Hotel			
Queen Vell Hotel			
Union Tourist Hotel Daegu			
Toyoko INN Daegu Dongseong-ro			

Departure	Departure Time			Arrival
	1st round	2nd round	3rd round (After Chairpersons' Dinner)	
EXCO	18:30	19:00	20:30	Hotel Inter-Burgo DAEGU
				Novotel Ambassador DAEGU
				The Grand Daegu Hotel
				Eldis Regent Hotel
				Queen Vell Hotel
				Union Tourist Hotel Daegu
				Toyoko INN Daegu Dongseong-ro

Useful Information

Shuttle Bus Service

Daily Shuttle Bus Schedule Between Hotel and the Conference Center (EXCO)

Wed. (Sept. 25)

Departure	Departure Time		
	1st round	2nd round	3rd round
Hotel Inter-Burgo DAEGU	07:00	08:00	09:00
Novotel Ambassador DAEGU			
The Grand Daegu Hotel			
Eldis Regent Hotel			
Queen Vell Hotel			
Union Tourist Hotel Daegu			
Toyoko INN Daegu Dongseong-ro			

Departure	Departure Time		Arrival
	1st round	2nd round	
EXCO (After the Closing Ceremony)	18:30	18:50	Dongdaegu Station
			Daegu International Airport
	18:30		The Grand Daegu Hotel Hotel Inter-Burgo DAEGU Queen Vell Hotel
	18:30		Novotel Ambassador Daegu Eldis Regent Hotel Toyoko INN Daegu Dongseong-ro Union Tourist Hotel Daegu

Circular Shuttle Bus to Hotel Schedule

Sat. (Sept. 21) ~ **Wed.** (Sept. 25)

Circular Shuttle Bus	Departure			
	EXCO	The Grand Daegu Hotel	Hotel Inter-Burgo DAEGU	Queen Vell Hotel
Route 1	12:00	12:30	12:50	13:00
	13:30	14:00	14:20	14:30
	15:00	15:30	15:50	16:00

Circular Shuttle Bus	Departure				
	EXCO	Novotel Ambassador DAEGU	Eldis Regent Hotel	Toyoko INN Daegu Dongseong-ro	Union Tourist Hotel Daegu
Route 2	12:00	12:30	12:40	12:50	13:00
	13:30	14:00	14:10	14:20	14:30
	15:00	15:30	15:40	15:50	16:00

Shuttle Bus Schedule Between Transportation Facilities and the Conference Center (EXCO)

Sat. (Sept. 21) ~ **Wed.** (Sept. 25)

	EXCO	Dongdaegu Station	Daegu International Airport	EXCO
Departure Time	10:00	10:30	11:00	11:20
	11:00	11:30	12:00	12:20
	12:00	12:30	13:00	13:20
	13:00	13:30	14:00	14:20
	14:00	14:30	15:00	15:20

Useful Information

Time

Korea standard time is nine hours ahead of Greenwich Mean Time (GMT+9).

Climate

Daegu, situated in a temperate zone, has four distinct seasons. The daily average temperature range in September is from 16°C to 26°C

Electricity

220 volt outlets are most common in Korea. Please check the power supply before use.

Currency

The unit of Korean currency is won (₩).
- Coins | ₩10, ₩50, ₩100, and ₩500
- Bills | ₩1,000, ₩5,000, ₩10,000 and ₩50,000

The exchange rate is approx. USD 1 to KRW 1,212 as of August 2019.

Emergency Call

112	Police
119	Emergencies for Fire / Rescue & Hospital Services
129	First Aid Patients
1330	Travel Information Center
1339	Medical Emergency

Business Hours

Government office hours are usually from 9:00 to 18:00 on weekdays and closed on weekends. Banks are open from 9:00 to 16:00 on weekdays and closed on Saturdays and Sundays. Most stores are open every day from 10:30 to 20:00, including Sundays.

Tip & Tax

Tipping is not a regular practice in Korea. Service charges are included in your bill for rooms, meals, and other services at hotels and upscale restaurants. Koreans occasionally do tip when they are especially pleased with the service they receive.
Value-added tax (VAT) is levied on most goods and services at a standard rate of 10% and is included in the retail price. In tourist hotels, this 10% tax applies to rooms, meals, and other services, and is included in the bill.

Local Transportation

Taxi

The fare is calculated from both the distance traveled and the time takes. Fares start from KRW 3,300 in Daegu. Tips are not required.

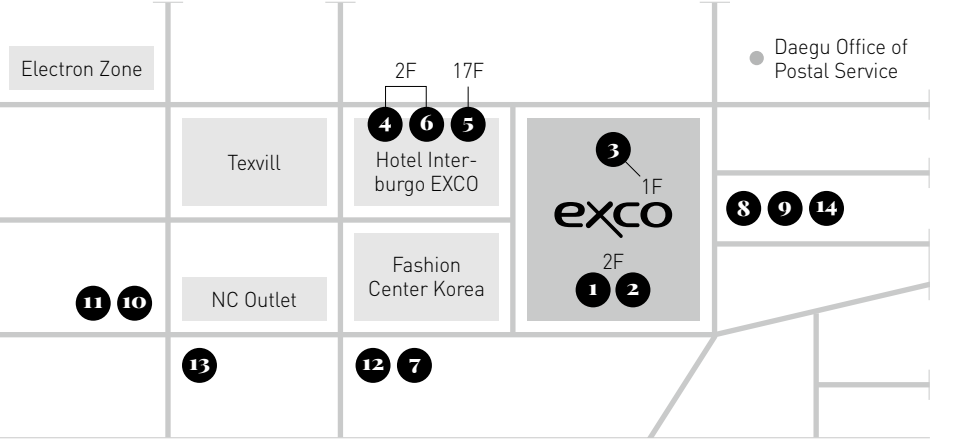
Subway

Daegu has 3 lines of metro; line 1(red), line 2(green) and line 3(yellow). The first train of the day starts at 5:30 AM from the departure station, and the last one at around 11:00 PM.

Useful Information

Restaurant Information

INTERNATIONAL
BRAIN RESEARCH
ORGANIZATION



Restaurants inside EXCO

1 Dadamddeul, Korean Buffet (2F of Exco)

- Various selections (Buffet)
- Menu | Noodles / Soup / Rice / Curry / Rice roll / Chicken / Salad / Vegetables / Fruits / Desserts, and others
- Price | KRW 8,000 (Adult)

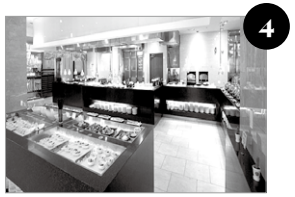
2 Greenteria (2F of Exco)

- Korean Food Court
- Menu | Pork Cutlet / Rice Topped with Pork or Beef / Kimchi Stew / Ox Bone Soup / Soft Tofu Stew / Udon
- Price | KRW 5,500 - 9,000

3 New York Hotdog and Coffee (1F of Exco)

- Hotdogs and Drinks
- Menu | Hotdog with Beef or Chicken / Chili & Cheese Hotdog / Onion Hotdog / Plain Hotdog / Bagel / Pretzel / Coffee / Smoothies
- Price | KRW 3,000 - 5,000

Restaurants nearby EXCO Convention



4 Yegrina (2F of Hotel Inter-Burgo Exco)

- All-day Dining Restaurant
- Menu | Buffet Style
- Price | KRW 22,000 (Breakfast) / 38,500 (Dinner)

5 GacJeong (17F of Hotel Inter-Burgo Exco)

- Korean Traditional Cuisine (*Recommended for Vegetarians)
- Menu | Rice with Mixed Vegetables / Rice with Beef and Mixed Vegetables in a Hot Pot / Buckwheat Noodles with Cold Broth / Pork Dumpling / Soft Tofu Stew with Seafood Dumpling Soup with Rice Cake / Pan-fried Beef
- Price | KRW 9,000 - 15,000

6 Dong Bo Sung (2F of Hotel Inter-Burgo Exco)

- Chinese Cuisine
- Menu | Six Course Meal / Chinese Rice and Noodles
- Price | Course Meal for Lunch | KRW 30,000 - 35,000
  Course Meal for Dinner | KRW 45,000 - 60,000
  Rice and Noodles | KRW 9,000 - 15,000

Useful Information

Restaurant Information

7 Jangmadang

- Korean Style Napa Wraps with Pork
- Menu | Boiled Pork with Herbs and Vegetables / Smoked Pork and Duck / Leaf Wraps and Rice with Grilled Fish
- Price | KRW 8,000 - 15,000

8 Buyong

- Chinese Cuisine
- Menu | Chinese-style noodles with vegetables and seafood / Black-bean-sauce noodles / Fried Noodles
- Price | KRW 8,000 - 14,000

9 Amijeong

- Korean Table d'hote
- Menu | Rice with Mushrooms and Seafood / Meal of Mixed Menu with Rice and Salted Mackerel or Cutlass Fish
- Price | KRW 10,000 - 15,000

10 Haesong Bogeo

- Puffer Fish and Course Meal
- Menu | Puffer Fish Stew / Steamed Puffer Fish / Course Meal / Fried Puffer Fish
- Price | KRW 15,000 - 26,000

11 Yeonhwajeong Samgyetang

- Korean Chicken Soup
- Menu | Ginseng Chicken Soup / Braised Spicy Chicken / Rice and Soup with Oyster
- Price | KRW 13,000 - 25,000

12 Bongchangyi Haemul Kalguksu

- Shabu-shabu and Seafood Noodles
- Menu | Shabu-shabu with Lettuce Cups and Noodle Soup / Seafood Hot Pot / Seafood Noodle Soup
- Price | KRW 6,000 - 10,000

13 Shabu-Hyang

- Vietnamese-Korean Fusion Restaurant
- Menu | Vietnamese Roll Shabu-shabu with Beef or Seafood / Vietnamese Pho
- Price | KRW 10,900 - 22,000

14 Eorim

- Japanese Cuisine
- Menu | Sushi d'hote / Eel d'hote / Cold Raw Fish Soup / Rice with Raw Fish
- Price | KRW 15,000 - 30,000

Halal Restaurants

A Indobangranggi

- Indian Restaurant
- Address | Bukgu Daehakro 81
- Contact | +82-53-956-9940

B New Saladdin

- Indian, Turkish, Srilanka, Arabic, Malaysian Restaurant
- Address | Bukgu Daehakro 79
- Contact | +82-53-942-3535

C Balaji Restaurant

- Indian, Nepal Restaurant
- Address | Junggu Dongseongro 73 (2F)
- Contact | +82-53-425-3242

D Nazar Kebab

- Turkish Restaurant
- Address | Junggu Dongseongro 3 gil, 62
- Contact | +82-53-424-9951

E Samarkand

- Russian, Uzbek Restaurant
- Address | Junggu Dondseongro 59 (3F)
- Contact | +82-53-252-4021

F Tara

- Indian, Nepal Restaurant
- Address | Junggu Dalgubeoldaero 2109-25
- Contact | +82-70-8977-8057

Scientific Information

Guidelines for Presenters

Symposia Presentation

1. Official language is English.
2. Allotted symposium time is 120 minutes; while for a mini-symposium, it is 90 minutes. Please adhere to the given time strictly.
3. Presentation with a computer
   - In order to avoid technical issues, presentation materials should be in Microsoft PowerPoint or Portal Document Format (PDF) file formats.
   - In case of using a personal Macintosh computer, please be sure to bring a VGA adaptor and test it before the session start.
4. Submission of your presentation materials
   - You should arrive at the Preview Room (Room 327) and submit the presentation materials before your session. Presenters at the Convention Hall on the 5th floor should submit the presentation materials at the Preview Desk on the 5th floor lobby.
   - If you are going to use your own laptop, please go to the operations desk directly.

Poster Presentation

1. Official language is English.
2. Each poster should include the title (preferably at the top), as well as the names and affiliations of the authors.
3. Posters must not exceed the dimensions (A0 size) of 841mm (width) x 1189mm (height)
4. Venue | Grand Ballroom, 3F, EXCO

Presentation Time	Mounting	Dismounting
Sun. (Sept. 22) - Wed. (Sept. 25) 12:40 -14:40	Sun. (Sept. 22) - Wed. (Sept. 25) 09:00 -10:00	Sun. (Sept. 22) - Wed. (Sept. 25) 17:00 -18:00

* Presenters should stay in the poster area to present their work during the designated poster session time.
* Please note that all posters that have not been removed by the designated dismounting time for each day will be automatically taken down and discarded.

IBRO 2019

The 10th IBRO World Congress of Neuroscience

Scientific Program

Program at a glance

Day 1. Sat. (Sept. 21)

Time	Room	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)
07:30 - 08:30		Registration				
08:30 - 09:20		Registration				
09:20 - 09:30						
09:30 - 10:00						
10:00 - 11:30		International Brain Initiative Session (Room 325, 3F)				
11:30 - 11:40						
11:40 - 12:00						
12:00 - 12:30		Presidential Highlighted Session: The Global Gender Equality Imperative in STEM Education (Room 324, 3F)				Luncheon Seminar
12:30 - 12:40						
12:40 - 13:30						
13:30 - 14:20		**Invited Lecture** **Presidential Lecture** Stanislas Dehaene (Convention Hall, 5F)				
14:20 - 14:50		Opening Ceremony (Convention Hall, 5F)				
14:50 - 15:20						
15:20 - 15:50		International Brain Bee Awards (Convention Hall, 5F)				
15:50 - 16:00		Break				
16:00 - 17:00		**Parallel Symposia (1)**	Development	Glia, glia-neuron interactions	New technology-Neurotool	Cognition and behavior
17:00 - 17:50		Disorders of the nervous system				
17:50 - 18:00						
18:00 - 20:00						
20:00 - 21:00						

Day 2. Sun. (Sept. 22)

Time	Room	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30 - 08:30		Registration					
08:30 - 09:20		**Invited Lecture** **Keynote Speaker** Peter Mombaerts (Convention Hall, 5F)					
09:20 - 09:30		Break					
09:30 - 10:00		**Parallel Symposia (2)**	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior	Exhibition / Poster
10:00 - 11:30		Disorders of the nervous system					
11:30 - 11:40		Break					
11:40 - 12:00		**Invited Lecture** **Keynote Speaker** Joseph Takahashi (Convention Hall, 5F)					
12:00 - 12:30		Break					
12:30 - 12:40							
12:40 - 13:30		Luncheon Seminar, Poster Session (1)					
13:30 - 14:20							
14:20 - 14:50							
14:50 - 15:20		Break					
15:20 - 15:50		**Parallel Symposia (3)**	Development	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior	
15:50 - 16:00		Disorders of the nervous system					
16:00 - 17:00		Break					
17:00 - 17:50		**Invited Lecture** **Torsten Wiesel Lecture** Hee-Sup Shin (Convention Hall, 5F)					
17:50 - 18:00							
18:00 - 20:00		Banquet (Hotel Inter-Burgo EXCO)					
20:00 - 21:00							

Day 3. Mon. (Sept. 23)

Time	Room	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)		GBR (3F)
07:30 - 08:30		Registration						
08:30 - 09:20		**Invited Lecture** **Keynote Speaker** Jerold Chun (Convention Hall, 5F)						
09:20 - 09:30		Break						
09:30 - 10:00		**Parallel Symposia (4)**	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: neuronal excitability and synapse function	Cognition and behavior		Exhibition / Poster
10:00 - 11:30		Disorders of the nervous system						
11:30 - 11:40		Break						
11:40 - 12:00		**Invited Lecture** **IBRO-Kavli Lecture** Steven E. Hyman (Convention Hall, 5F)						
12:00 - 12:30		Break						
12:30 - 12:40								
12:40 - 13:30		Luncheon Seminar, Poster Session (2)						
13:30 - 14:20								
14:20 - 14:50								
14:50 - 15:20								
15:20 - 15:50								
15:50 - 16:00								
16:00 - 17:00								
17:00 - 17:50		Social Tour						
17:50 - 18:00								
18:00 - 20:00								
20:00 - 21:00								

Presidential Highlighted Session: High Level Dialogue on Neuroscience and the Future of Education & Learning
IBE-UNESCO Reception
(Hotel Inter-Burgo Daegu)

Day 4. Tue. (Sept. 24)

Time	Room	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30 - 08:30		Registration					
08:30 - 09:20		**Invited Lecture** **Keynote Speaker** Hailan Hu (Convention Hall, 5F)					
09:20 - 09:30		Break					
09:30 - 10:00		**Parallel Symposia (5)**	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: neuronal excitability and synapse function	Cognition and behavior	Exhibition / Poster
10:00 - 11:30		Disorders of the nervous system					
11:30 - 11:40		Break					
11:40 - 12:00		**Invited Lecture** **Dana Neuroethics Lecture** Judy Illes (Convention Hall, 5F)					
12:00 - 12:30		Break					
12:30 - 12:40							
12:40 - 13:30		Luncheon Seminar, Poster Session (3)					
13:30 - 14:20							
14:20 - 14:50							
14:50 - 15:20		Break					
15:20 - 15:50		**Parallel Symposia (6)**	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems /network functions, computational neuroscience	Cognition and behavior	
15:50 - 16:00		Disorders of the nervous system					
16:00 - 17:00		Break					
17:00 - 17:50		**Invited Lecture** **Keynote Speaker** Masanobu Kano (Convention Hall, 5F)					
17:50 - 18:00							
18:00 - 20:00		Chairpersons' Dinner By invitation only (Hotel Inter-Burgo EXCO)					
19:00 - 20:00					KAOS-KBRI Brain Show (Hotel Inter-Burgo EXCO, Iris Hall, B1)		
20:00 - 21:00							

Day 5. Wed. (Sept. 25)

Time	Room	Convention Hall (5F)	211 (2F)	306 (3F)	324 (3F)	325 (3F)	GBR (3F)
07:30 - 08:30		Registration					
08:30 - 09:20		**Invited Lecture** **Keynote Speaker** Yukiko Gotoh (Convention Hall, 5F)					
09:20 - 09:30		Break					
09:30 - 11:30		**Parallel Symposia (7)**	Sensory and motor systems	Homeostatic and neuroendocrine systems	Physiology: systems /network functions, computational neuroscience	Cognition and behavior	Exhibition / Poster
		New technology-Neurotool					
11:30 - 11:40		Break					
11:40 - 12:30		**Invited Lecture** **Plenary Lecture** Erwin Neher (Convention Hall, 5F)					
12:30 - 12:40		Break					
12:40 - 14:40		Luncheon Seminar, Poster Session (4)					
14:40 - 14:50		Break					
14:50 - 16:50		**Parallel Symposia (8)**	Sensory and motor systems	Glia, glia-neuron interactions	Physiology: systems /network functions, computational neuroscience	Development	
		New technology-Neurotool					
16:50 - 17:00		Break					
17:00 - 17:50		Closing Ceremony (Convention Hall, 5F)					
17:50 - 18:00							
18:00 - 19:00							
19:00 - 20:00							
20:00 - 21:00							

Scientific Program

INVITED SPEAKERS

Invited Speakers

Presidential Lecture

How we learn:
Building bridges between neuroscience and education

Recent discoveries in cognitive psychology and neuroscience are starting to shed light on what is perhaps the most remarkable competence of the human brain: its capacity to change itself through education. In this talk, I will focus on the acquisition of two major school topic: reading and math. By scanning children every two months during the first year of school, as they acquire reading, and by comparing the results with those of illiterate adults, we obtained a detailed picture of how ventral visual cortex and language areas are enhanced by reading acquisition. In the field of mathematics, likewise, we begin to see how education leads to a large increase in the responsivity to numbers and mathematical expressions in ventral visual cortex and higher-level parietal and frontal areas. I will conclude by summarizing how our growing understanding of the psychology and neuroscience of learning leads to several key principles that may facilitate learning at all ages.

STANISLAS DEHAENE

College de France, France

Achievement

- Director of INSERM Unit 562 "Cognitive Neuroimaging"
- 1999 James S. McDonnel Foundation Centennial Fellowship

Presentation Schedule

- Date | Sat. (Sept. 21)
- Time | 13:30 - 14:20
- Room | Convention Hall, 5F

Invited Speakers

Torsten Wiesel Lecture

HEE-SUP SHIN

Center for Cognition and Sociality, Institute for Basic Science, Korea

Achievement

- 2015 Hotchkiss Lectureship Award
- 2006 National Honor Scientist, MOST

Presentation Schedule

- Date | Sun. (Sept. 22)
- Time | 17:00 – 17:50
- Room | Convention Hall, 5F

Genetic and circuit analysis of empathy behaviors in the mouse

Unraveling neural mechanisms underlying social behaviors is one of the major subjects in neuroscience. Diverse tools recently developed for doing experiments in rodents allow multidisciplinary studies on this subject at levels spanning from molecules to systems. Empathy, the capacity to recognize and share emotions with others, is crucial for our social interaction and mental well-being. This ability is conserved from rodents to humans, and the anterior cingulate cortex (ACC) is known to be integral in the acquisition of observational fear (OF), a model of empathic fear. Despite the fundamental importance of genetic factors underlying individual variability in empathy-related behaviors, molecular and cellular mechanisms in the ACC that control observational fear remain to be determined. Through examining several mutant strains for OF behaviors as well as through behavior-driven forward genetic analyses, we found several gene mutations that influence OF behavior in the mouse. One of them, a missense mutation in *Nrxn3*, causes an increase in observational fear. Using a combination of tools we find evidence that *Nrxn3* is an essential molecule for inhibitory synaptic transmission in somatostatin (SST)-positive neurons. Further studies uncovered a novel role of SST interneurons in the ACC, i.e., gating the expression of socially incited fear. These results show what the rodent system can offer to unravelling neurobiological mechanisms of empathy.

IBRO-Kavli Lecture

STEVEN E. HYMAN

Stanley Center for Psychiatric Research at Broad Institute of MIT and Harvard, USA

Achievement

- 2015 President of Society for Neuroscience

Presentation Schedule

- Date | Mon. (Sept. 23)
- Time | 11:40 – 12:30
- Room | Convention Hall, 5F

A new molecular map of psychiatric disease mechanisms

Genetic analyses of patients with schizophrenia, bipolar disorder, major depression, and other psychiatric disorders are advancing rapidly and yielding the first well-validated insights into the neurobiology of these diseases. The emerging genetic risk architectures of these severe illnesses are, however, proving highly complex. They are extremely polygenic, involving thousands of DNA sequence variants linked to many hundreds of genes. Risk associated DNA variants have also proven pleiotropic, meaning that they are shared across multiple psychiatric disorders and normal cognitive and behavioral phenotypes. Given such complexities, neurobiology faces significant challenges in the quest to exploit genetic findings in the service of understanding disease mechanisms and discovering much needed biomarkers and therapeutic interventions. I will discuss computational and experimental strategies that have already been applied to schizophrenia (and that should prove generally applicable to other disorders), which have begun to identify cell types and biological pathways involved in pathogenesis. I will also describe investigations of human phenotypes and human neurobiology that are advancing understandings of disease mechanisms and that promise to deliver biomarkers and nominate therapeutic targets.

Invited Speakers

Plenary Lecture

ERWIN NEHER

Max-Planck Institute for Biophysical Chemistry Research, Germany

Achievement

- 1991 Nobel Prize in Physiology or Medicine

Presentation Schedule

- Date | Wed. (Sept. 25)
- Time | 11:40 – 12:30
- Room | Convention Hall, 5F

Modulation of short-term plasticity at a glutamatergic synapse

Short-term synaptic plasticity (STP) mediates basic signal processing tasks, such as filtering, gain control, adaptation, and many more. My laboratory has studied STP at the Calyx of Held, a glutamatergic nerve terminal in the auditory pathway, which is large enough to be voltage-clamped in the 'whole-cell mode', using patch pipettes. STP is highly modulated by second messengers, such as Ca^{++} and diacylglycerol, which may rapidly switch a synapse from facilitation to depression. Such modulators accelerate a process called 'superpriming' - a transition of release-ready vesicles from a 'normally primed' state to a faster, 'superprimed' one (Lee et al. 2013; PNAS 110, 15079). This same process also mediates Post-Tetanic Potentiation by transiently increasing the proportion of superprimed vesicles (Taschenberger et al., 2016; PNAS 113, E4548-57). Such modulation may also underly the rapid switching between 'Brain States'.

Recent experiments on the dynamics of primed vesicles suggest a molecular interpretation of certain aspects of priming. I will discuss these findings and the possibility, that superpriming may be understood in terms of release sites, which can either be empty or else be occupied by a vesicle with a loosely organized release machinery (partially zippered SNARE-complexes), which is in rapid dynamic equilibrium with a tightly organized state (the superprimed one), in which SNARE-complexes are fully zippered. Importantly, these priming stages are rapidly reversible and the distinction between 'phasic' and 'tonic' synapses may reflect differences in their resting occupancy and stability.

Dana Neuroethics Lecture

On the ethics of neuroethics in international brain research

Neuroethics is a foundational pillar of each of the eight current national initiatives of the International Brain Initiative. Why has it gained such prominence over the past 20 years? What does it bring to neuroscience, from neurodevelopment to neurodegeneration, and from discovery to commercialization? With a focus on the ethics of neuroethics on the global landscape, I will explore these questions and address how neuroethics can bridge geographic borders and cultural divides of neurologic well-being and suffering.

JUDY ILLES

Canada Research Chair in Neuroethics, University of British Columbia, Canada

Achievement

- Co-Founder and President, International Neuroethics Society

Presentation Schedule

- Date | Tue. (Sept. 24)
- Time | 11:40 – 12:30
- Room | Convention Hall, 5F

INTERNATIONAL
BRAIN
RESEARCH
ORGANIZATION

Invited Speakers

Keynote Speakers

JOSEPH TAKAHASHI

Southwestern Medical Center University of Texas, USA

Achievement

- 2014 Thomson Reuters Highly Cited Researcher in Biology and Biochemistry
- 2012 Outstanding Scientific Achievement Award from the Sleep Research Society

Presentation Schedule

- Date | Sun. (Sept. 22)
- Time | 11:40 – 12:30
- Room | Convention Hall, 5F

Circadian clock genes and the transcriptional architecture of the clock mechanism

The molecular mechanism of circadian clocks in mammals is generated by a set of genes forming a transcriptional autoregulatory feedback loop. The "core clock genes" include: *Clock*, *Bmal1*, *Per1*, *Per2*, *Cry1* and *Cry2*. The discovery of "clock genes" led to the realization that circadian gene expression is widespread throughout the body and that the clock is cell autonomous. The cellular autonomy of circadian clocks has raised a number of questions concerning synchronization and coherence of rhythms at the cellular level as well as circadian organization at the systems level. The role of clocks in peripheral tissues has a number of important implications for disease.
In the circadian clock mechanism, CLOCK and BMAL1 activate the transcription of the *Periodand Cryptochrome* genes. The PERIOD and CRYPTOCHROME proteins then feedback and repress their own transcription by interaction with CLOCK and BMAL1. In the mouse liver, CLOCK and BMAL1 interact with the regulatory regions of thousands of genes, which are both cyclically and constitutively expressed. These target genes are highly enriched for metabolic pathways and indeed all fundamental metabolic pathways in the cell are direct targets of CLOCK:BMAL1. In addition to transcriptional control, the circadian system impacts the timing of metabolism with respect to body weight regulation, aging and longevity. These topics will also be discussed.

1. Takahashi, J.S. 2017. Transcriptional architecture of the mammalian circadian clock. Nature Rev Genet. 18: 164-179.
2. Acosta-Rodrıguez, V.A., M.H.M. de Groot, F. Rijo-Ferreira, C.B. Green and J.S. Takahashi. 2017. Mice under caloric restriction self-impose a temporal restriction of food intake as revealed by an automated feeder system. Cell Metabolism 26: 267–277.

Genomic mosaicism and the Alzheimer's disease brain

The human brain contains hundreds of billions of cells that have been widely assumed to have identical genomes amongst all cells from the same individual. This assumption is incorrect, as evidenced by neurons whose genomes appear to be unique despite being derived from a single zygote. Genomic mosaicism[1], arising somatically, accounts for most of this variation, and can take many forms, ranging from aneuploidies and aneusomies[2] – gains/losses of chromosomes – to smaller copy number variations (**CNVs**)[3] to single nucleotide variations, with combinations of these forms commonly existing in individual neurons. In addition to sequence differences, the sum total of these changes within a single nucleus can be detected by DNA content flow cytometry, which revealed robust heterogeneity of DNA content variation[4] amongst neurons of the human brain, producing a complex genomic mosaic of cells within the brain. Notably, these increases can be accentuated in sporadic Alzheimer's disease (**SAD**)[5], the most common form of AD. Some of this increase has been attributed to CNVs in the amyloid precursor protein (*APP*) gene, a causal gene in rare families and in Down syndrome, but produced somatically and mosaically within SAD neurons[5]. New data on mechanisms producing genomic mosaicism along with implications for the normal and SAD brain will be presented.

1. Rohrback, S., Siddoway, B., Liu, C. S. & Chun, J. Genomic mosaicism in the developing and adult brain. *Dev Neurobiol*, doi:10.1002/dneu.22626 (2018).
2. Rehen, S. K. *et al*. Chromosomal variation in neurons of the developing and adult mammalian nervous system. *Proc Natl Acad Sci U S A* **98**, 13361-13366 (2001).
3. Rohrback, S. *et al*. Submegabase copy number variations arise during cerebral cortical neurogenesis as revealed by single-cell whole-genome sequencing. *Proc Natl Acad Sci U S A*, doi:10.1073/pnas.1812702115 (2018).
4. Westra, J. W. *et al*. Neuronal DNA content variation (DCV) with regional and individual differences in the human brain. *J Comp Neurol* **518**, 3981-4000, doi:10.1002/cne.22436 (2010).
5 Bushman, D. M. *et al*. Genomic mosaicism with increased amyloid precursor protein (APP) gene copy number in single neurons from sporadic Alzheimer's disease brains. *eLife* **4**, doi:10.7554/eLife.05116 (2015).

JEROLD CHUN

Sanford Burnham Prebys Medical Discovery Institute, USA

Achievement

- 2018 Leadership Award, Hydrocephalus Association
- 2016 Alzheimer's San Diego Researcher of the Year

Presentation Schedule

- Date | Mon. (Sept. 23)
- Time | 08:30 – 09:20
- Room | Convention Hall, 5F

Invited Speakers

Keynote Speakers

HAILAN HU

Zhejiang University
Interdisciplinary Institute of
Neuroscience and Technology,
China

Achievement

- 2016 Tan Jia Zhen Life Science Award
- 2015 Chang Jiang Scholar Award

Presentation Schedule

- Date | Tue. (Sept. 24)
- Time | 08:30 – 09:20
- Room | Convention Hall, 5F

Neural mechanism of social and emotional behavior – from pecking order to ketamine

Emotions color our lives and profoundly shape the way we think and behave. Research in my lab aims to understand how emotional and social behaviors are encoded in the brain, with a main focus on the neural circuitry underlying depression and social dominance. I will talk about these two lines of research in this seminar.

Neural Circuit Mechanism of Social Hierarchy

Dominance hierarchy has a great impact on societal function and individuals' life quality. The social economic status has been identified as the single strongest predictor of health. Getting to the top of the social hierarchy is not simply determined by brute strength, but by personality traits such as grit, and social experience such as history of winning or losing. We discovered that the social hierarchical status of the animal correlates with the synaptic strength in the medial prefrontal cortex (mPFC) neurons. mPFC-based neural circuitry also underlies the winner effect, where animals increase their chance of victory after repeated winning. I will present our latest progress on mapping the neural circuitry involved in the control of dominance behavior.

Rapid antidepressant mechanism of ketamine

The discovery of the rapid antidepressant effects of the NMDA receptor antagonist ketamine is arguably the most significant advance in the field of psychiatry in the last half century. But the mechanism of how ketamine elevates mood so quickly has remained elusive. The rapid "hit-and-go" temporal profile of ketamine suggests that ketamine is likely to act on a system that is tonically in action and has NMDAR channels open. In this talk, I will present data to show how ketamine regulates mood and depression by blocking the burst firing of brain's anti-reward center, the lateral habenula (LHb). I will also discuss a perisomatic K+ buffering mechanism by which a glial potassium channel regulates LHb neuronal bursting in depression.

YUKIKO GOTOH

Graduate School of
Pharmaceutical Sciences,
The University of Tokyo,
Japan

Achievement

- 6th JSPS PRIZE, Japan Society for the Promotion of Science
- Japan Academy Medal

Presentation Schedule

- Date | Wed. (Sept. 25)
- Time | 08:30 – 09:20
- Room | Convention Hall, 5F

Chromatin-level regulation of neural stem / progenitor cell fate

A fundamental question in understanding tissue development is how resident stem cells or multipotent progenitors give rise to the various cell types in appropriate numbers and at the right locations to achieve tissue organization. Neural stem/progenitor cells (NPCs) in the mammalian neocortex initially divide symmetrically to increase their pool size (expansion phase). They then divide asymmetrically and give rise to neuronal and glial cell types in a region- and developmental stage–dependent manner and with high precision (neurogenic and gliogenic phases, respectively). We have previously shown that Polycomb group (PcG) complex and high mobility group A (HMGA) proteins play pivotal roles in driving the fate switches of NSCs associated with the transition from the neurogenic phase to the gliogenic phase. At this talk, I would like first to focus on how these and other proteins control the fate of NPCs. Second, I will address the mechanisms underlying the transition from the expansion phase to the neurogenic phase and discuss their potential role in psychiatric diseases such as autism spectrum disorder.

Invited Speakers

Keynote Speakers

MASANOBU KANO

Department of Neurophysiology, Graduate School of Medicine, The University of Tokyo, Japan

Achievement

- 2015 Uehara Award
- 2015 Medal with Purple Ribbon

Presentation Schedule

- Date | Tue. (Sept. 24)
- Time | 17:00 – 17:50
- Room | Convention Hall, 5F

Neural mechanisms of synapse remodeling in the developing brain

Functional neural circuits of mature animals are shaped during postnatal development by eliminating early-formed redundant synapses and strengthening of necessary connections. Postnatal development of excitatory synapses from climbing fiber (CF) to Purkinje cell (PC) in the cerebellum has been a representative model of synapse remodeling in the developing brain. PCs are initially innervated by more than five CFs with similar synaptic strengths. During the first three postnatal weeks, single CFs are selectively strengthened while redundant CFs are eliminated, and most PCs become innervated by single strong CFs. These processes consist of four distinct phases: (1) selective strengthening of a single CF among multiple CFs innervating the soma of each PC from postnatal day 3 (P3) to around P7, (2) translocation and expansion of innervation territory of the strongest CF ('winner' CF) to PC dendrites from P9, (3) elimination of somatic synapses of the 'winner' CF and those of weaker CFs ('loser' CFs) from P7 to around P11, (4) elimination of the remaining somatic CF synapses from around P12 to P17. In this lecture, I will make an overview of molecular, cellular and neural circuit mechanisms underlying CF synapse remodeling. Then I will refer to neural circuit development in other brain regions and discuss how neural activity regulates synapse remodeling.

Targeting olfaction

Chemoreception in the mouse olfactory system occurs primarily at two chemosensory epithelia: the main olfactory epithelium and the vomeronasal epithelium. Their sensory neurons are olfactory sensory neurons and vomeronasal sensory neurons, respectively. In the main olfactory epithelium, the interaction with odorous ligands (smells) is mediated by the largest gene family in the mouse genome: 1100 odorant receptor genes. Each mature olfactory sensory neuron is thought to express just one odorant receptor gene. Axons of olfactory sensory neurons that express the same odorant receptor coalesce into the same structures in the olfactory bulb called glomeruli. We are interested in the mechanisms that enable the expression of one odorant receptor per olfactory sensory neuron, and that govern the coalescence of axons into glomeruli.

PETER MOMBAERTS

Max Planck Research Unit for Neurogenetics, Germany

Achievement

- Director, Max Planck Institute of Biophysics, Frankfurt (2006 - 2013)
- Director, Max Planck Research Unit for Neurogenetics (2013-now)

Presentation Schedule

- Date | Sun. (Sept. 22)
- Time | 08:30 – 09:20
- Room | Convention Hall, 5F

Scientific Program

DAILY PROGRAM

Sat. (Sept. 21)
Sun. (Sept. 22)
Mon. (Sept. 23)
Tue. (Sept. 24)
Wed. (Sept. 25)

DAILY PROGRAM

Sat. (Sept. 21)

Special Program

IBI

International Brain Initiative Session (IBI)

ORGANIZER Neural Network Research Project, Korea Brain Research Institute

CHAIRS MU-MING POO (Institute of Neuroscience, Chinese Academy of Sciences, China)
JONG CHEOL RAH (Korea Brain Research Institute, Korea, Republic of)

ROOM 325, 3F TIME 10:00-12:00

IBI. 01	10:00-10:30	Perspectives on the China Brain Project MU-MING POO*[1] [1]Institute of Neuroscience and CAS Center for Excellence in Brain Science and Intelligence Technology, Chinese Academy of Sciences, Shanghai, China
IBI. 02	10:30-11:00	Brain mapping and disease modeling using common marmosets HIDEYUKI OKANO*[1] [1]Keio University School of Medicine, RIKEN Center for Brain Science, Tokyo, Japan
IBI. 03	11:00-11:30	Anatomy and connectivity of the cerebellum revealed by electron microscope images JINSEOP S. KIM*[1,2] [1]Neural Circuits Research Group &, Korea Brain Research Institute, Daegu, Korea, [2]Present Address: Department of Life Sciences, Sungkyunkwan University, Suwon, Korea
IBI. 04	11:30-12:00	Advancing neuroscience: collaborative data sharing, reproducible research, and workflows from data to models of brain function JAN G. BJAALIE*[1] [1]Institute of Basic Medical Sciences, University of Oslo, Norway

Presidential Highlighted Session

PHS 01

ORGANIZER WISET, KBRI & IBE-UNESCO

CHAIR YOUNG SOOK YOO (Former Korean Minister of Environment)

ROOM 324, 3F TIME 12:00-13:30

The Global Gender Equality Imperative in STEM Education

HYEYEON AHN; MMANTSETSA MAROPE; ANDREW MELTZOFF

President of WISET; Director, UNESCO International Bureau of Education(IBE), Geneva, Switzerland; Job and Gertrud Tamaki Endowed Chair and Co-Director, Institute for Learning & Brain Sciences, University of Washington, United States

Invited Lecture

IL01. 01

TYPE Presidential Lecture

CHAIR PIERRE MAGISTRETTI (President of IBRO, Saudi Arabia)

ROOM Convention Hall, 5F TIME 13:30-14:20

How we learn: Building bridges between neuroscience and education

STANISLAS DEHAENE

College de France, France

Opening Ceremony

ROOM Convention Hall, 5F TIME 14:20-15:20

Sat. (Sept. 21)

International Brain Bee Awards

TYPE Special Event

ROOM Convention Hall, 5F TIME 15:20-15:50

Parallel Symposia (1)

S01

TOPIC Disorders of the nervous system

TITLE Autism spectrum disorders: From mechanism to novel treatment

CHAIR MAURO COSTA-MATTIOLI (Baylor College of Medicine, USA)

ROOM Convention Hall, 5F TIME 16:00-18:00

S01. 01	16:00-16:30	The gut-microbiome-brain axis in neurodevelopmental disorders MAURO COSTA-MATTIOLI*[1] [1]Baylor College of Medicine, Houston, USA
S01. 02	16:30-17:00	Hypomethylated DNA of the aged sperm genome: A possible cause of neurodevelopmental diseases and a potential target for prevention? NORIKO OSUMI*[1] [1]Tohoku University School of Medicine, Sendai, Japan
S01. 03	17:00-17:30	Tipping excitation/inhibition balance in autism mouse models YONG-SEOK LEE*[1] [1]Seoul National University, Seoul, Korea, Republic of
S01. 04	17:30-18:00	Therapeutic implication of pharmacological evidences of excitatory dysregulation in animal models of ASD CHAN YOUNG SHIN*[1] [1]Konkuk University, Seoul, Korea, Republic of

S02

TOPIC Development

TITLE Intracellular and intercellular signaling in cortical cell fate control

CHAIR CARINA HANASHIMA (Waseda University, Japan)

ROOM 211, 2F TIME 16:00-18:00

S02. 01	16:00-16:30	Structural plasticity of neural stem cells in mammalian brain development FUMIO MATSUZAKI*[1], IKUMI FUJITA[2], ATSUNORI SHITAMUKAI[2], FUMIYA KUSUMOTO[2], SHUN MASE[2], TAEKO SUETSUGU[2], KAGAYAKI KATO[3], TAKAYA ABE[2], GO SHIOI[2], DAIJIRO KONNO[4] [1]RIKEN Center for Biosysmtems Dynamics Research, Kobe, Japan, [2]RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, [3]National Institutes of Natural Sciences, Okazaki, Japan, [4]Medical Institute of Bioregulation, Kyushu University, Hakata, Japan
S02. 02	16:30-17:00	A window into cortical development through the lens of RNA dynamics DEBRA SILVER*[1] [1]Duke University Medical Center, Durham, USA
S02. 03	17:00-17:30	Mechanisms of neuronal subtype specification and integration in the cerebral cortex CARINA HANASHIMA*[1] [1]Waseda University, Tokyo, Japan
S02. 04	17:30-18:00	Cell migration promotes dynamic cellular interactions to control cerebral cortex morphogenesis LAURENT NGUYEN*[1] [1]University of Liege, Liege, Belgium

S03

TOPIC Glia, glia-neuron interactions

TITLE Astrocytes in health and disease

CHAIR TIANMING GAO (Southern Medical University, China)

ROOM 306, 3F TIME 16:00-18:00

S03. 01	16:00-16:24	Astrocyte drive cortical synapse remodeling in chronic pain JUNICHI NABEKURA*[1], IKUKO TAKEDA[1], KOHEI YOSHIHARA[1], SUN KWAN KIM[2] [1]National Institute for Physiological Sciences, Okazaki, Japan, [2]Kyung Hee Unverssity, Seoul, Korea, Republic of
S03. 02	16:24-16:48	MAOists join BAPtists and TAUists in Alzheimer research: Reactive astrocytes as a cause of Alzheimer's disease C. JUSTIN LEE*[1] [1]IBS (Institute of Basic Sciences, Daejeon, Korea, Republic of)
S03. 03	16:48-17:12	Astrocytic control of synaptic transmission and plasticity ALFONSO ARAQUE*[1], ANA COVELO[1], MICHELLE CORKRUM[1], PAULO KOFUJI[1] [1]University of Minnesota, Minneapolis, USA
S03. 04	17:12-17:36	Astroglial connexin43 contributes to neuronal dysfunction in a murine model of Alzheimer's disease CHENJU YI*[1] [1]The Seventh Affiliated Hospital of Sun Yat-sen University, Shenzhen, China
S03. 05	17:36-18:00	Glial control of depressive-like behaviors TIANMING GAO*[1] [1]Southern Medical University, Guangzhou, China

Sat. (Sept. 21)

S04

TOPIC: New technology - Neurotool
TITLE: New technologies for visualizing and controlling the brain functions
CHAIR: WON DO HEO (Korea Advanced Institute of Science and Technology, Korea, Republic of)
ROOM: 324, 3F TIME: 16:00-18:00

S04.01 16:00-16:30
Genetically encoded tools for brain studies
ATSUSHI MIYAWAKI*[1]
[1]RIKEN Center for Brain Science / RIKEN Center for Advanced Photonics, Wako, Japan

S04.02 16:30-17:00
Spying on the dynamics of purinergic and monoaminergic neuromodulation by constructing new genetically-encoded GRAB sensors
YULONG LI*[1]
[1]Peking University, Beijing, China

S04.03 17:00-17:30
Filling the visible spectrum, and beyond, with genetically encoded fluorescent probes of cell signalling and metabolism
ROBERT CAMPBELL*[1]
[1]University of Alberta, Edmonton, Canada

S04.04 17:30-18:00
Optogenetic control of diverse molecular and cellular processes in the mouse brain
WON DO HEO*[1], HYUNJIN JUNG[1]
[1]KAIST, Daejeon, Korea, Republic of

S05

TOPIC: Cognition and behavior
TITLE: Visualizing and controlling circuits that generate emotional behavior
CHAIR: MAZEN KHEIRBEK (University of California, San Francisco, USA)
ROOM: 325, 3F TIME: 16:00-18:00

S05.01 16:00-16:24
Experience enhances the representations of salient stimuli in the dentate gyrus
MAZEN KHEIRBEK*[1]
[1]UCSF, San Francisco, USA

S05.02 16:24-16:48
Hippocampal neurogenesis modulates forgetting via remodeling of hippocampal circuits
PAUL FRANKLAND*[1]
[1]Hospital for Sick Children, Toronto, Canada

S05.03 16:48-17:12
An Amygdala to brainstem circuit regulates defensive locomotion
ANATOL KREITZER*[1]
[1]Gladstone Institutes/UCSF, San Francisco, USA

S05.04 17:12-17:36
Linking memories across time
DENISE CAI*[1]
[1]Icahn School of Medicine at Mount Sinai, New York, USA

S05.05 17:36-18:00
Reward and aversion biases in projector populations of the amygdala and insular cortex
ANNA BEYELER*[1]
[1]French NIH (INSERM) - University of Bordeaux, Bordeaux, France

Sat. (Sept. 21)

LS Luncheon Seminar

LS.00
SPONSOR: GNT Pharma
TITLE: Breakthroughs in Stroke and Alzheimer's Disease Treatment
SPEAKER: BYOUNGJOO GWAG
CEO, GNT Pharma
ROOM: 325, 3F
TIME: 12:00-13:30

Socials

ORGANIZER: The Korean Society for Brain and Neural Sciences
ROOM: Hotel Inter-Burgo EXCO, Grand Ballroom B, B1 TIME: 18:00-21:30
CJK Young Investigator Night (Applications only)
SUNG-OH HUH
The Korean Society for Brain and Neural Sciences, Korea, Republic of

ORGANIZER: International Neuroinformatics Coordinating Facility
ROOM: 323A, 3F TIME: 17:00-19:00
INCF: A standards organization for open and FAIR neuroscience (Applications only)
HELENA LEDMYR
INCF, Sweden

Sun. (Sept. 22)

Invited Lecture

IL02.02

TYPE Keynote Speaker
CHAIR CHEIL MOON (Daegu Gyeongbuk Institute of Science and Technology, Korea, Republic of)
ROOM Convention Hall, 5F TIME 08:30-09:20

Targeting olfaction

PETER MOMBAERTS
Max Planck Research Unit for Neurogenetics, Germany

IL02.03

TYPE Keynote Speaker
CHAIR JOONHO CHOE (Korea Advanced Institute of Science and Technology, Korea, Republic of)
ROOM Convention Hall, 5F TIME 11:40-12:30

Circadian clock genes and the transcriptional architecture of the clock mechanism

JOSEPH S. TAKAHASHI
Southwestern Medical Center University of Texas, USA

Parallel Symposia (2)

S06

TOPIC Disorders of the nervous system
TITLE Frontiers in neuropsychopharmacology of reward and pain
CHAIRS KAZUTAKA IKEDA (Tokyo Metropolitan Institute of Medical Science, Japan)
ANTHONY PHILLIPS (University of British Columbia, Canada)
ROOM Convention Hall, 5F TIME 09:30-11:30

S06.01	09:30-09:54	**Overview of dopamine and glutamate systems in "brain-stimulation reward": Relevance to the development of new therapies for substance-misuse disorders** ANTHONY PHILLIPS*[1] [1]University of British Collumbia, Vancouver, Canada
S06.02	09:54-10:18	**Striatal adenosine A2A receptor regulates impulsivity, goal-directed alcohol seeking behaviors** DOO-SUP CHOI*[1], SA-IK HONG[1], SEUNGWOO KANG[1], PHILLIP STARSKI[1] [1]Mayo Clinic, Rochester, USA
S06.03	10:18-10:42	**Orexin-initiated endocannabinoid signaling in pain and reward: Stress-induced analgesia, stress-induced cocaine relapse & acupuncture analgesia** LIH-CHU CHIOU*[1] [1]National Taiwan University, College of Medicine, Taipei, Taiwan, China
S06.04	10:42-11:06	**Involvement of NOP receptors, the fourth opioid receptor, on pain and drug abuse** LAWRENCE TOLL*[1], AKIHIKO OZAWA[1], ANDREA CIPPITELLI[1] [1]Florida Atlantic University, Boca Raton, USA
S06.05	11:06-11:30	**Personalized opioid use for controlling pain and drug abuse** KAZUTAKA IKEDA*[1], DAISUKE NISHIZAWA[1], MASAKAZU HAYASHIDA[2], KEN-ICHI FUKUDA[3] [1]Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan, [2]Juntendo University, Tokyo, Japan, [3]Tokyo Dental College, Tokyo, Japan

S07

TOPIC Development Mini-Symposia
TITLE Mechanical factors in brain development
CHAIR YOICHI KOSODO (Korea Brain Research Institute, Korea, Republic of)
ROOM 211, 2F TIME 09:30-11:00

S07.01	09:30-09:54	**Brain tissue stiffness regulates neuronal development and function** KRISTIAN FRANZE*[1] [1]University of Cambridge, Cambridge, UK
S07.02	09:54-10:16	**Role of extracellular stiffness to regulate neural stem cell differentiation in the developing brain** YOICHI KOSODO*[1] [1]Korea Brain Research Institute, Daegu, Korea, Republic of
S07.03	10:16-10:39	**Cytoskeletal forces driving nuclear migration in developing neurons** MINEKO KENGAKU*[1], YOU WU[1], NAOTAKA NAKAZAWA[1], GIANLUCA GRENCI[2] [1]KUIAS-iCeMS, Kyoto University, Kyoto, Japan, [2]Mechanobiology Institute, National Univresity of Singapore, Singapore, Singapore
S07.04	10:39-11:00	**Mechanical aspects of cortical folding** SILVIA BUDDAY*[1], PAUL STEINMANN[2], ELLEN KUHL[3] [1]Friedrich-Alexander University Erlangen-Nürnberg, Erlangen, Germany, [2]Friedrich-Alexander University Erlangen-Nürnberg, Glasgow Computational Engineering Center, Erlangen, Germany, [3]Stanford University, Stanford, USA

S08

TOPIC Glia, glia-neuron interactions
TITLE Glial regulation of brain physiology and pathology
CHAIR KYOUNGHO SUK (Kyungpook National University, Korea, Republic of)
ROOM 306, 3F TIME 09:30-11:30

S08.01	09:30-10:00	**Purine-mediated neuron-glia interactions** SHUMIN DUAN*[1], YULAN LI[2], YANQIN YU[2] [1]Zhejiang University, Hangzhou, China, [2]Zhejiang University School of Medicine, Hangzhou, China
S08.02	10:00-10:30	**Bi-directional network remodeling by reactive astrocytes** SCHUICHI KOIZUMI*[1] [1]University of Yamanashi, Interdisciplinary Graduate School of Medicine, Yamanashi, Japan
S08.03	10:30-11:00	**Phagocytic roles of glial cells in the healthy and diseased brains** WON-SUK CHUNG*[1] [1]KAIST, Daejeon, Korea, Republic of
S08.04	11:00-11:30	**Glia produces endogenous excitotoxin via abnormal metabolism and leads to neuronal damage in Alzheimer's disease** HOON RYU*[1], HYUN SOO SHIM[2], MI HYUN CHOI[2], HAE YOUNG KO[3], MIJIN YOON[3], JONG-HEON KIM[4], KYOUNGHO SUK[4], SOO-JIN OH[2], MIN-HO NAM[2], HYEONJOO IM[2], SEUNG JAE HYEON[2], PHUONG NGUYEN[2], JUNGHEE LEE[5], JEONGAE LEE[2], NEIL KOWALL[5], WON KYUNG JEON[2] [1]Boston University School of Medicine, Boston, USA, [2]KIST, Seoul, Korea, Republic of, [3]Department of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [4]Kyungpook National University School of Medicine, Daegu, Korea, Republic of, [5]Boston University, Boston, USA

Sun. (Sept. 22)

S09

TOPIC: Physiology: Neuronal excitability and synapse function
TITLE: Recent excitements about excitatory synapses
CHAIR: MICHISUKE YUZAKI (Keio University School of Medicine, Japan)
ROOM: 324, 3F TIME: 09:30-11:30

S09.01 09:30-10:00
Ultrastructural analysis of neuronal synapses using cryo electron tomography and correlative microscopy
GUOQIANG BI*[1]
[1]University of Science and Technology of China, Hefei, China

S09.02 10:00-10:30
Molecular mechanisms of presynaptic assembly at excitatory synapses
JAEWON KO*[1]
[1]DGIST (Daegu Gyeongbuk Institute of Science and Technology), Daegu, Korea, Republic of

S09.03 10:30-11:00
Proteomic dissection of the cell-surface protein interaction network at a specific excitatory hippocampal synapse
JORIS DE WIT*[1]
[1]VIB-KU Leuven Center for Brain & Disease Research, Leuven, Belgium

S09.04 11:00-11:30
Trans-synaptic regulation of postsynaptic glutamate receptors by C1q family proteins
MICHISUKE YUZAKI*[1]
[1]Keio University School of Medicine, Tokyo, Japan

S10

TOPIC: Cognition and behavior
TITLE: Neurobiological bases of memory updating: Brain mechanisms and clinical application
CHAIR: LUCAS DE OLIVEIRA ALVARES (Universidade Federal do Rio Grande do Sul, Brazil)
ROOM: 325, 3F TIME: 09:30-11:30

S10.03 09:30-10:00
Exploring the dynamic nature of memory to eliminate pathological memories
LUCAS DE OLIVEIRA ALVARES*[1], BRUNO POPIK[1]
[1]Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

S10.02 10:00-10:30
Regulation of reconsolidation and extinction by fear memory engrams
SATOSHI KIDA*[1]
[1]Tokyo Univeristry of Agriculture, Tokyo, Japan

S10.04 10:30-11:00
Advances in understanding and clinical application of memory updating through reconsolidation in humans
DANIELA SCHILLER*[1], JINGCHU HU[2], JOANA SINGER VERMES[3], FELIPE CORCHS[3]
[1]Icahn School of Medicine at Mount Sinai, New York, USA, [2]South China Normal University, Guangzho, China, [3]University of São Paulo, São Paulo, Brazil

S10.01 11:00-11:30
A model for how memories are stored: synapses vulnerable to erasure (SVEs).
WAYNE S SOSSIN*[1], LARISSA FERGUSON[1], CAROLE ABI-FARAH[1], TYLER DUNN[1], MARGARET HASTINGS[1], JIANGYUAN HU[2], SAMUEL SCHACHER[2]
[1]Department of Neurology and Neurosurgery, Montreal Neurological Institute, McGill University, Montreal, Quebec H3A 2B4, Canada, [2]Dept. of Neuroscience, Columbia University, College of Physicians and Surgeons, New York State Psychiatric Institute, New York, New York 10032

Workshop

ORGANIZER: Allen Institute for Brain Science
ROOM: 314, 3F TIME: 09:00-12:00

Exploring multimodal mammalian neuronal data using the Allen Brain Atlas tools and resources
KAITLYN CASIMO
Allen Institute for Brain Science, USA

Invited Lecture

TYPE: Torsten Wiesel Lecture
CHAIR: ERIC KLANN (New York University, USA)
ROOM: Convention Hall, 5F TIME: 17:00-17:50

IL02.04
Genetic and circuit analysis of empathy behaviors in the mouse
HEE-SUP SHIN
Center for Cognition and Sociality Institute for Basic Science, Korea, Republic of

Parallel Symposia (3)

S11

TOPIC: Disorders of the nervous system
TITLE: Mouse models of neuropsychiatric disorders: Integrative analyses from genes to circuits
CHAIR: JA-HYUN BAIK (Korea University, Korea, Repubilc of)
ROOM: Convention Hall, 5F TIME: 14:50-16:50

KMPC 국가마우스표현형분석사업단 KOREA MOUSE PHENOTYPING CENTER

S11.01 14:50-15:20
Mouse models of human disease: Identification of animal models for translational research
CYNTHIA SMITH*[1]
[1]The Jackson Laboratory, Bar Harbor, USA

S11.02 15:20-15:50
REM sleep active MCH neurons are involved in forgetting hippocampus-dependent memories
AKIHIRO YAMANAKA*[1], SHUNTARO IZAWA[1]
[1]RIEM, Nagoya University, Nagoya, Japan

S11.03 15:50-16:20
Assessment of contingent motivation to cocaine in mouse models
JOUNG HUN KIM*[1]
[1]POSTECH, Pohang, Korea, Republic of

S11.04 16:20-16:50
Dopaminergic control of impulsive and compulsive behaviors
JA-HYUN BAIK*[1]
[1]Korea University, Seoul, Korea, Republic of

Sun. (Sept. 22)

S12

TOPIC: Development
TITLE: Transcriptional regulation of neural cell fate
CHAIR: JIN WOO KIM (Korea Advanced Institute of Science and Technology, Korea, Republic of)
ROOM: 211, 2F TIME: 14:50-16:50

S12. 01	14:50-15:14	High Hes1 expression and resultant Ascl1 suppression regulate quiescent versus active neural stem cells in the adult mouse brain RYOICHIRO KAGEYAMA*[1], ITARU IMAYOSHI[1], RISA SUEDA[1], YUKIKO HARIMA[1] [1]Kyoto University, Kyoto, Japan
S12. 02	15:14-15:38	*Dlx1/2* are central and essential components in the transcriptional code for generating olfactory bulb interneurons ZHENGANG YANG*[1] [1]Institutes of Brain Science, Fudan University, Shanghai, China
S12. 03	15:38-16:02	Molecular mechanisms controlling hypothalamic patterning and neurogenesis SETH BLACKSHAW*[1] [1]Johns Hopkins University School of Medicine, Baltimore, USA
S12. 04	16:02-16:26	Transcriptional regulation of cone photoreceptor development MICHEL CAYOUETTE*[1], AWAIS JAVED[1], PIERRE MATTAR[1], KAMIL KRUCZEK[2], SUYING LU[3], MAGDALENA KLOC[2], ANAI GONZALEZ-CORDERO[2], ROD BREMNER[3], ROBIN ALI[2] [1]Montreal Clinical Research Institute (IRCM), Montreal, Canada, [2]UCL Institute of Ophthalmology, London, UK, [3]Lunenfeld-Tanenbaum Research Institute, Toronto, Canada
S12. 05	16:26-16:50	Exogenous homeodomain transcription factors in neural development and regeneration JIN WOO KIM*[1], EUN JUNG LEE[1] [1]KAIST, Daejeon, Korea, Republic of

S13

TOPIC: Glia, glia-neuron interactions
TITLE: Ionic transporters in microglia, astrocytes and oligodendrocytes as putative druggable targets in neurological disorders
CHAIR: LUCIO ANNUNZIATO (University of Naples, Italy)
ROOM: 306, 3F TIME: 14:50-16:50

S13. 01	14:50-15:20	Targeting Ca^{2+} and Na^{+}-dependent ionic transporters in microglia, astrocytes and oligodendrocytes as a new possible strategy for the treatment of neurodegenerative diseases LUCIO ANNUNZIATO*[1] [1]Division of Pharmacology, Department of Neuroscience, School of Medicine, Federico II University of Naples, Naples, Italy
S13. 02	15:20-15:50	Ionic transporters and ion channels in microglia and their role in glia-endocrine system MAMI NODA*[1] [1]Lab of Pathophysiology, Graduate School of Pharmaceutical Sciences, Kyushu University, Fukuoka, Japan
S13. 03	15:50-16:20	Microglia-oligodendrocyte interactions in post-injury brain repair DANDAN SUN*[1] [1]University of Pittsburgh, Pittsburgh, USA
S13. 04	16:20-16:50	Ionic excitability of astrocytes (beyond calcium) ALEXEI VERKHRATSKY*[1] [1]The University of Manchester, Manchester, UK

S14

TOPIC: Physiology: Neuronal excitability and synapse function
TITLE: New molecular insights into the synaptic tagging and capture hypothesis
CHAIR: TED ABEL (University of Iowa, USA)
ROOM: 324, 3F TIME: 14:50-16:50

S14. 01	14:50-15:20	Actin dynamics, neuronal activity and the heterosynaptic maintenance of plasticity ROSALINA FONSECA*[1] [1]NOVA Medical School, Lisboa, Portugal
S14. 02	15:20-15:50	Memory consolidation, dopamine and two distinct novelty systems TOMONORI TAKEUCHI*[1] [1]Aarhus University, Aarhus C, Denmark
S14. 03	15:50-16:20	Presynaptic and postsynaptic mechanisms of synaptic tagging and capture ALAN (JUNG) PARK*[1] [1]Columbia University, New York, USA
S14. 04	16:20-16:50	The p75 neurotrophin receptor is an essential mediator of impairments in hippocampal-dependent associative plasticity and memory induced by sleep deprivation SAJIKUMAR SREEDHARAN*[1] [1]National University of Singapore, Singapore, Singapore

S15

TOPIC: Cognition and behavior
TITLE: Mechanism of memory engram
CHAIR: JIN-HEE HAN (Korea Advanced Institute of Science and Technology, Korea, Republic of)
ROOM: 325, 3F TIME: 14:50-16:50

S15. 01 14:50-15:20

Function of adult-born neurons in maturation of fear memory engram during sleep

MASANORI SAKAGUCHI*[1], IYO KOYANAGI[1], ALVARO CARRIER-RUIZ[2], PABLO VERGARA[1], SAKTHIVEL SRINIVASAN[1], YUKI SUGAYA[2], MASATOSHI KASUYA[1], TZONG-SHIUE YU[3], KASPAR VOGT[1], MASAFUMI MURATANI[4], TAKAAKI OHNISHI[5], SIMA SINGH[1], CATIA M TEIXEIRA[6], YOAN CHÉRASSE[1], TOSHIE NAOI[1], SZU-HAN WANG[7], PIMPIMON NONDHALEE[1], BORAN AH OSMAN[1], NAOKO KANEKO[8], KAZUNOBU SAWAMOTO[9], STEVEN KERNIE[3], TAKESHI SAKURAI[1], THOMAS J MCHUGH[10], MASANOBU KANO[2], MASASHI YANAGISAWA[1], DEEPENDRA KUMAR[1]

[1]WPI-IIIS, University of Tsukuba, Ibaraki, Japan, [2]Department of Neurophysiology, Graduate School of Medicine, The University of Tokyo, International Research Center for Neurointelligence (WPI-IRCN), The University of Tokyo Institutes for Advanced Study (UTIAS), Tokyo, Japan, [3]Department of Pediatrics, Columbia University College of Physicians and Surgeons, New York, USA, [4]Department of Genome Biology, Faculty of Medicine, University of Tsukuba, Ibaraki, Japan, [5]Graduate School of Information Science and Technology, The University of Tokyo, Tokyo, Japan, [6]Emotional Brain Institute, Nathan Kline Institute, Orangeburg, New York, USA, [7]Centre for Clinical Brain Sciences, University of Edinburgh, Scotland, UK, [8]Department of Developmental and Regenerative Biology, Nagoya City University Graduate School of Medical Sciences, Aichi, Japan, [9]Department of Developmental and Regenerative Biology, Nagoya City University Graduate School of Medical Sciences, Division of Neural Development and Regeneration, National Institute for Physiological Sciences, Aichi, Japan, [10]RIKEN Center for Brain Science, Saitama, Japan

S15. 02 15:20-15:50

Genetic manipulations of CCR5 and the multifaceted molecular cellular and circuit mechanisms of cognitive enhancement: A cautionary tale

ALCINO SILVA*[1], MIOU ZHOU[2], YANG SHEN[2], MARY T. JOY[3], EINOR BEN ASSAYAG[4], DALIA SHABASHOV-STONE[5], TAWNIE SILVA[6], EFRAT KLIPER[4], SIGAL LIRAZ-ZALTSMAN[7], NATAN M. BORNSTEIN[4], ESTHER SHOHAMI[5], STANLEY T. CARMICHAEL[3]

[1]Departments of Neurobiology, Psychiatry and Biobehavioral Sciences, Psychology, Integrative Center for Learning and Memory and Brain Research Institute; UCLA, Los Angeles, USA, [2]Departments of Neurobiology, Psychiatry and Biobehavioral Sciences, Psychology, Integrative Center for Learning and Memory and Brain Research Institute; UCLA , Los Angeles, USA, [3]Department of Neurology, David Geffen School of Medicine, UCLA, Los Angeles, USA, [4]Departments of Neurology and Psychiatry, Tel Aviv Sourasky Medical Center; Sackler Faculty of Medicine, Tel Aviv University, Tel-Aviv, Israel, [5]Department of Pharmacology, The Institute for Drug Research, Hebrew University of Jerusalem, Jerusalem, Israel, [6]Departments of Neurobiology, Psychiatry and Biobehavioral Sciences, Psychology, Integrative Center for Learning and Memory and Brain Research Institute; UCLA , Tel-Aviv, USA, [7]Department of Pharmacology, The Institute for Drug Research, Hebrew University of Jerusalem; The Joseph Sagol Neuroscience Center, Sheba Medical Center, Jerusalem, USA

S15. 03 15:50-16:20

Robustness and flexibility of neuronal ensembles in memory

NAOKI MATSUO*[1]

[1]Osaka University, Suita, Japan

S15. 04 16:20-16:50

Engram cells during fear memory update by retraining

JIN-HEE HAN*[1]

[1]KAIST, Daejeon, Korea, Republic of

Poster Session (1)

ROOM: Grand Ballroom, 3F TIME: 12:40-14:40

LS Luncheon Seminar

LS. 01

SPONSOR: Korea Non-clinical Technology Solution Center
TITLE: Innovative Animal Model Generation and Application with Highly Efficient Gene Editing Technologies
ROOM: 211, 2F
SPEAKER: CHAOSHE GUO
Vice President, Beijing Biocytogen Co., LTD; Biocytogen Boston Corp.
TIME: 12:40-14:30

LS. 02

SPONSOR: DONG-A ST
TITLE: iPSCs: A Bridge from Discovery to Clinic
ROOM: 306, 3F
CHAIR: TAEYOUNG YOON
SPEAKERS: JANGHWAN KIM; JINJU HAN; JUNSOO SEO; YEHWANG CHEONG
KRIBB; KAIST; DGIST; Dong-A ST
TIME: 12:40-14:30

LS. 03

SPONSOR: DNA Link
TITLE: Neuroscience at True Resolution - From Single Cell to Spatial Transcriptomics with 10x Genomics
ROOM: 324, 3F
SPEAKERS: KEN OSAKI; JONG KYOUNG KIM; NIKHIL RAO
10x Genomics; Department of New biology, DGIST; 10x Genomics
TIME: 12:40-14:30

LS. 04

SPONSOR: Bio-Techne
TITLE: In situ validation and spatial mapping of diverse striatal cells identified by scRNA-seq in the mouse brain at single-cell resolution
ROOM: 325, 3F
SPEAKER: YEOMPYO LEE
MDxK , Field Application Manager
TIME: 12:40-14:30

Socials

ORGANIZER: Neuroscience, the IBRO Journal
ROOM: 320, 3F TIME: 12:00-14:00

How a journal handles your paper
JUAN LERMA
Instituto de Neurociencias CSIC-UMH, Spain

ORGANIZER: IBRO and the International Basic Sciences Programme (IBSP) at UNESCO
ROOM: 321, 3F TIME: 12:40 -14:50

Global engagement and outreach in support of basic research in the brain sciences
TASIA ASAKAWA
International Brain Research Organization, France

ORGANIZER: Young IBRO Committee and ALBA Network
ROOM: 322, 3F TIME: 15:00-17:00

Round-table discussion “Diversity: Regions specific challenges and solutions"
ZELJKA KRSNIK
Young IBRO Committee, Chair and ALBA Network, Steering Committee Member, Spain

Banquet

ROOM: Hotel Inter-Burgo EXCO, Grand Ballroom B, B1 TIME: 18:30-20:30

Mon. (Sept. 23)

Presidential Highlighted Session

PHS 02

ORGANIZER IBE-UNESCO, IBRO
CHAIRS PIERRE MAGISTRETTI; MMANTSETSA MAROPE (President of IBRO; Director of IBE-UNESCO)
VENUE Hotel Inter-Burgo DAEGU TIME 08:00-18:00

High Level Dialogue on Neuroscience and the Future of Education & Learning

Invited Lecture

IL03. 05

TYPE Keynote Speaker
CHAIR YOO-HUN SUH (Gachon University, Korea, Republic of)
ROOM Convention Hall, 5F TIME 08:30-09:20

Genomic mosaicism and the Alzheimer's disease brain
JEROLD CHUN
Sanford Burnham Prebys Medical Discovery Institute, USA

IL03. 06

TYPE IBRO-Kavli Lecture
CHAIR LINDA J. RICHARDS (The University of Queensland, Australia)
ROOM Convention Hall, 5F TIME 11:40-12:30

A new molecular map of psychiatric disease mechanisms
STEVEN E. HYMAN
Stanley Center for Psychiatric Research at Broad Institute of MIT and Harvard, USA

Parallel Symposia (4)

S16

TOPIC Disorders of the nervous system
TITLE Towards an understanding of neural basis of neurodevelopmental disorders: From cells to circuits
CHAIR TOMMASO PIZZORUSSO (University of Florence, Italy)
ROOM Convention Hall, 5F TIME 09:30-11:30

S16. 01	09:30-10:00	Reversibility of phenotypes in mouse models of neurodevelopment - a gene therapy perspective STUART COBB*[1] [1]University of Edinburgh, Edinburgh, UK
S16. 02	10:00-10:30	Emergence of nested oscillatory dynamics in human cortical organoids ALYSSON MUOTRI*[1] [1]UCSD, La Jolla, USA
S16. 03	10:30-11:00	Searching for functional and behavioural biomarkers in models of neurodevelopmental disorders TOMMASO PIZZORUSSO*[1] [1]University of Florence, Florence, Italy
S16. 04	11:00-11:30	Deep Learning of spontaneous arousal fluctuation detects early impairments in Rett Syndrome and CDKL5 disorder MICHELA FAGIOLINI*[1] [1]Boston Children's Hospital Harvard Medical School, Boston, USA

S17

TOPIC Sensory and motor systems
TITLE Recent advance in studying neural mechanisms for pain and itch
CHAIR UHTAEK OH (Korea Institute of Science and Technology, Korea, Republic of)
ROOM 211, 2F TIME 09:30-11:30

S17. 01	09:30-09:54	How Nav1.7 contributes to pain pathways JOHN WOOD*[1], JAMES COX[1], JING ZHAO[1] [1]UCL, London, UK
S17. 02	09:54-10:18	Gating of nociceptive signals in the peripheral sensory ganglia NIKITA GAMPER*[1] [1]University of Leeds, Leeds, UK
S17. 03	10:18-10:42	Descending modulation of itch and pain EARL CARSTENS*[1], TAYLOR FOLLANSBEE[1], MIRELA IODI CARSTENS[1] [1]University of California, Davis, Davis, USA
S17. 04	10:42-11:06	Cortical synaptic mechanisms for chronic pain and anxiety MIN ZHUO*[1] [1]University of Toronto, Toronto, Canada
S17. 05	11:06-11:30	Immune cells talk to pain: Role of natural killer cells SEOG BAE OH*[1], ALEXANDER DAVIES[2], HYOUNG WOO KIM[1], MICHAEL COSTIGAN[3] [1]Seoul National University, Seoul, Korea, Republic of, [2]University of Oxford , Oxford, UK, [3]Harvard Medical School, Boston, USA

S18

TOPIC Homeostatic and neuroendocrine systems
TITLE Central regulation of energy homeostasis
CHAIR KI WOO KIM (Yonsei University College of Dentistry, Korea, Republic of)
ROOM 306, 3F TIME 09:30-11:30

S18. 01	09:30-10:00	Discovery of AMPK-activated CRH neurons that induce dietary preference for carbohydrate over fat YASUHIKO MINOKOSHI*[1] [1]National Institute for Physiological Sciences, Okazaki, Aichi, Japan
S18. 02	10:00-10:30	Transcriptomic profiling of developing melanocortin neurons reveals a role for *Prdm12* in energy balance CHEN LIU*[1] [1]The University of Texas Southwestern Medical Center, DALLAS, USA
S18. 03	10:30-11:00	Homeostatic role of primary cilia in the ventromedial nucleus of the hypothalamus KI WOO KIM*[1], JI SU SUN[1], DONG JOO YANG[1] [1]Department of Oral Biology, BK21 PLUS, Yonsei University College of Dentistry, 03722, Seoul, Korea, Republic of
S18. 04	11:00-11:30	Primary cilia as a critical regulator of hypothalamic function MIN-SEON KIM*[1], CHAN HEE LEE[2], HONG DUGU[1], DO KYONG SONG[3] [1]University of Ulsan College of Medicine, Seoul, Korea, Republic of, [2]University of Ulsan College of Medicine, Asan Institute for Life Science, Seoul, Korea, Republic of, [3]Ewha University College of Medicine, Seoul, Korea, Republic of

Mon. (Sept. 23)

S19

TOPIC: Physiology: Neuronal excitability and synapse function
TITLE: From synaptic and network plasticity to behavior
CHAIRS: JUAN LERMA (Instituto de Neurociencias CSIC UMH, Spain)
YING SHING CHAN (Hong Kong University, Hong Kong SAR, China)
ROOM: 324, 3F TIME: 09:30-11:30

S19. 01 09:30-10:00
Exploring functions of non-neuronal NMDA receptors
YUKIKO GODA*[1], PETER CHIPMAN[2]
[1]RIKEN, Wako-shi, Japan, [2]RIKEN , Wako-shi, Japan

S19. 02 10:00-10:30
Cholinergic modulation of circuits involved in stress-related behaviors
MARINA PICCIOTTO*[1], YANN MINEUR[1]
[1]Yale University, New Haven, USA

S19. 03 10:30-11:00
Correcting navigation deficits in the adult by targeting inhibitory gating in central vestibular circuits
YING SHING CHAN*[1], KENNETH LAP KEI WU[1], QIU FEN JIANG[1], WEI SHI[1], DAISY KWOK YAN SHUM[1]
[1]The University of Hong Kong, Hong Kong, Hong Kong SAR, China

S19. 04 11:00-11:30
Kainate receptors, circuit imbalance and mental diseases
JUAN LERMA*[1], VINEET ARORA[1], SERGIO VALBUENA[1], ALVARO GARCIA[1], M ISABEL ALLER[1]
[1]Instituto de Neurociencias CSIC-UMH, San Juan de Alicante, Spain

S20

TOPIC: Cognition and behavior
TITLE: Social behaviors and cognition
CHAIR: XIAOHONG XU (Institute of Neuroscience, Chinese Academy of Sciences, China)
ROOM: 325, 3F TIME: 09:30-11:30

S20. 01 09:30-10:00
Regulation of the social behaviors by the medial preoptic area
XIAOHONG XU*[1], YI-CHAO WEI[1]
[1]Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China

S20. 02 10:00-10:30
Life-long action of steroid hormones on the neural networks for the regulation of sex-typical social behavior
SONOKO OGAWA*[1]
[1]University of Tsukuba, Tsukuba, Japan

S20. 03 10:30-11:00
Oxytocin and variability in social strategies: Parenting, early adversity and mood disorders
DANIEL OLAZÁBAL*[1]
[1]Departamento de Fisiología, Facultad de Medicina, Universidad de la República Oriental del Uruguay, Montevideo, Uruguay

S20. 04 11:00-11:30
Entorhinal cortex-dentate gyrus circuit control of negative valence and cognitive systems
SANGHEE YUN*[1], AMELIA J. EISCH[1]
[1]The Children's Hospital of Philadelphia Research Institute, University of Pennsylvania, Philadelphia, USA

Poster Session (2)

ROOM: Grand Ballroom, 3F TIME: 12:40-14:40

LS Luncheon Seminar

LS. 05
SPONSOR: Logos Biosystems
TITLE: Deeplabel immuno-staining technology and advanced tissue clearing system for high-resolution 3D imaging: Application in Alzheimer's disease research
ROOM: 211, 2F
SPEAKER: YOUNGSHIK CHOE
TIME: 12:40-14:30

LS. 06
SPONSOR: HYUNDAI Motor Company
TITLE: Human phenome: Why digital phenotyping will be a topic of the future
ROOM: 306, 3F
SPEAKERS: DONG-SEON CHANG; CHEIL MOON
Hyundai Motor Group, Head of Future Technology Strategy Team; DGIST
TIME: 12:40-14:30

LS. 07
SPONSOR: EN Luncheon Seminar
TITLE: Experimental neurobiology lunchen seminar
ROOM: 324, 3F
SPEAKERS: C. JUSTIN LEE; MIN CHO
Institute for Basic Science; Neuroscience Next at Wiley Inc
TIME: 12:40-14:30

LS. 08
SPONSOR: Women in World Neuroscience(WWN)
TITLE: Women World Neuroscience Science Policy Forum: Is there a leaky pipeline in Asia?
ROOM: 325, 3F
SPEAKERS: MUN MIOCK; XIAOHONG XU; NORIKO OSUMI; HAE YOUNG SUH; ORLY WEINREB; SO YOUNG KIM
TIME: 12:40-14:30

Socials

ORGANIZER: The Korean Society for Brain and Neural Sciences
ROOM: 320, 3F TIME: 08:00-09:00
KSBNS Council Meeting (By invitation only)

ORGANIZER: Federation of Asian-Oceanian Neuroscience Societies (FAONS)
ROOM: 322, 3F TIME: 10:00-12:00
FAONS Council Meeting (Council Members Only)

ORGANIZER: The Korean Society for Brain and Neural Science
ROOM: 324, 3F TIME: 14:50-16:30
General Assembly for The Korean Society for Brain and Neural Science

ORGANIZER: EN (Experimental Neurobiology) Journal
ROOM: 320B, 3F TIME: 20:00-22:00
EN Side Meeting (By invitation only)

Workshop

ORGANIZER: Brain Organoids Research Group
ROOM: 320A, 3F TIME: 16:30-18:30
Brain Organoids Researchers Meeting (Applicants Only)
MI-RYOUNG SONG
Gwangju Institute of Science and Technology, Korea, Republic of

Tue. (Sept. 24)

Invited Lecture

TYPE Keynote Speaker
CHAIR MU-MING POO (Institute of Neuroscience, Chinese Academy of Sciences, China)
ROOM Convention Hall, 5F TIME 08:30-09:20

IL04. 07

Neural mechanism of social and emotional behavior – from pecking order to ketamine
HAILAN HU
Zhejiang University Interdisciplinary Institute of Neuroscience and Technology, China

TYPE Dana Neuroethics Lecture
CHAIR SUNG-JIN JEONG (Korea Brain Research Institute, Korea, Republic of)
ROOM Convention Hall, 5F TIME 11:40-12:30

IL04. 08

On the ethics of neuroethics in international brain research
JUDY ILLES
Neurology and Canada Research Chair in Neuroethics at the University of British Columbia, Canada

Parallel Symposia (5)

S21

TOPIC Disorders of the nervous system
TITLE New perspectives on mental illness research
CHAIRS TORU TAKUMI (RIKEN Brain Science Institute, Japan)
HEON-JEONG LEE (Korea University, Korea, Republic of)
ROOM Convention Hall, 5F TIME 09:30-11:30

S21. 01	09:30-09:54	The critical role of ASD-related gene CNTNAP3in regulating synaptic development and social behavior in mice ZILONG QIU*[1], DALI TONG[1] [1]Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China
S21. 02	09:54-10:18	Modeling autism TORU TAKUMI*[1] [1]RIKEN, Wako, Japan
S21. 03	10:18-10:42	Circadian misalignment in mood episodes and the possibility of a novel treatment modality of controlling circadian rhythm using ICT technology HEON-JEONG LEE*[1], CHUL-HYUN CHO[1], TAEK LEE[2] [1]Korea University, Seoul, Korea, Republic of, [2]Sungshin University, Seoul, Korea, Republic of
S21. 04	10:42-11:06	Epigenetics, genomic imprinting and psychiatric illness ANTHONY ISLES*[1] [1]Cardiff University, Cardiff, UK
S21. 05	11:06-11:30	Pseudo-immaturity of the brain inducible by neural hyperexcitation is shared by multiple neuropsychiatric disorders TSUYOSHI MIYAKAWA*[1] [1]Fujita Health University, Toyoake, Japan

S22

TOPIC Sensory and motor systems
TITLE Multi-areal circuit mechanisms of action
CHAIR KAZUO KITAMURA (University of Yamanashi, Japan)
ROOM 211, 2F TIME 09:30-11:30

S22. 01	09:30-10:00	Inhibitory basal ganglia inputs induce excitatory motor signals in the thalamus DAESOO KIM*[1], JEONGJIN KIM[2] [1]KAIST, Daejeon, Korea, Republic of, [2]KIST, Seoul, Korea, Republic of
S22. 02	10:00-10:30	Functional connectivity between the neocortex and the cerebellum KAZUO KITAMURA*[1] [1]University of Yamanashi, Yamanashi, Japan
S22. 03	10:30-11:00	Cerebellar modulation of the basal ganglia KAMRAN KHODAKHAH*[1] [1]Albert Einstein College Med, New York, USA
S22. 04	11:00-11:30	The nature of dopamine signals during spatial navigation NAOSHIGE UCHIDA*[1], HYUNGGOO KIM[1] [1]Harvard University, Cambridge, USA

S23

TOPIC Glia, glia-neuron interactions
TITLE The role of NG2 glia in brain disorders
CHAIRS JIAWEI ZHOU (Institute of Neuroscience, Chinese Academy of Sciences, China)
KATARINA AKASSOGLOU (University of California, San Francisco, USA)
ROOM 306, 3F TIME 09:30-11:30

S23. 01	09:30-10:00	Regulation of NG2 glia by inhibitory neurons in the developing and regenerating brain. ANASTASSIA VORONOVA*[1], ADRIANNE WATSON[1], BEATRIX WANG[1], TIM FOOTZ[1] [1]University of Alberta, Edmonton, Canada
S23. 02	10:00-10:30	Neurovascular interactions: Mechanisms, imaging, and therapeutics KATERINA AKASSOGLOU*[1], RESHMI TOGNATTA[2], MARK PETERSEN[3] [1]Gladstone Institutes/UCSF, San Francisco, USA, [2]Gladstone Institutes, San Francisco, USA, [3]Gladstone Institutes/UCSF, San Francisco, USA
S23. 03	10:30-11:00	GABAergic signaling to NG2 glia in de- and re-myelination FRANK KIRCHHOFF*[1] [1]University of Saarland, Homburg, Germany
S23. 04	11:00-11:30	NG2 glia regulate brain innate immunity via TGF-β2 / TGFBR2 axis JIAWEI ZHOU*[1] [1]Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China

Tue. (Sept. 24)

S24

TOPIC: Physiology: Neuronal excitability and synapse function
TITLE: The NMDA receptors in synapse physiology and brain diseases
CHAIR: NIGEL EMPTAGE (University of Oxford, UK)
ROOM: 324, 3F TIME: 09:30-11:30

S24.01 09:30-10:00
The dopaminergic receptors control the availability of the NMDA receptor co-agonist D-serine to enable proper synaptic activity and cognitive function
JEAN-PIERRE MOTHET*[1]
[1]CNRS - ENS Paris Saclay, Orsay, France

S24.02 10:00-10:30
A role for presynaptic NMDA receptors in hippocampal plasticity
NIGEL EMPTAGE*[1], ZAHID PADAMSEY[1]
[1]University of Oxford, Oxford, UK

S24.03 10:30-11:00
Early correction of NMDA receptor dysfunction in mouse models of autism
EUNJOON KIM*[1]
[1]KAIST, Daejeon, Korea, Republic of

S24.04 11:00-11:30
Role of extrasynaptic NMDA receptors in prodromal Huntington disease
LYNN RAYMOND*[1], WISSAM NASSRALLAH[2], JAMES MACKAY[2], RUJUN KANG[2]
[1]Univ. of British Columbia, Vancouver, Canada, [2]University of British Columbia, Vancouver, Canada

S25

TOPIC: Cognition and behavior
TITLE: Behavioral control and reward-seeking
CHAIR: ANDREW LAWRENCE (Florey Institute of Neuroscience & Mental Health, Australia)
ROOM: 325, 3F TIME: 09:30-11:30

Sponsored by BJP

S24.01 09:30-10:00
Experience-based changes to decision-making circuits and implications for behavioural control
LAURA CORBIT*[1], SERENA BECCHI[2], MICHAEL KENDIG[2]
[1]University of Toronto, Toronto, Canada, [2]University of New South Wales, Sydney, Australia

S24.02 10:00-10:30
Prefrontal regulation of punished ethanol self-administration
ANDREW HOLMES*[1]
[1]NIH, Bethesda, USA

S24.03 10:30-11:00
Ventral striatopallidal circuits that promote or prevent reward seeking
GAVAN MCNALLY*[1]
[1]UNSW, Sydney, Australiaà

S24.04 11:00-11:30
Using intensive longitudinal data in addiction research
VALENTINA VENGELIENE*[1]
[1]Department of Neurobiology and Biophysics, Institute of Biosciences, Life Sciences Center, Vilnius University, Vilnius, Lithuania

Special Program

ROOM: Hotel Inter-Burgo EXCO, Iris Hall, B1 TIME: 19:00-21:00
KAOS-KBRI Brain Show

Invited Lecture

TYPE: Keynote Speaker
CHAIR: YUKIKO GODA (RIKEN Center for Brain Science, Japan)
ROOM: Convention Hall, 5F TIME: 17:00-17:50

IL04.09
Neural mechanisms of synapse remodeling in the developing brain
MASANOBU KANO
Department of Neurophysiology, Graduate School of Medicine, The University of Tokyo, Japan

Parallel Symposia (6)

S26

TOPIC: Disorders of the nervous system
TITLE: Advances in neurodegenerative diseases research
CHAIR: ZHI-YING WU (Zhejiang University, China)
ROOM: Convention Hall, 5F TIME: 14:50-16:50

S26.01 14:50-15:20
Clinical profiles and *HTT* haplotype analysis in Chinese patients with Huntington's disease
ZHI-YING WU*[1]
[1]Department of Neurology and Research Center of Neurology, Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China

S26.02 15:20-15:50
Stem cell-based therapy for Parkinson's disease
JUN TAKAHASHI*[1]
[1]Kyoto University / Center for iPS Cell Research and Application, Kyoto, Japan

S26.03 15:50-16:20
Mechanism of pathological progression in Parkinson disease
SEUNG-JAE LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

S26.04 16:20-16:50
Investigating roles for Alzheimer's disease-associated genetic variants in microglia
HUAXI XU*[1]
[1]Sanford Burnham Prebys Medical Discovery Institute, La Jolla, USA

Tue. (Sept. 24)

S27

TOPIC: Sensory and motor systems
TITLE: Magnetoreception, the sixth sense of animal: From worms to human
CHAIR: KWON-SEOK CHAE (Kyungpook National University, Korea, Republic of)
ROOM: 211, 2F TIME: 14:50-16:50

S27.01 | 14:50-15:20
Cryptochrome-based magnetic sensing
PETER HORE*[1]
[1]University of Oxford, Oxford, UK

S27.02 | 15:20-15:50
A magnetic protein biocompass and beyond
CAN XIE*[1], PEILIN YANG[2], TIANTIAN CAI[2]
[1]Peking University, Beijing, China, [2]State Key Laboratory of Membrane Biology, Laboratory of Molecular Biophysics, School of Life Sciences, Peking University, Beijing, China

S27.03 | 15:50-16:20
The mysterious magnetic sense
DAVID KEAYS*[1]
[1]Research Institute of Molecular Pathology, Vienna, Austria

S27.04 | 16:20-16:50
Light and inclination compass mediated human magnetoreception in geomagnetic food orientation
KWON-SEOK CHAE*[1]
[1]Kyungpook National University, Daegu, Korea, Republic of

S28

TOPIC: Homeostatic and neuroendocrine systems — Mini-Symposia
TITLE: The gating and maintenance of sleep and wake: New circuits and insights
CHAIR: PATRICK FULLER (Harvard Medical School, USA)
ROOM: 306, 3F TIME: 14:50-16:20

S28.01 | 14:50-15:13
Organism-level systems biology by next-generation genetics and whole-organ cell profiling
HIROKI UEDA*[1]
[1]University of Tokyo / RIKEN(BDR), Tokyo / Osaka, Japan

S28.02 | 15:13-15:36
Roles of the basal ganglia in physiological sleep-wake cycles and sleep disorders of Parkinson's disease
ZHI-LI HUANG*[1], WEI-MIN QU[1]
[1]Department of Pharmacology, School of Basic Medical Sciences; State Key Laboratory of Medical Neurobiology; Institutes of Brain Science and Collaborative Innovation Center for Brain Science, Shanghai Medical College, Fudan University, Shanghai, China

S28.03 | 15:36-15:59
The brain mechanisms underlying the desire to sleep in boring situations
MICHAEL LAZARUS*[1]
[1]University of Tsukuba, International Institute for Integrative Sleep Medicine, Tsukuba, Japan

S28.04 | 15:59-16:20
Genetic dissection of hypothalamic arousal systems
PATRICK FULLER*[1]
[1]BIDMC / Harvard Medical School, Boston, USA

S29

TOPIC: Physiology: Systems / network functions, computational neuroscience
TITLE: Recent advances in systems and computational neuroscience
CHAIR: MAYANK MEHTA (University of California, Los Angeles, USA)
ROOM: 324, 3F TIME: 14:50-16:50

S29.01 | 14:50-15:14
Rhythms and spatial representation in the entorhinal-hippocampal network
LAURA COLGIN*[1]
[1]University of Texas at Austin, Austin, TX, USA

S29.02 | 15:14-15:38
Asynchronous irregular states during wakefulness, and Up/Down states during sleep: How to make sense of this activity?
ALAIN DESTEXHE*[1]
[1]CNRS, Paris-Saclay, France

S29.03 | 15:38-16:02
Hippocampus as a multisensory association circuit
MAYANK MEHTA*[1]
[1]UCLA, Los Angeles, USA

S29.04 | 16:02-16:26
Degeneracy in robust spatial encoding
RISHIKESH NARAYANAN*[1]
[1]Indian Institute of Science, Bangalore, India

S29.05 | 16:26-16:50
Reconciling grid cells with place cells over a set of flexible charts
ALESSANDRO TREVES*[1], CHOL JUN KANG[2], DAVIDE SPALLA[1], FEDERICO STELLA[3], REMI MONASSON[4]
[1]SISSA, Trieste, Italy, [2]Kim Il Sung University, Pyongyang, Korea, Dem. People's Rep., [3]IST Austria, Klosterneuburg, Austria, [4]ENS, Paris, France

S30

TOPIC: Cognition and behavior — Mini-Symposia
TITLE: The "emotional thalamus" on the regulation of reward, fear, and aversion
CHAIR: FABRICIO DO MONTE (The University of Texas Health Science Center at Houston, USA)
ROOM: 325, 3F TIME: 14:50-16:20

S30.01 | 14:50-15:13
Molecular and circuit mechanisms underlying paraventricular thalamic regulation of habituation to repeated stress
SEEMA BHATNAGAR*[1], BRIAN CORBETT[2]
[1]University of Pennsylvania School of Medicine, Philadelphia, USA, [2]Children's Hospital of Philadelphia, Philadelphia, USA

S30.02 | 15:13-15:36
Peptidergic signaling in the paraventricular thalamus: Effects on food intake and reward
ZHI YI ONG*[1], JING-JING LIU[2], ZHIPING PANG[2], HARVEY GRILL[3]
[1]School of Psychology, University of New South Wales, Sydney, Australia, [2]Child Health Institute of New Jersey, Rutgers University Robert Wood Johnson Medical School, New Brunswick, New Jersey, USA, [3]Department of Psychology, University of Pennsylvania, Philadelphia, Pennsylvania, USA

S30.03 | 15:36-15:59
The paraventricular nucleus of the thalamus: A critical node for mediating individual differences in cue-motivated behaviors
SHELLY FLAGEL*[1]
[1]University of Michigan, Ann Arbor, USA

S30.04 | 15:59-16:20
Overcoming fear to obtain food: Focus on the paraventricular thalamus
FABRICIO DO MONTE*[1], DOUGLAS ENGELKE[1], LEAH OLIVO[2], JOSE FERNANDEZ-LEON[1], JOHN O'MALLEY[1], XU ZHANG[1], SA LI[3], GILBERT KIROUAC[3], MICHAEL BEIERLEIN[1]
[1]The University of Texas Health Science Center, Houston, USA, [2]Rice University, Houston, USA, [3]University of Manitoba, Winnipeg, Canada

Tue. (Sept. 24)

Poster Session (3)

ROOM Grand Ballroom, 3F TIME 12:40-14:40

LS Luncheon Seminar

LS. 09

SPONSOR Merck Ltd. Korea
TITLE Quantification of low abundant neurodegenerative biomarkers in blood using MILLIPLEX® and SMC™ high sensitivity Immunoassays
ROOM 211, 2F
SPEAKER MICHAEL GODENY
Head of MILLIPLEX Reagent Portfolio
TIME 12:40-14:30

LS. 10

SPONSOR JSK Biomed Inc.
TITLE Every step of the way: Development, optimization, and validation of stem cell neurons
ROOM 306, 3F
SPEAKER MIKE CLEMENTS
Axion BioSystems, Inc., Atlanta, GA, United States
TIME 12:40-14:30

LS. 11

SPONSOR Allen Institute for Brain Science
TITLE Exploring the landscape of the brain with the Allen Cell Types Database
ROOM 324, 3F
SPEAKER JEREMY MILLER
TIME 12:40-14:30

LS. 12

SPONSOR 2019 Global Neuroethics Summit
TITLE No longer Unthinkable: Why the 21st century neuroscientist needs neuroethics
ROOM 325, 3F
SPEAKERS MU-MING POO; KHARA RAMOS; NORIHIRO SADATO; ARLEEN SALLES; SUNG-JIN JEONG
Institute of Neuroscience, Chinese Academy of Sciences; NIH BRAIN Initiative; Japan Brain/MINDS; Human Brain Project; Korea Brain Initiative
TIME 12:40-14:30

Chairpersons' Dinner (By invitation only)

ROOM Hotel Inter-Burgo EXCO, Grand Ballroom B, B1 TIME 18:00-20:00

Social

ORGANIZER The Korean Society for Brain and Neural Sciences
ROOM 322, 3F TIME 18:00-20:00
The Glia Social Meeting (By invitation only)

Wed. (Sept. 25)

Invited Lecture

IL05. 10

TYPE Keynote Speaker
CHAIR JONG EUN LEE (Yonsei university College of Medicine, Korea, Republic of)
ROOM Convention Hall, 5F TIME 08:30-09:20
Chromatin-level regulation of neural stem/progenitor cell fate
YUKIKO GOTOH
Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan

IL05. 11

TYPE Plenary Lecture
CHAIR PANN-GHILL SUH (Korea Brain Research Institute, Korea, Republic of)
ROOM Convention Hall, 5F TIME 11:40-12:30
Modulation of short-term plasticity at a glutamatergic synapse
ERWIN NEHER
Max Planck Institute for Biophysical Chemistry, Germany

Parallel Symposia (7)

S31

TOPIC New technology - Neurotool
TITLE Next-gen neurotech
CHAIR MICHAEL ROUKES (California Institute of Technology, USA)
ROOM Convention Hall, 5F TIME 09:30-11:30

S31. 01	09:30-09:54	Two-photon imaging of electrical activity in awake behaving animals with ASAP-family voltage indicators MICHAEL LIN*[1] [1]Stanford University, Stanford, USA
S31. 02	09:54-10:18	Three dimensional control and imaging of the brain with light DARCY PETERKA*[1, 2] [1]Zuckerman Mind Brain Behavior Institute, Columbia University, New York, USA, [2]Zuckerman Institute, Columbia University, New York, USA
S31. 03	10:18-10:42	Watching the brain in action: Creating tools for functional analysis of neural circuitry LIN TIAN*[1] [1]University of California, Davis, DAVIS, USA
S31. 04	10:42-11:06	Large-scale electrophysiology with Neuropixels: Scientific advances and future directions NICHOLAS STEINMETZ*[1] [1]University of Washington, Seattle, WA, USA
S31. 05	11:06-11:30	*Integrated neurophotonics*: An all-optical paradigm for dense deep-brain circuit interrogation MICHAEL ROUKES*[1] [1]California Institute of Technology, Pasadena, CA, USA

Wed. (Sept. 25)

S32

TOPIC: Sensory and motor systems
TITLE: Novel concepts of the visual hierarchy
CHAIR: TADASHI ISA (Kyoto University, Japan)
ROOM: 211, 2F
TIME: 09:30-11:30

S32.01 09:30-10:00
Possible parallel visual pathways between the pulvinar and V2 in macaques
TORU TAKAHATA*[1]
[1]Zhejiang University, Interdisciplinary Institute of Neuroscience and Technology, Hangzhou, Zhejiang, China

S32.02 10:00-10:30
Discovering the fine-scale functional organization of macaque cortex using mesoscale whole-brain mapping
WIM VANDUFFEL*[1], XIAOLIAN LI[1], QI ZHU[1]
[1]Lab. Neuro-and Psychophysiology, KU Leuven, Leuven, Belgium

S32.03 10:30-11:00
Cortical circuits for visual processing and audiovisual integration
SEUNG-HEE LEE*[1]
[1]KAIST, Daejeon, Korea, Republic of

S32.04 11:00-11:30
Neural mechanisms and functions of blindsight
TADASHI ISA*[1]
[1]Kyoto University, Kyoto, Japan

S33

TOPIC: Homeostatic and neuroendocrine systems
TITLE: Dialing in the dialogue between inflammation and the brain
CHAIR: KEITH W. KELLEY (University of Illinois, USA)
ROOM: 306, 3F
TIME: 09:30-11:30

S33.01 09:30-10:00
Changes in the interface between bacteria and the brain in mouse models of neurodevelopmental disease
ELISA HILL-YARDIN*[1], ELISA HILL[2], SAMANTHA MATTA[3], GAYATHRI BALASURIYA[1], GABRIELLE BELZ[4], PETER CRACK[3], SAMIHA SHARNA[1], TANYA ABO-SHABAN[1], SUZANNE HOSIE[5], ASHLEY FRANKS[6]
[1]RMIT University, Bundoora, Australia, [2]The University of Melbourne, Bundoora, Australia, [3]The University of Melbourne, Parkville, Australia, [4]Walter and Eliza Hall Institute, Parkville, Australia, [5]RMIT University, Bundoora, Australia, [6]La Trobe University , Bundoora, Australia

S33.02 10:00-10:30
Neuroimmune consequences of early life dietary and immune experience
SARAH J. SPENCER*[1], LUBA SOMINSKY[1], ALITA SOCH[1], ILVANA ZIKO[1], SIMONE DELUCA[1]
[1]RMIT University, Melbourne, Australia

S33.03 10:30-11:00
Brain to immune and back: Neuroendocrine regulatory pathways of inflammation and CNS Leukocyte trafficking underlying psychological and physical health interface
SUZI HONG*[1]
[1]University of California San Diego, La Jolla, USA

S33.04 11:00-11:30
Science Convergence applied to psychoneuroimmunology: The future of measurement and imaging
MARK HUTCHINSON*[1, 2]
[1]The University of Adelaide, Adelaide, Australia, [2]ARC Centre of Excellence for Nanoscale BioPhotonics, Adelaide, Australia

S34

TOPIC: Physiology: Systems/network functions, computational neuroscience
TITLE: Neuromodulatory regulation of brain health and disease: Unifying experiments and computational models
CHAIR: YEVGENIA KOZOROVITSKIY (Northwestern University, Evanston, USA)
ROOM: 324, 3F
TIME: 09:30-11:30

S34.01 09:30-10:00
Dopaminergic modulation of dendritic spine plasticity
YEVGENIA KOZOROVITSKIY*[1], MINGZHENG WU[1], SAMUEL MINKOWICZ[1], VASIN DUMRONGPRECHACHAN[1], PAULINE HAMILTON[1], LEI XIAO[1]
[1]Northwestern University, Evanston, USA

S34.02 10:00-10:30
Optogenetic control of neuromodulatory circuits in brain states
LUIS DE LECEA*[1]
[1]Stanford University, Stanford, USA

S34.03 10:30-11:00
The need for reinforcement signals other than dopamine
CHRISTOPHER D. FIORILLO*[1]
[1]KAIST, Daejeon, Korea, Republic of

S34.04 11:00-11:30
A data-driven in silico framework to predict cholinergic control of neocortical network states
SRIKANTH RAMASWAMY*[1]
[1]EPFL, Geneva, Switzerland

S35

TOPIC: Cognition and behavior
TITLE: Imaging cognition and motivation in zebrafish
CHAIR: HITOSHI OKAMOTO (RIKEN Center for Brain Science, Japan)
ROOM: 325, 3F
TIME: 09:30-11:30

S35.01 09:30-09:54
Whole-brain imaging of sensory processing in larval zebrafish
ETHAN SCOTT*[1]
[1]University of Queensland, Brisbane, Australia

S35.02 09:54-10:18
Neural circuits for visual stimulus competition in zebrafish
JULIE SEMMELHACK*[1], IVAN LAZARTE[1]
[1]HKUST, Clear Water Bay, Hong Kong SAR, China

S35.03 10:18-10:42
Organizational logic of the locus coeruleus noradrenergic system
JIULIN DU*[1]
[1]Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China

S35.04 10:42-11:06
A nonlinear oscillator coordinates brain-wide motivational state during foraging
JENNIFER LI*[1], DREW ROBSON[1], MENG LI[1], JOAO MARQUES[1], DIANE SCHAAK[1]
[1]Harvard University, Cambridge, USA

S35.05 11:06-11:30
in-vivo imaging of the telencephalic neural activities in the closed-loop virtual reality environment revealed active inference in decision making
HITOSHI OKAMOTO*[1], MAKIO TORIGOE[2]
[1]RIKEN Center for Brain Science, Wako, Japan, [2]RIKEN Center for Brain Science, Wako, Saitama 351-0198, Japan

Wed. (Sept. 25)

Parallel Symposia (8)

S36

TOPIC: New technology - Neurotool
TITLE: Advance in circuit interrogation technologies
CHAIR: HARUHIKO BITO (University of Tokyo, Japan)
ROOM: Convention Hall, 5F
TIME: 14:50-16:50

S36.01 14:50-15:20
Neural circuitry of looming induced innate fear responses
LIPING WANG*[1], ZHENG ZHOU[1], XUEMEI LIU[1], SHANPING CHEN[1], ZHIJIAN ZHANG[2], YUANMING LIU[1], QUENTIN MONTARDY[1], YONGQIANG TANG[1], PENGFEI WEI[1], NAN LIU[1], GUOQIANG BI[3], GUOPING FENG[4], FUQIANG XU[2]
[1]Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China, [2]Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, Wuhan, China, [3]University of Science and Technology of China, Hefei, China, [4]Massachusetts Institute of Technology, Cambridge, USA

S36.02 15:20-15:50
Multiplex imaging of neural activity and signaling dynamics
HARUHIKO BITO*[1]
[1]The University of Tokyo, Tokyo, Japan

S36.03 15:50-16:20
Synaptic engram
BONG-KIUN KAANG[1]
[1]Seoul National University, Seoul, Korea, Republic of

S36.04 16:20-16:50
All-optical closed-loop interrogation of neural circuits in behaving animals
MICHAEL HAUSSER*[1]
[1]University College London, London, UK

S37

TOPIC: Sensory and motor systems — Mini-Symposia
TITLE: Birdsong, a tractable model system for studying basal ganglia and dopamine-dependent skill learning
CHAIR: SATOSHI KOJIMA (Korea Brain Research Institute, Korea, Republic of)
ROOM: 211, 2F
TIME: 14:50-16:20

S37.01 14:50-15:20
Songbird basal ganglia circuits generate exploratory motor variability and guide cortical motor plasticity to improve vocal performance
SATOSHI KOJIMA*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

S37.02 15:20-15:50
Dissecting the role of dopamine and the basal ganglia in vocal learning and vocal fluency
TODD ROBERTS*[1]
[1]UT Southwestern Medical Center, Dallas, USA

S37.03 15:50-16:20
A computational view on motor exploration during reinforcement learning
RICHARD HAHNLOSER*[1], ANJA ZAI[1]
[1]ETH Zurich, Zürich, Switzerland, 21972, Zürich, Switzerland

S38

TOPIC: Glia, glia-neuron interactions
TITLE: Neuron-glia interactions in sensory disorders
CHAIR: SUNG JOONG LEE (Seoul National University, Korea, Republic of)
ROOM: 306, 3F
TIME: 14:50-16:50

S38.01 14:50-15:20
Emerging role of schwann cells in neurological disorders: Receptors, glial mediators and myelination
GANG CHEN*[1]
[1]Medical School of Nantong University, Nantong, China

S38.02 15:20-15:50
Pivotal role of spinal astrocytes in the chronicity of itch
MAKOTO TSUDA*[1]
[1]Kyushu University, Fukuoka, Japan

S38.03 15:50-16:20
IKK/NF-κB-dependent satellite glia activation induces spinal cord microglia activation and neuropathic pain via ganglioside-TLR2 signaling
SUNG JOONG LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

S38.04 16:20-16:50
Sex, pain and microglia
MICHAEL SALTER*[1]
[1]SickKids, The Hospital for Sick Children, Toronto, Canada

S39

TOPIC: Physiology: Systems/network functions, computational neuroscience
TITLE: Valence and reward encoding
CHAIR: LAN MA (Fudan University, China)
ROOM: 324, 3F
TIME: 14:50-16:50

S39.01 14:50-15:20
Neural circuits for reinforcement learning and mental simulation
KENJI DOYA*[1]
[1]OIST, Onna, Okinawa, Japan

S39.02 15:20-15:50
Roles of striatal direct and indirect pathways in value-based decision making
MIN WHAN JUNG*[1], JUNG SHIN[1], SHINAE KWAK[1]
[1]KAIST/IBS, Daejeon, Korea, Republic of

S39.03 15:50-16:20
Chasing the circuitry mechanisms of reward anticipation
OREN PRINCZ-LEBEL[1], MIGUEL SKIRZEWSKI*[1]
[1]University of Western Ontario, London, Ontario, Canada

S39.04 16:20-16:50
Cocaine reward and circuitry: How engram encodes a specific memory
LAN MA*[1], YIMING ZHOU[1], HUIWEN ZHU[1], XING LIU[1]
[1]State Key Laboratory of Medical Neurobiology, School of Basic Medical Sciences and Institutes of Brain Science, Fudan University, Shanghai, China

Wed. (Sept. 25)

S40

TOPIC: Development
TITLE: Development and plasticity of brain connectivity
CHAIR: ALAIN CHEDOTAL (Institut de la Vision, France)
ROOM: 325, 3F TIME: 14:50-16:50

S40. 01	14:50-15:20	Revisiting midline crossing ALAIN CHEDOTAL*[1] [1]Institut de la Vision, Paris, France
S40. 02	15:20-15:50	Activity-dependent and molecular mechanisms regulating the development of cortical connectivity LINDA J. RICHARDS*[1] [1]The University of Queensland, Queensland Brain Institute, Brisbane, Australia
S40. 03	15:50-16:20	Wiring thalamocortical connectivity: From axon guidance to plasticity GUILLERMINA LOPEZ-BENDITO*[1] [1]Instituto de Neurociencias, Alicante, Spain
S40. 04	16:20-16:50	In vivo imaging of the developing cerebral cortex to elucidate the mechanism for activity-dependent circuit maturation HIDENOBU MIZUNO*[1] [1]Kumamoto University, Kumamoto city, Japan

Poster Session (4)

ROOM: Grand Ballroom, 3F TIME: 12:40 -14:40

LS Luncheon Seminar

LS. 13
SPONSOR: National Research Foundation of Korea
TITLE: Public hearing for Korean neuroscience advancement program: Korean neuroscientists only
ROOM: 211, 2F TIME: 12:40-14:30

LS. 14
SPONSOR: National Research Center for Dementia in Chosun University(NRCD)
TITLE: Incorporation of novel biomarkers to transform AD from a diagnosis of exclusion to a diagnosis of inclusion.; Distinctive roles of Ataxin-1 in Alzheimer's disease and spinocerebellar ataxia type 1; Genome-wide association analyses of multimodal biomarkers for AD
ROOM: 306, 3F
SPEAKERS: MARWAN NOEL SABBAGH; JAE-HONG SUH; KUN-HO LEE
Lou Ruvo Center for Brain Health, Cleveland Clinic Nevada; Harvard Medical School, Massachusetts General Hospital; National Research Center for Dementia
TIME: 12:40-14:30

LS. 15
SPONSOR: ZEISS Korea
TITLE: Advanced Neuroscience Imaging Trend
SPEAKER: XIANKE SHI
ROOM: 324, 3F TIME: 12:40-14:30

LS. 16
SPONSOR: NIKON
TITLE: Nikon MP Products for Neuroscience Research
SPEAKER: YOSHIRO OIKAWA
Visiting Professor, Kyoto University
ROOM: 325, 3F TIME: 12:40-14:30

Closing Ceremony

ROOM: Convention Hall, 5F TIME: 17:00-17:50

Scientific Program

POSTER SESSIONS

Sun. (Sep. 22) - Poster Session (1)
Mon. (Sep. 23) - Poster Session (2)
Tue. (Sep. 24) - Poster Session (3)
Wed. (Sep. 25) - Poster Session (4)

Sun. (Sept. 22)

Poster Session (1)

Cognition and behavior

P00.01 **Neural correlates of auditory perception**

PATRICK KRAUSS*[1]
[1]University Hospital Erlangen, Erlangen, Germany

P00.02 **The relationship between symptom prevalence, body image, and quality of life in iranian gynecologic cancer patients**

ZAHRA MAJDI*[1], AMIR HOSSEIN ASHNA[2], FAEZEH AGHAYAN GOL KASHANI[3]
[1]Kharazmi University, Tehran, Iran, [2]Refah University, Tehran, Iran, [3]Tehran University, Tehran, Iran

P00.03 **Treatment decision making in early-stage papillary thyroid cancer**

FAEZEH AGHAYAN KOL KASHANI*[1], AMIR HOSSEIN ASHNA[2], ZAHRA MAJDI[3]
[1]Tehran University, Tehran, Iran, [2]Refah University, Tehran, Iran, [3]kharazmi University, Tehran, Iran

P00.04 **A thalamic complex specifically involved in social behavior based on chemogenetic evidence in the rat**

DAVID KELLER*[1], EMESE A. FAZEKAS[2], ARPAD DOBOLYI[1]
[1]Laboratory of Neuromorphology, Department of Anatomy, Histology and Embryology, Semmelweis University, Budapest, Hungary, [2]MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Department of Physiology and Neurobiology, Eötvös Loránd University and the Hungarian Academy of Sciences, Budapest, Hungary

P00.05 **Rapid, biphasic CRF neuronal responses encode positive and negative valence**

JINEUN KIM*[1], GREG SUH*[2]
[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [2]Korea Advanced Institute of Science and Technology, Dajeeon, Korea, Republic of

P00.06 **Prefrontal innervation of the mesolimbic system**

ÁKOS BABICZKY*[1], DÓRA ZSÍROS[2], JUDIT BERCZIK[2], ANNA FEHÉR[2], FERENC MÁTYÁS[3]
[1]Neuronal Networks and Behaviour Research Group, Research Centre for Natural Sciences, Hungarian Academy of Sciences/Doctoral School of Psychology-Cognitive Science, Budapest University of Technology and Economics, Budapest, Hungary, [2]Neuronal Networks and Behaviour Research Group, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary, [3]Neuronal Networks and Behaviour Research Group, Research Centre for Natural Sciences, Hungarian Academy of Sciences/Department of Anatomy and Histology, University of Veterinary Medicine, Budapest, Hungary, Budapest, Hungary

P00.07 **Slow-wave sleep are dissociated from paradoxal sleep after contextual fear extinction in rats**

LUIZ HENRIQUE SANTANA*[1], KARIN MOREIRA[2], PAULA AYAKO TIBA[3]
[1]University of São Paulo, São Paulo, Brazil, [2]Federal University of São Paulo, São Paulo, Brazil, [3]Federal University of ABC, São Bernardo do Campo, Brazil

P00.08 **Frontal EEG alpha asymmetry changes while watching emotional film clips and role of difference pair of frontal electrodes: A preliminary study**

WICHULADA SUWANNAPU*[1], NATCHAREE KRAIWATTANAPIROM[2], SURADATE PRAYOONSAK[3], VORASITH SIRIPORNPANICH*[1]
[1]Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand, [2]Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand, [3]Department of Educational Psychology and Guidance, Mahasarakham University, Mahasarakram, Thailand

P00.09 **Chronic activation of 5-HT2A receptors with highly selective agonists affects the behavior and the BDNF system of C57Bl6/J mice**

TATIANA ILCHIBAEVA*[1], ANTON TSYBKO[1], ELENA FILIMONOVA[1], DMITRIY EREMIN[1], NINA POPOVA[1]
[1]The Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

P00.10 **Nigrostriatal dopamine system is implicated in the regulation of genetically-defined aggressive behavior in rats**

ANTON TSYBKO*[1], TATIANA ILCHIBAEVA[1], RIMMA KOZHEMYAKINA[1], DMITRY EREMIN[1], VLADIMIR NAUMENKO[1]
[1]The Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

P00.11 **Auditory pathway and Alzheimer's disease**

KANEEZ FATIMA SHAD*[1], TY LEES[1], SARA LAL[1], YASHAR AGHAZADEH[2], BODO KRESS[3]
[1]University of Technology Sydney, Sydney, Australia, [2]Chefarzt des Instituts für Neuroradiologie, Krankenhaus Nordwest, Steinbacher Hohl 2-26, , Frankfurt, Germany, [3]Chefarzt des Instituts für Neuroradiologie, Krankenhaus Nordwest, Steinbacher Hohl 2-26, Frankfurt, Germany

P00.12 **The free energy principle for perception and behavior**

CHANG SUB KIM*[1]
[1]Chonnam National University, Gwangju, Korea, Republic of

P00.13 **Effect of cerebral dopamine neurotrophic factor (CDNF) on the behavior and expression of the key genes of the brain serotonin system in C57Bl6/J mice**

DMITRIY EREMIN*[1, 2], TATIANA ILCHIBAEVA[3], NIKITA KHOTSKIN[3], VLADIMIR NAUMENKO[3], ANTON TSYBKO[3]
[1]The Federal Research Center Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia, [2]Novosibirsk State University, Novosibirsk, Russia, [3]The Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

P00.14 **Melatonin recovers cognitive impairments caused by sub-chronic methamphetamine administration in adult mice**

THIT LWIN*[1], PONGRUNG CHANCHAROEN[1], NISARATH VESCHSANIT[1], SUKONTHAR NGAMPRAMUAN[1], KITTIKUN VIWATPINYO[1], SUJIRA MUKDA*[1]
[1]Mahidol University, Nakhon Pathom, Thailand

P00.15 **A dominant visual pathway in sex hormone-dependent color cognition in zebra finches**

YI-TSE HSIAO*[1], TA-CHING CHEN[2], CHENG-MING CHUONG[3], PIN-HUAN YU[1], FANG-CHIA CHANG*[1]
[1]Department of Veterinary Medicine, School of Veterinary Medicine, National Taiwan University, Taipei, Taiwan, China, [2]Department of Ophthalmology, College of Medicine, National Taiwan University, Taipei, Taiwan, China, [3]Department of Pathology, University of Southern California, Los Angeles, California, USA , Los Angeles, USA

P00.16 **Obesity impairs cognition and leads to morphological and neurogenic alterations**

CAROLINE FERNANDES DA SILVA*[1], LETICIA FORNY-GERMANO[1], JEAN HOUZEL[1], SÉRGIO FERREIRA[1], JOSÉ DONATO[2], FERNANDA DE FELICE[1]
[1]Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, [2]University of São Paulo, São Paulo, Brazil

P00.17 **Pre and post Exposure of voglibose and sexagliptin improves brain injury and cognition in MCAo induced stroke and cognitive decline**

VISHAL CHAVDA[1], SNEHAL PATEL*[2]
[1]Department of Pharmacology, Institute of Pharmacy, Nirma University, Ahmadabad, India, [2]Department of Pharmacology, Institute of Pharmacy, Nirma University, Ahmedabad, India

P00.18 **Oxytocin regulates differentially in male and female mice conspecific olfactory preference behavior**

SUNIL DHUNGEL*[1, 2], DILIP RAI[3], MISAO TEREDA[4], CHITOSE ORIKASA[5], KATSUHIKO NISHIMORI[6], YASUO SAKUMA[7], YASHUHIKO KONDO[8]
[1]Nepalese Army Institute of Health Sciences/ Neuroscience Society of Nepal, Department of Physiology, Nippon Medical School, Kathmandu, Nepal, [2]Nepalese Army Institute of Health Sciences/ Neuroscience Society of Nepal, Kathmandu, Nepal, [3]Department of Physiology, Nippon Medical School, Tokyo, Japan, Bunkyo ku, Tokyo, Japan, [4]Laboratory Animal Research Center, Dokkyo Medical School, Tochigi, Japan, [5]Department of Physiology, Nippon Medical School, Bunkyoku, Tokyo, Japan, [6]Department of Molecular and Cell Biology, Tohoku University, Miyagi, Japan, [7]Department of Physiology, Nippon Medical School, University of Tokyo Health Sciences, Tokyo, Bunkyoku, Tokyo, Japan, [8]Department of Physiology, Nippon Medical School; Department of Animal Sciences, Teikyo University of Science, Bunkyoku, Tokyo, Japan

P00.19 **The effect of Peroxisome Proliferator-Activated Receptor- γ on Harmaline-induced cognitive impairments in rats**

VAHID HAJALI*[1], IRAJ AGHAEI[2], MOHAMAD SHABANI[3]
[1]Department of Neuroscience, Mashhad University of Medical Sciences, Mashhad, Iran, [2]Department of Neuroscience, Poursina Hospital, Guilan University of Medical Sciences, Rasht, Iran, Guilan, Iran, [3]Intracellular Recording Lab, Neuroscience Research Center, Neuropharmacology Institute, Kerman University of Medical Sciences, Kerman, Kerman, Iran

P00.20 **Sustained dopaminergic bursts and noradrenergic pauses favor exploitative behavioral states**

AARON KORALEK*[1], RUI COSTA[1]
[1]Columbia University, New York, USA

P00.21 **Melatonin attenuated neuroinflammation and cognitive impairment in aging mice**

PONGRUNG CHANCHAROEN*[1], SUKONTHAR NGAMPRAMUAN[1], PIYARAT GOVITRAPONG[1], SUJIRA MUKDA*[1]
[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakorn Pathom, Thailand

P00.22 **The emerging role of posterior parietal cortex in cocaine reward-context association**

SE JIN JEONG*[1], SHIJIE XU[2], UNG GU KANG[2, 3], JA WOOK KOO[1]
[1]Behavioral Neuroepigenetics Lab (BNL), Department of Neural Development and Disease, Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [2]Institute of Human Behavioral Medicine, Medical Research Center, Seoul National University, Seoul, Korea, Republic of, [3]Department of Psychiatry and Behavioral Science, Seoul National University, College of Medicine, Seoul, Korea, Republic of

P00.23 **Neural correlates of visual context representations in the CA3 following lesions in the dentate gyrus of the hippocampus**

CHOONG-HEE LEE*[1], INAH LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P00.24 **Differential coding of motivational context between the dorsal and ventral areas of the hippocampus**

SEUNG-WOO JIN*[1], JHOSEPH SHIN[1], INAH LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P00.25 **Defining latent place fields based on theta phase precession in the subiculum**

SU-MIN LEE*[1], HYUN-WOO LEE[1], INAH LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P00.26 **Social decision making network involved in intrasexual aggression in zebrafish**

MARIA FLORENCIA SCAIA*[1], IBUKUN AKINRINADE[2], RUI OLIVEIRA[2]
[1]University of Buenos Aires - FCEyN, Buenos Aires, Argentina, [2]Instituto Gulbenkian de Ciencia, Lisbon, Portugal

P00.27 **Task-related component analysis of electroencephalogram signals during emotional face recognition: A case study of ERP**

ZAHRA TABANFAR[1], FARNAZ GHASSEMI*[1]
[1]Amirkabir University of Technology, Tehran, Iran

P00.28 **Anti-oxidant and behavioural effects of aqueous extract of *Terminalia macroptera***

LYDIA IOR*[1], STEFANO NEGRI[2], OTIMENYIN SUNDAY[3], FLAVIA GUZZO[2], ATIENE SAGAY[1]
[1]University of Jos, Jos, Nigeria, [2]University of Verona, Verona, Italy, [3]University of Jos, Jos, Italy

P00.29 **The function of the Fasciola Cinereum in object-place recognition memory**

EUN YOUNG LEE[1], SEONG-BEOM PARK[1], INAH LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P00.30 **Methylphenidate (MPH) produces conditioned place preference (CPP) in marmoset monkeys and cannabidiol exposure during extinction do not inhibit the reinstatement of MPH-induced CPP**

ADEL KASHEFI*[1], CARLOS TOMAZ[2]
[1]Universidade de Brasiia, Brasilia, Iran, [2]University of Brasilia, Brasilia, Brazil

P00.31 **Adult hippocampal cytogenesis: behavioral correlates and function in the female brain**

PATRICIA PATRICIO[1], ANTÓNIO MATEUS-PINHEIRO[2], TIAGO SILVEIRA-ROSA[1], JOANA SOFIA CORREIA[1], JOANA MARGARIDA SILVA[1], NUNO DINIS-ALVES[1], ANA RITA MACHADO-SANTOS[1], IOANNIS SOTIROPOULOS[1], NUNO SOUSA[1], LUÍSA PINTO*[2]
[1]Life and Health Sciences Research Institute (ICVS); School of Medicine, University of Minho, Braga, Portugal, [2]Life and Health Sciences Research Institute (ICVS); School of Medicine, University of Minho, BRAGA, Portugal

P00.32 **The combined neuropsychological test and EEG assessment of cognitive functions in methamphetamine abusers with and without psychosis**

NATCHAREE KRAIWATTANAPIROM*[1], WICHULADA SUWANNAPU[2], VORASITH SIRIPORNPANICH[2], BANTHIT CHETSAWANG[2]
[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand, [2]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom , Thailand

P00.33 **Patients with ADHD are being overmedicated (for optimal cognitive performance)**

DAPHNE S. LING*[1], KRISTINA BALCE[1], MARGARET WEISS[2], CANDICE MURRAY[3], ADELE DIAMOND[1]
[1]The University of British Columbia, Vancouver, Canada, [2]University of Arkansas and Arkansas Children's Hospital, Little Rock, USA, [3]British Columbia Children's Hospital, Vancouver, Canada

P00.34 **Hippocampal structural correlates of neurocognitive perturbations in androgen-deprived rats**

OLUWOLE AKINOLA*[1], SARAMIDE AIYEDOGBON[2], AYODEJI RAHMON[2], FATIMOH FADELE[2], ADEOYE OYEWOPO[2]
[1]Department of Anatomy, Adeleke University, Ede, Nigeria, [2]University of Ilorin, Ilorin, Nigeria

P00.35 **Endogenous brain noise and complexity**

ALEXANDER PISARCHIK*[1], PARTH CHHOLAK[1]
[1]Technical University of Madrid, Madrid, Spain

P00.36 **Early-life stress increases susceptibility to social defeat stress in adults and causes long-lasting transcriptional and epigenetic alterations: Evidence from RNA-seq and H3K4me3-based chromatin immunoprecipitation with sequencing**

VASILIY RESHETNIKOV*[1], NIKITA ERSHOV[1], POLINA KISARETOVA[1], NATALIA BONDAR[1]
[1]Institute of Cytology and Genetics, Novosibirsk, Russia

P00.37 **Erotic suboptimal stimuli affects moral decision-making. A cross-cultural comparison**

LUIS FELIPE RIVERA*[1], ANTONIO OLIVERA LA ROSA[2], AMAURI GOUVEIA JR[3]
[1]Universidade Federal do Pará, Belém, Brazil, [2]Fundación Universitaria Luis Amigó, Medellin, Colombia, [3]Universidade Federal do Pará, Bele, Brazil

P00.38 **Deep brain stimulation of the prelimbic cortex disrupts consolidation of fear memories**

SHAWN TAN*[1], CHI HIM POON[1], YING-SHING CHAN[1], LEE WEI LIM[1]
[1]School of Biomedical Sciences, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, China., Hong Kong, Hong Kong SAR, China

P00.41 **The effects of Astilbin on dopamine transmission and long-term memory in mice**

YE-JIN KIM[1], YU-JEONG KIM[2], SO-YEON JEON[1], NA-HYUN KIM[1], KYUNG-A LEE[1], YUKIORI GOTO[3], YOUNG-A LEE*[1]
[1]Daegu Catholic Univesity, Gyeongsan-si, Gyeongbuk, Korea, Republic of, [2]Daegu Catholic Univesity Medical Center, Daegu, Korea, Republic of, [3]Kyoto University, Primate Research Institute, Inuyama, Aichi, Japan

P00.42 **Involvement of orexinergic and dopaminergic receptors within the dentate gyrus of the hippocampus in stress-induced reinstatement of morphine in food-deprived rats**

ABBAS HAGHPARAST*[1], MAHSA POURHAMZEH[2], ROGHAYEH MOZAFARI[2], SHOLE JAMALI[1], REZA AHADI[2]
[1]Neuroscience Research Center, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [2]Department of Anatomy, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

P00.43 **Role of the retrosplenial cortex in the "what" component of recognition memory**

ANA BELÉN DE LANDETA*[1], MAGDALENA PEREYRA[1], JORGE H. MEDINA[1], CYNTHIA KATCHE[1]
[1]Institute of Cell Biology and Neuroscience "Prof. E. De Robertis" (IBCN), University of Buenos Aires-CONICET, Buenos Aires, Argentina

P00.44 **Recognition of social rank in autism spectrum disorder**

YUKIORI GOTO*[1], SHINO OGAWA[2], MAYUKO IRIGUCHI[3], YOUNG-A LEE[4], SAKIKO YOSHIKAWA[2]
[1]Primate Research Institute, Kyoto University, Inuyama, Japan, [2]Kokoro Research Center, Kyoto University, Kyoto, Japan, [3]Department of Neurobiology and Behavior, Nagasaki University, Nagasaki, Japan, [4]Department of Food Sciences and Nutrition, Daegu Catholic University, Gyeongsan, Korea, Republic of

P00.45 **Paraventricular thalamus controls behavior during motivational conflict.**

EUN A CHOI*[1], PHILIP JEAN-RICHARD-DIT-BRESSEL[1], COLLIN CLIFFORD[1], GAVAN MCNALLY[1]
[1]University of New South Wales, Sydney, Australia

P00.46 **EEG reactions during recognition of written sentences about "myself" and "others" among the people practicing samatha meditation**

ALEXANDER SAVOSTYANOV*[1], SERGEY TAMOZHNIKOV[2], KLIMENTY SUDOBIN[3], ANDREY BOCHAROV[4], ALEXANDER SAPRIGYN[2], GENNADY KNYAZEV[2]
[1]Institute of Cytology and Genetics of SB RAS; Institute of Physiology and Basic Medicine, Novosibirsk State University, Novosibirsk, Russia, [2]Institute of Physiology and Basic Medicine, Novosibirsk, Russia, [3]Novosibirsk State University, Novosibirsk, Russia, [4]Institute of Physiology and Basic Medicine, Novosibirsk State University, Novosibirsk, Russia

P00.47 **Increased level of HMGB1 induced by chronic cerebral hypoperfusion without evident of amyloid-beta accumulation in an animal model of vascular cognitive impairment**

AMELIA NUR VIDYANTI*[1], CHAUR-JONG HU[2]
[1]International Phd Program in Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, China, [2]Department of Neurology, College of Medicine, Taipei Medical University, Taipei, Taiwan, China

P00.48 **Longitudinal associations of stressful life event and social support deficit with functioning in patients with acute coronary syndrome**
JU-WAN KIM[1], JAE-MIN KIM*[1]
[1]Chonnam national university, Kwangju, Korea, Republic of

P00.49 **The role of feedback in criterion inference**
HYANG-JUNG LEE[1], SANG-HUN LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P00.50 **Characterization of in vivo functions of SALM4**
EUNKYUNG LIE[1], EUNJOON KIM*[1]
[1]IBS, Daejeon, Korea, Republic of

P00.51 **Neuroprotective and cognitive-enhancing effects of *Aster glehni* extracts**
JUYEON KIM[1], MI KYUNG LIM*[1]
[1]KOREAEUNDAN Co., Seongnam-si, Korea, Republic of

P00.52 **Plasmalogens in the murine hippocampus is critical for memory processes**
MD.SHAMIM HOSSAIN*[1], KOICHI AKASHI[1], TAKEHIKO FUJINO[2], SHIRO MAW ATARI[2], SANYU SEJIMO[1]
[1]Kyushu University, Fukuoka, Japan, [2]Institute of Rheological Functions of Food, Fukuoka, Japan

P00.53 **Effects of glucose on neurons and glia to the memory processes**
YUTAKA OMURA*[1]
[1]Kyushu University, Fukuoka, Japan

P00.54 **Role of sleep using category associates in generation of false memories**
KEDARMAL VERMA*[1], NAVEEN KASHYAP[2]
[1]Indian Institute of Technology, Guwahati, India, [2]Indian Institute of Technology, Guwahati, India

P00.55 **Sociality traits affect emotion perception of visual narratives**
JINYOUNG KIM[1], YEONHWA KIM[1], SANG-HUN LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P00.56 **Impact of suicidal ideation on long-term cardiac outcomes in patients with acute coronary syndrome**
JAE-MIN KIM*[1], JU-WAN KIM[1]
[1]Chonnam national university, Gwangju, Korea, Republic of

P00.57 **Associations of obsessive-compulsive symptoms with long-term cardiac outcomes in acute coronary syndrome: effects of depression comorbidity and treatment**
JUYEON AN[1], JAE-MIN KIM*[2]
[1]Chonnam National University Hospital, Gwangju, Korea, Republic of, [2]Chonnam national university, Gwangju, Korea, Republic of

P00.58 **Effect of prenatal stress on memory, nicotine withdrawal and 5HT1A expression in raphe nuclei of adult rats**
NADIA SAID*[1], SARA LAKEHAYLI[2], MERYAM EL KHACHIBI[3], MERIAM EL OUAHLI[4], SELLAMA NADIFI[2], FARID HAKKOU[2], ABDELOUAHHAB TAZI[2]
[1]University Hassan II, Faculty of Medicine and Pharmacy, Casablanca, Morocco, [2]Hassan II University, Faculty of Medicine and Pharmacy, Casablanca, Morocco, [3]Genetics and Molecular Pathology Laboratory, Faculty of Medicine and Pharmacy, Casablanca, Morocco, [4]Sultan My Slimane University, Fac Sciences & Tecniques, Life Sciences, Beni Mellal, Morocco

P00.59 **A segmentation-based approach for detecting switching interaction**
JERIC BRIONES*[1], TAKATOMI KUBO[1], KAZUSHI IKEDA[1]
[1]Nara Institute of Science and Technology, Ikoma, Japan

P00.60 **The effect of caffeine and schizotypy on working memory performance in healthy participants**
FAIZ MOHAMMED KASSIM*[1], MATHEW MARTIN-IVERSON[2]
[1]University of Western Australia, Perth, Australia, [2]School of Biomedical Sciences, Faculty of Health and Medical Sciences, University of Western Australia, Perth, Australia

P00.61 **Boundaries on lability: Severe fear learning leads to reconsolidation-resistant memories due to noradrenergic-dependent changes in plasticity mechanisms**
JOSUE HAUBRICH*[1], KARIM NADER[1]
[1]McGill University, Montreal, Canada

P00.62 **Neural adaption of deep learning for human cognition and thinking hypothesis - Allied with engram, langram, and neural lexicon hypothesis**
ZANG-HEE CHO*[1], SUN-HA PEAK[2], YOUNG-BO KIM[3], TAIGYOUN CHO[4]
[1]Suwon university, Hwasung Gyunggi, Korea, Republic of, [2]School of Medicine, Seoul National University, Seoul, Korea, Republic of, [3]Department of Neurosurgery, Gachon Medical School, Inchon, Korea, Republic of, [4]Department of Industrial Design, Hong Ik University, Seoul, Korea, Republic of

P00.63 **De-confounding dopaminergic effects on pupillometry via trial-to-trial corrections for blink-locked pupillary responses**
KYUNG YOO[1], SANG-HUN LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P00.64 **Singing is necessary for the maintenance of song acoustic structure in adult songbirds**
DAISUKE MIZUGUCHI*[1], SATOSHI KOJIMA[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P00.65 **Role of interval timing in intertemporal choice: A behavioural and drift-diffusion model investigation**
SATHYA NARAYANA SHARMA*[1], AZIZUDDIN KHAN[1]
[1]Indian Institute of Technology Bombay, Mumbai, India

P00.66 **Increased sleep need in mice lacking the PKA phosphorylation site in SIK1 and SIK2**
MINJEONG PARK[1], CHIKA MIYOSHI[1], TOMOYUKI FUJIYAMA[1], MIYO KAKIZAKI[1], AYA IKKYU[1], JINHWAN CHOI[1], SEIYA MIZUNO[2], SATORU TAKAHASHI[2], HIROMASA FUNATO[1], MASASHI YANAGISAWA*[1]
[1]International Institute for Integrative Sleep Medicine, University of Tsukuba, Tsukuba, Japan, [2]Laboratory Animal Resource Center, University of Tsukuba, Tsukuba, Japan

P00.67 **Nutritional programming during pregnancy and lactation sensitizes food addiction-like behavior in offspring of rats**
LARISA JAJAIRA MONTALVO MARTINEZ[1], GABRIELA CRUZ CARRILLO[1], LIZETH FUENTES MERA[1], ROCIO ORTIZ LÓPEZ[2], ALBERTO CAMACHO*[1]
[1]Autonomous University of Nuevo Leon, Monterrey, Mexico, [2]Technological Institute of Superior Studies of Monterrey, Monterrey, Mexico

P00.68 **Preservation of schema-driven memory benefits in older adults**
HOSEIN AGHAYAN GOLKASHANI[1], MICHAEL CHEE WEI LIANG*[2]
[1]Yong Loo Lin School of Medicine, National University of Singapore (NUS), Singapore, Singapore, [2]Center for Cognitive Neuroscience, Duke-NUS Medical School, Singapore, Singapore

P00.69 **Recovery effects of dexmedetomidine against nicotine aversion reduction in rats exposed to early adolescent nicotine**

MINJI JANG[1], SUNG-HOON KIM[2], JIHYUN NOH*[1]
[1]Dankook University, Yongin-si, Korea, Republic of, [2]Asan Medical Center, Seoul, Korea, Republic of

P00.70 **Effects of subjective visibility on our cognitive function: How visual attentional modulation correlates with subjective visibility**

MOMOKO HISHITANI[1], YUMA OSAKO[1], SHOTA MURAI[1], KOHTA KOBAYASI*[1]
[1]Doshisha University, Kyoto, Japan

P00.71 **A high blood cortisol level during prenatal period leads to functional deficits in cognition and behaviors of juvenile rats**

HYE-JI KIM[1], SUNG-CHERL JUNG*[1]
[1]Dept. of Physiology, School of Medicine, Jeju Natl'.University, Jeju-si, Korea, Republic of

P00.72 **Ceramide system contributes to learning and memory**

LIUBOV KALINICHENKO*[1], AN-LI WANG[2], NADINE ROESEL[1], CHRISTIANE MUEHLE[1], BERND LENZ[1], ERICH GULBINS[3], MARIA A. DE SOUZA SILVA[2], JOHANNES KORNHUBER[1], JOSEPH P. HUSTON[2], CHRISTIAN P. MUELLER[1]
[1]Friedrich-Alexander-University of Erlangen-Nuremberg, Erlangen, Germany, [2]Heinrich-Heine-University, Düsseldorf, Germany, [3]University of Duisburg-Essen, Essen, Germany

P00.73 **Perinatal dietary protein deficiency perturbs neurodevelopment and cognitive behavior of F_1 and F_2-generations of rat models**

NOSARIEME ABEY*[1], OSARETIN A.T EBUEHI[2], NGOZI. O.A IMAGA[2]
[1]Department of Biochemistry, College of Medicine, University of Lagos, Lagos, Nigeria, [2]Department of Biochemistry, University of Lagos, Lagos, Nigeria

P00.74 **Function of the insular cortex in acute restraint stress induced post-traumatic behavior**

SANGGEON PARK[1], YEOWOOL HUH[2], JEIWON CHO*[2]
[1]KIST / The Catholic Univ. of Incheon St.Mary's Hospital, Incheon, Korea, Republic of, [2]College of Medicine, Catholic Kwandong University, Incheon, Korea, Republic of

P00.75 **Olfactory bulbectomy induces learning and memory deficits associated with impaired structural plasticity in the rat**

JULIO CÉSAR MORALES MEDINA*[1], GUMARO GALINDO PAREDES[2], ANDREA JUDITH VÁZQUEZ HERNÁNDEZ[3], PATRICIA SÁNCHEZ TEOYOTL[4], RUBÉN ANTONIO VÁZQUEZ ROQUE[3], GONZALO FLORES[3]
[1]CINVESTAV, Tlaxcala, Mexico, [2]Departamento de Fisiología, Biofísica y Neurociencias, CINVESTAV, Tlaxcala, Mexico, [3]Instituto de Fisiología, Benemérita Universidad Autónoma de Puebla, Puebla, Mexico, [4]Facultad en Ciencias de la Salud, Tlaxcala, Mexico

P00.76 **Role of the modulation of Nkb pathway in chronic stress induced changes in the BNST and consequences on the anxiety behavior**

AURELIE MENIGOZ*[1], DONALD RAINNIE[2], KATIE BARRETT[1], MEGAN JIANG[1], LARRY YOUNG[1]
[1]Emory University, Atlanta, USA, [2]emory University, Atlanta, USA

P00.77 **Deceased delta activity and cross-frequency interaction of resting-state electroencephalographic oscillations in transcranial light emitting diode (LED)**

FAHIMEH PARSAEI*[1], MOHAMMAD ALI NAZARI[2], SOOMAAYEH HEYSIEATTALAB[3]
[1]PhD student, division of Cognitive Neuroscience, Faculty of Education and Psychology, University of Tabriz, Tabriz, Iran, [2]Associate Professor, division of Cognitive Neuroscience, Faculty of Education and Psychology, University of Tabriz, Tabriz, Iran, [3]Assistant professor, Division of Cognitive Neuroscience, Faculty of Education and Psychology, University of Tabriz, Tabriz, Iran, Tabriz, Iran

P00.78 **Altruistic allogrooming in male mice**

YU-SHAN SU[1], TSUNG-HAN KUO[1], TSUNG-HAN KUO*[1]
[1]National Tsing Hua university, Hsinchu, Taiwan, China

P00.79 **Cultural difference of affective responses to mourn images between Asian and Western people**

SRISHTI TRIPATHI*[1], YUKIORI GOTO[1]
[1]Primate Research Institute, Kyoto University, Inuyama, Japan

P00.80 **Learning modulates neural systems for event segmentation**

ODED BEIN*[1], LILA DAVACHI[2]
[1]New York University, New York City, USA, [2]Columbia University, New York City, USA

P00.81 **The impact of childhood trauma on posttraumatic symptoms, posttraumatic growth, and quality of life: a multi-group path analysis among oxytocin receptor gene polymorphism**

MIN JIN JIN[1], MYOUNG HO HYUN[3], SEUNG-HWAN LEE*[2]
[1]Clinical Emotion and Cognition Research Laboratory, Goyang, Korea, Republic of, [2]Department of Psychiatry, Inje University, Ilsan-Paik Hospital, Goyang, Korea, Republic of, [3]Department of Psychology, Chung-Ang University, Seoul, Korea, Republic of

P00.82 **The effect of positive emotional gesture guidance to speech sound discrimination in children with autism spectrum disorder**

NONTICHA THAVORNPAIBOONBUD[1], ASST.PROF.VORASITH SIRIPORNPANICH*[1]
[1]Institute of Molecular Biosciences Mahidol University, Nakornprathom, Thailand

P00.83 ***De novo* mutation in *EP300* gene in an autistic patient and its influence in autistic phenotypes in a transgenic mouse line mimicking the mutation**

HYOPIL KIM[1], HYO-WON KIM[2], JAE-HYUNG LEE[3], SANG-BEOM SEO[4], TED ABEL[5], YONG-SEOK LEE[6], BONG-KIUN KAANG*[1]
[1]School of Biological Sciences, College of Natural Sciences, Seoul National University, Seoul, Korea, Republic of, [2]Department of Psychiatry, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Korea, Republic of, [3]Department of Life and Nanopharmaceutical Sciences, Department of Maxillofacial Biomedical Engineering, School of Dentistry, Kyung Hee University, Seoul, Korea, Republic of, [4]Department of Life Science, College of Natural Sciences, Chung-Ang University, Seoul, Korea, Republic of, [5]Iowa Neuroscience Institute, University of Iowa Carver College of Medicine, Iowa City, USA, [6]Department of Physiology, Seoul National University College of Medicine, Seoul, Korea, Republic of

P00.84 **Morris water maze performance correlates with gene expression in the hippocampus: A transcriptome analysis**

POLINA KISARETOVA*[1], ANASTASIYA SHULUPOVA[3], ANNA IVANCHIKHINA[4], NATALYA KLIMOVA[5], NIKITA ERSHOV[5], VASILIY RESHETNIKOV[5], TATYANA MERCULOVA[2], NATALYA BONDAR[2]
[1]NSU, ICG SB RAS, Novosibirsk, Russia, [2]Novosibirsk State University, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia, [3]Novosibirsk State Medical University, Novosibirsk, Russia, [4]Novosibirsk State University, Novosibirsk, Russia, [5]Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

P00.85 **EEG-based graph metrics of brain networks during cognitive task performance and at rest**

EKATERINA MASLENNIKOVA[1], INNA FEKLICHEVA[1], EKATERINA MASLENNIKOVA[1], ILYA ZAKHAROV[2], VICTORIA ISMATULLINA[2], TIMOFEY ADAMOVICH[3], SERGEY MALYKH[4], NADEZDA CHIPEEVA*[1]
[1]South Ural State University (national research university), Chelyabinsk, Russia, [2]Russian Academy of Education, Moscow, Russia, [3]Lomonosov Moscow State University, Moscow , Russia, [4]Russian Academy of Education, Moscow , Russia

Development

P01.01 **Role of Per3, a circadian clock gene, in brain development**
KOH-ICHI NAGATA*[1], MARIKO NODA[1], IKUKO IWAMOTO[1], HIDENORI TABATA[1], HIDENORI ITO[1]
[1]Department of Molecular Neurobiology, Institute for Developmental Research, Aichi Human Service Center, Kasugai, Japan

P01.02 **Language and executive functions in primary progressive aphasia**
LAURENT LEFEBVRE*[1], SANDRINE BASAGLIA-PAPPAS[2], KENDRA KANDANA ARACHCHIGE[1], BERNARD LAURENT[3], MANDY ROSSIGNOL[1], ISABELLE SIMOES LOUREIRO[1]
[1]University of Mons, Mons, Belgium, [2]University of Mons, Saint-Etienne, France, [3]CHU Nord, CMRR, Unité de Neuropsychologie, Saint-Etienne, Saint-Etienne, France

P01.03 **Electric axon guidance is mediated by Ca^{2+} binding to integrin**
MASAYUKI YAMASHITA*[1]
[1]International University of Health and Welfare, Ohtawara, Japan

P01.04 **The novel gene *Nwd1* regulate brain development**
SEIYA YAMADA*[1], HIROKI AKIYAMA[1], SHIN-ICHI SAKAKIBARA*[1]
[1]Laboratory for Molecular Neurobiology, Graduate school of Human Sciences, Waseda University, Saitama, Japan

P01.05 **Early administration of umbilical cord blood cells exacerbates ventilation-induced brain injury in preterm lambs**
KYRA CHAN*[1], VALERIE ZAHRA[2], VANESA STOJANOVSKA[1], PARIS PAPAGIANIS[1], ANQI LI[2], ILIAS NITSOS[2], DOMENIC LAROSA[2], SUZANNE MILLER[1], DHAFER ALAHMARI[3], GRAEME POLGLASE[1], COURTNEY MCDONALD[2]
[1]Department of Obstetrics and Gynaecology, Monash University and The Ritchie Centre, Hudson Institute of Medical Research, Melbourne, Australia, [2]The Ritchie Centre, Hudson Institute of Medical Research, Melbourne, Australia, [3]Monash Biomedical Imaging, Melbourne, Australia

P01.06 **Altered structural brain networks at term-equivalent age in preterm infants with low-grade intraventricular hemorrhage**
HYUN JU LEE*[1], JOO YOUNG LEE[1], JONG HO CHA[1]
[1]Hanyang university, seoul, Seoul, Korea, Republic of

P01.07 **Dual mechanisms for the regulation of brain-derived neurotrophic factor by valproic acid in neural progenitor cells**
YEONSUN JIN[1], HYUNMYUNG KO[3], SUNGHOON LEE*[2]
[1]Chung-Ang Univ., Seoul, Korea, Republic of, [2]Chung-ang univ., Seoul, Korea, Republic of, [3]Woosuk univ., Jincheon, Korea, Republic of

P01.08 **Usp9x-null mice show corpus callosum dysgenesis and altered behaviour**
MARIA KASHERMAN[1], STEPHEN WOOD[1], MICHAEL PIPER*[2]
[1]Griffith University, Brisbane, Australia, [2]University of Queensland, Brisbane, Australia

P01.09 **Developmental patterns of the *Drosophila* visual projection neurons**
RANA EL-DANAF*[1], NAILA ADAM[2], CLAUDE DESPLAN[3]
[1]New York University Abu Dhabi, Abu Dhabi, United Arab Emirates, [2]New York University Abu Dhabi, Abu Dhabi, United Arab Emirates, [3]New York University Abu Dhabi, Abu Dhabi, United Arab Emirates

P01.10 **Tracking of neurons derived from basal radial glia experiencing multiple cell division in the developing neocortex of ferrets**
KAZUHIKO SAWADA*[1]
[1]Tsukuba International University, Tsuchiura, Japan

P01.11 **The role of hyaluronan in the morphological development of hippocampal neurons**
MOLLY ABRAHAM*[1], RASHIKA KARUNASINGE[1], TANIA FOWKE[2], JUSTIN DEAN[1]
[1]University of Auckland, Auckland, New Zealand, [2]University of Auckland, Auckland, New Zealand

P01.12 **Early-generated interneurons regulate neuronal circuit formation during early postnatal development**
YONGCHUN YU*[1]
[1]FUDAN UNIVERSITY, SHANGHAI, China

P01.13 **Expression pattern of neuroglia development factor (NGDF) in the central nervous system using NGDF-LacZ knock-in mouse model**
ANU SHAHAPAL*[1], HYO JEONG YONG[1], BYEONGIL YU[1], WON SUK LEE[1], JONG-IK HWANG[1], JAE YOUNG SEONG[1]
[1]Korea University, Seoul, Korea, Republic of

P01.14 **Expression pattern of a novel chemokine like peptide, BDNF 3 during developmental and mature stages of mouse brain**
HYO JEONG YONG*[1], ANU SHAHAPAL[1], BYEONGIL YU[1], WON SUK LEE[1], JONG-IK HWANG[1], JAE YOUNG SEONG[1]
[1]Graduate School of Medicine, Korea University, Seoul, Korea, Republic of

P01.15 **Exploring the spatio-temporal transposcriptome of the developing human brain**
CHRISTOPHER PLAYFOOT[1], JULIEN DUC[1], ALEXANDRE COUDRAY[1], DIDIER TRONO*[1]
[1]EPFL, Lausanne, Switzerland

P01.16 **Foxg1 is critical for maintenance of the neuron plasticity**
CAO GUANGLIANG[1], YU BAOCONG[1], ZHAO CHUNJIE*[1]
[1]Southeast University, Nanjing, China

P01.17 **Understanding neurogenesis in the human spinal cord using stem cell-based 3D organoids**
JIYOUNG YOON[1], JU-HYUN LEE[2], HANOUL YUN[1], WOO MIN SEO[1], YU JIN KANG[1], JONG WOON KIM[3], WOONG SUN[2], MI-RYOUNG SONG*[1]
[1]Gwangju institute of science and technology, Gwangju, Korea, Republic of, [2]Korea University College of Medicine, Seoul, Korea, Republic of, [3]Chonnam National University Medical School, Gwanju, Korea, Republic of

P01.18 **Netrin-1/DCC-mediated PLCg1 activation is required for axon guidance and brain structure development**
DU-SEOCK KANG[1], YONG RYOUL YANG[2], CHEOL LEE[2], BUMWOO PARK[2], JEONG KON SEO[3], HYUNGJOON CHO[2], LUCIO COCCO[4], PANN-GHILL SUH*[2]
[1]College of Life Science & Bioengineering, Korea Advanced Institute of Science & Technology (KAIST), Daejeon, Korea, Republic of, [2]School of Life Sciences, Ulsan National Institute of Science and Technology, Ulsan, Korea, Republic of, [3]UNIST Central Research Facility, Ulsan National Institute of Science and Technology., Ulsan, Korea, Republic of, [4]Cellular Signaling Laboratory, Department of Biomedical and Neuromotor Sciences, University of Bologna, Bologna, Italy, Bologna, Italy

P01.19 **Intrinsic regulators of neuronal regeneration in *C. elegans***
KYUNG WON KIM*[1], YISHI JIN[2], ANDREW CHISHOLM[2]
[1]Hallym University, Chuncheon, Korea, Republic of, [2]University of California, San Diego, La Jolla, USA

P01.20 **The ontogeny of visual lateralization in pigeons might underlie miRNA-regulated Trk receptor expression**
STEPHANIE LOR*[1], VERENA THEIS[2], DIRK MOSER[3], ROBERT KUMSTA[3], CARSTEN THEISS[2], ONUR GUNTURKUN[1]
[1]Institute of Cognitive Neuroscience, Dept. Biopsychology, Faculty of Psychology, Ruhr-University Bochum, Bochum, Germany, [2]Dept. of Cytology, Medical Faculty, Ruhr-University Bochum, Bochum, Germany, [3]Dept. Genetic Psychology, Faculty of Psychology, Ruhr-University Bochum, Bochum, Germany

P01.21 **Regulation of *Nk2.2/vnd* in the expression of *deadpan* (*dpn*) in *Drosophila melanogaster***

SIUK YOO*[1], SE-JIN KIM[2], SU-HYUN JO[3]

[1]Department of Life Sciences, Yeungnam University, Gyeongsan, Gyeongbuk 38541, Korea, Republic of, [2]NIKOM (National Development Institute of Korean Medicine), Gyeongsan, Gyeongbuk, Korea, Republic of, [3]Department of Life Sciences, Yeungnam University, Gyeongsan, Gyeongbuk 38541, Korea, Republic of

P01.23 **Immunohistochemical study of cerebellar corticohistogenesis in ferrets**

SHIORI KAMIYA*[1], KAZUHIKO SAWADA[1]

[1]Tsukuba International University, Tsuchiura-city, Japan

P01.24 **Role of TTF-1 in leptin action for hypothalamic neuronal development**

DASOL KANG[1], BYUNG JU LEE*[1]

[1]Ulsan university, Ulsan, Korea, Republic of

P01.25 **Junctional neural tube defect: A peak at what happens 'between' primary and secondary neurulation**

JI YEOUN LEE[1], KYU-CHANG WANG*[1]

[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P01.26 **Proteomic study reveals a possible molecular mechanism of neurotrophic activity of *Gelidium amansii* in primary cultured neurons**

MD ABDUL HANNAN[1], MD. NAZMUL HAQUE[1], RAJU DASH[1], HO JIN CHOI[1], DIYAH FATIMAH OKTAVIANI[1], IL SOO MOON*[1]

[1]Dongguk university, Gyeongju, Korea, Republic of

P01.27 **The role of placental signalling in altered neurodevelopment in rat-model of IUGR**

PHILEMON D. SHALLIE*[1], OLUWADAMILOLA FAITH SHALLIE[2], DENISE MARGOLIS[2], THAJASVARIE NAICKER[2]

[1]Olabisi Onabanjo University, Sagamu, Nigeria, [2]University of KwaZulu-Natal, Durban, South Africa

P01.28 **The neurodevelopmental consequences of genomic stress**

NADINE MICHEL[1], USNISH MAJUMDAR[3], JOANNE LANNIGAN[4], MICHAEL MCCONNELL*[2]

[1]University of Virginia School of Medicine, Charlottesville, USA, [2]Department of Biochemistry and Molecular Genetics, Charlottesville, USA, [3]Icahn School of Medicine, Charlottesville, USA, [4]University of Virginia Flow Core Facility, Charlottesville, USA

Disorders of the nervous system

P02.01 **Neuroprotective role of *Phosphatase of Regenerating Liver-1* against CO2 Stimulation in *Drosophila***

YONGMEI XI*[1], PENGFEI GUO[1], XIAO XU[1], XIAOHANG YANG[1]

[1]Institute of Genetics and Department of Genetics, Division of Human Reproduction and Developmental Genetics of the Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China

P02.02 **Protective effect of Yukmijihwang-tang (YJT) against oxidative stress in rodent model**

HORYONG YOO*[1], TAE MIN EOM[2], IN CHAN SEOL[2], YOON SIK KIM[3]

[1]Daejeon university, Daejeon, Korea, Republic of, [2]Center of Neurologic Diseases, Dunsan Korean Medicine Hospital, Daejeon University, Daejeon, Korea, Republic of, [3]Center of Stroke Neurology, Chunan Korean Medicine Hospital, Daejeon University, Chunan, Korea, Republic of

P02.03 **Effects of rTMS on cognition and functional connectivity in subacute stroke patients**

YEONG WOOK KIM[1], MIN KYUN SOHN*[1]

[1]Department of Rehabilitation Medicine, School of Medicine, Chungnam National University, Dae-jeon, Korea, Republic of

P02.04 **Ginsenoside Rk1 inhibits antitumor activity through Akt/ß-catenin signalling pathway in neuroblastoma cells**

JAE HOON JEONG[1], JUNG-MI OH[1], SUNGKUN CHUN*[1]

[1]Chonbuk National University Medical School, Jeonju, Korea, Republic of

P02.05 **Elevation of endoplasmic reticulum (ER) stress-mediated Ca^{2+} release leads to tauopathy in chronic traumatic encephalopathy (CTE)**

HYEONJOO IM[1], YUNHA KIM[1], SUNG SOO IM[2], YUN KYUNG KIM[2], SEUNG JAE HYEON[1], JUNGHEE LEE[3], NEIL W. KOWALL[3], SOOYOUNG CHUNG[1], ANN C. MCKEE[3], HOON RYU*[1]

[1]Center for Neuroscience, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [2]Convergence Research Center for Diagnosis, Treatment, and Care System of Dementia, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [3]Boston University, Boston, USA

P02.06 **Noninvasive brain stimulation to attenuate Alzheimer's pathology**

MITCHELL MURDOCK[1], ELANA LOCKSHIN[1], LI-HUEI TSAI*[1]

[1]MIT, Cambridge, USA

P02.07 **Correlation between oligomerizaton of amyloid beta in plasma and other Alzheimer's disease biomarkers**

SUNGMIN KANG[1], JEEWON SUH[2], JEONG MIN PYUN[2], YOUNG CHUL YOUN[3], JI SUN YU[1], GWANG JE KIM[1], BYOUNG-SUB LEE[1], AERIM CHOE[1], YECHAN JOH[1], SHINWON KIM[1], RYAN LEE[1], SEONG SOO AN[4], CHANG WAN OH[5], SANGYUN KIM*[2]

[1]Peoplebio Inc., Seongnam-si, Korea, Republic of, [2]Department of Neurology, Seoul National University Bundang Hospital & Seoul National University College of Medicine, Seongnam-si, Korea, Republic of, [3]Department of Neurology, Chung-Ang University Hospital, Seoul, Korea, Republic of, [4]Gachon University College of Nanobiotechnology, Seongnam-si, Korea, Republic of, [5]Department of Neurosurgery, Seoul National University College of Medicine Clinical Neuroscience Center, Seoul National University Bundang Hospital, Seongnam-si, Korea, Republic of

P02.08 **Dysfunction of X-linked inhibitor of apoptosis protein (XIAP) leads to neuronal damage via altered p53 activity in Huntington's disease**

SEUNG JAE HYEON[1], TIAN LIU[2], SEUNG CHAN KIM[1], JINYOUNG PARK[1], MI HYUN CHOI[1], HYUN SOO SHIM[1], HYEONJOO IM[1], PHUONG NGUYEN[1], YU JIN HWANG[1], RICHARD MEYER[3], EUN JOO SONG[1], EUN MI HWANG[1], NEIL KOWALL[3], HYEMYUNG SEO[4], JUNGHEE LEE[3], HOON RYU*[1]

[1]KIST, Seoul, Korea, Republic of, [2]South Florida University, Tampa, USA, [3]Boston University, Boston, USA, [4]Hanyang University, Ansan, Korea, Republic of

P02.09 **The human microglia (HMC-3) as a cellular model of neuroinflammation**

IZABELA LEPIARZ*[1], OLUMAYOKUN OLAJIDE[2]
[1]The Univrsity of Huddersfield, Huddersfield, UK, [2]The University of Huddersfield, Huddersfield, UK

P02.10 **mTOR cascade inhibition underlies the anti-epileptic effects of combined metformin and caloric restriction**

BRYAN PHILLIPS-FARFÁN*[1], MARÍA DEL CARMEN RUBIO OSORNIO[2], VERONICA CUSTODIO RAMÍREZ[2], DANIELA CALDERÓN GÁMEZ[1], CARLOS PAZ TRES[2], KARLA CARVAJAL AGUILERA[1]
[1]Laboratorio de Nutrición Experimental, Instituto Nacional de Pediatría, Mexico City, Mexico, [2]Laboratorio de Neurofisiología, Instituto Nacional de Neurología y Neurocirugía, Mexico City, Mexico

P02.11 **Calpain 2 contributes prenatal stress-induced epileptic spasms in the infant rat**

HYEOK HEE KWON[1], CHIRANJIVI NEUPANE[1], JUHEE SHIN[1], DO HYEONG GWON[1], YUHUA YIN[1], NARA SHIN[1], HYO JUNG SHIN[1], JINPYO HONG[1], JIN BONG PARK[1], YOONYOUNG YI[2], DONG WOON KIM[1], JOON WON KANG*[2]
[1]Chungnam National University, Daejeon, Korea, Republic of, [2]Chungnam National University Hospital, Daejeon, Korea, Republic of

P02.12 **Identification of amino-truncated amyloid beta peptides AßN 3-42 and AßN$_{11-42}$ in age-related cataracts and retinas from diabetic and no diabetic patients**

LUIS F. HERNANDEZ-ZIMBRON*[1, 2], FRIDA PAULINA MUÑIZ-RUVALCABA[3], NAYELI MARTÍNEZ-ZUÑIGA[3], ABIGAIL TORRES-ROMERO[3], ROBERTO GONZALEZ-SALINAS[3], HUGO QUIROZ-MERCADO[3]
[1]Asociación Para Evitar la Ceguera en México I.A.P., Mexico, Mexico, [2]Departamento de Investigacion, Asociación Para Evitar la Ceguera en México I.A.P., Departamento de Bioquímica, Facultad de Medicina, UNAM, México, Mexico, Mexico, [3]Departamento de Investigacion, Asociación Para Evitar la Ceguera en México I.A.P. México City, Mexico, Mexico

P02.13 **Inhibition of non-muscle myosinIIB enhances cellular degradation of insoluble form of FTD/ALS-linked TDP-43 protein and reduces cellular toxicity**

MIHEE JUN[1], HAEUN CHOI[1], PUREM JEON[1], YOU-KYUNG LEE[1], DEOK-JIN JANG[2], JIN-A LEE*[1]
[1]Hannam University, Daejeon, Korea, Republic of, [2]Kyungpook National University, Sangju, Korea, Republic of

P02.14 **Effect of the number of independent components in default mode network: depression study**

JI HYUN BAE[1], YOU MIN JUNG[2], BOKYOUNG KIM[3], HANG KEUN KIM[2], JONG HOON KIM[4], YOUNG DON SON*[2]
[1]Gachon University, Incheon, Korea, Republic of, [2]Department of Biomedical Engineering, Gachon University, Incheon, Korea, Republic of, [3]Department of Health Sciences and Technology, GAIHST, Gachon University, Incheon, Korea, Republic of, [4]Department of Psychiatry, Gil Medical Center, Incheon, Korea, Republic of

P02.15 **Epileptiform activity induced by kainate application results in decreased Reelin expression and motility of differentiated granule cells**

XUEJUN CHAI[1], SHANTING ZHAO[3], JIPING YANG[2], JUNFENG ZHANG[2], XI XU*[2]
[1]College of basic Medicine, Xi'An Medical University, Xi'An 710021, China, Xi'An, China, [2]College of Basic Medicine, Xi'An Medical University, Xi'An 710021, China, Xi'An, China, [3]Laboratory of Neurobiology, Nortnwest A&F University, Yangling 712100, China, Yangling, China

P02.16 **Truncation mutation of *PDZD8* in a family with intellectual disability and autistic features**

STEVEN CLAPCOTE*[1], CHRIS F INGLEHEARN[1], MANIR ALI[1], AHMED H AL-AMRI[2], AMANDA BRETMAN[1], JAMES ROUSE[1], THOMAS WAINWRIGHT[1], PAUL ARMSTRONG[1]
[1]University of Leeds, Leeds, UK, [2]National Genetic Centre, Directorate General of Royal Hospital, Muscat, Oman

P02.17 **Levodopa-related peripheral neuropathy in patients with Parkinson's disease**

FATEMEH SEIFAR*[1], HORMOZ AYROMLOU[2], MOHAMMAD YAZDCHI[2], ROGHAYEH ASADI[2], FARID HAJIBONABI[3], NEDA GHAEMIAN[2]
[1]Stem Cell Research Center, Tabriz University of Medical Sciences, Tabriz, Iran, [2]Neuroscience Research Center, Tabriz University of Medical Sciences, Tabriz, Iran, [3]Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran

P02.18 **Neuroprotective potential of free-range chicken eggs to chronic stress rats**

NINDYASTUTI*[1], HARDINSYAH[1], DEWI RATIH AGUNGPRIYONO[1], SRI ANNA MARLIYATI[1], EKOWATI HANDHARYANI[1]
[1]IPB UNIVERSITY, BOGOR, Indonesia

P02.19 **Relationship between cerebellar development and emerging neurodevelopmental disorders**

CHIE MORIMOTO[1], KIYOTO KASAI[1], SHINSUKE KOIKE*[2]
[1]Department of Neuropsychiatry, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, [2]University of Tokyo Institute for Diversity & Adaptation of Human Mind (UTIDAHM), The university of Tokyo, Tokyo, Japan

P02.20 **Targeting RPTPσ to overcome CSPG-mediated inhibition of remyelination in animal models of multiple sclerosis**

SMARANDA RUXANDRA BADEA*[1], LI RONG[1], RONG LIU[1], HAITAO SUN[2], JIAN-DONG HUANG[3], WUTIAN WU[4]
[1]School of Biomedical Sciences, The University of Hong Kong, Hong Kong, Hong Kong SAR, China, [2]Department of Neurosurgery, Zhujiang Hospital, Southern Medical University, Guangzhou, China, [3]State Key Laboratory of Brain and Cognitive Sciences, The University of Hong Kong, Hong Kong, Hong Kong SAR, China, [4]Joint Laboratory for Brain Function and Health (BFAH), Jinan University and The University of Hong Kong, Guangzhou, China

P02.21 **Neuroprotective effect of Aptamin-C in 1-methyl-4-phenyl-1, 2, 3, 6-tetrahydropyridine (MPTP) induced Parkinson's disease mice model**

MINKYUNG SONG[1], JOO HEE LEE[2], YOON JU KIM[2], YOUN-JUNG KIM*[2]
[1]University of central florida, Orlando, USA, [2]KyungHee University, Seoul, Korea, Republic of

P02.22 **Effects of a semi-chronic exposition to paraquat and Maneb on the circadian rhythm of locomotor activity in Wistar rats**

NADA FATH[1], ANASS TINAKOUA[3], NOURIA LAKHDAR-GHAZAL[2], NOURIA LAKHDAR-GHAZAL*[2]
[1]Comparative Anatomy Unit, Department of Biological and Pharmaceutical Veterinary Sciences, Hassan II Agronomy and Veterinary Institute, BP: 6202, Rabat-Instituts, 10101, Rabat, Morocco, Rabat, Morocco, [2]Team Biological Rhythms, Neurosciences and Environment, Department of Biology, Faculty of Sciences, Mohamed V University, Rabat, Morocco, Rabat, Morocco, [3]Institute of mediterranean neurobiology INMED-INSERM U901, Marseille, France, Marseille, France

P02.23 **Blockade of PD-1/PD-L1 suppresses epileptiform activities in both *in vivo* and *in vitro* seizure models**

YUN WANG*[1], ZHIYUN CHEN[1], XU LIU[1], GUOXIANG WANG[1]
[1]Fudan University, Shanghai, China

P02.24 **Alterations in resting-state functional and effective connectivity on salience network in first episode schizophrenia**

CHONGWON PAE[1], HAE-JEONG PARK*[1]
[1]Department of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of

P02.25 **The altered affective distress in neuropathic pain state is mediated by the metabotropic glutamate receptor 5 in the brain**

GEEHOON CHUNG[1], CHAE YOUNG KIM[2], YEONG-CHAN YUN[3], SEUNGHUI WOO[1], SANG HO YOON[2], MYOUNG-HWAN KIM[2], SANG JEONG KIM[2], SUN KWANG KIM*[1]
[1]Kyung Hee University, Seoul, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of, [3]Dongshin University, Naju, Korea, Republic of

P02.26 **Cocaine drives schizophrenia-like behaviors via reduced neuronal activity in the nucleus accumbens**

SUJI HAM[1, 2], HEH-IN IM*[1, 2]
[1]Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology (KIST), Seoul, Korea. [2]Division of Bio-Medical Science & Technology, KIST School, Korea University of Science and Technology, Seoul, Korea., Seoul, Korea, Republic of

P02.27 **Epigenetic dysregulation of MeCP2 in dorsal striatum underlies the pathogenesis of Alzheimer's disease in APP/PS1 mice**

SANGJOON LEE[1], YUNJUNG CHOI[1], MINSU YOU[1], JUHWAN KIM[1], JEEWON RYU[1], TAE KYOO KIM[1], YOO LIM CHUN[1], SUJI HAM[1], HYE-SUN KIM[2], HEH-IN IM*[1]
[1]Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [2]Department of Pharmacology and Biomedical Sciences, Seoul National University College of Medicine, Seoul, Korea, Republic of

P02.28 **Alpha-synuclein expression promotes Coxsackie virus infections in the brain and Coxsackie virus may play an important role in Lewy body formation**

SOOJIN PARK[1], SANG MYUN PARK*[2]
[1]Ajou University School of Medicine, Suwon, Korea, Republic of, [2]Ajou University, Suwon, Korea, Republic of

P02.29 **Machine learning application to predict the susceptibility to acute traumatic stress in inbred mice**

MIN-JAE JEONG[1], JUNG HOON JUNG[2], CHANGHEE LEE[3], JOUNG-HUN KIM*[1]
[1]Department of Life sciences, POSTECH, Pohang, Korea, Republic of, [2]Hospital for Sick Children, Toronto, Canada, [3]Department of Mathematics, POSTECH, Pohang, Korea, Republic of

P02.30 **Target screening of miR126 in pathological process of Alzheimer's Disease**

SEOHOE SONG[1], HANEUL NOH[1], KAI C. SONNTAG[2], HYEMYUNG SEO*[1]
[1]Hanyang University, Ansan-si, Korea, Republic of, [2]McLean Hospital, Harvard Medical School, Belmont, USA

P02.31 **The effects of histone deacetylase inhibition on neuroinflammation and motor control in LRRK2 R1441G mice**

YEONGWON PARK[1], SEOHOE SONG[1], TAEWOO KIM[1], HANEUL NOH[1], SINIL KANG[1], HYEMYUNG SEO*[1]
[1]Hanyang University, Seoul, Korea, Republic of

P02.32 **Cell type-specific translational profiling of the hippocampal dentate gyrus to chronic antidepressant treatment**

JIN-JYEOK JANG[1], GYOCHANG HONG[1], SO-HYUN LEE[1], YONG-SEOK OH*[1]
[1]DGIST, Daegu, Korea, Republic of

P02.33 **Differential phosphorylation of cytoskeletal proteins in LRRK2 R1441G Parkinson's disease model**

JAEPIL SONG[1], JEHA JUN[2], TAEWOO KIM[2], HYEMYUNG SEO*[2]
[1]Hanyang university, Ansan-si, Korea, Republic of, [2]Hanyang University, Ansan-si, Korea, Republic of

P02.34 **Automated classification of traumatic brain injury using machine learning with multiple indices of diffusion tensor imaging**

HIBA ABUELGASIM FADLELOMOULA ABDELRAHMAN*[1], UBUKATA SHIHO[2], UEDA KEITA[2], TOSHIHIKO ASO[2], GAKU FUJIMOTO[2], TOSHIYA MURAI[2]
[1]Kyoto University, Kyoto, Japan, [2]Kyoto University, Graduate school of Medicine. Department of Psychiatry, Kyoto, Japan

P02.35 **Nanobodies (VHHs) for targeting tau in Alzheimer's disease and tauopathies**

LUC BUEE*[1], CLEMENT DANIS[2], ELIAN DUPRE[2], ALEXIS ARRIAL[3], FRANÇOIS-XAVIER CANTRELLE[2], JEAN-CHRISTOPHE RAIN[3], MORVANE COLIN[2], XAVIER HANOULLE[2], ISABELLE LANDRIEU[2]
[1]University of Lille - Inserm, Lille, France, [2]University of Lille, Lille, France, [3]Hybrigenics Service, Paris, France

P02.36 **Depressive behavioral and physiological state induced by low-frequency rTMS to the ventral medial frontal cortex in monkeys**

SHINYA NAKAMURA[1], KEN-ICHIRO TSUTSUI*[1]
[1]Laboratory of Systems Neuroscience, Graduate School of Life Sciences, Tohoku University, Sendai, Japan

P02.37 **Gintonin, a ginseng-derived ingredient, as a novel therapeutic strategy for Huntington's disease: Activation of the Nrf2 pathway through lysophosphatidic acid receptors**

JONG HEE CHOI[1], MINHEE JANG[1], YEEUN JANG[1], IK HYUN CHO*[1]
[1]Kyung Hee University, Seoul, Korea, Republic of

P02.38 **Cortical network dynamic changes in chronic socially-isolated mice**

HYOIN LEE[1], GAON KIM[1], YONG JEONG*[1]
[1]KAIST, Dae-jeon, Korea, Republic of

P02.39 ***Valeriana fauriei* exerts antidepressant-like effects through anti-inflammatory and anti-oxidant activities by inhibiting brain-derived neurotrophic factor associated in chronic restrained stress**

JONG HEE CHOI[1], MIN JUNG LEE[1], IK-HYUN CHO*[1]
[1]Kyung Hee University, Seoul, Korea, Republic of

P02.40 **Genetic modulation of p75 Neurotrophin signaling in neurodegeneration**

ANA OSORIO OLIVEIRA[1], CARLOS IBANEZ*[1]
[1]Karolinska Institute, Stockholm, Sweden

P02.41 **Role of mitochondrial complex I in Parkinson's disease models**

WON-SEOK CHOI*[1]
[1]Chonnam National University, Gwangju, Korea, Republic of

P02.42 **Functional transcriptome analysis related to stress resilience in FKBP5 deficient mice**

YEONGJAE KIM[1], JOONHONG KWON[1], KOEUL CHOI[1], SIHWAN SEOL[1], HYO JUNG KANG*[1]
[1]Department of Life Science, Chung-Ang University, Seoul, Korea, Republic of

P02.43 **Functional role of pvalb-positive neurons of the mouse subthalamic nucleus**

SOOYOUNG CHUNG*[1], HANBYUL KIM[1]
[1]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P02.44 **The effect of rotenone on synuclein and neurotrophic factor gene expression levels in zebrafish larvae**

ANWAR NORAZIT*[1], SHARVIN MANICKAM[1], AGNES ONG LEE CHEN[1], DAVID WONG CHEE EARN[1], SUZITA MOHD NOOR[1]
[1]University of Malaya, Kuala Lumpur, Malaysia

P02.45 **Development of Alzheimer's disease biomarker using Aβ*56 soluble oligomer in human nasal secretions**

SHENGMIN WANG[1], GOWOON SON[2], CHEIL MOON[2], HYUN KOOK LIM*[1]
[1]Medical College, Catholic University of Korea, Seoul, Korea, Republic of, [2]Department of Brain and Cognitive Sciences, Graduate School, Daegu Gyeungbuk Institute of Science and Technology, Daegu, Republic of Korea, Daegu, Korea, Republic of

P02.46 **Selectively acting agent based on ablated CeO2 nanoparticles for photodynamic therapy of brain cancer**

MAXIM PUGACHEVSKII[1], EUN SEONG KIM[3], NAM YOUNG KIM*[2]
[1]Southwest State University, Kursk, Russia, [2]Kwangwoon University, Seoul, Korea, Republic of, [3]Kwangwoon University, RFIC Lab, Seoul, Korea, Republic of

P02.47 **ALK-mediated impairment of autophagosome maturation leads to tau accumulation and neuropathology in Azheimer's disease**

JISU PARK[1], HYUNWOO CHOI[1], YONG-KEUN JUNG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P02.48 **Purkinje cell loss causes cerebellar hypoplasia and motor impairment in EBP1 deficient mice**

INWOO HWANG[1], HYEONJEONG PARK[2], SEONGBONG JO[2], JEE-YIN AHN[*1]
[1]Single Cell Network Research Center, Sungkyunkwan University, School of Medicine, Suwon, Korea, Republic of, [2]Sungkyunkwan University, School of Medicine, Suwon, Korea, Republic of

P02.49 **Changes in gut microbiota landscape in chronic stress mouse model of depression and the rescue of stress-induced depressive-like behaviors by Lactobacillus-derived EVs**

HYEJIN KWON[1], JULI CHOI[1], PYUNG-LIM HAN[*1]
[1]Department of Brain and Cognitive Sciences Ewha Womans University Republic of Korea, Seoul, Korea, Republic of

P02.50 **Hippocampal neurogenesis enhancer enhances forgetting of nicotine-induced place preference memory**

AYAKA MINAMI[1], SATOSHI KIDA[*2]
[1]Department of Bioscience, Tokyo University of Agriculture, Tokyo, Japan, [2]Graduate School of Agriculture and Life Sciences, The University of Tokyo, Tokyo, Japan

P02.51 **Age related increase in cav-1 expression facilitates cell-to-cell transmission of α-synuclein in neurons**

TAE-YOUNG HA[1], YU REE CHOI[1], HYE RIN NOH[1], KA YOUNG KIM[2], SANG MYUN PARK[*1]
[1]Ajou university, suwon, Korea, Republic of, [2]Gachon university, Incheon, Korea, Republic of

P02.52 **Modulation of tau isoforms by RNA reprogramming: Functional consequences and therapeutic perspectives**

MARIA-ELENA AVALE[1], ANA DAMIANICH[1], CAROLINA FACAL[1], DELFINA LOCH[2], JUAN FERRARIO[3], SONIA ESPINDOLA[1], MARIA-ELENA AVALE[*1]
[1]INGEBI-CONICET- National Research Council Argentina, Buenos Aires, Argentina, [2]INGEBI-CONICET- National Research Council Argentina, Buenos aires, Argentina, [3]FCEyN-UBA-University of Buenos Aires, Buenos Aires, Argentina

P02.53 **TMCA attenuated the morphine dependence in mice and rats**

SEIKWAN OH[*1], MIJIN KIM[1], THEA VILLA[1], SOHYEON MOON[1]
[1]Ewha Womans University, Seoul, Korea, Republic of

P02.54 **Effect of alpha lipoic acid on cognitive function in mouse model of chronic cerebrovascular hypoperfusion**

JI HYE PARK[1], YIN YI XIONG[2], RONGHUA YUAN[2], EUL SIG CHOI[1], MI JUNG HAN[1], SEOUL LEE[*1]
[1]Department of Pharmacology and Wonkwang Brain Research Institute, Wonkwang University School of Medicine, Jeonbuk, Korea, Republic of, [2]Department of Pharmacology, Wonkwang University School of Medicine, Jeonbuk, Korea, Republic of

P02.55 **Peripheral alterations in cytokine and chemokine levels in the young adult depressive risk group**

EUNJOO NAM[1], JINHO KIM[1], YI-SEUL CHOE[2], JONG-HOON KIM[2], KEUN-A CHANG[*1]
[1]Department of Pharmacology, College of Medicine, Gachon University, Incheon, Korea, Republic of, [2]Department of Psychiatry, Gachon University College of Medicine, Gil Medical Center, Neuroscience Research Institute, Incheon, Korea, Republic of

P02.56 **Characterization of behavioral addiction: affects, personality, and cognitive bias**

YUI ASAOKA[1], MOOJUN WON[2], EMI ISHIKAWA[2], TOMOYA MORITA[2], YUKIORI GOTO[1]
[1]Kyoto University Primate Research Institute, Inuyama, Japan, [2]Kyowa Hospital, Ohbu, Japan

P02.57 **L-Methionine effects on proliferation and cell death of human neuroplastoma SH-SY5Y and mouse hippocampus**

KHAWLA NUSEIR[*1], AMAL ALACHKAR[2], OLIVIER CIVELLI[2]
[1]Jordan University of Science and Technology, Irbid, Jordan, [2]University of California at Irvine, Irvine, USA

P02.58 **Intracellular trafficking defects induced by α-synuclein as a pathogenic mechanism for Parkinson's disease**

AGUSTIN ANASTASIA[*1], MILAGROS OVEJERO[1], VAISHALI SHARMA[2], MILENA JANDAR PAZ[1], MARIANO BISBAL[1], DONNA J ARNDT-JOVIN[2], THOMAS M JOVIN[2], ALFREDO CACERES[1]
[1]Instituto Ferreyra (INIMEC-CONICET-Universidad Nacional de Cordoba), Cordoba, Argentina, [2]Laboratory of Cellular Dynamics, Max-Planck-Institute for Biophysical Chemistry, Göttingen, Germany

P02.59 **Regional patterns of amyloid-beta accumulation in Alzheimer's disease: comparison between autoencoder and the non-negative matrix factorization (NMF)**

MYUNGWON CHOI[1], BYEONGCHANG JEONG[1], HYUNCHUL YOUN[2], HYUN-GHANG JEONG[2], CHEOL E HAN[*1]
[1]Department of Electronics and Information Engineering, Korea University, Sejong, Korea, Republic of, [2]Department of Psychiatry, Korea University College of Medicine, Seoul, Korea, Republic of

P02.60 **Discriminating coupling between structural connectivity and functional connectivity in the brain networks of juvenile myoclonic epilepsy**

DAEGYEOM KIM[1], JEONG-HOON LEE[1], MYUNGWON CHOI[1], JI-HYUN KIM[2], CHEOL E HAN[*1]
[1]Department of Electronics and Information Engineering, Korea University, Sejong, Korea, Republic of, [2]Department of Neurology, Korea University Guro Hospital, Korea University College of Medicine, Seoul, Korea, Republic of

P02.61 **Proteomics of the human neuronal cell culture model of Alzheimer's disease**

MIN-YOUNG SONG[1], DA KYEONG PARK[1], CHAEWON PARK[1], DAIN KIM[1], SOO YOUN LEE[1], JUNG HOON CHOI[1], JIN YOUNG KIM[1], YOUNG HYE KIM[*1]
[1]Biomedical Omics Research Group, Korea Basic Science Institute, Cheongju-si, Korea, Republic of

P02.62 **Differential regulation of transcription factor activation induced by peripheral and central axotomy**

YOUNG JOO OH[1], MIN JUNG KWON[3], BYUNG GON KIM[*2]
[1]ajou university, Suwon, Korea, Republic of, [2]Department of Neurology, Ajou University School of Medicine, Suwon, Korea, Republic of, [3]Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of

P02.63 **Cortical beta burst duration modulates other candidate electrophysiological biomarkers for closed-loop DBS in Parkinson's disease**

ANDERS CHRISTIAN MEIDAHL[*1]
[1]University of Oxford, Oxford, UK

P02.64 **Effects of serotonergic drugs on dopamine-deficient mice.**

YUKIKO OCHIAI[1], MASAYO FUJITA[2], YOKO HAGINO[2], KAZUTO KOBAYASHI[3], RYOICHI OKIYAMA[4], KAZUTAKA IKEDA[*2]
[1]Tokyo Metropolitan Institute of Medical Science/ Neurology, Tokyo Metropolitan Neurological Hospital, Tokyo, Japan, [2]Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan, [3]Department of Molecular Genetics, Institute of Biomedical Science, Fukushima Medical University, Fukushima, Japan, [4]Neurology, Tokyo Metropolitan Neurological Hospital, Tokyo, Japan

P02.65 **Therapeutic effects of the collagen-binding motif of osteopontin in an animal model of cerebral palsy with bone loss**

YOON KYUM SHIN[1], SUK-YOUNG SONG[3], EUNJU CHO[1], SOONIL PYO[1], BAE-GEUN NAM[3], SEONGMOON JO[1], JEONG HYUN HEO[3], JI HEA YU[2], JUNG HWA SEO[2], SOOHYUN WI[2], AHREUM BAEK[2], SUNG-RAE CHO[*2]
[1]Brain Korea 21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Graduate Program of NanoScience and Technology, Yonsei University, Seoul, Korea, Republic of

P02.66 **Effect of CC2D1A/Freud-1 and CC2D1B/Freud-2 genes knockdown in the frontal cortex on behavior and 5-HT1A receptor gene**

ALEXANDRA PLYUSNINA[*1], ELENA KONDAUROVA[1], TATIANA ILCHIBAEVA[1], VLADIMIR NAUMENKO[1]
[1]Department of Behavioral Neurogenomics, Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

P02.67 **Exposure to 835 MHz radiofrequency radiation reduces expression of tyrosine hydroxylase in the striatum of the Aging-PD mice model**

WOOSUN WANG[1], JU-HWAN KIM[1], HAKRIM KIM[1], HYUNG-GUN KIM[1], JIN-KOO LEE*[1]
[1]Dankook University, Cheonan, Korea, Republic of

P02.68 **Cortical-region-dependent dynamic alterations of Neuronal activity and Vascular response in Alzheimer's disease model mice**

YOUNG-GEUN CHOE[1], MINSEOK KANG[1], HYOIN LEE[1], JINHUI YOON[1], YONG JEONG*[1]
[1]KAIST, Daejeon, Korea, Republic of

P02.69 **Effect of environmental enrichment on SNARE proteins and their regulators (MUNC-13, MUNC-18) expression in the brain of hypoxic-ischemic brain injury**

SUK-YOUNG SONG[1], SOONIL PYO[3], JI HEA YU[1, 2], YOON-KYUM SHIN[3], AHREUM BAEK[2], JUNG HWA SEO[2], SOOHYUN WI[2], BAE-GEUN NAM[1], SEONGMOON JO[3], SEONGMOON JO[2], HEE-SANG OH[2], SUNGCHUL CHOI[2], JUNG-WON PARK[2], JEONGHYUN HEO[1], SUNG-RAE CHO*[2]
[1]Graduate Program of Nano Science and Technology, Yonsei University, Seoul, Republic of Korea, Seoul, Korea, Republic of, [2]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea, Seoul, Korea, Republic of

P02.70 **Therapeutic effects on behavioral performance by erythropoietin and granulocyte colony stimulating factor in MPTP-induced PD animal model**

EUNJU CHO[1], HYUNG TAE KIM[3], SUK-YOUNG SONG[4], SOONIL PYO[5], BAE-GEUN NAM[4], SEONGMOON JO[5], HEO JEONG HYUN[4], JI HEA YU[6], YOON-KYUM SHIN[5], AHREUM BAEK[7], SUNG RAE CHO*[2]
[1]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea; Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea, Seoul, Korea, Republic of, [2]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea; Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea; Department of Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea; Graduate Program of Nano Science and Technology, Yonsei University, Seoul, Republic of Korea, seoul, Korea, Republic of, [3]Department of Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, seoul, Korea, Republic of, [4]Graduate Program of Nano Science and Technology, Yonsei University, Seoul, Republic of Korea, seoul, Korea, Republic of, [5]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea; Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea, seoul, Korea, Republic of, [6]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, seoul, Korea, Republic of, [7]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea; Department and Rehabilitation Medicine, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea, seoul, Korea, Republic of

P02.71 **Identification of FKBP5-associated miRNA signature as a candidate biomarker for PTSD**

HYO JUNG KANG[1], SUJUNG YOON[2], SUJI LEE[2], KOEUL CHOI[1], YEONGJAE KIM[1], SHINWON PARK[2], EUN NAMGUNG[2], TAMMY D. KIM[2], YONG-AN CHUNG[3], JUNGYOON KIM[2], JUNG-SOO HAN[4], IN KYOON LYOO*[2]
[1]Department of Life Science, Chung-Ang University, Seoul, Korea, Republic of, [2]Ewha Brain Institute, Ewha W. University, Seoul, Korea, Republic of, [3]Department of Radiology, Incheon St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Incheon, Korea, Republic of, [4]Department of Biological Sciences, Konkuk University, Seoul, Korea, Republic of

P02.72 **The effects of chemotherapy drug in amyotrophic lateral sclerosis**

SUNJOO CHA[1], HYUN-JUN CHOI[1], KIYOUNG KIM*[1]
[1]Soonchunhyang Institute of Medi-bio Science (SIMS), Cheonan, Korea, Republic of

P02.73 **The analgesic effects of venlafaxine on oxaliplatin induced neuropathic pain in mice**

DAXIAN LI[1], WOOJIN KIM[3], SUN KWANG KIM*[2]
[1]Department of Science in Korean Medicine, Graduate School, Kyung Hee University, Seoul 02447, Republic of Korea, Seoul, Korea, Republic of, [2]Department of Science in Korean Medicine, Graduate School, Kyung Hee University, Seoul 02447, Republic of Korea; Department of Physiology, College of Korean Medicine, Kyung Hee University, Seoul 02447, Republic of Korea, Seoul, Korea, Republic of, [3]Department of Physiology, College of Korean Medicine, Kyung Hee University, Seoul 02447, Republic of Korea, Seoul, Korea, Republic of

P02.74 **Dasatinib regulates LPS-induced microglial and astrocytic neuroinflammatory responses by inhibiting AKT/STAT3 signaling**

KA-YOUNG RYU[1], HYUN-JU LEE[1], RI-JIN KANG[1], KYUNG-MIN HAN[1], YOUNGPYO NAM[1], JU-YOUNG LEE[1], HYUN-WOOK NAM[1], HYUNHEE PARK[1], HYANG-SOOK HOE*[1]
[1]korea brain research institute, Daegu, Korea, Republic of

P02.75 **The effect of conditioned medium of mesenchymal stem cells derived from human embryonic stem cells on neurogenesis markers in a rat model of ischemic stroke**

AFSANEH ASGARI TAEI[1], GHOLAMREZA HASSANZADEH[2], LEILA DARGAHI[3], SANAZ NASOOHI[4], MEHDI KADIVAR[5], MARYAM FARAHMANDFAR*[1]
[1]Department of Neuroscience and Addiction Studies, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran, Tehran, Iran, [2]Department of Anatomy, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran, Tehran, Iran, [3]Neurobiology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Tehran, Iran, [4]Neuroscience Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Tehran, Iran, [5]Department of Biochemistry, Pasteur Institute of Iran, Tehran, Iran, Tehran, Iran

P02.76 **Absence of association between AQP4, KCNJ10 gene polymorphisms and drug resistance in Chinese Han patients with partial epilepsy**

HAOYUE ZHU[1], LUO ZHOU[2], BO XIAO*[1]
[1]Xiangya hospital of Central south university, Changsha, Hunan province, China, [2]Xiangya hospital of Central south university, Changsha, Hunan province , China

P02.77 **Gait analysis of rhesus macaque after neural electrode implant in the median nerve**

JINYOUNG WON[1], JUNGHYUNG PARK[1], JINCHEOL SEO[1], HYEON-GU YEO[1], KEONWOO KIM[1], CHANG-YEOP JEON[1], YOUNGJEON LEE*[1]
[1]Korea Research Institute of Bioscience and Biotechnology (KRIBB), Cheongju, Korea, Republic of

P02.78 **Effects of drug TC-2153 on the behavior and striatal-enriched tyrosine protein phosphatase in the brain of rats selectively bred for high and low aggression towards humans.**

ALEXANDER KULIKOV*[1], VITALII MOSKALIUK[1], RIMMA KOZHEMYAKINA[1], DARYA BAZOVKINA[1], ELENA TERENINA[2], KONSTANTIN VOLCHO[3], VLADIMIR NAUMENKO[1], ELIZABETH KULIKOVA[1]
[1]Institute of Cytology and Genetics, Novosibirsk, Russia, [2]INRA, Toulouse, France, [3]Novosibirsk Institute of Organic Chemistry, Novosibirsk, Russia

P02.79 **Inhibitory effects of Korean Red Ginseng extract on methamphetamine-induced addictive behaviors in rodents**

BO-RAM LEE[1], SU-JEONG SUNG[1], KWANG-HYUN HUR[1], SEONG-EON KIM[1], SEON-KYUNG KIM[1], SEOK-YONG LEE[1], CHOON-GON JANG*[1]
[1]Sungkyunkwan University, Suwon, Korea, Republic of

P02.80 **TREK1 channel in DGGCs ameliorates depression-like behaviour and increases adult hippocampal neurogenesis in mice**

SEUNG CHAN KIM[1], JAE HYOUK CHOI[1], EUNMI HWANG*[1]
[1]Korea institute of Science and Technology (KIST), Seoul, 02792, Korea, Republic of

P02.81 **Impaired EWSR1 activity leads to oligodendrocyte dysfunction and demyelination of motor neurons in amyotrophic lateral sclerosis (ALS)**

MI-HYUN CHOI[1], PHUONG T. NGUYEN[1], EUNMI KIM[2], HYUN SOO SHIM[1], SEUNG JAE HYEON[1], YUN HA KIM[1], YU JIN HWANG[1], NEIL W KOWALL[3], SEAN BONG LEE[4], JUNGHEE LEE[3], HAE-CHUL PARK[5], HOON RYU*[1]
[1]KIST, Seoul, Korea, Republic of, [2]Korea University, School of Medicine, Ansan, Korea, Republic of, [3]VA Boston Healthcare System, Boston, USA, [4]Tulane University School of Medicine, New Orleans, USA, [5]Korea University, School of Medicine , Ansan, Korea, Republic of

P02.82 **Exosome from reactive astrocyte induces cognitive impairment and memory loss in mouse models**

SO-YOUNG OH[1], YU-NA LEE[1], C. JUSTIN LEE[2], MIN SOO KIM*[1]
[1]KIST, seoul, Korea, Republic of, [2]IBS, Daejeon, Korea, Republic of

P02.83 **Focused ultrasound restores interhemispheric balance after stroke through direct neuromodulation**

ANVAR SARIEV[1], HONGCHAE BAEK[3], HYUNGMIN KIM*[2]
[1]Division of Bio-Medical Science & Technology, KIST school, Korea University of Science and Technology, Seoul 02792, Republic of Korea, Seoul, Korea, Republic of, [2]Center for Bionics, Biomedical Research Institute, Korea Institute of Science and Technology (KIST), Seoul, Republic of Korea, Seoul, Korea, Republic of, [3]Department of Biomedical Engineering, Washington University in St. Louis, St. Louis, MO, USA, St. Louis, USA

P02.84 **Functional role of GluN2D subunit containing NMDA receptors in MPTP-induced Parkinsonism**

RAMESH SHARMA[1], CHIRANJIVI NEUPANE[1], HYUN JIN SHIN[1], SU EUN PARK[1], JIN BONG PARK*[1]
[1]Department of Medical Sciences, Department of BK21 Plus, School of Medicine, Chungnam National University, Daejeon, Korea, Republic of

P02.85 **A postmortem study on the distribution of various neurotransmitters in the cortical area and inner nuclei of human brain using ultra performance liquid chromatography-tandem mass spectrometry (UPLC-MS/MS)**

KEECHAN AHN[1], MASKEY DHIRAJ[1], GUK HWA JUNG[1], YONG-KI PARK[1], SUNYOUNG KIM[1], YUMI SHIM[3], SEONG IK KIM[3], SUNG-HYE PARK[3], HYUNG-GUN KIM*[2]
[1]NeuroVis Co., Cheonan, Korea, Republic of, [2]Pharmacology, Dankook University, Cheonan, Korea, Republic of, [3]Brain Bank, Seoul National University Hospital, Seoul, Korea, Republic of

P02.86 **The effects of aging on behavior and brain-derived neurotrophic factor in the hippocampus in mice**

VITALII MOSKALIUK*[1], ELIZABETH KULIKOVA[2], VLADIMIR NAUMENKO[2], ELENA KONDAUROVA[2], DARYA BAZOVKINA[2]
[1]Novosibirsk State University, Novosibirsk, Russia, [2]Institute of Cytology and Genetics, Novosibirsk, Russia

P02.87 **Severe reactive astrocytes precipitate pathological hallmarks of Alzheimer's disease via excessive H_2O_2-production**

HEEJUNG CHUN[1], YUNHA KIM[2], YOU JUNG KANG[3], HYEONJOO IM[2], JIN HEE SHIN[4], YEONHA JU[1], WOOJIN WON[1], YONGMIN MASON PARK[1], JIWOON LIM[1], JAEKWANG LEE[1], JUNSUNG WOO[2], YUJIN HWANG[2], SEONMI JO[2], ISAAC WETZEL[5], JONG-HYUN PARK[2], DAESOO KIM[6], DOO YEON KIM[7], BYOUNG JOO GWAG[4], YOUNGSOO KIM[8], KI DUK PARK[2], BONG-KIUN KAANG[9], HANSANG CHO[2], HOON RYU[2], C.JUSTIN LEE*[1]
[1]Institute for Basic Science, Daejeon, Korea, Republic of, [2]Korea Institute of Science and Technology, Seoul, Korea, Republic of, [3]University of North Carolina at Charlotte, Charlotte, Korea, Republic of, [4]GNT Pharma Co. Ltd., Seoul, Korea, Republic of, [5]University of North Carolina at Charlotte, Charlotte, USA, [6]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [7]Harvard Medical School, USA, USA, [8]Yonsei University, Seoul, Korea, Republic of, [9]Seoul National University, Seoul, Korea, Republic of

P02.88 **High-frequency stimulation of cortico-subthalamic projections in the 6-hydroxydopamine model of Parkinson's disease**

INSUN CHOI[1], JOON HO CHOI[1], JONG CHEOL RAH*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P02.89 **Cytoskeletal and molecular changes in axonal swellings**

VICTORIO POZO DEVOTO[1], VALENTINA LACOVICH[1], MARIA CARNA[1], MONICA FEOLE[1], GORAZD STOKIN*[1]
[1]Center for Translational Medicine, International Clinical Research Center, St. Anne's University Hospital Brno, Brno, Czech Republic

P02.90 **Possible therapeutic role of tetracycline derivatives in Parkinson's disease model**

ELAINE DEL BEL*[1], MARIZA BORTOLANZA[2], GLAUCE NASCIMENTO[2], RITA RAISMAN-VOZARI[3]
[1]University of Sao Paulo - Dental School of Ribeirao Preto, Ribeirao Preto, Brazil, [2]University of Sao Paulo-Dental School of Ribeirao Preto, Ribeirao Preto, Brazil, [3]UPMC UM75 INSERM U1127, CNRS UMR 7225, Thérapeutique Expérimentale de la Neurodégénérescence Institut du cerveau et de la moelle épinière (ICM) Hôpital de la Salpêtrière, Paris, France

P02.91 **Studies on the propagation of tau protein mediated TLR2 using transwell system**

KYU-WON CHO[1], JUN-SUNG LEE[1], SEUNG-JAE LEE*[1]
[1]Department of Biomedical science, Seoul National University, Seoul, Korea, Republic of

P02.92 **TRPV1 knockout mitigates calcium dyshomeostasis and reduces the amyloid-beta and tau pathogenesis in a mouse model of Alzheimer's disease**

JUYONG KIM[1], SIYOUNG LEE[3], JAEKYOON KIM[3], YONGKEUN JUNG[4], JUNGSOO HAN[5], KIWON LEE[3], JIYOUNG KIM*[2]
[1]Wide River Institute of Immunology, Seoul National University College of Medicine, Hongcheon, Korea, Republic of, [2]Center for Food and Bioconvergence, College of Agriculture and Life Sciences, Seoul National University, Seoul, Korea, Republic of, [3]Department of Agricultural Biotechnology, Seoul National University, Seoul, Korea, Republic of, [4]School of Biological Sciences, Seoul National University, Seoul, Korea, Republic of, [5]Department of Biological Sciences, Konkuk University, Seoul, Korea, Republic of

P02.93 **Loss of RNA binding protein, human antigen R enhances mitochondrial elongation by regulating Drp1 expression in SH-SY5Y cells**

HYUN JUN PARK[1], JI-EUN BAE[1], DOO SIN JO[1], NA YEON PARK[1], JUN BUM KIM[1], DONG-HYUNG CHO*[1]
[1]Kyungpook National University, Daegu, Korea, Republic of

P02.94 **The effect of short photoperiod on behavior, brain-derived neurotrophic factor and brain serotonin system in tumour necrosis factor knockout mice**

DARYA BAZOVKINA*[1], ARINA PERSHINA[2], EKATERINA BAZHENOVA[1], ELIZAVETA KULIKOVA[1]
[1]Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia, [2]Novosibirsk State University, Faculty of Natural Sciences, Novosibirsk, Russia

P02.95 **Down-regulated TMP21 in Alzheimer's disease induces autophagy via ATG4B activation**

NAYEON PARK[1], JI HYUN SHIN[1], DOO SIN JO[1], JUN BUM KIM[1], JI-EUN BAE[1], HYUN JUN PARK[1], DONG-HYUNG CHO*[1]
[1]Kyungpook National Univ., Daegu, Korea, Republic of

P02.96 **Identification of novel pexophagy regulator**

DOO SIN JO[1], JOON BUM KIM[2], NA YEON PARK[2], JI-EUN BAE[2], HYUN JUN PARK[2], KYU-SUN LEE[3], DONG-HYUNG CHO*[1]
[1]Kyungpook National University, Daegu, Korea, Republic of, [2]Kyungpook National University, Daegu, Korea, Republic of, [3]Korea Research Institute of Bioscience and Biotechnology, Daejeon , Korea, Republic of

P02.97 **Primary cilia mediate mitochondrial stress responses and autophagy to promote cell survival in a Parkinson's disease model**

JI-EUN BAE[1], DOO SIN JO[1], NA YEON PARK[1], JUN BUM KIM[1], HYUN JUN PARK[1], MIN-SEON KIM[2], DONG-HYUNG CHO*[1]
[1]Kyungpook National University, Daegu, Korea, Republic of, [2]Asan Medical Center, Seoul, Korea, Republic of

P02.98 **Proteomic analysis of wing-cut flies: identification of novel protein associated with axonal regeneration and degeneration**

MYUNGJIN JO[1], HYUNG-JUN KIM*[1]
[1]KBRI, Daegu, Korea, Republic of

P02.99 **Autism-like social deficit generated by *Dock4* deficiency is rescued by restoration of NMDA receptor function**

DAJI GUO[1], YINGHUI PENG[1], LAIJIAN WANG[2], BIN JIANG[2], LEI SHI*[1]
[1]JNU-HKUST Joint Laboratory for Neuroscience and Innovative Drug Research, College of Pharmacy, Jinan University, Guangzhou, China, [2]Guangdong Province Key Laboratory of Brain Function and Disease, Zhongshan School of Medicine, Sun Yat-sen University, Guangzhou, China

P02.100 **Effects of the transient receptor potential cation channel 5 (TRPC5) inhibitor NU6027 on hippocampal neuronal death after traumatic brain injury**

MIN KYU PARK[1], BO YOUNG CHOI[1], A RA KHO[1], SONG HEE LEE[1], DAE KI HONG[1], JEONG HYUN JEONG[1], BEOM SEOK KANG[1], DONG HYEON KANG[1], SANG WON SUH*[1]
[1]Hallym University, ChunCheon, Korea, Republic of

P02.101 **Reduced neuroglobin (Ngb) level associated with the breakdown of blood brain barrier (BBB) after transient middle cerebral artery occlusion (tMCAO) in aged mice**

YEOJIN KIM[1], MINGEE KIM[1], SODAM KIM[1], YUNSEON SONG*[1]
[1]Sookmyung women's University, Seoul, Korea, Republic of

P02.102 **Dissociation of parvalbumin-positive and somatostatin-positive interneurons' contributions to frequency-selective impairments of synaptic inhibition to hippocampal pyramidal cells induced by Aβ oligomers in vitro**

KYERL PARK[1], HYOWON CHUNG[1], HYUN JAE JANG[1], MICHAEL KOHL[2], JEEHYUN KWAG*[1]
[1]Korea University, Seoul, Korea, Republic of, [2]University of Oxford, Oxford, UK

P02.103 **Combined treatment of herbal formula with L-3,4-dihydroxyphenylalanine ameliorates Parkinson's disease with reducing complaints induced by L-3,4-dihydroxyphenylalanine**

EUGENE HUH[1], JIN GYU CHOI[3], JINHEE KIM[4], YEOMOON SIM[4], MYUNG SOOK OH*[2]
[1]Department of Life and Nanopharmaceutical Sciences and Department of Medical Science of Meridian, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Life and Nanopharmaceutical Sciences, Graduate School, and Department of Oriental Pharmaceutical Science, College of Pharmacy, Kyung Hee University, Seoul, Korea, Republic of, [3]Department of Oriental Pharmaceutical Science, College of Pharmacy and Kyung Hee East-West Pharmaceutical Research Institute, Kyung Hee University, Seoul, Korea, Republic of, [4]Department of Life and Nanopharmaceutical Sciences, Graduate School, Kyung Hee University, Seoul, Korea, Republic of

P02.104 **Improvement of mismatch negativity correlates with symptomatic and functional outcome of patients with first episode psychosis**

KYUNGJIN LHO[1], MINAH KIM[1], TAK HYUNG LEE[3], YOO BIN KWAK[3], JUN SOO KWON*[2]
[1]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Republic of Korea; Department of Neuropsychiatry, Seoul National University Hospital, Seoul, Republic of Korea, Seoul, Korea, Republic of, [2]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Republic of Korea; Department of Neuropsychiatry, Seoul National University Hospital, Seoul, Republic of Korea; Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Republic of Korea, Seoul, Korea, Republic of, [3]Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Republic of Korea, Seoul, Korea, Republic of

Glia, glia–neuron interactions

P03.01 **Pharmacological and genetic inhibition of astrocytic GABA-transaminase enhances tonic GABA inhibition in the hippocampus**

WONSEOK LEE[1], MIN GU PARK[2], JUNSUNG WOO[3], C. JUSTIN LEE[2], BOEUN YOON*[1]
[1]Dankook University, Cheonan, Korea, Republic of, [2]Institute for Basic Science (IBS), Daejeon, Korea, Republic of, [3]Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P03.02 **Inhibition of metabotropic glutamate receptor 5 provides neuronal protection and neurological recovery via down-regulation of activated microglia after intracerebral hemorrhage**

MD SAIDUR RAHMAN[1], HAIXIA LU[1], YONG LIU[1], XINLIN CHEN*[1]
[1]Institute of Neurobiology, School of Basic Medical Sciences, Xi'an Jiaotong University Health Science Center, 76 Yanta West Road, Xi'an, Shaanxi, 710061, P. R. China, Xi'an, China

P03.03 **3D in vitro peripheral nervous system organoid using mouse primary dorsal root ganglion neurons and Schwann cells**

WOON-HAE KIM[1], HYUN-GYU KANG[1], TAEHOON H. KIM[2], YOON JEONG MO[3], YU SEON KIM[3], ASEER INTISAR[1], HYUN YOUNG SHIN[1], SEUNG JOON LEE[1], YUN-IL LEE[3], MINSEOK S. KIM*[1]
[1]Department of New Biology, Daegu Gyeongbuk Institute of Science & Technology, Daegu, Korea, Republic of, [2]CytoDx, Daegu, Korea, Republic of, [3]Well Aging Research Center, Daegu Gyeongbuk Institute of Science & Technology, Daegu, Korea, Republic of

P03.04 **A Parkinson's disease gene, DJ-1, regulates anti-inflammatory roles of astrocytes through Prostaglandin D2 synthase expression**

KEON AH LEE[1], DONG-JOO CHOI[3], JIAWEI AN[4], ILO JOU[5], SANG MYUN PARK[5], EUN-HYE JOE*[2]
[1]Ajou University, Suwon, Korea, Republic of, [2]a Neuroscience Graduate Program, Department of Biomedical Sciences, b Department of Pharmacology, c Chronic Inflammatory Disease Research Center, d Department of Brain Science, Department of Neurology, Ajou University School of Medicine, Suwon, Korea, Republic of, [3]b Department of Pharmacology, c Chronic Inflammatory Disease Research Center, Ajou University School of Medicine, Suwon, Korea, Republic of, [4]a Neuroscience Graduate Program, Department of Biomedical Sciences, b Department of Pharmacology, d Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of, [5]a Neuroscience Graduate Program, Department of Biomedical Sciences, b Department of Pharmacology, c Chronic Inflammatory Disease Research Center, Ajou University School of Medicine, Suwon, Korea, Republic of

P03.05 **Adenosine changes the phenotypes of cultured microglia pre-treated with lipopolysaccharide**

QINGJUN HUANG*[1], WENXIAO ZHANG[1]
[1]Shantou University Mental Health Center, Shantou, China

P03.06 **Rehabilitative training-induced functional vicariation is associated with coordinated plasticity of synapses and astrocytes in peri-infarct motor cortex**

SOO YOUNG KIM*[1], J. EDWARD HSU[2], THERESA JONES[3]
[1]College of Pharmacy, Yeongnam University, Gyeongsan, Gyeongbuk, Korea, Republic of, [2]McGovern Medical School, University of Texas Health Science Center, Houston, Texas, USA, [3]Institute for Neuroscience, University of Texas at Austin, Austin, Texas, USA

P03.07 **Mao-b inhibition reduces astrogliosis and transforms reactive astrocytes into active astrocytes under pathological conditions**

JIWOON LIM[1], HEEJUNG CHUN[1], JOUNGHA WON[1], YONGMIN MASON PARK[1], CHANGJOON JUSTIN LEE*[1]
[1]Institute for basic science, Daejeon, Korea, Republic of

P03.08 **Does neuronal-glia interaction involve depression as a behavioral comorbidity related to epileptogenic process in temporal lobe epilepsy?**

SOL AH KIM[1], HYE-YOUNG JOUNG[1], YUN SEO CHOI[1], SEI KWAN OH[2], HYANG WOON LEE*[1]
[1]Departments of Neurology and Medical Science, Ewha Womans University School of Medicine and Ewha Medical Research Institute, Seoul, Korea, Republic of, [2]Department ofof Medical Science and Molecular Medicine, Ewha Womans University School of Medicine, Seoul, Republic of Korea, Seoul, Korea, Republic of

P03.09 **Expression and roles of osteopontin in injured brain**

JIAWEI AN[1], HAIJIE YANG[3], EUN-HYE JOE*[2]

[1]a Neuroscience Graduate Program, b Department of Pharmacology, c Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of, [2]a Neuroscience Graduate Program, b Department of Pharmacology, c Department of Brain Science, d Chronic Inflammatory Disease Research Center, Ajou University School of Medicine, Suwon, Korea, Republic of, [3]b Department of Pharmacology, c Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of

P03.10 **GABA from reactive astrocytes in hypothalamus via monoamine oxidase B causes and exacerbates obesity**

MOONSUN SA[1], YONGRYUL YANG[3], HYUN-JUN JANG[3], JEONGYEON KIM[4], JEA KWON[5], WOOJIN WON[5], KI DUK PARK[6], C. JUSTIN LEE*[2]

[1]Institute for Basic Science (IBS) and KU-KIST Graduate School of Converging Science and Technology, Daejeon, Korea, Republic of, [2]Center for Cognition and Sociality, Institute for Basic Science (IBS), Deajeon, Korea, Republic of, [3]Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea, Republic of, [4]Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [5]Institute for Basic Science (IBS) and KU-KIST Graduate School of Converging Science and Technology, Deajeon, Korea, Republic of, [6]Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P03.11 **Differential susceptibility and vulnerability of brain cells of C57BL/6 mouse to cuprizone intoxication**

HAIYUN XU*[1], MAOMAO DENG[1]

[1]Shantou University Medical College, Shantou, China

P03.12 **Deficiency of DJ-1 delays monocyte infiltration and repair of injured brain**

EUN-HYE JOE*[1], DONG-JOO CHOI[2], JIAWEI AN[3], KEON AH LEE[4], BYUNG GON KIM[5], ILO JOU[6], SANG MYUN PARK[6]

[1]a Neuroscience Graduate Program, Department of Biomedical Sciences, b Department of Pharmacology, c Chronic Inflammatory Disease Research Center, d Department of Brain Science, Department of Neurology, Ajou University School of Medicine, Suwon, Korea, Republic of, [2]b Department of Pharmacology, c Chronic Inflammatory Disease Research Center, Ajou University School of Medicine, Suwon, Korea, Republic of, [3]a Neuroscience Graduate Program, Department of Biomedical Sciences, b Department of Pharmacology, d Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of, [4]b Department of Pharmacology, d Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of, [5]a Neuroscience Graduate Program, Department of Biomedical Sciences, c Chronic Inflammatory Disease Research Center, d Department of Brain Science, e Department of Neurology, Ajou University School of Medicine, Suwon, Korea, Republic of, [6]a Neuroscience Graduate Program, Department of Biomedical Sciences, b Department of Pharmacology, c Chronic Inflammatory Disease Research Center, Ajou University School of Medicine, Suwon, Korea, Republic of

P03.13 **Region-specific astrogliosis reveals meninges damage and blood vessel formation are critical for scar formation**

HAIJIE YANG[1], JIAWEI AN[3], EUN-HYE JOE*[2]

[1]Department of Pharmacology, Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of, [2]Department of Pharmacology, Department of Brain Science, Neuroscience Graduate Program, Department of Biomedical Sciences, Chronic Inflammatory Disease Research Center, Ajou University School of Medicine, Suwon, Korea, Republic of, [3]Department of Pharmacology, Department of Brain Science, Neuroscience Graduate Program, Department of Biomedical Sciences, Ajou University School of Medicine, Suwon, Korea, Republic of

P03.14 **Astrocytes regulate inhibitory system distinctively on male and female in ADHD mouse model**

GA YEON KIM[1], BO-EUN YOON*[1]

[1]Department of Molecular biology, Dankook university, Cheonan, Korea, Republic of

P03.15 **Ethanol-induced changes in astrocytic morphological properties and GABA.**

JONG-MIN KIM[1], BO-EUN YOON*[1]

[1]Department of molecular biology, Dankook University, Cheonan, Korea, Republic of

P03.16 **Differential expression of circular RNAs in the proximal and distal segments of the sciatic nerve after injury**

EUN JUNG SOHN*[1], HWAN TAE PARK[1]

[1]Peripheral Neuropathy Research Center, Department of Molecular Neuroscience, College of Medicine, Dong-A University, pusan, Korea, Republic of

P03.17 **Synthesis and Release of GABA From Astrocytes in VB Thalamus**

HANKYUL KWAK[1], EUNJI CHEONG*[1]

[1]Yonsei Univ, Seoul, Korea, Republic of

P03.18 **Isoliquiritigenin attenuates pro-inflammatory response in LPS-induced microglia via regulation of calcium/calcineurin/Drp1-mediated mitochondrial fission**

BORA NAM[1], DONG GIL LEE[1], DONG-SEOK LEE*[1]

[1]School of Life Sciences, BK21 Plus KNU Creative BioResearch Group, Kyungpook National University, Daegu, Korea, Republic of

P03.19 **A critical role of PITX1 in astrocyte differentiation through transcriptional regulation of SOX9 gene**

JEONGSU BYUN[1], BAEK-SOO HAN*[1]

[1]KRIBB, Daejeon, Korea, Republic of

P03.20 **ADHD-like behavior mediated by tonic inhibition**

YOO SUNG KIM[1], MOONSUN SA[2], JUNSUNG WOO[3], GUK HWA JUNG[4], HYUNG-GUN KIM[4], C. JUSTIN LEE[2], BO-EUN YOON*[1]

[1]Department of Molecular Biology, Dankook University, Cheonan, Korea, Republic of, [2]Center for Cognition and Sociability, Institute for Basic Science (IBS), Daejeon, Korea, Republic of, [3]Center for Neuroscience and functional Connectomics, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [4]Department of Pharmacology, College of Medicine, Dankook University, Cheonan, Korea, Republic of

P03.21 **Activation of astrocytic mu-opioid receptor causes conditioned place preference**

MIN-HO NAM[1], KYUNG-SEOK HAN[1], JAEKWANG LEE[1], WOOJIN WON[1], WUHYUN KOH[1], JIN YOUNG BAE[3], JUNSUNG WOO[1], JAYOUNG KIM[1], ELLIOT KWONG[1], TAE-YONG CHOI[4], HEEJUNG CHUN[1], SEUNG EUN LEE[1], SANG-BUM KIM[5], KI DUK PARK[1], SE-YOUNG CHOI[4], YONG CHUL BAE[3], C. JUSTIN LEE*[2]

[1]KIST, Seoul, Korea, Republic of, [2]IBS, Daejeon, Korea, Republic of, [3]Kyungpook National University, Daegu, Korea, Republic of, [4]SNU, Seoul, Korea, Republic of, [5]Daegu-Gyeongbuk Medical Innovation Foundation, Daegu, Korea, Republic of

P03.22 **The novel DYRK1A inhibitor KD03 alters neuroinflammation in BV2 microglial cells, wild-type, and Alzheimer's transgenic mice**

HANWOONG WOO[1], JI-HYE KWON[1], JU-YOUNG LEE[1], JIN HAN NAM[1], WONIL LEE[1], JEONGYEON KIM[1], RI-JIN KANG[1], KA-YOUNG RYU[1], HYUN-JU LEE[1], YOO JOO JEONG[1], HYUN-WOOK NAM[1], YOUNGPYO NAM[1], HYANG-SOOK HOE*[1]

[1]KBRI, Daegu, Korea, Republic of

P03.23 **NMO-IgG leads to accumulation of multilamellar structure in human iPSC-derived astrocytes**

SUKHEE CHO[1], MINKYO JUNG[1], JINSOO SEO*[2], JIYOUNG MUN*[1]

[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of

P03.24 **Non-cell autonomous modulation of tyrosine hydroxylase by HMGB1 released from astrocytes in an acute MPTP-induced mouse model**

SOO JEONG KIM[1], MIN JEONG RYU[1], JEONGSU HAN[1], YUNSEON JANG[1], MIN JOUNG LEE[1], XIANSHU JU[1], ILHWAN RYU[1], YU LIM LEE[1], EUNGSEOK OH[2], WOOSUK CHUNG[3], JUN YOUNG HEO[1], GI RYANG KWEON[1], JUN YOUNG HEO*[1]

[1]Department of Medical science, Chungnam National University School of Medicine, Daejeon, Korea, Republic of, [2]Department of Neurology, Chungnam National University Hospital, Daejeon, Korea, Republic of, [3]Department of Anesthesiology and Pain Medicine, Chungnam National University Hospital, Daejeon, Korea, Republic of

P03.25 **SUMO-1 regulates the NFκB-mediated inflammatory response of activated microglia**

APARNA KARTHIKEYAN[1], NEELIMA GUPTA[1], PARAKALAN RANGARAJAN[1], KARTHIK MALLILANKARAMAN[2], ENG ANG LING[1], S. THAMEEM DHEEN*[1]

[1]Department of Anatomy, YLL School of Medicine, NUS, Singapore, Singapore, [2]Department of Physiology, YLL School of Medicine, NUS, Singapore, Singapore

Sun. (Sept. 22)

Homeostatic and neuroendocrine systems

P04.01 **Neuroprotective role of heme oxygenase in the drosophila brain**
ELŻBIETA PYZA*[1], TERENCE AL ABAQUITA[1], MILENA DAMULEWICZ[1]
[1]Jagiellonian University, Krakow, Poland

P04.02 **Identification of herbal ingredients to alleviate sleep disorders**
RYEONG EUN KIM[1], CHAN YOUNG SHIN[1], KYOUNG JA KWON*[1]
[1]Department of Neuroscience, School of Medicine, Konkuk University, 120 Neungdong-ro, Gwangjin-Gu, Seoul 05029, Korea, Seoul, Korea, Republic of

P04.03 **hAPOE4 enhances glucose intolerance and obesity in knock-in mouse model**
YONG DO PARK[1], SONG MI HAN[1], SUNG EUN LEE[1], SUN AH PARK*[2]
[1]Neuroscience Graduate Program, Department of Biomedical Sciences, Ajou University Graduate School of Medicine, Suwon, Korea, Republic of, [2]Ajou University School of Medicine, Suwon, Korea, Republic of

P04.04 **Chemogenetic manipulation of parasympathetic (DMV) regulates feeding behavior and energy metabolism**
CHERL NAMKOONG[1], WOO JIN SONG[1], CHANG YEON KIM[1], DEOK HYEON CHEON[1], SOONHO SHIN[1], JONG WOO SOHN[2], HYUNG JIN CHOI*[1]
[1]SEOUL NATIONAL UNIVERSITY, Seoul, Korea, Republic of, [2]KAIST, Daejeon, Korea, Republic of

P04.05 **Vitamin D deficiency attenuates homeostatic sleep response and circadian rhythmicity**
JIEUN JUNG[1], JISEUNG KANG[1], TAE KIM*[1]
[1]GIST, Gwangju, Korea, Republic of

P04.06 **Effects of reduced nocturnal phone light exposure on sleep - a comparison of the decreased polychromatic light and the blocked short wavelength light conditions**
CHUAN LI*[1], MING YI CHOI[1], AUGUSTINE LI[1], CHUN LOK WU[1], ZENAB BIBI[1]
[1]Tung Wah College, Hong Kong, Hong Kong SAR, China

P04.07 **Identification of small molecule inhibitors of glucocorticoid synthesis**
SOOHYUN KIM[1], SOOYOUNG CHUNG*[1]
[1]Department of Brain and Cognitive Sciences, Scranton College, Ewha Womans University, Seoul, Korea, Republic of

P04.08 **p110β in the ventromedial hypothalamus regulates glucose and energy metabolism**
DONG JOO YANG[1], KI WOO KIM*[1]
[1]Yonsei University College of Dentistry, Seoul, Korea, Republic of

P04.09 **FoxO1 in dopaminergic neurons regulates energy homeostasis and targets tyrosine hydroxylase**
LE TRUNG TRAN[1], KI WOO KIM*[1]
[1]Yonsei University College of Dentistry, Seoul, Korea, Republic of

P04.10 **Suppression of FoxO1 by leptin enhances tyrosine hydroxylase and leads to anxiolytic behavior**
SEUL KI KIM[1], KI WOO KIM*[1]
[1]Yonsei University College of Dentistry, Seoul, Korea, Republic of

P04.11 **Association between serum cortisol level and T cell subpopulation after transient middle cerebral artery occlusion (tMCAO) in aged mice**
MINGEE KIM[1], YEOJIN KIM[1], SODAM KIM[1], YUNSEON SONG*[1]
[1]Sookmyung women's University, Seoul, Korea, Republic of

P04.12 **Stress-induced protein DRR1 affects spine maturation and AMPAR-subunits in hippocampal neurons**
OLGA TSCHESNOKOWA*[1], MARTA SEGARRA[2], TANJA JENE[3], MARIANNE MUELLER[3], AMPARO ACKER-PALMER[2]
[1]Buchmann Institute for Molecular Life Sciences, Goethe-University, Frankfurt am Main, Germany, [2]Buchmann Institute for Molecular Life Sciences, Goethe-University, Frankfurt am Main, Germany, [3]Johannes Gutenberg University Medical Center, Mainz, Germany

P04.13 **Elucidating the function of glucose-sensing neurons modulating the activity of endocrine cells in the pancreas**
SEONGJU LEE[1], UISU HYUN[1], MINHO LEE[1], YANGKYUN OH[3], JONGWOO SOHN[1], GREG S.B. SUH*[2]
[1]KAIST, Daejeon, Korea, Republic of, [2]KAIST, New York University, Daejeon, New York, USA, [3]New York University, New York, USA

New technology - Neurotool

P05.01 **Inferring causal relations between neurophysiological signals with dimensional causality**

ZSIGMOND BENKŐ[1], MARCELL STIPPINGER[3], ÁDÁM ZLATNICKI[4], DÁNIEL FABÓ[5], ANDRÁS SÓLYOM[5], LORÁND ERŐSS[6], SEVINJ YOLCHUYEVA[3], ANDRÁS TELCS[7], ZOLTÁN SOMOGYVÁRI*[2]

[1]Wigner Research Centre for Physics, Budapest, Hungary, [2]Department of Computational Sciences, Wigner Research Centre for Physics of the Hungarian Academy of Sciences; Neuromicrosystems ltd., Budapest, Hungary, [3]Department of Computational Sciences, Wigner Research Centre for Physics of the Hungarian Academy of Sciences, Budapest, Hungary, [4]Department of Computer Science and Information Theory, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary, [5]Epilepsy Center "Juhász Pál", National Institute of Clinical Neurosciences, Budapest, Hungary, [6]Department of Functional Neurosurgery, National Institute of Clinical Neurosciences, Budapest, Hungary, [7]Department of Computer Science and Information Theory, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics; Department of Computational Sciences, Wigner Research Centre for Physics of the Hungarian Academy of Sciences, Budapest, Hungary

P05.02 **Gait variability indicates underlying focal gray matter atrophy in the brain of non-demented older adults**

SEONJEONG BYUN[1], SEONJEONG BYUN[3], KI WOONG KIM*[2]

[1]1. Department of Psychiatry, Seoul National University, College of Medicine 2. 1. Department of Neuropsychiatry, National Medical Center, seoul, Korea, Republic of, [2]Seoul national university, seoul, Korea, Republic of, [3]1. Department of Psychiatry, Seoul National University, College of Medicine 2. 1. Department of Neuropsychiatry, National Medical Center, Seoul, Korea, Republic of

P05.03 **Vertical nanowire electrode array for intracellular electrical stimulation to enhance neurogenesis of human neural stem cells**

JONG SEUNG LEE[1], JU YOUNG KWON[2], JUNG HOON KIM[1], JIN KIM[1], HEON-JIN CHOI[1], SEUNG-WOO CHO*[1]

[1]Yonsei University, Seoul, Korea, Republic of, [2]Yonsei University, seoul, Korea, Republic of

P05.04 **High-throughput, high-viability encapsulation of iPSCs and cerebral spheroids into hydrogel spheres using droplet microfluidics**

MARCO MALAGA[1], JOHN HEYMAN[2], JESSE COLLINS[2], ALISON O'NEIL[3], QIAOLING HUANG[4], YI XIAO[5], DAVID WEITZ*[2]

[1]GEIN SOCIEM-USMP, Facultad de Medicina Humana, Universidad San Martin de Porres, Lima, Peru, [2]Department of Physics, John A. Paulson School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA, [3]Stem Cell and Regenerative Biology Department, Harvard University, Cambridge, MA, USA, [4]Xiamen University, Xiamen, China, [5]Hunan Normal University, Changsha, China

P05.05 **New method for the detection of Neurocysticercosis cysts in MRI by image processing**

LAURA BAQUEDANO SANTANA*[1], JAVIER BUSTOS[2], GIANFRANCO ARROYO[3], JUAN CHACALTANA[4], MANUEL FORERO[5], HECTOR GARCIA[2]

[1]Universidad Peruana Cayetano Heredia, Lima, Peru, [2]Cysticercosis Unit, Instituto Nacional de Ciencias Neurologicas, Lima, Peru, [3]School of Public Health and Administration, Universidad Peruana Cayetano Heredia, Lima, Peru, [4]Department of Diagnostic Imaging, Instituto Nacional de Ciencias Neurologicas, Lima, Peru, [5]Universidad de Ibagué, Ibague, Colombia

P05.06 **Spatio-temporal membrane potential and resistive current reconstruction from parallel multielectrode array and intracellular measurements in single neurons**

ZOLTÁN SOMOGYVÁRI*[1], DOMOKOS MESZÉNA[2], DOROTTYA CSERPÁN[1], LUCIA WITTNER[2], ISTVÁN ULBERT[2]

[1]Wigner Research Centre for Physics of Hungarian Academy of Sciences, Budapest, Hungary, [2]Institute of Cognitive Neuroscience and Psychology, Research Center for Natural Sciences of Hungarian Academy of Sciences, Budapest, Hungary

P05.07 **Shaping brain signals with real-time fMRI : optimizing retrieval inducing neurofeedback with simulations**

CINDY LOR*[1], AMELIE HAUGG[2], RONALD SLADKY[1], GUSTAVO PAMPLONA[3], FRANK SCHARNOWSKI[1]

[1]University of Vienna, Vienna, Austria, [2]University of Zurich, Zurich, Switzerland, [3]University of Lausanne, Lausanne, Switzerland

P05.08 **Correlative super-resolution structured illumination microscopy combined with array tomography for high accuracy synapse detection**

GYEONG TAE KIM[1], NARI KIM[2], SANG-KYU BAHN[2], KIPOM KIM[2], JOON HO CHOI[2], JINSEOP KIM[2], JONG-CHEOL RAH*[1]

[1]Korea Brain Research Institute, Dae-gu, Korea, Republic of, [2]Korea Brain Research Intitute, Dae-gu, Korea, Republic of

P05.09 **Detection of ion concentration of the selected cation at the localized position of hippocampal neuron using nano-pipette**

JONG WAN SON[1], TOMOHIDE TAKAMI[2], WOONG SUN[3], CHAN SOO YOON[1], MI JUNG LEE[1], BAE HO PARK*[1]

[1]Konkuk University, Seoul, Korea, Republic of, [2]Kogakuin University, Tokyo, Japan, [3]Korea University, Seoul, Korea, Republic of

P05.10 **Automated identification of neural cells in the multi-photon images using deep-neural networks**

SI-BAEK SEONG*[1], HAE-JEONG PARK[2]

[1]BK21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of

P05.11 **Highly dense optoelectronic device realized through dry transfer technique**

SEUNG KYOUNG HEO[1], HOHYUN KEUM[2], KYUNG IN JANG*[1]

[1]Daegu Gyeongbuk Institute of Science & Technology, Daegu, Korea, Republic of, [2]LG Display, Seoul, Korea, Republic of

P05.12 **Long-term organotypic culture model of the post mortem adult human retina**

ARNOLD SZABO*[1], FERENC KILIN[1], DANIEL MAGDA[1], SANDOR LOVAS[1], AKOS KUSNYERIK[2]

[1]Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary, [2]Semmelweis University, Eye Clinic, Budapest, Hungary

P05.13 **Inhibition of neural activities by photothermal effects of polydopamine film with patterned illumination**

HYUNSOO JANG[1], YOONKEY NAM*[1]

[1]KAIST, Daejeon, Korea, Republic of

P05.14 **Neural spike classification via deep neural network**

JUNSIK EOM[1], SEWON KIM[1], HANBYOL JANG[1], HYUNGSEOB SHIN[1], JUN HA HWANG[1], SANGGEON PARK[2], YEOWOOL HUH[2], HEON JIN CHOI[1], DOSIK HWANG*[1]

[1]Yonsei University, Seoul, Korea, Republic of, [2]Catholic Kwandong University, International St. Mary's Hospital, Incheon, Korea, Republic of

P05.15 **Developing an optimizing 3-D imaging platform of light sheet fluorescence microscopy for CLARITY brain tissue**

S. OLIVIA PARK[1], KARAM KIM[1], WONCHANG CHOE[1], DEOKHUI CHANG[1], YUSUCK KIM[1], NEONCHEOL JUNG*[1]

[1]Logos Biosystems, Anyang, Korea, Republic of

P05.16 **Visualizing super-resolution and volumetric imaging of substantia nigra via expansion microscopy**

KYEONG-BAE MIN[1], JAE-BYUM CHANG*[2]

[1]Sungkyunkwan unversity, Suwon-si, Kyeonggi-do, Korea, Republic of, [2]KAIST, Daejeon, Korea, Republic of

P05.17 **Volumetric super-resolution imaging of actin and other cytoskeletons of the brain via expansion microscopy**

CHANE PARK[1], JAE-BYUM CHANG*[1]

[1]KAIST, Daejeon, Korea, Republic of

P05.18 **Super-resolution simultaneous imaging of proteins and mRNAs via expansion microscopy**

IN CHO[1], JAE-BYUM CHANG*[1]
[1]KAIST, Daejeon, Korea, Republic of

P05.19 **Aberration corrected inclined light sheet microscopy for high speed brain structure mapping**

CHEOLWOO AHN[1], JUNG-HOON PARK*[1]
[1]Department of Biomedical Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea, Republic of

P05.20 **Method of decellularized scaffold for tissue regeneration using tissue clearing**

YU-JIN JANG[1], BYUNG GEUN HA[1], SUNG-JIN JEONG*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

Physiology: neuronal excitability and synapse function

P06.01 **Drugs of abuse inhibit striatal dopamine transmission evoked by prefrontal cortex inputs**

JUNG HOON SHIN[1], MARTIN ADROVER[2], MICHAEL AUTHEMENT[1], VERONICA ALVAREZ*[1]
[1]NIH / National Institute on Alcohol Abuse and Alcoholism, Bethesda, USA, [2]Instituto de Investigaciones en Ingeniería Genética y Biología Molecular, CONICET, Buenos Aires, Argentina

P06.02 **Cerebellar microcircuit regulates long-term fear memory by the STAT3-mediated excitatory-inhibitory balance**

JEONG-KYU HAN[1], SANG JEONG KIM*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P06.03 **Slow presynaptic calcium dynamics gate long-lasting asynchronous release at the hippocampal mossy fiber to CA3 pyramidal cell synapse**

KATALIN TOTH*[1], SIMON CHAMBERLAND[2], ALESYA EVSTRATOVA[3]
[1]Universite Laval, Quebec City, Canada, [2]NYU, New York, NY, USA, New York, USA, [3]University of Toronto, Toronto, Canada

P06.04 **Action potential mediated long range cell to cell connections within rat suprachiasmatic nucleus (SCN): Exploring the characteristics of connections and morphology by using the custom-built optogenetic mapping system.**

CHEOL HONG MIN[1], HYUN KIM[3], KYOUNG J. LEE*[2]
[1]Korea University, Seoul, Korea, Republic of, [2]Department of Physics, Korea University., Seoul, Korea, Republic of, [3]Department of Physics, Korea University, Seoul, Korea, Republic of

P06.05 **The metabolism of astrocytes in the central vestibular system regulates neural excitabilities in the medial vestibular nucleus**

HO KOO*[1], MIN SUN KIM[1]
[1]Wonkwang University, Iksan, Korea, Republic of

P06.06 **Cholinergic modulation of AMPA receptor signaling in long-term depression in the nucleus accumbens**

SU JEONG CHOI[1], MAHNAZ DAVOUDI[2], TAE-YONG CHOI[3], SU-HYUN JO[4], SE-YOUNG CHOI*[1]
[1]Department of Physiology and Dental Research Institute, Seoul National University School of Dentistry, Seoul National University, Seoul, Korea, Republic of, [2]Department of Physiology and Dental Research Institute, Seoul National University School of Dentistry, Seoul National University, Seoul, Iran, [3]Department of Neural Development and Disease, Korea Brain Research Institute, Daegu, Korea, Republic of, [4]Department of Physiology, BIT Medical Convergence Graduate Program, Kangwon National University, Chuncheon, Korea, Republic of

P06.07 **Slow wave sleep and sleep need resolution**

GOEUN HAN*[1], KASPAR VOGT[1], ROBERT GREENE[2], JAVIER DIAZ[1]
[1]International Institute for Integrative Sleep Medicine, University of Tsukuba, Tsukuba, Japan, [2]University of Texas Southwestern Medical Center, UT Southwestern Joint appt Department of Neuroscience, Dallas, USA

P06.08 ***Hydrangea macrophylla* induces neurite outgrowth in neuroblastoma Neuro2a cells**

JIEUN JEON[1], HUIYOUNG KWON[1], EUNBI CHO[1], DONGHYUN KIM*[1]
[1]Dong-A university, Busan, Korea, Republic of

P06.09 **Bee venom acupuncture suppresses paclitaxel-induced mechanical hyperalgesia through spinal α2-adrenergic activity in rats**

JI HWAN LEE[1], SUN KWANG KIM*[2]
[1]Department of Science in Korean Medicine, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Physiology, College of Korean Medicine, Kyung Hee University, seoul, Korea, Republic of

Sun. (Sept. 22)

P06.10 **Stalk domain of NL1 regulates its synaptogenic capability via membrane interaction**

TAILIN LIAO[1], WEI HU[1], JUNYU XU[*1]
[1]Zhejiang University, Hangzhou, China

P06.11 **Autism-like behaviors and enhanced memory formation and synaptic plasticity in Lrfn2/SALM1-deficient mice**

NAOKO MORIMURA[*1], HIROKI YASUDA[2], KAZUHIKO YAMAGUCHI[3], KEI-ICHI KATAYAMA[3], NAOKO H. TOMIOKA[3], KAZUYUKI YAMADA[3], SEIJI HITOSHI[1], TAKEO YOSHIKAWA[3], JUN ARUGA[4]
[1]Shiga University of Medical Science, Otsu, Japan, [2]Gunma University Graduate School of Medicine, Maebashi, Japan, [3]RIKEN Brain Science Institute (BSI), Wako, Japan, [4]Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan

P06.12 **Differential expression of Cul4a and Cul4b by NMDA-evoked neuronal activity**

TAMMY SHIM[1], JAEYEON KIM[1], SEONGHWAN KIM[1], BONGKI CHO[1], CHEIL MOON[*1]
[1]Daegu Gyeongbuk Institute of Science & Technology, Daegu, Korea, Republic of

P06.13 **CAST/ELKS regulates presynaptic morphology and calcium channel levels in a developing central synapse**

WEI DONG[*1], MIAOMIAO XU[1], TAMARA RADULOVIC[2], TOSHIHISA OHTSUKA[3], SAMUEL YOUNG[2]
[1]Southwest Medical University, Luzhou, China, [2]University of Iowa, Iowa City, USA, [3]University of Yamanashi, Yamanashi, Japan

P06.14 **The roles of NaV1.9 and BK channels in rebound depolarization in cortical pyramidal neurons**

PRZEMYSLAW KUROWSKI[*1], PAWEL SZULCZYK[1], MAGDALENA BUJALSKA-ZADROZNY[2]
[1]Laboratory of Physiology and Pathophysiology, Centre for Preclinical Research, Medical University of Warsaw, Warsaw, Poland, [2]Laboratory of Pharmacodynamics, Centre for Preclinical Research, Medical University of Warsaw, Warsaw, Poland

P06.15 **Theta burst firing induces intrinsic plasticity in dentate gyrus granule cells**

POONAM MISHRA[1], RISHIKESH NARAYANAN[*2]
[1]Indian Institute of Science, Bangalore, India, [2]Indian Institute of Science, Banagalore, India

P06.16 **Application of polysome profiling analysis in the study of synaptic protein translation**

YINGHUI PENG[1], XIAOJUN WANG[1], LEI SHI[*1]
[1]Jinan University, Guangzhou, China

P06.17 **RNA editing of ionotropic glutamate receptors in the suprachiasmatic nucleus**

ALES BALIK[*1], ZDENKA BENDOVA[2], HANA KYCLEROVA[2], VIKTOR KUCHTIAK[2]
[1]Charles University, Prague, Czech Republic, [2]Charles University, Faculty of Science, Prague, Czech Republic

P06.18 **Actions of neuropeptide Y on synaptic transmission in the lateral habenula**

MYUNGHYUN CHEON[1], HOYONG PARK[1], CHIHYE CHUNG[*1]
[1]Konkuk univ., seoul, Korea, Republic of

P06.19 **Involvement of β-adrenergic signaling in the induction phase of a labile state during memory reconsolidation**

CHAE-SEOK LIM[1], JAEHYUN LEE[2], JIHAE OH[2], BONG-KIUN KAANG[*2]
[1]Wonkwang University School of Medicine, Iksan, Jeonbuk, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of

P06.20 **Extra neuronal circuit pattern from hippocampal subregion to several areas of subcortical region**

JUNSEOP LEE[1], YONGSEOK OH[*1]
[1]DGIST, Daegu, Korea, Republic of

P06.21 **Focused ultrasound increases adult hippocampal neurogenesis and concomitant zinc**

JAEWOO SHIN[1], BO YOUNG CHOI[2], CHANHO KONG[1], JIYEON SIM[1], JIN WOO CHANG[1], SANG WON SUH[2], WON SEOK CHANG[*1]
[1]Department of Neurosurgery, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Physiology, Hallym University College of Medicine, Chuncheon, Korea, Republic of

P06.22 **Novel function of calcium binding protein parvalbumin in modulation of excitatory synapses**

SOOYONG KIM[1], JAE JIN SHIN[1], HWAYOUNG LEE[1], SANG YOUNG LEE[1], JOOMIN PARK[1], SANG JEONG KIM[*2]
[1]Institute for Basic Science, Daejeon, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of

P06.23 **The functional connectivity of locus coeruleus and mesencephalic trigeminal nucleus neurons as an implication for stress-induced masticatory dysfunction**

JONGHWA WON[1], SEUNG-HYUN LEE[1], YOUNGNAM KANG[1], SEOG BAE OH[*1]
[1]Seoul National University, Seoul, Korea, Republic of

P06.24 **Overexpression of neuronal K^+-Cl^- co-transporter enhances dendritic spine plasticity and motor learning**

KAYO NAKAMURA[1], JUNICHI NABEKURA[*2]
[1]Toyohashi SOZO University, Toyohashi 440-8511, Japan, [2]National Institute for Physiological Sciences, Okazaki, 444-8585, Japan

P06.25 **Presynaptic mitochondrial regulation of microdomain calcium and short-term plasticity at the calyx of Held**

CHEHO YANG[1], WON KYUNG HO[1], SUK HO LEE[*1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P06.26 **NMDAR-dependent regulation of signaling pathways involved in translational control in hippocampal neurons**

XUANYUE MA[1], LIUREN LI[1], YINGHUI PENG[1], LEI SHI[*1]
[1]JNU-HKUST Joint Laboratory of Neuroscience and Innovative Drug Research, Jinan University, Guangzhou, China

Physiology: systems / network functions, computational neuroscience

P07.01 **Temporal and spectral properties of mouse cortical LFP explained from a conceptual framework based on transient events**

JAVIER DIAZ*[1], SUMIRE MATSUMOTO[1], KAORU OYAMA[1], KASPAR VOGT[1]
[1]International Institute for Integrative Sleep Medicine (IIIS), University of Tsukuba., Tsukuba, Ibaraki, Japan

P07.02 **Cognitive reserve and task-free functional networks: in normal cognition, amnestic MCI and Alzhemier's dementia**

SUNG-WOO KIM[1], JOON-KYUNG SEONG*[1]
[1]Korea University, Seoul, Korea, Republic of

P07.03 **Altered structural and functional connectivity underlying thalamo-cortical disturbances in psychosis**

YOO BIN KWAK[1], KANG IK CHO[3], WU JEONG HWANG[1], TAE YOUNG LEE[2], JUN SOO KWON*[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, Korea, Republic of, [3]Harvard University, Boston, USA

P07.04 **Thalamic microstructure in unaffected relatives of psychosis**

WU JEONG HWANG[1], TAE YOUNG LEE[2], KANG IK CHO[3], YOO BIN KWAK[1], JUN SOO KWON*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, Korea, Republic of, [3]Harvard University, Boston, USA

P07.05 **Cortico-cortical and baso-cortical gamma oscillations represent functionally distinct attentional networks**

KA EUN LEE[1], HIO-BEEN HAN[3], JEE HYUN CHOI*[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Korea Institute of Science and Technology, Seoul, Korea, Republic of, [3]Korea Advanced Institute of Science and Technology, Seoul, Korea, Republic of

P07.06 **Electric field orientation-dependence of evoked seizures and foci localisation using temporal interference and implantable electrodes**

BOTZANOWSKI BORIS[1], WILLIAMSON ADAMI*[1]
[1]INSERM, Marseille, France

P07.07 **Real consequences of improved histocompatibility: a microscopic study of flexible organics vs standard rigid implants in mice and the effect on seizure onset.**

MISSEY FLORIAN[1], WILLIAMSON ADAM*[1]
[1]INSERM, Marseille, France

P07.08 **Computational model of subcortical neuromodulatory circuit for coding of the adaptation to aversion**

TAEGON KIM*[1]
[1]Center for Functional Connectomics, Korea Institute of Science and Technology, Seoul, Korea, Republic of

P07.09 **A toolbox for dynamic causal modeling simulations of multimodal electrophysiological data**

HAE-JEONG PARK*[1], JIYOUNG KANG[1], JINSEOK EO[1]
[1]Yonsei University College of Medicine, Seoul, Korea, Republic of

P07.10 **A dynamic causal modeling of voltage sensitive dye imaging data from rodent hippocampus**

JIYOUNG KANG[1], KYESAM JUNG[1], HAE-JEONG PARK*[1]
[1]Yonsei University, Seoul, Korea, Republic of

P07.11 **A populational connection map for the whole brain white matter**

DONGHA LEE[1], HAE-JEONG PARK*[2]
[1]Center for Systems and Translational Brain Sciences, Institute of Human Complexity and Systems Science, Yonsei University, Seoul, Korea, Republic of, [2]Center for Systems and Translational Brain Sciences, Institute of Human Complexity and Systems Science, Yonsei University; BK21 PLUS Project for Medical Science, Yonsei University College of Medicine; Department of Nuclear Medicine, Yonsei University College of Medicine; Department of Cognitive Science, Yonsei University, Seoul, Korea, Republic of

P07.12 **A Study on the Stress-induced Changes of Correlation of cerebral Metabolites in Mouse Brain: 1H MR spectroscopy Study**

CHANG-SOO YUN[1], YOON HO HWANG[2], MIN-HEE LEE[3], JIHWAN KIM[1], JEHYEONG YEON[1], WOOSEUNG KIM[2], YONG-TAE KIM[4], HYEON-MAN BAEK[4], DONG YOUN KIM[2], BONG SOO HAN*[1]
[1]Department of Radiological Science, Yonsei University, Wonju, Korea, Republic of, [2]Department of Biomedical Engineering, Yonsei University, Wonju, Korea, Republic of, [3]Department of Pediatrics, Children's Hospital of Michigan, Detroit, USA, [4]Department of Basic Medical Sciences, Lee Gil Ya Cancer & Diabetes Institute, Gachon University, Incheon, Korea, Republic of

P07.13 **Early classification of Alzheimer's disease and mild cognitive impairment using pre-trained 3D deep neural network**

YUBRAJ GUPTA[1], GOO-RAK KWON*[2]
[1]Chosun university, Gwangju, Korea, Republic of, [2]Chosun University, Gwangju, Korea, Republic of

P07.14 **Conductance-based models of insect central olfactory neurons**

HAYEONG LEE[1], TOMOKI KAZAWA[1], STEPHAN HAUPT[1], RYOHEI KANZAKI*[1]
[1]The University of Tokyo, Tokyo, Japan

P07.15 **Alzheimer's disease identification using joint mutual information based feature selection and extreme learning machine: structural MRI, CSF and cognitive score**

UTTAM KHATRI[1], GOO-RAK KWON*[2]
[1]Chosun university, Gwangju, Korea, Republic of, [2]Chosun University, Gwangju, Korea, Republic of

P07.16 **Suppression mechanisms of high frequency electrical stimulation on seizure-like events in rat hippocampal microelectrode array recordings**

YUN SEO CHOI[1], HYE-YOUNG JOUNG[1], SOL AH KIM[1], SANG BEOM JUN[2], CHANG-HYEON JI[3], HYANG WOON LEE*[1]
[1]Departments of Neurology and Medical Science, Ewha Womans University School of Medicine and Ewha Medical Research Institute, Seoul, Korea, Republic of, [2]Department of Electronic and Electrical Engineering, Department of Brain & Cognitive Sciences, Ewha Womans University, Seoul, Korea, Republic of, [3]Department of Electronic and Electrical Engineering, Ewha Womans University, Seoul, Korea, Republic of

P07.17 **Decoding scene prediction and its confidence during maze exploration**

RISA KATAYAMA*[1], SHIN ISHII[2], WAKO YOSHIDA[2]
[1]Graduate School of Informatics, Kyoto University, Kyoto, Japan, [2]Graduate School of Informatics, Kyoto University, and Advanced Telecommunications Research Institute International (ATR), Kyoto, Japan

P07.18 **The organization of layer Vb microcircuits in the lateral and medial entorhinal cortex**

SHINYA OHARA[1], RAJEEVKUMAR NAIR[2], STEFAN BLANKVOORT[2], CLIFFORD KENTROS[2], MENNO WITTER*[2]
[1]Tohoku University Graduate School of Life Sciences, Sendai, Japan, [2]Kavli Institute for Systems Neuroscience, NTNU Norwegian University of Science and Technology, Trondheim, Norway

Sun. (Sept. 22)

P07.19 **Functional dissociation of EEG theta rhythms between prefrontal and visual cortices and their synchronization during sustained attention**

HIO-BEEN HAN[1], KA EUN LEE[3], JEE HYUN CHO*[2]
[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [2]Korea Institute of Science and Technology, Seoul, Korea, Republic of, [3]Seoul National University, Seoul, Korea, Republic of

P07.20 **Stress, anxiety and depression measurements by using TNF, IL6 and cortisol in undergrad students correlated with EEG & EKG**

ESTELA ADRIANA CASTELLANOS ALVARADO*[1, 2], PAOLA BEATRIZ CASTRO GARCÍA[3], LIZETH GONZÁLEZ CARABARIN[4], CÉSAR ADRIÁN HERNÁNDEZ LÓPEZ[3], CLAUDIA JANETTE MANZANO GARCÍA[3], HECTOR ISAY VÁZQUEZ TÁPIA[3], MARIO ALBERTO GARCÍA RAMÍREZ[3]
[1]Instituto Mexicano del Seguro Social, Guadalajara, Mexico, [2]University of Guadalajara, Guadaljara, Mexico, [3]University of Guadalajara, Guadalajara, Mexico, [4]Morton College Oxford University Oxford, Oxford, UK

P07.21 **Preparatory neural activations in basal ganglia related with learned songs and innate calls in Java sparrows**

SACHIO UMEMOTO[1], SHIN YANAGIHARA[1], KAZUO OKANOYA*[1]
[1]The University of Tokyo, Tokyo, Japan

P07.23 **Cortical responsiveness across natural wake and sleep in mice**

SUMIRE MATSUMOTO[1], KAORU OYAMA[1], JAVIER DIAZ[1], ROBERT GREENE[2], KASPAR VOGT*[1]
[1]International Institute for Integrative Sleep Medicine, University of Tsukuba, Tsukuba, Japan, [2]Department of Psychiatry&Neuroscience, Peter O'Donnell Brain Institute, UT Southwestern Medical Center, Dallas, USA

P07.24 **Lessons from artificial neural networks for studying coding principles of biological neural networks**

HYOJIN BAE[1], CHANG-EOP KIM*[1]
[1]Gachon university, Seong-nam, Korea, Republic of

Sensory and motor systems

P08.01 **Neural ensemble dynamics during vocal learning**

JUNESEUNG LEE[1], SATOSHI KOJIMA[2], RICHARD HAHNLOSER*[1]
[1]ETH Zurich, Zurich, Switzerland, [2]KBRI, Daegu, Korea, Republic of

P08.02 **Subgroups of fCO neurons differentially affect leg kinematics during walking in Drosophila**

ALEXANDER CHOCKLEY*[1], SARA RATICAN[2], GESA F. DINGES[1], ANSGAR BÜSCHGES[1], TILL BOCKEMÜHL[1]
[1]University of Cologne, Cologne, Germany, [2]Geisel School of Medicine, Dartmouth University, Hanover, NH, USA

P08.03 **MicroRNA-181a contributes to gastric hypersensitivity by targeting toll-like receptor 4 in diabetic rats**

HONG-HONG ZHANG[1], JI HU[1], BING-YU ZHANG[1], QIAN SUN[2], YI-LIAN ZHANG[1], GUANG-YIN XU*[2]
[1]Department of Endocrinology, the Second Affiliated Hospital Soochow University, Suzhou, China, [2]Center for Translational Pain Medicine, Institute of Neuroscience, Soochow University, Suzhou, China

P08.04 **Social behaviour may drive asymmetries among accessory olfactory bulb subdomains: the case of octodontine rodents**

PEDRO FRANCISCO FERNANDEZ-ABURTO*[1], SCARLETT E. DELGADO[2], RAUL SOBRERO[3], JORGE MPODOZIS[2]
[1]Agency for Science, Technology and Research (A*STAR), Singapore, Singapore, [2]Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago de Chile, Chile, [3]Instituto de Ciencias Veterinarias del Litoral (ICiVet-Litoral), Universidad Nacional del Litoral (UNL)/ Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Santa Fe, Argentina

P08.05 **Bed nucleus of stria terminalis is involved in thermoregulatory behaviors**

BATTUVSHIN LKHAGVASUREN*[1], TUVSHINGEREL SANDAGDORJ[2], JOSHUA CORRIGAN[3], ANDREJ ROMANOVSKY[4]
[1]Mongolian National University of Medical Sciences, Ulaanbaatar, Mongolia, [2]National Cancer Center, Ulaanbaatar, Mongolia, [3]Massachusetts Institute of Technology , Boston, USA, [4]Barrow Neurological Institute, Phoenix, USA

P08.06 **Effects of stochastic resonance electrical stimulation on proprioception in healthy adults**

SHIANG-LIN HOU[1], SHUN-HWA WEI[1], CHUNG-LAN KAO[1], LI-WEI CHOU*[1]
[1]National Yang-Ming University, Taipei, Taiwan, China

P08.07 **The gain reflected by a response of the auditory midbrain to intracochlear electrical stimulation is affected by a neonatal cochlear lesion**

HUIMING ZHANG*[1], MIYAKO HATANO[2], JACK KELLY[3]
[1]University of Windsor, Windsor, Canada, [2]Kanazawa University, Kanazawa, Japan, [3]Carleton University, Ottawa, Canada

P08.08 **Visuomotor adaptation in the virtual reality environment based on the head-mounted display**

EUNBEEN LEE[1], KYOUNG-MIN LEE[1], SANGBIN JEON[2], BYUNGCHEOL KIM[2], JEH-KWANG RYU*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Joongbu University, Geumsan County, Korea, Republic of

P08.09 **Efficient decoding of imagined upper limb movements from human electrocorticographic signals**

SANG JIN JANG[1], JAESEUNG JEONG*[1]
[1]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of

P08.10 **Movement related changes in rhythmic activity in subthalamic nucleus of parkinsonian patients**

ELENA BELOVA*[1], ULIA SEMENOVA[1], ALEXEY TOMSKIY[2], ALEXEY SEDOV[1]
[1]Semenov Institute of Chemical Physics, Moscow, Russia, [2]N.N. Burdenko National Scientific and Practical Center for Neurosurgery, Moscow, Russia

P08.11 **Effect of neurokinin 1 receptor (NK1R) antagonist on mechanical paw hypersensitivity in MIA-induced osteoarthritis model**

YOUNGKYUNG KIM[1], KYUNGWON YANG[2], EUNJU JEONG[3], YOUNG WOOK YOON*[1]
[1]Department of Physiology, Korea University College of Medicine, Seoul, Korea, Republic of, [2]Department of Physiology, Ehwa Womans University College of Medicine, Seoul, Korea, Republic of, [3]Catholic Institute for Applied Anatomy center, The Catholic University of Korea, Seoul, Korea, Republic of

P08.12 **The effects of proprioceptive feedback on pallidal LFP activity in patients with cervical dystonia**

ULIA SEMENOVA*[1], ALEXEY TOMSKIY[2], VALENTIN POPOV[2], RITA MEDVEDNIK[1], AASEF G. SHAIKH[3], ALEXEY SEDOV[1]
[1]Semenov Institute of chemical physics, Russian Academy of Sciences, Moscow, Russia, [2]Burdenko National Scientific and Practical Center for Neurosurgery, Moscow, Russia, [3]Department of Neurology, Case Western Reserve University, Cleveland, OH, USA

P08.13 **Descending premotor pathways controlling distinct whisking movements**

JAEHONG PARK[1], JUN TAKATOH[1], FAN WANG*[1]
[1]Duke University, Durham, USA

P08.14 **Amygdala and auditory cortex differentially modulate tonal receptive fields in the inferior colliculus**

JEONGYOON LEE[1], JEFF LIN[1], ADAM SWIERCZ[2], ZHE YU[2], PAUL J MARVAR[2], GUANGYING K WU*[1]
[1]Department of Psychology, The George Washington University, Washington, DC, USA, [2]Department of Pharmacology and Physiology, The George Washington University, Washington, DC, USA

P08.15 **Specific brain response of secondary somatosensory cortex and prefrontal cortex in vibrotactile discrimination**

JAEHWAN KIM[1], JUNESIC KIM[1], SEOKYUN RYUN[1], DONGHYEOK LEE[1], CHUNKEE CHUNG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P08.16 **Central neural circuits for visual object recognition in flying Drosophila**

JOOWON LEE[1], HAYUN PARK[1], ANMO KIM*[1]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of

P08.17 **Calretinin-poor cochlear afferent fibers are preferentially lost in aged mouse cochlea**

KWON WOO KANG*[1], EUNYOUNG YI[1]
[1]College of Pharmacy and Natural Medicine Research Institute Mokpo National University, Muan-gun, Jeollanam-do, Korea, Republic of

P08.18 **Moxibustion treatment alleviates atypical pain in a rat model of pre-rheumatoid arthritis through inhibition of P2X7 receptor function**

BIYU SHEN[1], PINGAN ZHANG[1], HAOYANG CHEN[1], YUCHENG XU[1], YONGCHANG LI[1], YANYAN WU[1], XUE XU[1], HUILING LI[2], GUANG-YIN XU*[1]
[1]Center for Translational Pain Medicine, Institute of Neuroscience, Soochow University, Suzhou, China, [2]Nursing School of Soochow University, Suzhou, China

P08.19 **Single unit activity of hand and neck sensitive pallidal cells in patients with cervical dystonia**

ALEXEY SEDOV*[1], VALENTIN POPOV[2], SVETLANA USOVA[1], ALEXEY TOMSKIY[2], AASEF G. SHAIKH[3]
[1]Semenov Institute of Chemical Physics, Russian Academy of Sciences, Moscow, Russia, [2]N .N. Burdenko National Scientific and Practical Center for Neurosurgery, Moscow, Russia, [3]Case Western Reserve University, Cleveland, USA

P08.20 **A study of the arm movement feature visualization from non-human primate epidural electrocorticography using deep learning structure**

SEOKBEEN LIM[1], HOSEOK CHOI[2], DONG PYO JANG*[1]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Department of Neurology, University of California San Francisco, San Francisco, USA

P08.21 **Effects of repetitive transcranial magnetic stimulation(rTMS) combined with aerobic exercise on the recovery of motor function in ischemic stroke rat model**

JUANXIU CUI[1], MINKYUN SOHN[2], YEONGWOOK KIM[2], CUKSEONG KIM[3], SUNGJU JEE*[2]
[1]Chumnam National University, daejeon, Korea, Republic of, [2]Chumnam National University, Daejeon, Korea, Republic of, [3]Chungnam National University College of Medicine, Daejeon, Korea, Republic of

P08.22 **Existence of internal post-ingestive salt sensing in drosophila**

BYOUNG SOO KIM[1], GREG S.B SUH*[2]
[1]KAIST, Daejeon, Korea, Republic of, [2]KAIST, Deajeon, Korea, Republic of

P08.23 **Effect of therapeutic singing on swallowing function of patients with head and neck cancer**

SEONGMOON JO[1], MYUNG SUN YEO[3], YOON-KYUM SHIN[4], JEONGHYUN HEO[5], AHREUM BAEK[6], JI HEA YU[1], JUNG HWA SEO[1], SOOHYUN WI[1], SUK-YOUNG SONG[3], BAE-GEUN NAM[3], SOONIL PYO[1], EUNJU CHO[1], SOO JI KIM[7], SUNG-RAE CHO*[2]
[1]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Korea, Republic of, [2]Department and Research Institute of Rehabilitation Medicine, Seoul, Korea, Republic of, [3]Department of Music Therapy, Graduate School, Ewha Womans University, Seoul, Korea, Republic of, [4]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, seoul, Korea, Republic of, [5]Graduate Program of Nano Science and Technology, Seoul, Korea, Republic of, [6]Department and Rehabilitation Medicine, Yonsei University Wonju College of Medicine, Wonju, Korea, Republic of, [7]Music Therapy Education, Graduate School of Education, Ewha Womans University, Seoul, Korea, Republic of

P08.24 **Primary motor cortical neurons reflect visuomotor coordination during arm-reaching movements**

MIN-KI KIM[1], SOYOUNG CHAE[1], SEONG-MIN KIM[2], JEONG-WOO SOHN[2], SUNG-PHIL KIM*[1]
[1]Ulsan National Institute of Science and Technology, Ulsan, Korea, Republic of, [2]Catholic Kwandong University, Incheon, Korea, Republic of

P08.25 **Suppressive effects of bee venom derived phospholipase A2 on mechanical allodynia in a rat model of neuropathic pain**

SEUNGHUI WOO[1], GEEHOON CHUNG[2], SUN KWANG KIM*[2]
[1]Department of science in Korean Medicine, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Physiology, College of Korean Medicine, Kyung Hee University, Seoul, Korea, Republic of

P08.26 **Neuronal response of mouse S1 cortex in formalin-induced biphasic spontaneous pain condition**

HEERA YOON[1], MYEONG SEONG BAK[1], YOO RIM KIM[2], SA-YOON PARK[3], CHANG-EOP KIM[3], GEEHOON CHUNG[1], SANG JEONG KIM[2], SUN KWANG KIM*[1]
[1]Department of physiology, Kyung Hee university, Seoul, Korea, Republic of, [2]Department of physiology, Seoul national university, Seoul, Korea, Republic of, [3]Department of physiology, Gachon university, Gyeonggi, Korea, Republic of

P08.27 **Contribution of PMd and A5 to feedback responses to mechanical disturbances of the limb in non-human primates**

TOMOHIKO TAKEI*[1, 2], STEPHEN LOMBER[3], DOUGLAS COOK[4], STEPHEN SCOTT[4]
[1]Kyoto University, Kyoto, Japan, [2]Graduate School of Medicine/ Hakubi Center for Advanced Research, Kyoto University, Kyoto, Japan, [3]Department of Psychology, Western University, London, Canada, [4]Centre for Neuroscience Studies, Queen's University, Kingston, Canada

P08.28 **Motor skill learning and movement variabilities in Parkinson's disease: a new behavioral approach for evaluating the severity of Parkinson's disease**

JEH-KWANG RYU*[1], KYOUNG-MIN LEE[1], JEE-YOUNG LEE[2], SE-WOONG PARK[3], JINSEOK OH[4]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University Boramae Hospital (SMG-SNU Boramae Medical Center), Seoul, Korea, Republic of, [3]Northeastern University, Boston, USA, [4]University of Minnesota, Minneapolis, USA

Others

P09.01 **Field effect transistor based depression sensor development**

JIYEON LEE[1], OH SEOK KWON*[1]
[1]Korea Research Institute of Bioscience and Biotechnology, Daejeon, Korea, Republic of

P09.02 **Hippocampal neurodegeneration and behavioral deficit following short-term bilateral adrenalectomy**

ABDU ADEM*[1], NASERDDINE HAMADI[2], AHLAM SAID ABI ISSA[2], NAHEED AMIR[2], NATHER MADJID[3], ÖMÜR GÜLSÜM DENIZ[4], SÜLEYMAN KAPLAN[4]
[1]United Arab Emirates University, Al Ain, United Arab Emirates, [2]Department of Pharmacology, College of Medicine and Health Science, United Arab Emirates University, Maqam 17666, Al Ain, United Arab Emirates, Al Ain, United Arab Emirates, [3]Department of Neuroscience, Karolinska Institutet, SE-171 77 Stockholm, Sweden, Stockholm, Sweden, [4]Department of Histology and Embryology. Medical Faculty. Ondokuz Mayıs University, 55139. Samsun, Turkey, Samsun, Turkey

P09.03 **Optimization of intracranial penetration of focused ultrasound through energy efficiency analysis of various skull factors**

CHANHO KONG[1], JAEWOO SHIN[1], YOUNG CHEOL NA[2], JUYOUNG PARK[3], HEE GYU BAEK[3], JIN WOO CHANG[1], WON SEOK CHANG*[1]
[1]Department of Neurosurgery, Yonsei University College of Medicine., Seoul, Korea, Republic of, [2]Department of Neurosurgery, Catholic Kwandong University College of Medicine., Incheon, Korea, Republic of, [3]Medical Device Development Center, Daegu-Gyeongbuk Medical Innovation Foundation., Daegu , Korea, Republic of

P09.04 **Grassroots Neuroscience – The Grenada Brain Bee initiative celebrates a decade of increasing neuroscience awareness in high school students in a developing country**

GABRIELLE WALCOTT-BEDEAU*[1], GAIL BLACKETTE[2]
[1]St. George's University, St. George's, Grenada, [2]Grenada National Brain Bee Cooridnator, St George's, Grenada

P09.05 **Cerebral small vessel disease (CSVD) in apparently healthy and asymptomatic individuals: from diffusion MRI, neuropsychology and micro-thrombogenic microparticles profiling (one-year follow up study)**

CHE MOHD NASRIL CHE MOHD NASSIR[1], MAZIRA MUHAMMAD GHAZALI[1], USMAN JAFFER[1], MUZAIMI MUSTAPHA*[1]
[1]Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

P09.06 **Enhancement of memantine uptake in the brain by incorporation with nanoparticles and given intranasally**

MARSITA ABD RAZAK[1], TOMMY JULIANTO[1], ABU BAKAR ABDUL MAJEED*[1]
[1]Universiti Teknologi MARA, Kuala Lumpur, Malaysia

P09.07 **A step towards demystifying sleep physiology: forward genetics approach in mice**

STACI J. KIM[1], CHIKA MIYOSHI[1], TAKAHIRO EZAKI[2], AYA IKKYU[1], NORIKO HOTTA-HIRASHIMA[1], SATOMI KANNO[1], MIYO KAKIZAKI[1], MANA YAMADA[1], SHIGEHARU WAKANA[3], HIROMASA FUNATO[1], MASASHI YANAGISAWA*[1]
[1]International Institute for Integrative Sleep Medicine (WPI-IIIS), University of Tsukuba, Tsukuba, Japan, [2]rch Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan, [3]Institute of Biomedical Research and Innovation, Kobe, Japan

P09.08 **Immune-tolerance to cytosolic neural antigens biases the retinal environment towards a neuroprotective profile**

ESPERANZA MELENDEZ HERRERA*[1], LORENA MARTÍNEZ-ALCANTAR[1], DIANA KARINA TALAVERA-CARRILLO[1], JONHATAN URIEL PINEDA-SALAZAR[1], MIGUEL AVALOS-VIVEROS[1], GABRIEL GUTIÉRREZ-OSPINA[2], BRYAN VICTOR PHILLIPS-FARFÁN[3], ALMA LILIA FUENTES-FARÍAS[1]
[1]Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Mexico, [2]Universidad Nacional Autónoma de México, Ciudad de México, Mexico, [3]Instituto Nacional de Pediatría, Ciudad de México, Mexico

P09.09 **Nd1-L as a novel stress granules (SGs) component that regulates Stress granule dynamics and associates with autophagy components**

PUREUM JEON[1], SANG-WON PARK[2], YONG-WOO JUN[2], MI-HEE JUN[1], YOU-KYUNG LEE[1], HA-EUN CHOI[1], DEOK-JIN JANG[2], JINA LEE*[1]
[1]Hannam university, Daejeon, Korea, Republic of, [2]Kyungpook university, Sangju, Korea, Republic of

P09.10 **Effects of dietary fiber supplement on gut microbiota and depressive-like behaviors in socially isolated mouse model**

SEOHYEON BYEON[1], MINA PARK[1], DONG-MI SHIN*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P09.11 **Cell type-specific proteome labeling in vertebrate by engineered aminoacyl-tRNA synthetase**

EUNJIN KIM[1], HOSUNG JUNG*[1]
[1]Yonsei University, Seoul, Korea, Republic of

P09.12 **Alpha dependent effective connectivity in the default mode network of resting state MEG**

JUNHO SON[1], CHONGWON PAE[2], JIYOUNG KANG[3], JINSEOK EO[1], HAE-JEONG PARK*[1]
[1]BK21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Center for Systems and Translational Brain Science, Institute of Human Complexity and Systems Science, Yonsei University, Seoul, Korea, Republic of

P09.13 **Brain artery segmentation using MP2RAGE images at 7T MRI**

UK-SU CHOI[1], HIROKAZU KAWAGUCHI[2], TOBIAS KOBER[3], IKUHIRO KIDA*[1]
[1]Center for Information and Neural Networks, NICT, Osaka, Japan, [2]Siemens Healthcare K.K., Osaka, Japan, [3]Advanced Clinical Imaging Technology, Siemens Healthcare AG, Lausanne, Switzerland

P09.14 **The role of PVN CRF neurons in mediating the detection of the nutritional value of sugar**

WONGYO JUNG[1], JINEUN KIM[1], GREG SUH*[1]
[1]KAIST, Daejeon, Korea, Republic of

P09.15 **Intra-arterial Delivery and Efficient Engraftment of Mesenchymal Stem Cells in a Rat Chronic Stroke Model**

DA RONG JO[1], GYU-HEE KIM[1], DA-YOUNG CHANG[1], JEONG SEON YOON[1], SUNG-SOO KIM[1], HAEYOUNG SUH-KIM*[1]
[1]Department of Biomedical Sciences, Graduate School of Ajou University, Suwon, Korea, Republic of

P09.16 **Interspecies cortical registration between macaque and human using functional network property under a spherical demons framework**

HAEWON NAM[1], HAE-JEONG PARK*[2]
[1]Hongik University, Sejong, Korea, Republic of, [2]Department of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, Seoul, Korea, Republic of

P09.17 **Comprehensive connectivity and molecular profiles of the subthalamic nucleus**

HOJIN LEE[1], HYUNGJU JEON[1], JIWON KIM[1], WON CHAN OH[1], LINGQING FENG[1], JINHYUN KIM[1], JINHYUN KIM*[1]
[1]Korea Institute of science and technology, Seoul, Korea, Republic of

P09.18 **Genetic associations of clock gene with longitudinal sleep characteristic changes and brain volume in Korea genome epidemiology study**

HYANG WOON LEE*[1], SONG E KIM[1], HYEON JIN KIM[1], SORIUL KIM[2], REGINA EY KIM[2], SOL AH KIM[1], SEUNGKU LEE[2], CHOL SHIN[2]
[1]Ewha Womens University, Seoul, Korea, Republic of, [2]Institute of Human Genomic Study, College of Medicine, Korea University, Ansan, Korea, Republic of

P09.19 **Neuronal activation can modulate enhancer activity through de novo DNA methylation**

TOMONORI KAMEDA[1], TAKUYA IMAMURA[1], TAKUMI TAKIZAWA[2], FUMIHITO MIURA[1], TAKASHI ITO[1], KINICHI NAKASHIMA*[1]
[1]Kyushu University, Fukuoka, Japan, [2]Gunma University, Gunma, Japan

P09.20 **Acupuncture alleviates chronic pain and comorbid conditions by regulating DNA methylation in the prefrontal cortex of a mouse model of neuropathic pain**

JAE-HWAN JANG[1], EUN-MO SONG[2], SORA AHN[1], JU-YOUNG OH[1], TAE-YEON HWANG[1], MI-YEUN SONG[2], HI-JOON PARK*[1]
[1]Department of Korean Medical Science, Graduate School of Korean Medicine, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Physical Medicine and Rehabilitation, Graduate School of Korean Medicine, Kyung Hee University, Seoul, Korea, Republic of

P09.21 **Ablation of NMDA receptor in the brain endothelial cells induces histopathological signs of neurodegenerative diseases**

DO-GEUN KIM*[1], CHAN HEE LEE[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P09.22 **The protein – protein interaction between SQSTM1 and Tau through distinct domain**

CHAE EUN KIM[1], SONG MI HAN[1], SUN AH PARK*[2]
[1]Neuroscience Graduate Program, Department of Biomedical Sciences, Ajou University Graduate School of Medicine, suwon, Korea, Republic of, [2]Ajou University School of Medicine, suwon, Korea, Republic of

P09.23 **Semaphorin 3E signaling ameliorates the brain vasculature remodeling after ischemic stroke**

RI YU[1], YAN LI[1], NAM-SUK KIM[1], JIN-YOUNG JEONG[1], WON-JONG OH*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P09.24 **Pathophysiologic disease modeling for the complex regional pain syndrome by tibial fracture in laboratory animals**

EUL SIG CHOI[1], JI HYE PARK[1], MI JUNG HAN[1], RONGHUA YUAN[2], YIN YI XIONG[2], SEOUL LEE*[1]
[1]Department of Pharmacology and Wonkwang Brain Research Institute, Wonkwang University School of Medicine, Iksan, Korea, Republic of, [2]Department of Pharmacology, Wonkwang University School of Medicine, Iksan, Korea, Republic of

P09.25 **Comparison of cerebrospinal fluid biomarkers of Alzheimer's disease with commercial kits**

KYUNGHUN KANG[1], SANG YUN KIM[2], HO-WON LEE[1], PANWOO KO*[1]
[1]Department of Neurology, Kyungpook National University Chilgok Hospital, Daegu, Korea, Republic of, [2]Department of Neurology, Seoul National University Bundang Hospital, Seongnam, Korea, Republic of

P09.26 **HDAC6 selective inhibitor, Tubastatin A protects blood-brain barrier against the methamphetamine abuse**

JONG SU HWANG*[1], EUN HYE CHA[1]
[1]Keimyung university, Daegu, Korea, Republic of

P09.27 **Exogenous transcription factor in Müller glia enhances damage-induced neuroregeneration in mouse retina**

EUN JUNG LEE[1], JUN WOO PARK[1], JIN WOO KIM*[1]
[1]Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), Daejeon 34141, Korea, Republic of

P09.28 **TNF receptor-associated factor 6 (TRAF6) enhances tau clearance through the interaction with sequestosome-1/p62**

SONG MI HAN[1], CHAE EUN KIM[1], SUE MIN KIM[1], SUN AH PARK*[2]
[1]Neuroscience Graduate Program, Department of Biomedical Sciences, Ajou University Graduate School of Medicine, Suwon, Korea, Republic of, [2]Ajou university School of Medicine, Suwon, Korea, Republic of

P09.29 **Changed expression of the P2X7 receptor during blood-brain barrier opening by focused ultrasound**

JIYEON SIM[1], JAEWOO SHIN[1], CHANHO KONG[1], JIHYEON LEE[1], YOUNG CHEOL NA[2], WON SEOK CHANG[1], JIN WOO CHANG*[1]
[1]Department of Neurosurgery, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Neurosurgery, Catholic Kwandong University College of Medicine, Incheon Metropolitan City, Korea, Republic of

P09.30 **Trifluoperazine-induced exosomal gene expression profiles serve as predictive drug response biomarkers for glioblastoma**

SEOKMIN KANG[1], KUNHYUNG KIM[1], JUHYUN KIM[1], SANG SOO KANG[2], MYUNGJIN KIM*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Gyeongsang National University, Jinju, Korea, Republic of

P09.31 **Morphological properties of cholinergic neurons in the hippocampus of transgenic ChAT-cre mice**

ANDRES CARRASCO*[1], JEFFREY WICKENS[1]
[1]Okinawa Institute of Science and Technology, Okinawa, Japan

P09.32 **The kainate receptor subunit GluK2 interacts with KCC2 to promote dendritic spine formation**

SEBNEM KESAF[1], STANISLAV KHIRUG[1], EMILIE DINH[2], MARTA SAEZ GARCIA[1], TOMI TAIRA[1], SARI LAURI[1], CLAUDIO RIVERA BAEZA*[1]
[1]University of Helsinki, Helsinki, Finland, [2]Developmental Biology Institute of Marseille, Marseille, France

P09.33 ***A novel PRRT2* pathogenic variant in a family with Paroxysmal Kinesigenic Dyskinesia**

JIALINZI HE[1], LILI LONG*[1]
[1]XiangYa hospital, ChangSha, China

P09.34 **Transdifferentiation of reactive astrocytes into functional neurons causes motor recovery after spinal cord injury**

HEEYOUNG AN[1], HYE-LAN LEE[3], DOO-WAN CHO[4], JINPYO HONG[5], HYE YEONG LEE[6], JUNMOO LEE[1], JUNSUNG WOO[5], JAEKWANG LEE[5], MINGU PARK[1], YOUNG-SU YANG[4], SU-CHEOL HAN[4], YOON HA[3], C. JUSTIN LEE*[2]
[1]1 KU-KIST Graduate School of Converging Science and Technology, Korea University, Seoul 2 Center for Cognition and Sociality, Institute for Basic Science (IBS), Deajeon, Korea, Republic of, [2]Center for Cognition and Sociality, Institute for Basic Science (IBS), Deajeon, Korea, Republic of, [3]Spine & Spinal Cord Institute, Department of Neurosurgery, College of Medicine, Yonsei University, Seoul, Korea, Republic of, [4]Jeonbuk Department of Inhalation Research, Korea Institute of Toxicology, Jeongeup, Korea, Republic of, [5]Center for Glia-Neuron Interaction, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [6]Spine & Spinal Cord Institute, Department of Neurosurgery, College of Medicine, Yonsei University, seoul, Korea, Republic of

P09.35 **Comparison between brain sub-networks decomposed by auto encoder (AE) and graph auto encoder (GAE) with non-negative weight constraints and sparse encoding**

PILSUB LEE[1], MYUNGWON CHOI[1], DAEGYEOM KIM[1], SUJI LEE[2], HYUNCHUL YOON[3], HYUN-GHANG JEONG[3], CHEOL E HAN*[1]

[1]Department of Electronics and Information Engineering, Korea University, Sejong, Korea, Republic of, [2]Department of Biomedical Sciences, Korea University Graduate School, Seoul, Korea, Republic of, [3]Department of Psychiatry, Korea University College of Medicine, Seoul, Korea, Republic of

P09.36 **ZnR/GPR39-mediated human salivary secretion**

YOON-JUNG KIM[1], YOO-HWA CHO[2], HEE-KYUNG PARK[1], SE-YOUNG CHOI*[1]

[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of

P09.37 **CDK5/Drp1-mediated abnormal mitochondrial dynamics in streptozotocin (STZ)-induced hippocampal HT-22 cells**

JUNGHYUNG PARK[1], JINYOUNG WON[1], JINCHEOL SEO[1], HYEON-GU YEO[1], KEONWOO KIM[1], CHANG-YEOP JEON[1], YOUNGJEON LEE*[1]

[1]Korea Research Institute of Bioscience and Biotechnology (KRIBB), Cheongju, Korea, Republic of

P09.38 **Compositions for transplantation by RF absorber with photosensitizer for brain tumors and cancer treatment**

EUN SEONG KIM[1], ALEXANDROVICH PUGACHEVSKII[2], NAM YOUNG KIM*[1]

[1]Kwangwoon University, RFIC Lab, Seoul, Korea, Republic of, [2]Southwest State University, Kursk, Russia

P09.39 **Inflammatory factor A contributes to PD pathogenesis**

MINSUN CHOI[1], TAE-KYUNG KIM[2], SEUNG-JAE LEE*[1]

[1]Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]Seoul National University College of Medicine, Seoul , Korea, Republic of

P09.40 **A new psychoactive substance, 25C-NBF, exhibits abuse potential and induce motor and memory impairment in rodents**

SEONG-EON KIM[1], KWANG-HYUN HUR[1], BO-RAM LEE[1], SEON-KYUNG KIM[1], YONG-SUP LEE[2], HYOUNG-CHUN KIM[3], SEOK-YONG LEE[1], CHOON-GON JANG*[1]

[1]Sungkyunkwan University, Suwon, Korea, Republic of, [2]Kyung Hee University, Seoul, Korea, Republic of, [3]Gangwon National University, Chunchon, Korea, Republic of

P09.41 **The TGF-beta induced muscle fibrosis and wasting in myoblast as in ALS mouse might be inhibited by pirfenidone**

DO-YEON LEE[1], JUNG-JOON SUNG*[2]

[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, Korea, Republic of

POSTER SESSIONS

Mon. (Sept. 23)

Poster Session (2)

Cognition and behavior

P10.01 **The effect of oral administration of ethanol fruit extract of Phoenix dactylifera (Date Palm) on the histology of cerebellum of adult wistar rats**

NKEREUWEM ETEUDO*[1], CHARLES CHIBUOYIM[2], ABEL AGBON[3]

[1]Ebonyi State University Abakaliki, Abakaliki, Nigeria, [2]Anatomy Department, Faculty of Basic Medical Science Amadu Bello University Zaria , Zaria, Nigeria, [3]Anatomy Department, Faculty of Basic Medical Science Amadu Bello University Zaria, Zaria, Nigeria

P10.02 **Effect of resveratrol supplementation on arsenic trioxide-induced adverse effects on female mice hippocampus**

KAMAKSHI MEHTA[1], BALPREET KAUR[1], KAMLESH PANDEY[1], PUSHPA DHAR[1], PUSHPA DHAR*[1]

[1]All India Institute of Medical Sciences, New Delhi, India

P10.03 **Role of curcumin on arsenic trioxide induced effects in basal forebrain of mice**

BALPREET KAUR[1], KAMAKSHI MEHTA[1], KAMLESH KUMAR PANDEY[1], PUSHPA DHAR*[1]

[1]All India Institute of Medical Sciences, New Delhi, India

P10.04 **An integrative and comprehensive systems biology-based view regarding the genetic basis of impulsivity**

ALI BOZORGMEHR[1], ALI SHAHBAZI*[1]

[1]Iran University of Medical Sciences, Faculty of Advanced Technologies in Medicine, Department of Neuroscience, Tehran, Iran

P10.05 **The impact of gallic acid on BDNF and Nrf-2 expression in the frontal cortex of a rat model of ADHD**

ISMAEEL BIN-JALIAH*[1]

[1]Department of Physiology, College of Medicine, King Khalid University, Abha, Aseer, Saudi Arabia

P10.06 **Clusters composed of similar items can act as representational units of visual working memory**

SANG CHUL CHONG*[1], GAEUN SON[1], BYUNG-IL OH[2], MIN-SUK KANG[2]

[1]Yonsei University, Seoul, Korea, Republic of, [2]Sungkyunkwan University, Seoul, Korea, Republic of

P10.07 **Clomipramine improves lipopolysaccharide-induced depressive-like behavior by regulating ASC-mediated expression of microglial IDO**

QIONG LIU*[1], SHANSHAN ZHANG[1]

[1]Department of Anatomy, Histology and Embryology, School of Basic Medical Sciences, Fudan University, Shanghai, China

P10.08 **The study of the behaviour, the hippocampus and cerebellar cortex of adult Wistar rats exposed to lead and treatment with Psidium guajava leaf extract**

ILIYASU MUSA OMOYINE*[1], IBEGBU AUGUSTINE O.[2], SAMBO JAMES S.[3], MUSA SUNDAY A.[4], AKPULU PETER S.[4], ANIMOKU ABDULRAZAQ A.[1], MUSA MUSTAPHA[4]

[1]Department of Anatomy, Faculty of Basic Medical Sciences, Kogi State University, Anyigba, Nigeria, [2]Department of Anatomy, Faculty of Basic Medical Sciences, Federal University Ndifu-Alike, Abakaliki, Nigeria, [3]Department of Veterinary Pathology, Faculty of Veterinary Medicine, Ahmadu Bello University, Zaria, Nigeria, [4]Department of Human Anatomy, Faculty of Basic Medical Sciences, College of Health Sciences, Ahmadu Bello University, Zaria, Nigeria

P10.09 **Functional left/right hippocampal asymmetry and split-brain in forming short/long-term memory**

YUKITOSHI SAKAGUCHI*[1], YOSHIO SAKURAI[1]
[1]Doshisha University, Kyotanabe-shi, Japan

P10.10 **Effects of prenatal methamphetamine exposure on neurobehavioral functions in adolescent and adult mice**

HATTAYA BENYA-APHIKUL[1], THONGCHAI SOOKSAWATE[1], RATCHANEE RODSIRI*[1]
[1]Department of Pharmacology and Physiology, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand

P10.11 **Evaluation of anxious behavior and social cognition in an early Alzheimer´s disease mice model**

MAR PACHECO-HERRERO*[1], ERNESTINA CASTRO-SALAZAR[2], FRANCISCO ROS-BERNAL[2], FRANCISCO OLUCHA-BORDONAU[2]
[1]Pontificia Universidad Católica Madre y Maestra, Santiago de los Caballeros, Dominican Republic, [2]Universitat Jaume I, Castellon, Spain

P10.12 **Anterior cingulate cortex and its input to the basolateral amygdala control innate fear response**

MIN SOO KANG[1], JINHO JHANG[1], HYOEUN LEE[2], HAN-SOL LEE[1], HYUNGJU PARK*[2], JIN-HEE HAN*[1]
[1]Department of Biological Sciences, KAIST Institute for the BioCentury (KIB), Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [2]Department of Structure & Function of Neural Network, Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of

P10.13 **Spatial memory deficits caused by reduced inhibitory synaptic function in Shank2 mutant mice**

MD ARIFUL ISLAM[1], JUNE-HYUN JEONG[1], JIHAE OH[1], HYOPIL KIM[1], CHAE-SEOK LIM[2], NAM-KYUNG YU[3], TAEHYUN KIM[4], HYOUNG-GON KO[5], TAESUNG PARK[1], JUNGSOO GIM[1], STEPHANIE WEGENER[6], DIETMAR SCHMITZ[6], TOBIAS M. BOECKERS[7], MIN GOO LEE[8], EUNJOON KIM[9], JAE-HYUNG LEE[10], SUNG HEE BAEK[1], BONG-KIUN KAANG*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Wonkwang University, Iksan, Korea, Republic of, [3]Scripps Research Institute, Florida, USA, [4]MIT, Boston, USA, [5]Kyung puk national university, Daegu, Korea, Republic of, [6]Charite, Berlin, Germany, [7]Ulm University, Ulm, Germany, [8]Yonsei University, Seoul, Korea, Republic of, [9]KAIST, Daejeon, Korea, Republic of, [10]Kyung Hee University, Seoul, Korea, Republic of

P10.14 **Knockdown of butyrylcholinesterase in the hippocampal ca1 strengthen contextual fear memory**

ZHENGDONG LIN[1], SI CHEN[1], KAI-LENG TAN[1], WEN TAN*[1]
[1]Guangdong University of Technology, Guangzhou, China

P10.15 **Recreational drug use and cognitive abilities**

ADNAN LEVENT*[1], EDDY DAVELAAR[2]
[1]Birkbeck University, London, UK, [2]Birkbeck university, London, UK

P10.16 **Neural circuit and molecular mechanisms of social hierarchy**

TAE-YONG CHOI[1], BYUNGSOO KANG[2], YUN HA JEONG[1], JEONG SEOP KIM[3], HYOUNGSEOK JEON[4], SE JIN JEONG[1], MURIM CHOI[4], JA WOOK KOO*[1]
[1]Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [2]SYSOFT R&D Center, Daegu, Korea, Republic of, [3]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [4]Seoul National University College of Medicine, Seoul, Korea, Republic of

P10.17 **Altered neural processing of monetary punishment in individuals with depressive disorders**

YOONJI IRENE LEE[1], SUSAN PARK[1], YOO-BIN CHOI[1], JONG MOON CHOI[3], SOO-HEE CHOI[4], JOON HWAN JANG*[2]
[1]Seoul National University Hospital, Seoul, Korea, Republic of, [2]Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Korea University, Seoul, Korea, Republic of, [4]Seoul National University College of Medicine and Institute of Human Behavioral Medicine, Seoul, Korea, Republic of

P10.18 **Prefrontal asymmetry during cognitive tasks in depression and its relationship to suicide ideation: a functional Near-Infrared Spectroscopy (fNIRS) study**

SEUNG YEON BAIK[1], JEONG-YOUN KIM[3], SEUNG-HWAN LEE*[2]
[1]Clinical emotion and cognition research laboratory, Ilsan, Korea, Republic of, [2]Ilsan Paik Hospital, Inje University College of Medicine, Ilsan, Korea, Republic of, [3]Clinical Emotion and Cognition Research Laboratory, Ilsan, Korea, Republic of

P10.19 **Effects of dominant / subordinate social status on acute pain perception**

SOOMAAYEH HEYSIEATTALAB*[1], FATEMEH BAGHERI[2], EMAD KHALILZADEH[3], MAHDI DOLATYARI[3], SOOMAAYEH HEYSIEATTALAB[4]
[1]university of Tabriz, tabriz, Iran, [2]1Department of Psychology, Faculty of Education and Psychology, University of Tabriz, Tabriz, Iran, Tabriz, Iran, [3]2Division of Physiology, Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tabriz, Tabriz, Iran, Tabriz, Iran, [4]3Division of Cognitive Neuroscience, Faculty of Education and Psychology, University of Tabriz, Tabriz, Iran, Tabriz, Iran

P10.20 **Negativity bias-related cortical representations in facial emotion perception**

GAYOUNG KIM[1], SUE-HYUN LEE[1, 2]
[1]Department of Bio and Brain Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea, [2]Program of Brain and Cognitive Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea

P10.21 **A novel cortico-intrathalamic circuit for flight behavior**

HAO WANG[1], PING DONG[1], XIAO-MING LI*[1]
[1]Center for Neuroscience and Department of Neurology of Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China

P10.22 **Impaired behavioral flexibility and associative memory after experimental stroke**

LIN KOOI ONG*[1]
[1]The University of Newcastle, Callaghan, NSW, Australia

P10.23 **Chronic Administration of Hexane Fruit Extract of *Persia americana* Mill Improves Cognitive Deficit in Mice**

NUHU MOHAMMED DANJUMA[1], JAMILU YA'U[2], HAMZA AKAWU NAMATA*[2]
[1]Ahmadu Bello University Zaria Nigeria, Zaria, Nigeria, [2]Ahmadu Bello University Zaria, Zaria, Nigeria

P10.24 **Does Pavlovian conditioning occur in a realistic environment?**

PETER ZAMBETTI*[1], JEANSOK KIM[2]
[1]University of Washington, Seattle, USA, [2]University of Washington , Seattle, USA

P10.25 **The effects of delayed visual feedback on sitting balance in healthy subjects**

ABDUL CHALIK MEIDIAN*[1], HIRO TAKEMURA[2], KAZU AMIMOTO[2], KOUTA SAWA[2]
[1]Tokyo Metropolitan University, Jakarta, Indonesia, [2]Tokyo Metropolitan University, Tokyo, Japan

P10.26 **Odor similarity may encode in very early olfactory processing**

JISUB BAE[1], KWANGSU KIM[1], SUN-AE MOON[1], WON-SEOK KANG[1], CHEIL MOON*[1]
[1]DGIST, daegu, Korea, Republic of

P10.27 **Essential oil fragrances positively affect menopausal depressive and anxiety symptoms: An EEG study for mid-life women**

SUN AE MOON[1], JISUB BAE[1], KWANGSU KIM[1], SI YOUNG CHO[2], GUSANG KWON[2], RAN LEE[2], SEUNGHO KO[2], SOYEON LIM[2], CHEIL MOON*[1]
[1]DGIST, Daegu, Korea, Republic of, [2]AMOREPACIFIC R&D Unit, Gyeonggi-Do, Korea, Republic of

P10.28 **Pre-clinical pain model: conceptualisation of a behavioral test battery**

NIDHI GOSWAMI*[1], ALEEM MOHD[1], KAILASH MANDA[1]
[1]Institute of Nuclear Medicine and Allied Sciences (INMAS), DRDO, Delhi, Delhi, India

P10.29 **Early changes in the hippocampal neurogenesis, neuroinflammation, and behavioral functions following mild traumatic brain injury**

ALEEM MOHD*[1], NIDHI GOSWAMI[1], KAILASH MANDA[1]
[1]Institute of Nuclear Medicine and Allied Sciences (INMAS), DRDO, Delhi, Delhi, India

P10.30 **A real-time fMRI-based neurofeedback system for rehabilitation of depressive symptoms**

ISHANI THAKKAR[1], MOHIT RANA[2], CESAR SALINAS[3], CLAUDIO SILVA[3], CLAUDIA BRETT[1], JAIME PEREIRA[1], RANGANATHA SITARAM[1], SERGIO RUIZ*[1]
[1]Pontificia Universidad Católica de Chile, Santiago, Chile, [2]University of Tübingen, Tübingen, Germany, [3]Clínica Alemana de Santiago, Santiago, Chile

P10.31 **Differential engagements of somatostatin- and parvalbumin-expressing neurons in flexible representation of task variables in rodent prefrontal cortex**

HUIJEONG JEONG[1, 2], DOHOUNG KIM[1, 3], MIN WHAN JUNG*[1, 2, 3]
[1]Center for Synaptic Brain Dysfunctions, Institute for Basic Science, Daejeon 34141, Korea, [2]Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon 34141, Korea, [3]Graduate School of Medical Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon 34141, Korea

P10.32 **Auditory steady-state responses and the complex information processing**

INGA GRISKOVA-BULANOVA*[1], ALEKSANDRAS VOICIKAS[1], EVALDAS PIPINIS[1], VYKINTA PARCIAUSKAITE[1], MINDAUGAS POTAPOVAS[1], VYTAUTAS JURKUVENAS[1]
[1]Vilnius University, Vilnius, Lithuania

P10.33 **Somatic marker influences a decision making under uncertainty**

JAEJOONG KIM[1], BUMSEOK JEONG*[1]
[1]KAIST, Daejeon, Korea, Republic of

P10.34 **Early olfactory event related potential can represent odor habituation**

KWANGSU KIM[1], JISUB BAE[1], CHEIL MOON*[1]
[1]DGIST, daegu, Korea, Republic of

P10.35 **A study of visual-olfactory interactions using context-related smell**

JEEWON LEE[1], KWANGSU KIM[1], JISUB BAE[1], CHEIL MOON*[1]
[1]DGIST, daegu, Korea, Republic of

P10.36 **Strengthened connections between engrams encode specific memories**

DONG IL CHOI[1], JUN-HYEOK CHOI[1], SU-EON SIM[1], JI-IL KIM[1], JIHAE OH[1], SANGHYUN YE[1], JAEHYUN LEE[1], TAEHYUN KIM[1], HYOUNG-GON KO[1], CHAE-SEOK LIM[1], HOONWON LEE[1], BONG-KIUN KAANG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P10.37 **Context discrimination is impaired by CaMKII* overexpression**

JOOYOUNG KIM[1], SANGHYUN YE[1], JI-IL KIM[1], BONG-KIUN KAANG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P10.38 **A role of midbrain dopamine neurons in negative punishment**

CONSTANCE PENG[1], PHILIP JEAN-RICHARD DIT BRESSEL[1], GAVAN MCNALLY*[1]
[1]University of New South Wales, Sydney, Australia

P10.39 **CREB-binding protein (CBP) phosphorylation by Protein kinase M zeta(PKMzeta) in nucleus as a mechanism of memory maintenance**

DAEHEE HAN[1], JUN-YEONG BEAK[1], BONG-KIUN KAANG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P10.40 **Insulin rescues memory impairment caused by the increased 5-HT content in the central nerves system in *Lymnaea***

YUKI TOTANI[1], HITOSHI AONUMA[2], JUNKO NAKAI[1], ETSURO ITO*[1]
[1]Department of Biology, Waseda University, Tokyo, Japan, [2]Research Institute for Electronic Science, Hokkaido University, Hokkaido, Japan

P10.41 **Deep neural networks process similar facial features compared to humans in facial expression recognition**

HYUNGJUN MOON[1], BJÖRN BROWATZKI[1], CAROLINE BLAIS[2], CHRISTIAN WALLRAVEN*[1]
[1]Korea University, Seoul, Korea, Republic of, [2]Quebec University, Gatineau , Canada

P10.42 **Mechanism of nicotine-induced conditioned place preference through dopamine D2 receptor signaling**

GOFARANA WILAR*[1], KOHJI FUKUNAGA[1]
[1]Department Pharmacology, Graduate School of Pharmaceutical Sciences,Tohoku University, Sendai, Japan

P10.43 **Relationship between the neural response to face stimuli and the clinical severity in children with autism spectrum disorder**

NUTTHIDA PHIANCHANA[1], NAIPHINICH KOTCHABHAKDI[1], NUANCHAN CHUTABHAKDIKUL[1], VORASITH SIRIPORNPANICH*[1]
[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand

P10.44 **Visuomotor transformation in frontal network in blindsight monkey**

YUSUKE YAMAMOTO*[1], REONA YAMAGUCHI[1], TOMOHIKO TAKEI[1], CHAO ZENAS[1], TADASHI ISA[1]
[1]Kyoto University, Kyoto, Japan

P10.45 **A cross-species approach to understand adolescent vulnerability to methamphetamine use: Genetic and cognitive factors**

JEE HYUN KIM*[1], DANNI JIANG[1], PETER HAMILTON[2], CHRISTINA PERRY[1], LEONID CHURILOV[3], YVONNE BONOMO[4], ROSS BATHGATE[1], NESTLER ERIC[2], SUSAN ROSSELL[5], KATHERINE DRUMMOND[1], ANDREW LAWRENCE[1], ALEXANDRE GUERIN[1]
[1]The Florey Institute of Neuroscience and Mental Health, Parkville, Australia, [2]Icahn School of Medicine at Mt Sinai Hospital, New York, USA, [3]University of Melbourne, Parkville, Australia, [4]St Vincent's Hospital, Fitzroy, Australia, [5]Swinburne University of Technology, Hawthorn, Australia

P10.46 **Dysregulation of mood by chronic unpredictable stress induce impairment of episodic memory**

JEONGSEOP KIM[1, 2], JOONHEE LEE[3], TAE-EUN KIM[1, 2], HYO JUNG KANG*[3], JA WOOK KOO*[1]
[1]Korea brain research institute (KBRI), Daegu, Korea, Republic of, [2]Daegu Gyeongbuk Institute of Science and Technology (DGIST), daegu, korea, republic of, [3]Chung-Ang University, Seoul, Korea, Republic of

P10.47 **Hierarchical organization of cognitive control with various sensory information**

TAEHYUN YOO[1], HYEON-AE JEON*[1]
[1]Department of Brain and Cognitive Sciences, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Daegu, Korea, Republic of

P10.48 **The role of gut microbiota in dietary restriction-induced memory enhancement**

CHUN-CHIEH HUANG[1], PEI-YU WANG*[1]
[1]Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taipei, Taiwan, China

P10.49 **Gamma oscillations in basolateral amygdala: individual mouse and collective mice**

JISOO KIM[1, 3], CHAE WOO KIM[1, 4], WOOSEUP YOUM[2], SUNG Q LEE*[2], JEE HYUN CHOI*[1,4]
[1]Korea Institute of Science and Technology, Seoul, Korea, Republic of, [2]Electronics and Telecommunications Research Institute, Daejeon, Korea, Republic of, [3]Korea University, Seoul, Korea, Republic of, [4]University of Science and Technology, Seoul, Korea, Republic of

P10.50 **7,3′,4′-Trihydroxyisoflavone improves hippocampal cognitive function by regulating neurotrophic factors and BDNF signaling pathway in mice**

SEON-KYUNG KIM[1], YONG-HYUN KO[1], SEOK-YONG LEE[1], CHOON-GON JANG*[1]
[1]Department of Pharmacology, School of Pharmacy, Sungkyunkwan University, Suwon, Korea, Republic of

P10.51 **Inhibition of fractalkine signaling attenuates postoperative neuroinflammation and cognitive dysfunction in mice model**

BON-NYEO KOO*[1], INJA CHO[1], EUN HEE KAM[1], EUN JUNG KIM[1], SO YEON KIM[1], JEONG MIN KIM[1]
[1]Yonsei University College of Medicine, Seoul, Korea, Republic of

P10.52 **The habenular $Ca2^{+}$-dependent secretion activator 2 knock-down leads to despair-like behavior**

HYEIJUNG YOO[1], JIN YONG KIM[1], SOO HYUN YANG[1], ESTHER YANG[1], KI MYUNG SONG[1], HYUNG SUN PARK[1], HYUN WOO LEE[1], HYUN KIM*[1]
[1]Korea University, Seoul, Korea, Republic of

P10.53 **Identify genes to mediate ascr#3 avoidance in *C. elegans***

YEONJI PARK[1], YONGJIN CHEON[1], LEESUN RYU[1], KYUHYUNG KIM*[1]
[1]DGIST, Daegu, Korea, Republic of

P10.54 **Role of executive functions in statistical learning**

JUNGTAK PARK[1], HYEON-AE JEON*[1]
[1]Department of Brain and Cognitive Sciences, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Daegu, Korea, Republic of

P10.55 **Ethanol extract of mixture of Astragali Radix and Salviae Miltiorrhizae Radix, alleviates in unpredictable chronic mild stress-induced depression mouse model**

YOO JIN JEON[1], CHANG GUE SON*[1]
[1]Daejeon university, Daejeon, Korea, Republic of

P10.56 **Expression of Aquaporin-4 channels in the mouse prefrontal cortex and hippocampus in MK-801 induced schizophrenia-like behaviour**

OMER BURAK ERICEK*[1], DERVIS MANSURI YILMAZ[2], IBRAHIM CEVIK[3], DILEK SAKER[4], MELTEM DONMEZ KUTLU[5], SAMET KARA[4], KUBRA AKILLIOGLU[5]
[1]CUKUROVA UNIVERSITY, ADANA, Turkey, [2]Department of Neurological Surgery, Cukurova University, Adana, Turkey, [3]Division of Neurophysiology, Department of Physiology, Medical Faculty, Cukurova University, Adana, Turkey, [4]Department of Histology and Embryology, Cukurova University Faculty of Medicine, Adana, Turkey, [5]Division of Neurophysiology, Department of Physiology, Cukurova University Faculty of Medicine, Adana, Turkey

P10.57 **Plasticity of ascr#3 avoidance behavior in *C. elegans***

HYEONJEONG HWANG[1], KYUHYUNG KYUHYUNG*[1]
[1]DGIST, Daegu, Korea, Republic of

P10.58 **Temporary changes of resting-state functional networks after fear learning**

KIRILL EFIMOV*[1], OLGA MARTYNOVA[2], ALINA TETEREVA[2], ALEXEY IVANITSKY[3]
[1]Institute of Higher Nervous activity and Neurophysiology, Russian Academy of Science; Moscow Institute of Physics and Technology, Moscow, Russia, [2]Institute of Higher Nervous activity and Neurophysiology, Russian Academy of Science; National Research University Higher School of Economics, Moscow, Russia, [3]Institute of Higher Nervous activity and Neurophysiology, Russian Academy of Science, Moscow, Russia

P10.59 **The critical role of interference control during novel metaphor comprehension**

HEE-DONG YOON[1], KI-CHUN NAM[2], SUN-YOUNG LEE[3], YOUNGJOO KIM[4], HYEON-AE JEON*[1]
[1]Department of Brain and Cognitive Sciences, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Daegu, Korea, Republic of, [2]Department of Psychology, Korea University, Seoul, Korea, Republic of, [3]Department of English, Cyber Hankuk University of Foreign Studies, Seoul, Korea, Republic of, [4]Department of Korean Language, Kyung Hee University, Gyunggido, Korea, Republic of

P10.60 **Scale-free properties of resting-state BOLD signal change after fear learning**

ALINA TETEREVA*[1], OLGA MARTYNOVA[2]
[1]Institute of Higher Nervous activity and Neurophysiology, Russian Academy of Science, Moscow, Russia, [2]Institute of Higher Nervous activity and Neurophysiology, Russian Academy of Science; National Research University Higher School of Economics, Moscow, Russia

P10.61 **Cell type-specific mapping of the SCN projection**

HAN KYOUNG CHOE*[1], SOOMIN LEE[1], JIHOON KOM[1], HYEWON MOON[1]
[1]Department of Brain and Cognitive Sciences, DGIST, Daegu, Korea, Republic of

P10.62 **The impact of choice and its outcome on memory**

EUN-JOO JEONG*[1], MIN-SUK KANG[1]
[1]SungKyunKwan University, Seoul, Korea, Republic of

P10.63 **Neuronal dynamics of social representation in the hippocampus**

KYU-HEE LEE[1], EUNJI KONG[2], JOOWON KIM[2], YOUNG-BEOM LEE[1], DOYUN LEE*[1]
[1]Institute for Basic Science, Daejeon, Korea, Republic of, [2]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P10.64 **The effects of childhood maltreatment on semantic networks during cognitive reappraisal of emotion**

SANG WON LEE*[1], SEUNG HO KIM[2], HYUNSIL CHA[2], YONGMIN CHANG[3], SEUNG JAE LEE[4]
[1]Kyungpook National University Medical Center, Daegu, Korea, Republic of, [2]Department of Medical & Biological Engineering, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [3]Department of Molecular Medicine, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [4]Department of Psychiatry, School of Medicine, Kyoungpook National University, Daegu, Korea, Republic of

P10.65 **Neural correlates of emotion reactivity and regulation in North Korean refugees**

KYUNG HWA LEE[1], HAYOUNG LEE[1], NAMBEOM KIM[3], JEONG EUN JEON[1], INKYUNG PARK[1], SEHYUN JEON[2], SOOHYUN KIM[4], YU JIN LEE[1], SEOG JU KIM*[2]
[1]Department of Psychiatry and Center for Sleep and Chronobiology, Seoul National University, College of Medicine and Hospital, Seoul, Korea, Republic of, [2]Department of Psychiatry, Sungkyunkwan University College of Medicine, Samsung Medical Center, Seoul, Korea, Republic of, [3]Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [4]Department of Neurology, Gangneung, Gangneung Asan Hospital, Gangwon-do, Korea, Republic of

P10.66 **ASIC1a in striatal synapse remodeling and procedural learning: implications in habitual drug-seeking behavior**

JIANG QIN[1], TIAN-LE XU*[1]
[1]Shanghai Jiao Tong University School of Medicine, Shanghai, China

P10.67 **Akt3/ GSK-3 signalling pathway regulates motor learning in mice**

MICHEL CYR*[1], ANNE-SOPHIE ALLAIN[1], BRUNO OUIMET[1]
[1]Cell Signalling Research Group, Univ of Trois Rivieres, Trois Rivieres, Canada

P10.68 **The role of medial prefrontal neurons in social dominance and competitive success in groups of male mice**

SONGJUN LI*[1], LEAH STRAHS[1], LANCE JOHNSON[1], ZIV WILLIAMS[1]
[1]Massachusetts General Hospital, Boston, USA

P10.69 **Bayesian integration in setting classification criterion**

HEESEUNG LEE[1], SANG-HUN LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P10.70 **Deconstructing the neural circuit underlying social hierarchy**

QIUHONG XIN[1], TINGTING ZHOU[1], DIYANG ZHENG[1], HAILAN HU*[1]
[1]1) Center for Neuroscience and Department of Psychiatry of First Affiliated Hospital, Zhejiang University. 2) Interdisciplinary Institute of Neuroscience and Technology, Qiushi Academy for Advanced Studies, Zhejiang University. 3) NHC and CAMS Key Laboratory of Medical Neurobiology, Mental Health Center, Zhejiang University School of Medicine., Hangzhou, China

P10.71 **Behavioral circadian rhythm is associated with cognition, medial temporal lobe volume and cortical amyloid burden in patients with cognitive impairment**

HYUN WOONG ROH[1], JUNG-GU CHOI[2], DUKYONG YOON[2], BUMHEE PARK[2], SANG WON SEO[3], SANG JOON SON[4], CHANG HYUNG HONG[4], EUN YOUNG KIM*[1]
[1]Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of, [2]Department of Biomedical informatics, Ajou University School of Medicine, Suwon, Korea, Republic of, [3]Department of Neurology, Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of, [4]Department of Psychiatry, Ajou University School of Medicine, Suwon, Korea, Republic of

P10.72 **Light-sensitive vs temperature-sensitive pacemaker neuron's molecular clockwork in Drosophila**

MIRI KWON[1], EUI MIN JEONG[2], JAE KYUNG KIM[2], EUN YOUNG KIM*[1]
[1]Neuroscience Graduate Program, Department of Biomedical Sciences, Ajou University Graduate School of Medicine, Suwon, Korea, Republic of, [2]Department of Mathematical Science, KAIST, Daejeon, Korea, Republic of

P10.73 **Silencing of superoxide dismutase 2 via DNMT3b after repeated mild traumatic brain injury: Implications in vulnerability to chronic**

NAGALAKSHMI BALASUBRAMANIAN[1], SNEHA SAGARKAR[2], NAMRATA PAWAR[1], AMIT CHOUDHARY[3], DADASAHEB KOKARE[3], AMUL SAKHARKAR*[1]
[1]Department of Biotechnology, Savitribai Phule Pune Univeristy, Pune, India, [2]Department of Zoology, Savitribai Phule Pune Univeristy, Pune, India, [3]Department of Pharmaceutical Sciences, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, India

P10.74 **Efficacy of saccade-based approaches in eye movement for Alzheimer's Dementia**

JULIUS OPWONYA[1], SUNJUU PARK[2], SEUL GEE KIM[1], JAEUK KIM*[1]
[1]Korea Institute of Oriental Medicine, Daejeon, Korea, Republic of, [2]Daejeon University, Daejeon, Korea, Republic of

P10.75 **Observational threat conditioning is induced by circa-strike activity burst and requires visual attention**

EUN-HWA HONG[1], CHANG BUM KO[1], JUNE-SEEK CHO*[1]
[1]Korea University, Seoul, Korea, Republic of

P10.76 **Nampt-mediated NAD+ biosynthesis is essential for the behavioral changes of depression *in vivo***

YI-LU YE[1], PING YU[1], ROUXIN WANG[1], KAI ZHONG[1], SIQI YAO[1], QI ZHANG*[1]
[1]Hangzhou Medical College, Hangzhou, China

P10.77 **On association of the lethal yellow (AY) mutation in the agouti gene with the alterations in mouse brain and behavior**

NIKITA KHOTSKIN*[1], ALEXANDRA PLUSNINA[1], ELIZABETH KULIKOVA[1], EKATERINA BAZHENOVA[1], DARYIA FURSENKO[1], IVAN SOROKIN[1], ILIA KOLOTYGIN[2], PIERRE MORMEDE[3], ELENA TERENINA[3], OLEG SHEVELEV[1], ALEXANDER KULIKOV[1]
[1]Institute of Cytology & Genetics, Novosibirsk, Russia, [2]Novosibirsk State University, Novosibirsk, Russia, [3]GenPhySE, INRA, Université de Toulouse, Toulouse, France

P10.78 **Effect of yohimbine on voluntary ethanol intake of adult male wistar rats**

ÁNGELES AGÜERO*[1], INMACULADA RUÍZ[1], Mª DOLORES ESCARABAJAL[1], Mª LOURDES DE LA TORRE[1]
[1]University of Jaen, Jaen, Spain

P10.79 **SCD-A-112 attenuates scopolamine-induced learning and memory impairments in mice by improving cholinergic transmission via activation of CREB/NGF signaling**

EUNJIN SOHN[1], HYE-SUN LIM[2], YU JIN KIM[2], BU-YEO KIM[2], JOO HWAN KIM[3], SOO-JIN JEONG*[2]
[1]Korea Institute of Oriental Medicine, Daejeon, Korea, Republic of, [2]KIOM, Daejeon, Korea, Republic of, 3Department of Life Science, Gachon University, Kyonggi-do , Korea, Republic of

P10.80 **Effects of transcranial direct current stimulation polarity on cortical activity in human visual cortex**

JEONGYEOL AHN[1], JUHYOUNG RYU[1], SANGJUN LEE[2], CHANY LEE[3], CHANG-HWAN IM[2], SANG-HUN LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of, [2]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [3]Department of Structure & Function of Neural Network, Korea Brain Research Institute, Daegu, Korea, Republic of

P10.81 **The role of basolateral amygdala parvalbumin neurons in the blocking of Pavlovian fear**

JOANNA YAU*[1], GAVAN MCNALLY[1]
[1]University of New South Wales, Sydney, Australia

P10.82 **Contributions of the sound symbolism to acquisition of new word-meaning association**

MAKOTO MATSUMOTO[1], SACHI ITAGAKI[1], KOHTA KOBAYASI*[1]
[1]Doshisha University, Kyoto, Japan

P10.83 **E-vapour inhalation - how does it affect memory?**

HUI CHEN*[1], JOEL STEELE[1], GERARD LI[1], YIK CHAN[1], BRIAN OLIVER[1], SONIA SAAD[2], RITA MACHAALANI[3]
[1]Faculty of Science, University of Technology Sydney, Sydney, Australia, [2]Kolling Institute of Medical Research, University of Sydney, Sydney, Australia, [3]Sydney Medical School, University of Sydney, Sydney, Australia

P10.84 **Memory loss by 1, 2 - diacetylbenzene – induced microglial inflammation: An in vivo and in vitro study**

MIN-SUN KIM*[1], SUNG-JIN KIM[1]
[1]Sunchon National University, Suncheon, Korea, Republic of

Development

P11.01 **Inactivation of ATM and DNA polymerase b results in cerebellar ataxia**
JUSIK KIM[1], YOUNGSOO LEE*[1]
[1]Ajou University School of Medicine, Suwon, Korea, Republic of

P11.02 **Impact of *Rsf1* deficiency on DNA damage response in the nervous system**
KEEEUN KIM[1], SUNWOO MIN[1], HYESEONG CHO[1], YOUNGSOO LEE*[1]
[1]Ajou University School of Medicine, Suwon, Korea, Republic of

P11.03 **Timely inhibitory circuit formation by Abl1 regulates innate olfactory behaviors in the mouse**
JAE YEON[1], BONGKI CHO[1], CHEIL MOON*[1]
[1]DGIST, daegu, Korea, Republic of

P11.04 **Formin-2 in development of neural circuits in zebrafish**
DHRITI NAGAR*[1], SHROBONA GUHA[1], AURNAB GHOSE[1]
[1]Indian Institute of Science Education and Research, Pune, Pune, India

P11.05 **GABAergic neurons excite hippocampal, but inhibit cortical, network activity in neonatal mice**
YASUNOBU MURATA*[1], MATTHEW COLONNESE[1]
[1]George Washington University, Washington, USA

P11.06 **Role of *Snf7-3* in neurodevelopment and object location memory**
JIHYE LEE[1], HYOPIL KIM[2], SU-EON SIM[2], MYUNG WON KIM[2], JISU LEE[2], JUNE HYUN JEONG[2], YU-KYUNG LEE[3], JIN-A LEE[3], BONG-KIUN KAANG*[2]
[1]Laboratory of Neurobiology, School of Biological Sciences, College of Natural Sciences, Seoul National University, Seoul 08826, Korea., Seoul, Korea, Republic of, [2]Laboratory of Neurobiology, School of Biological Sciences, College of Natural Sciences, Seoul National University, Seoul 08826, Korea., Seoul, Korea, Republic of, [3]Department of Biotechnology, College of Life Science and Nano Technology, Hannam University, Daejeon 305-811, Korea, Daejeon, Korea, Republic of

P11.07 **Long-term effects of prenatal stress on chloride transporters and $GABA_A$ receptor subunits in the prefrontal cortex of periadolescent rats**
ARBTHIP SUWALUK[1], NUANCHAN CHUTABHAKDIKUL*[1]
[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand

P11.08 **Precise positioning of neural progenitors is essential for neocortical development**
YUNLI XIE*[1], TIANXIANG TANG[2]
[1]Fudan University, Shanghai, China, [2]Fudan University , Shanghai, China

P11.09 **Gut regulates synaptic specificity**
SHI YANJUN[1], SHAO ZHIYONG*[1]
[1]Fudan University, Shanghai, China

P11.10 **Elucidation of the mechanisms underlying a novel Olig2 binding factor-mediated maintenance of oligodendrocyte precursor cells**
NORIHISA BIZEN[1], MASATO YANO[1], ZHOU LI[1], MANABU ABE[2], KENJI SAKIMURA[2], HIROHIDE TAKEBAYASHI*[1]
[1]Division of Neurobiology and Anatomy, Graduate School of Medical and Dental Sciences, Niigata University, Niigata, Japan, [2]Department of Animal Model Development, Brain Research Institute, Niigata University, Niigata, Japan

P11.11 **Polystyrene nanoplastic exposure leads to abnormal brain development by dysregulation of neural stem cell functions**
BOHYEON JEONG[1], JAHONG KOO[1], WANG SIK LEE[2], JINYOUNG JEONG[2], JAE-RAN LEE[1], DA YONG LEE*[1]
[1]Rare Disease Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon, Korea, Republic of, [2]Environmental Disease Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon, Korea, Republic of

P11.12 **Pituitary stalk interruption syndrome: MRI findings in a case of pituitary hypogonadism**
ALOYSIUS EBI LIGHA*[1], CHARLES OYINBO[2], MICHEAL TARIMOBO OTOBO[2]
[1]Texila American University/FEU-NRMF, Niger Delta University, Quezon City, Philippines, [2]Niger Delta University, Amassoma, Nigeria

P11.13 **Bcas1-mediated plastic development of visual projection**
SEUNG HEE CHOI[1], SEUNGEUN YEO[1], MI SUK LEE[1], JAEMYUNG JANG[1], JONG HYUK YOON[1], HYUN-JIN JUNG[1], YURA CHOI[1], DASOM KIM[1], YOUNGSHIK CHOE*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P11.14 **Increased ER-mitochondria tethering promotes axon regeneration**
SOYEON LEE[1], WEI WANG[1], JINYEON HWANG[2], UK NAMGUNG[2], KYUNG-TAI MIN*[1]
[1]UNIST, Ulsan, Korea, Republic of, [2]Daejeon University, Daejeon, Korea, Republic of

P11.15 **Role of SPIN90, SH3 protein interacting with Nck, in radial migration**
JIEUN KANG[1], WOOYUL CHOI[2], SEUNGHYUK CHOI[3], ALISTARE SADRA[3], SUNG-OH HUH*[1]
[1]Laboratory of Brain Development, Department of Pharmacology, College of Medicine, Hallym University, Chuncheon, Gangwon-do, South Korea, 24252, Chuncheon, Korea, Republic of, [2]Laboratory of Brain Development, Department of Pharmacology, College of Medicine, Hallym University, Chuncheon, Gangwon-do, South Korea, 24252 , Chuncheon, Korea, Republic of, [3]Department of Pharmacology, College of Medicine, Institute of Natural Medicine, Hallym University, South Korea, Chuncheon, Korea, Republic of

P11.16 **Gene regulatory networks underlying cell fate specification of a C. elegans sensory / inter / motor neuron-type**
WOOJUNG HEO[1], HYEONJEONG HWANG[1], KYUHYUNG KIM*[1]
[1]DGIST, Daegu, Korea, Republic of

P11.17 **Electrophysiological changes in high-performer preschoolers from poor homes after a computerized cognitive control training**
MARCOS LUIS PIETTO[1], FEDERICO GIOVANNETTI[1], MARIA SOLEDAD SEGRETIN[1], JUAN ESTEBAN KAMIENKOWSKI[2], SEBASTIAN JAVIER LIPINA*[1]
[1]Unidad de Neurobiología Aplicada (UNA, CEMIC - CONICET), Buenos Aires, Argentina, [2]Laboratorio de Inteligencia Artificial Aplicada, Instituto de Ciencias de la Computación (FCEyN-UBA, CONICET), Buenos Aires, Argentina

P11.18 **Regulation of axonal length, independent of mTORC1 activity, by a farnesylation-defective rheb in embryonic primary neurons**
SEUNGHYUK CHOI[1], ALI SADRA[1], JIEUN KANG[1], DONG-KWAN YOO[1], JAE RYUN RYU[2], JUNE HOAN KIM[2], WOONG SUN[2], SUNG-OH HUH*[1]
[1]Department of Pharmacology, College of Medicine, Institute of Natural Medicine, Hallym University, Chuncheon, Gangwon-do, 24252, Republic of Korea., Chuncheon, Korea, Republic of, [2]Department of Anatomy, Korea University College of Medicine, Brain Korea 21 plus, Seoul 02841, Republic of Korea, Seoul, Korea, Republic of

P11.19 **Elucidation of RNA binding protein Rbms1 (RNA Binding Motif Single Stranded Interacting Protein 1) Role in neocortical brain development**
KHADIJA HABIB[1], ALI SADRA[1], SUNG-OH HUH*[1]
[1]Department of Pharmacology, College of Medicine, Institute of Natural Medicine, Hallym University, Chuncheon, Gangwon-do, 24252, Republic of Korea., Chuncheon, Korea, Republic of

P11.20 **Alteration of Hippo signaling pathway in the neural stem cells derived from the patients with mental retardation**
JAHONG KOO[1], SOO-EUN SUNG[2], JAE-RAN LEE[1], DA YONG LEE*[1]
[1]Rare Disease Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon, Korea, Republic of, [2]Daegu-Gyeongbuk Medical Innovation Foundation, Daegu, Korea, Republic of

P11.22 **Delayed development of metabolic brain network in ADHD-model rats with persistent symptoms**

SEUNGGYUN HA[1], HYEKYOUNG LEE[3], YOORI CHOI[3], SE JIN JEON[4], JONG HOON RYU[5], HEE JIN KIM[6], JAE HOON CHEONG[6], SEONHEE LIM[7], BUNG-NYUN KIM[8], DONG SOO LEE*[2]

[1]Radiation Medicine Research Institute, Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, and College of Medicine or College of Pharmacy, Seoul National University, Seoul, Korea, Republic of, [3]Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Republic of Korea, Seoul, Korea, Republic of, [4]Department of Oriental Pharmaceutical Science, College of Pharmacy, Kyung Hee University, Seoul, Korea, Republic of, [5]Department of Life and Nanopharmaceutical Science, College of Pharmacy, Kyung Hee University, Seoul, Korea, Republic of, [6]Department of Pharmacy, Uimyung Research Institute for Neuroscience, Sahmyook University, Seoul, Korea, Republic of, [7]Department of Mathematical Sciences, Seoul National University, Seoul, Korea, Republic of, [8]Division of Child and Adolescent Psychiatry, Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of

P11.23 **Subcellular IIIG9 dynamics in cell-cell adhesion during ependymal cell specification and maturation from radial glia progenitors**

VICTOR BAEZA[1], MARIA-JOSE OVIEDO[1], MANUEL CIFUENTES[2], FRANCISCO NUALART[1], KATTERINE SALAZAR*[1]

[1]Laboratory of Neurobiology and Stem Cells, Neuro CellT, Center for Advanced Microscopy CMA BIOBIO, Concepcion University, Concepcion, Chile, [2]CIBER BIONAND, Malaga University, Málaga, Spain

P11.24 **Anks1a is essential for establishing the rotational polarity of ependymal cells**

HAERYUNG LEE[1], HYUNCHEOL RYU[2], SOOCHUL PARK*[1]

[1]Sookmyung Women's University, Seoul, Korea, Republic of, [2]University Of Seoul, Seoul, Korea, Republic of

P11.25 **Erk-dependent phosphorylation regulates NeuroD1 activity**

TAE-YOUNG LEE[1], NARAYAN BASHYAL[1], JUNG-MI CHOI[1], SUNG-SOO KIM[1], HAEYOUNG SUH-KIM*[1]

[1]Ajou University school of medicine, Suwon, Korea, Republic of

P11.26 **Cep215 is essential for astrocyte development and process formation**

DONGHEE KANG[1], WONJUNG SHIN[2], HYUNJUNG YOO[2], BYUNGHO SHIN[2], KYUNGNAM KIM[3], YOUNGHOON SUNG[3], KUNSOO RHEE*[1]

[1]Department of Biological Sciences, Seoul National University, Seoul, Korea, Republic of, [2]Department of Biological Sciences, Seoul National University, Seoul, Korea, Republic of, [3]Department of Convergence Medicine, University of Ulsan College of Medicine, Seoul, Korea, Republic of

P11.27 **Single-molecule imaging of CREB transcription factor in human cortical-like neurons**

YURI ATSUMI[1], NORIYUKI SUGO[1], RYOHEI IWATA[2], PIERRE VANDERHAEGHEN[2], NOBUHIKO YAMAMOTO*[1]

[1]Osaka University, Suita, Osaka, Japan, [2]VIB Center for Brain & Disease Research, Leuven, Belgium

P11.28 **Human neural organoid model exhibiting early neural tube morphogenesis**

JU-HYUN LEE[1], MOHAMMED R. SHAKER[1], HYUN JUNG KIM[1], JUNE HOAN KIM[1], HYOGEUN SHIN[2], MINJIN KANG[3], TAE HWAN KWAK[4], IM JOO RHYU[1], HYUN KIM[1], DONG WOOK HAN[4], IL-JOO CHO[2], DONGHO GEUM[3], WOONG SUN*[1]

[1]Department of Anatomy, Brain Korea 21 Plus Program for Biomedical Science, Korea University College of Medicine, Seoul, Korea, Republic of, [2]Center for BioMicrosystems, Brain Science Institute, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [3]Department of Biomedical Sciences, Korea University College of Medicine, Seoul, Korea, Republic of, [4]Department of Stem Cell Biology, School of Medicine, Konkuk University, Seoul, Korea, Republic of

Disorders of the nervous system

P12.01 **The newly-found AMP-activated protein kinase (AMPK) inhibitors reduce hypoglycemia-induced hippocampal neuronal death**

A RA KHO[1], BO YOUNG CHOI[1], SONG HEE LEE[1], DAE KI HONG[1], JEONG HYUN JEONG[1], BEOM SEOK KANG[1], DONG HYEON KANG[1], MIN KYU PARK[1], SANG WON SUH*[1]

[1]Hallym University, Chuncheon Si, Kangwon-Do, Korea, Republic of

P12.02 **Anti-oxidant, N-acetyl-l-cysteine attenuates hippocampal neurodegeneration after global cerebral ischemia via inhibition of transient receptor potential melastatin 2**

DAE KI HONG[1], BO YOUNG CHOI[1], A RA KHO[1], SONG HEE LEE[1], JEONG HYUN JEONG[1], BEOM SEOK KANG[1], DONG HYEON KANG[1], MIN KYU PARK[1], KYOUNG-HA PARK[2], SANG WON SUH*[1]

[1]Department of Physiology, Hallym University, College of Medicine, Chuncheon, Korea, Republic of, [2]Division of Cardiovascular Diseases, Hallym University Medical Center, Anyang, Korea, Republic of

P12.03 **Longitudinal investigation of spatiotemporal dynamics of blood cell stagnation in cerebral capillaries using optical coherence tomography angiography during subcortical vascular dementia development**

JIN-HUI YOON[1], WANG-YUHL OH[1], PAUL SHIN[1], JONGYOON JU[1], GAON KIM[1], YONG JEONG*[1]

[1]KAIST, Daejeon, Korea, Republic of

P12.04 **Delineating the pathogenesis of cerebral malaria in Balb/c and C57BL/6J mice: A comparative assessment**

MEETALI GIRDHAR[1], ANJU KATYAL*[2]

[1]Dr. B.R. Ambedkar center for Biomedical Research, University of Delhi, Delhi, India, [2]Dr. B.R. Ambedkar Center for Biomedical Research, University of Delhi, Delhi, India

P12.05 **Temporal change of zinc transporters after pilocarpine-induced seizure**

SONG HEE LEE[1], BO YOUNG CHOI[1], A RA KHO[1], JEONG HYUN JEONG[1], DAE KI HONG[1], DONG HYEON KANG[1], BEOM SEOK KANG[1], MIN KYU PARK[1], HONG KI SONG[1], HUI CHUL CHOI[1], SANG WON SUH*[1]

[1]Hallym University, Chuncheone-si, Korea, Republic of

P12.06 **ACE-HM improves alcohol-induced memory impairment through activation of alcohol metabolism**

HUIYOUNG KWON[1], EUNBI CHO[1], JIEUN JEON[1], DONG HYUN KIM*[1]

[1]Dong-A university, Busan, Korea, Republic of

P12.07 **Effects of transient receptor potential cation channel 5 (TRPC5) inhibition on global cerebral ischemia-induced neuronal death**

BEOM SEOK KANG[1], BO YOUNG CHOI[1], A RA KHO[1], SONG HEE LEE[1], DAE KI HONG[1], JEONG HYUN JEONG[1], DONG HYEON KANG[1], MIN KYU PARK[1], SANG WON SUH*[1]

[1]Department of Physiology, Hallym university, College of Medicine, ChunCheon, Korea, Republic of

P12.08 **Effects of cerebrolysin on hippocampal neuronal death and neurogenesis after pilocarpine-induced seizure**

DONG HYEON KANG[1], BO YOUNG CHOI[1], A RA KHO[1], SONG HEE LEE[1], JEONG HYUN JEONG[1], DAE KI HONG[1], BEOM SEOK KANG[1], MIN KYU PARK[1], HUI CHUL CHOI[2], HONG KI SONG[2], SANG WON SUH*[1]

[1]Department of Physiology, Hallym University, college of medicine, ChunCheon, Korea, Republic of, [2]Department of Neurology, Hallym University, college of medicine, ChunCheon, Korea, Republic of

P12.09 **Synaptic modifications in the ventral hippocampal neurons in the learned helplessness model of depression**

SANGWOO KIM[1], GYEONG-EON CHANG[1], HYOJUNG LEE[1], DONGSU LEE[1], GYEONG HWUII KIM[1], GO EUN HA[1], EUNJI CHEONG*[1]
[1]Department of Biotechnology, Yonsei University, Seoul, Korea, Republic of

P12.10 **Human brain transcriptome analysis reveals altered neuroimmune associated genes in Down syndrome**

SIHWAN SEOL[1], JOONHONG KWON[1], HYO JUNG KANG*[1]
[1]Department of Life Science, Chung-Ang University, Seoul, Korea, Republic of

P12.11 **Hyaluronic acid metabolism regulates amyloid-β pathology by preserving lysosomal integrity**

SEO-HYUN KIM[1], TAE-IN KAM[1], YONGDAE GWON[1], SEUNG-MIN YOO[1], JISU PARK[1], SEOWON MOON[1], YOUBIN KIM[1], HANEUL LEE[1], YONG-KEUN JUNG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P12.12 **Peroxiredoxin 5 alleviates iron overload-induced neuronal death through regulation of endoplasmic reticulum-mediated mitochondrial fragmentation in mouse hippocampal HT-22 cells**

DONG GIL LEE[1], DONG-SEOK LEE*[1]
[1]School of Life Sciences, BK21 Plus KNU Creative BioResearch Group, Kyungpook National University, Daegu, Korea, Republic of

P12.13 **Peroxiredoxin 4 ameliorates amyloid beta oligomer-mediated apoptosis by inhibiting ER-stress in HT-22 hippocampal neuron cells**

MINKYOUNG KAM[1], DONG GIL LEE[1], DONG-SEOK LEE*[1]
[1]School of Life Sciences, BK21 Plus KNU Creative BioResearch Group, Kyungpook National University, DAEGU, Korea, Republic of

P12.14 **Therapeutic effects of carvacrol in hippocampal neuronal death after pilocarpine-induced seizure**

JEONG HYUN JEONG[1], BO YOUNG CHOI[1], A RA KHO[1], SONG HEE LEE[1], DAE KI HONG[1], DONG HYEON KANG[1], BEOM SEOK KANG[1], MIN KYU PARK[1], HUI CHUL CHOI[2], HONG KI SONG[2], SANG WON SUH*[1]
[1]Department of Physiology, Hallym University, college of Medicine, ChunCheon, Korea, Republic of, [2]Department of Neurology, Hallym University, college of Medicine, ChunCheon, Korea, Republic of

P12.15 **Potential role of TRPC4 in neurodevelopmental disorders**

JEE YOUNG SEO[1], SEUNG YEON KO[2], GI YOUNG SON[1], DO GYEONG KIM[1], HYEON SON*[2]
[1]Graduate School of Biomedical Science and Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Department of Biochemistry and Molecular Biology, College of Medicine, Hanyang University, Seoul, Korea, Republic of

P12.16 **Effect of chronic fluoxetine administration on brain mRNA levels of 5-HT1A receptor gene and its repressors CC2D1A/Freud-1 and CC2D1B/Freud-2 in mouse lines differed by 5-HT1A receptor sensitivity**

ELENA KONDAUROVA*[1], ALEXANDER RODNYY[1], VLADIMIR NAUMENKO[1]
[1]Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

P12.17 **Neuritin produces antidepressant-like behaviors through HDAC5 phosphorylation**

SEUNG HOON LEE[1], MIYEON CHOI[3], SEUNG YEON KO[2], GI YOUNG SON[1], DO GYEONG KIM[1], HYEON SON*[2]
[1]Graduate School of Biomedical Science and Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Department of Biochemistry and Molecular Biology, College of Medicine, Hanyang University, Seoul, Korea, Republic of, [3]Hanyang Biomedical Research Institute, Hanyang University, Seoul, Korea, Republic of

P12.18 **Dopamine D1 receptor (D1R) expression is controlled by a transcriptional repressor complex containing DISC1**

YEONGJUN SUH[1], SU-JIN NOH[1], SAEBOM LEE[2], BO KYOUNG SUH[1], SU BEEN LEE[1], JINHYUK CHOI[3], JAEHOON JEONG[4], SANGJUNE KIM[2], SANG KI PARK[1], SANG KI PARK*[1]
[1]Pohang University of Science and Technology, Pohang, Korea, Republic of, [2]The Johns Hopkins University of School of Medicine, Baltimore, USA, [3]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [4]National Institutes of Health, Bethesda, USA

P12.19 **Label-free high resolution proteomic analysis of cerebrospinal fluid in Alzheimer's disease**

SUN AH PARK*[1], JIN MYUNG JUNG[2], JUN SUNG PARK[3], JEONG HO LEE[3], BUMHEE PARK[1], HYUNG JUN KIM[4], JEONG-HO PARK[4], WON SEOK CHAE[4], JEE HYANG JEONG[5], SEONG HYE CHOI[6], JE-HYUN BAEK[7]
[1]Ajou University School of Medicine, Suwon, Korea, Republic of, [2]Department of Data Science, The University of Suwon, Suwon, Korea, Republic of, [3]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [4]Soonchunhyang University Bucheon Hospital, Bucheon, Korea, Republic of, [5]Ewha Womans University Mokdong Hospital, Seoul, Korea, Republic of, [6]Inha University School of Medicine, Incheon, Korea, Republic of, [7]R&D Center for Clinical Mass Spectrometry, Seegene Medical Foundation, Seoul, Korea, Republic of

P12.20 **Drug screening for regulating α-synuclein propagation**

JOO-OK MIN[1], HYUN-KYUNG CHUNG[1], SEUNG-JAE LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P12.21 **Oxidative stress reduces the expression of glutamate decarboxylases through transcripts down-regulation**

SEONG-EUN LEE[1], GUM HWA LEE*[1]
[1]Chosun University, Gwangju, Korea, Republic of

P12.22 **Rubrofusarin improves memory loss in an Aβ-induced Alzheimer's disease-like mouse model**

EUNBI CHO[1], HUIYOUNG KWON[1], JIEUN JEON[1], DONG HYUN KIM*[1]
[1]Dong-A university, Busan, Korea, Republic of

P12.23 **Modulation of inhibitory microenvironment in the hydrogel-induced extracellular matrix to enhance axonal regeneration following spinal cord injury**

HEE HWAN PARK[1], DONG HOON HWANG[1], HYUNG SOON KIM[1], BYUNG GON KIM*[1]
[1]Department of Brain Science, Ajou University School of Medicine, Suwon, Korea, Republic of

P12.24 **Identification of a small molecule that alleviates synaptic and cognitive deficits in APP/PS1 mice**

YUMEI LIAO[1], XIAOJI ZHUANG[1], PENG LIU[1], XIAOJIE HUANG[1], YINGHUI PENG[1], LEI SHI*[1]
[1]JNU-HKUST Joint Laboratory for Neuroscience and Innovative Drug Research, Jinan University, Guangzhou, China

P12.25 **On the behavior and 5-HT1A receptor functioning in the brain of BTBR mice – the animal model of autism**

VLADIMIR NAUMENKO*[1], ALEXANDER RODNYY[1], NIKITA KHOTSKIN[1], YEGOR ANTONOV[1], ELENA KONDAUROVA[1], ELIZABETH KULIKOVA[1]
[1]Institute of Cytology and Genetics, Novosibirsk, Russia

P12.26 **Infiltration of Th17 lymphocytes in the substantia nigra of non-human primate model of Parkinson's disease**

JINCHEOL SEO[1], JUNGHYUNG PARK[1], JINYOUNG WON[1], HYEON-GU YEO[1], KEONWOO KIM[1], CHANG-YEOP JEON[1], DONG-SEOK LEE[2], YOUNGJEON LEE*[1]
[1]National Primate Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Cheongju, Korea, Republic of, [2]School of Life Sciences, BK21 Plus KNU Creative BioResearch Group, Kyungpook National University, Daegu, Korea, Republic of

P12.27 **Identification of a novel translocation mechanism of TFEB in neurodegeneration**

GISEONG CHO[1], YOUNG J OH[1], NURI YUN*[2]
[1]Department of Systems Biology, Yonsei University College of Life Science and Biotechnology, Seoul, Korea, Republic of, [2]Istitute of Life Science and Biotechnology, Yonsei University, Seoul, Korea, Republic of

P12.28 **Effects of combined treatment with acupuncture and herbal medicine in a mouse model of parkinson's disease**

TAE-YEON HWANG[1], MIN-A SONG[1], SORA AHN[1], JU-YOUNG OH[1], HI-JOON PARK*[1]
[1]Acupuncture and Meridian Science Research Center, Kyung Hee University, Seoul, Korea, Republic of

P12.29 **Loss of Ataxin-1 potentiates Alzheimer's pathogenesis by elevating cerebral BACE1 transcription**

JAEHONG SUH*[1], DONNA ROMANO[1], LARISSA NITSCHKE[2], SCOTT HERRICK[1], BRITT DIMARZIO[1], VOLODYMYR DZHALA[1], JUN-SEOK BAE[1], MARY ORAM[1], YUEJIAO ZHENG[1], BASAVARAJ HOOLI[1], KRISTINA MULLIN[1], VINCENZO GENNARINO[2], WILMA WASCO[1], JEREMY SCHMAHMANN[1], MARK ALBERS[1], HUDA ZOGHBI[2], RUDOLPH TANZI[1]
[1]Harvard Medical School - MGH, Boston, MA, USA, [2]Baylor College of Medicine, Houston, Texas, USA

P12.30 **Effect of agonists and antagonists of muscarinic receptor type 2 and 4 on the anticonvulsive activity of sparteine in an acute kainic acid murine model**

FRIDHA VIRIDIANA VILLALPANDO VARGAS*[1], SOFIA RODRÍGUEZ MERCADO[1], MARISOL MALDONADO MORA[1], SAMUEL ARELLANO LEYVA[1], LAURA MEDINA CEJA[1]
[1]University of Guadalajara, Guadalajara, Mexico

P12.31 **Aβ oligomers impair mGluR5-mediated enhancement of depolarization-induced suppression of inhibition by disrupting PLCβ-dependent endocannabinoid mobilization**

JAEDONG LEE[1], JEEHYUN KWAG*[1]
[1]Dept. of Brain and Cognitive Engineering, Korea University, Seoul, Korea, Republic of

P12.32 **Potential role of ellagic acid in reduction of oxidative stress after status epilepticus induced in rats**

KENIA PARDO-PEÑA*[1], ANA SÁNCHEZ-LIRA[1], ALDO YAÑEZ-HERNÁNDEZ[1], LAURA MEDINA-CEJA[1]
[1]Laboratory of Neurophysiology, Department of Cellular and Molecular Biology, University of Guadalajara, Zapopan, Mexico

P12.33 **Chronic kidney disease exacerbates post-stroke brain damage**

RAGHU VEMUGANTI*[1], BHARATH CHELLUBOINA[2], SURESH L MEHTA[2], TAEHEE KIM[2], ANIL K CHOKKALLA[3], SAIVENKATESHKOMAL BATHULA[2], JIN SOO PARK[2]
[1]Department of Neurological Surgery, Cell and Molecular Pathology Graduate Program, University of Wisconsin, Madison, WI, USA and William S. Middleton Veterans Administration Hospital, Madison, WI, USA, Madison, USA, [2]Department of Neurological Surgery, University of Wisconsin, Madison, WI, USA , Madison, USA, [3]Department of Neurological Surgery, Cell and Molecular Pathology Graduate Program, University of Wisconsin, Madison, WI, USA , Madison, USA

P12.34 **Both WFS1 and CISD2 are required for endoplasmic reticulum calcium uptake, which controls mitochondrial function in neurons**

ALLEN KAASIK*[1], MAILIS LIIV[1], ANNIKA VAARMANN[1], MALLE KUUM[1], DZAMILJA SAFIULINA[1], VLADIMIR VEKSLER[2]
[1]University of Tartu, Tartu, Estonia, [2]INSERM, Châtenay-Malabry , France

P12.35 **TMEM43, a novel passive conductance channel of cochlear glia is critical for maintenance of speech discrimination**

MINWOO JANG[1], DOO-YI OH[2], EUNYOUNG YI[3], WOONGYANG PARK[4], BYUNG YOON CHOI[2], CHANGJOON LEE*[1]
[1]Institute for Basic Science, Daejeon, Korea, Republic of, [2]Seoul National University Bundang Hospital, Bundang, Korea, Republic of, [3]Mokpo National University, Mokpo, Korea, Republic of, [4]Samsung Medical Center, Seoul, Korea, Republic of

P12.36 **APOE genotype differentially regulates mitophagy**

BO-RAM LEE[1], CHANGJAE YOO[1], JAEKWANG KIM*[1]
[1]Department of Neural Development and Disease, Korea Brain Research Institute,Deagu, 41062, Daegu, Korea, Republic of

P12.37 **Development of trans-cellular propagation of Tau by bimolecular fluorescence complementation technique**

EUGENE BOK[1], JI MIN LEE[1], JAEKWANG KIM*[1]
[1]Department of Neural Development and Disease, Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of

P12.39 **Mechanism for the learning disability in RAS-ERK signaling-associated neurodevelopmental disorder**

MINKYUNG KANG[1], BENJAMIN G. NEEL[2], HYUN-HEE RYU[1], SUNYONG KIM[1], YONG-SEOK LEE*[1]
[1]Department of Physiology, Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]Laura and Isaac Perlmutter Cancer Center, New York University Langone Medical Center, New York, USA

P12.40 **Upregulation of MeCP2 level in Red Nucleus Cause Late-life Depressive phenotypes**

YUNJUNG CHOI[1], JEEWON RYU[1], HYE-SUN KIM[2], HEH-IN IM*[1]
[1]Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [2]Department of Pharmacology, College of Medicine, Seoul National University, Seoul, Korea, Republic of

P12.41 **Therapeutic effects of Agomelatine on desynchronized diurnal rhythms of sleep/wake cycle and home cage motor activity in an experimental model of melatonin deficit**

JANA TCHEKALAROVA*[1], NATASHA IVANOVA[1], LIDIA KORTENSKA[1]
[1]Institute of Neurobiology, Sofia, Bulgaria

P12.42 **PPV-6 suppresses amyloid-beta (Aβ)-induced cell cycle reentry in differentiated primary cortical neurons**

DING-I YANG*[1], BO-YU HOU[1]
[1]Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, China

P12.43 **Cocaine- and amphetamine-regulated transcript peptide as a possible common biomarker for the symptoms expressed in major depressive disorders and amphetamine withdrawal syndrome**

HYUNG SHIN YOON[1], JUNGWON LEE[1], KOTARO HATTORI[2], DAIMEI SASAYAMA[3], MIHO OTA[2], HIROSHI KUNUGI[2], JEONG-HOON KIM*[1]
[1]Department of Physiology, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Mental Disorder Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan, [3]Department of Psychiatry, Shinshu University School of Medicine, Matsumoto, Japan

P12.44 **The psychomotor properties of beta-phenylethylamine in rodents**

EUN YOUNG JANG*[1], SEONG SHOON YOON[1], JI SUN KIM[1], WOO HYUN KIM[1], MINHAN KA[1], TAE WAN KIM[1], RI-NA LIM[1], YOUNG-JU LEE[1], CHANG-HOON CHOI[1], JOUNG-WOOK SEO[1]
[1]Korea Institute of Toxicology, Daejeon, Korea, Republic of

P12.45 **Tmem74 regulates anxiety-like behavior through HCN1 channels in BLA pyramidal neurons**

NINGHE SUN[1], DANYANG CHEN[2], LINGXIAO SHAO[2], QUAN JIANG[2], FENG HAN*[1]
[1]College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, China, China, [2]College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, China, China

P12.46 **Fluoxetine-induced Upregulation of Dopamine D2 Receptor and its Pharmacological Roles in the Hippocampal mossy cells**

GYOCHANG HONG[1], JIN-HYEOK JANG[1], MINHYE KIM[1], YONG-SEOK OH*[1]
[1]DGIST, Daegu, Korea, Republic of

P12.47 **Hippocampal mossy cell involvement in behavioral and neurogenic responses to chronic antidepressant treatment**

SEO-JIN OH[1], PAUL GREENGARD[2], JIA CHENG[2], YONG-SEOK OH*[1]
[1]DGIST, Deagu, Korea, Republic of, [2]Rockefeller University, New York, USA

P12.48 **Depressive disorder induced by defective PTPRT activity**

SO-HEE LIM[1], KYOUNG-SHIM KIM[1], SUN SEEK MIN[2], NA-YOON LEE[1], JAE-RAN LEE*[1]
[1]Korea Research Institute of Bioscience and Biotechnology, Daejeon, Korea, Republic of, [2]School of Medicine, Eulji University, Daejeon, Korea, Republic of

P12.49 **The roles of several signal molecules in the production of antinociception by acute immobilization stress and the development of antinociceptive tolerance by chronic immobilization stress**

HONG SUH*[1], JING HUI[1], HEE LEE[1]
[1]Department of Pharmacology, College of Medicine, Hallym University, Chuncheon, Korea, Republic of

P12.50 **Modulation of immune-mediated cytokines for the recovery of motor function after stroke in mice**

KYOUNG IN KIM[1], YOUNG CHEUL CHUNG[2], JAE YEONG JEONG[1], JAE GEUN JANG[1], AH REUM HONG[1], BYUNGKWAN JIN*[2]
[1]Department of Neuroscience, Graduate school, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Biochemistry & molecular Biology, Kyung Hee University, Seoul, Korea, Republic of

P12.51 **Tyrosine nitration of glutamine synthetase is increased in the prefrontal cortex of chronic immobilization stress-induced depressive mouse**

JAE SOON KANG[1], JI HYEONG BAEK[1], HYEONWI SON[1], HYUN JOON KIM*[1]
[1]Department of Anatomy and Convergence Medical Sciences, Institute of Health Sciences, Bio Anti-Aging Medical Research Center, Gyeongsang National University Medical School, Jinju, Korea, Republic of

P12.52 **The novel melatoninergic drug Piromelatine and its beneficial influence on anxiety in prenatally stressed offspring**

NATASHA IVANOVA*[1], ZLATINA NENCHOVSKA[1], LIDIA KORTENSKA[1], RUMIANA MITREVA[1], TSVETA STOYANOVA[1], JANE TCHEKALAROVA[1]
[1]Institute of Neurobiology, Bulgarian Academy of Sciences, Sofia, Bulgaria

P12.53 **Control of neuropathic pain by lateral parabrachial nucleus**

LI SUN[1], SHUMIN DUAN*[1]
[1]Department of Neurobiology, Key Laboratory of Medical Neurobiology of Ministry of Health of China, Key Laboratory of Neurobiology, Zhejiang University School of Medicine, Hangzhou, Zhejiang 310058, hangzhou, China

P12.54 **Primary tumors of the central nervous system in Mongolia**

ORKHONTUUL SHIRMEN*[1], KHUSAYAN KHAIRULLA[1], AVAAJIGMED LKHAMJAV[1], TSETSEGDELGER MUNKHJARZGAL[2], TOVUUDORJ AVIRMED[3], ENKHSAIKHAN LKHAGVASUREN[4]
[1]Shastin central hospital, Department of Neurosurgery, Ulaanbaatar, Mongolia, [2]Department of Adult Pathology, National Center for Pathology , Ulaanbaatar, Mongolia, [3]University of Medical Sciences, Department of Medicine school, Ulaanbaatar, Mongolia, [4]Department of Microbiology and Immunology, School of Bio-Medicine, Mongolian National University of Medical Sciences, Ulaanbaatar, Mongolia

P12.55 **Early synaptic pathologies in a mouse model of prodromal Parkinson's disease**

IKUKO AMANO[1], TOMOYUKI TAGUCHI[1], MASASHI IKUNO[1], HODAKA YAMAKADO[1], YUSUKE HATANAKA[1], RYOSUKE TAKAHASHI*[1]
[1]Department of Neurology, Graduate School of Medicine, Kyoto University, 54 Kawaharacho, Shogoin, Sakyo-ku, Kyoto City, Japan

P12.56 **Single-cell profiling of tumors more accurately classifies glioma molecular subtypes**

WEIWEI XIAN[1], MOHAMMAD IMAM HASAN BIN ASAD[2], SHUAI WU[3], FENGJIAO LI[1], JUNFENG LU[3], HONG CHEN[4], YING MAO[5], LIANGFU ZHOU[5], GUOMIN ZHOU[1], JINSONG WU[3], EDWIN WANG[2], LINYA YOU*[1]
[1]Department of Human Anatomy & Histoembryology, School of Basic Medical Sciences, Fudan University, Shanghai, China, [2]University of Calgary, Cumming School of Medicine, Calgary, Alberta, Canada, Alberta, Canada, [3]Glioma Surgery Division, Neurological Surgery Department of Huashan Hospital, Fudan University, Shanghai, China, [4]Department of Pathology, Huashan Hospital, Fudan University, Shanghai, China, Shanghai, China, [5]Department of Neurosurgery, Huashan Hospital, Fudan University, Shanghai, China

P12.57 **The potent psychomotor, rewarding and reinforcing properties of 3-fluoromethamphetamine in rodents**

IN SOO RYU[1], SEONG SHOON YOON[1], YOUNG EUN LEE[1], WOO HYUN KIM[1], JI SUN KIM[1], JAE HOON CHEONG[2], HEE JIN KIM[2], CHOON-GON JANG[3], YONG SUP LEE[4], MINHAN KA[1], DONG HO WOO[1], EUN YOUNG JANG[1], JOUNG-WOOK SEO*[1]
[1]Korea Institute of Toxicology, Daegeon, Korea, Republic of, [2]Sahmyook University, Seoul, Korea, Republic of, [3]Sungkyunkwan University, Seoul, Korea, Republic of, [4]Kyung Hee University, Seoul, Korea, Republic of

P12.58 **Cell-based screen using Tet-Off model of amyloid expression reveals novel compounds targeting disease-associated protein aggregates**

HEEJEONG KIM*[1], SANGWOO HAM[1], HYOJUNG KIM[1], YUNJONG LEE[1]
[1]SungKyunKwan university, suwon, Korea, Republic of

P12.59 **Neuronal protective effect of GSK3β inhibition in *Drosophila* ALS model**

HYUN-JUN CHOI[1], SUNJOO CHA[1], KIYOUNG KIM*[1]
[1]Soonchunhyang Institute of Medi-bio Science (SIMS), Cheonan, Korea, Republic of

P12.60 **Gender-related differences in the regional distribution of brain iron in A53T transgenic mice**

LE QU[1], HUAMIN XU[1], JUNXIA XIE*[1]
[1]Shandong Provincial Key Laboratory of Pathogenesis and Prevention of Neurological Disorders, Shandong Provincial Collaborative Innovation Center for Neurodegenerative Disorders and State Key Disciplines, The department of Physiology, Qingdao University, Qingdao, China

P12.61 **DNAJA1 as a novel $CRL4^{CRBN}$ substrate induces resistance to stress and tau pathology**

UROOS AKBER[1], HEEJI JO[1], SEUNG-JOO YANG[1], SEUNG-JE JEON[1], PARK CHUL-SEUNG*[1]
[1]Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P12.62 **The gut microbiome dysbiosis and inflammation-driven pathogenesis of Alzheimer's disease animal model**

SANG TAE KIM[1], SANGYUN KIM*[1]
[1]Bundang Hospital in Seoul National University, Seongnam, Korea, Republic of

P12.63 **Comparison of pathophysiological changes of white matter and gray matter under focal ischemic stroke condition**

MUHAMMAD MOHSIN QURESHI[1], SEUNGJUN RYU[1], YOUNGHOON SHIN[2], HYUK-SANG KWON[1], HYOUNG-IHL KIM[1], EUIHEON CHUNG*[1]
[1]Department of Biomedical Science and Engineering, Gwangju Institute of Science and Technology (GIST), 123 Cheomdangwagi-Ro, Buk-gu, Gwangju 61005, Korea, Republic of, [2]Korea Photonics Technology Institute, 9, Cheomdan Venture-ro 108beon-gil, Buk-gu, Gwangju 61007, Korea, Republic of

P12.64 **Changes in immunoreactivity to cellular markers associated with connexins in the hippocampus of epileptic rats with fast ripple activity**

LAURA MEDINA-CEJA*[1], GUSTAVO A. CHIPRÉS-TINAJERO[1], MIGUEL A. NÚÑEZ-OCHOA[1]
[1]University of Guadalajara, Guadalajara, Mexico

P12.65 **Amyloid β oligomers suppress excitatory transmitter release via presynaptic depletion of phosphatidylinositol-4, 5-bisphosphate**

XIAOLIN MA[1], YANG HE[2], YUDONG ZHOU*[1]
[1]Zhejiang University, Hangzhou, China, [2]Zhejiang University, Hangzhou , China

P12.66 **Molecular adaptations of the blood-brain barrier promoting depression or stress resilience**

CAROLINE MENARD*[1], KATARZYNA DUDEK[1], LAURENCE DION-ALBERT[1], MANON LEBEL[1], KATHERINE LECLAIR[2], ELLEN TUCK[3], CARMEN FERRER PEREZ[4], SAM A GOLDEN[5], NAGUIB MECHAWAR[6], SCOTT J RUSSO[2]
[1]Université Laval, Quebec City, Canada, [2]Icahn School of Medicine at Mount Sinai, New York, USA, [3]Trinity College Dublin, Dublin, Ireland, [4]University of Valencia, Valencia, Spain, [5]University of Washington, Seattle, USA, [6]McGill University, Montreal, Canada

P12.67 **Hypoxia exosomes exacerbate proteopathy by dampening lysosomal activity**

MI SUK LEE[1], HYUN JIN JUNG[1], YOUNGSHIK CHOE*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P12.68 **Cardiorespiratory fitness is associated with hippocampal cognitive reserve in older adults with amnestic mild cognitive impairment**

YULIA LERNER*[1], TAMIR EISENSTEIN[1], HAGGAI SHARON[2], GALIT YOGEV[3], NIR GILADI[1]
[1]Tel Aviv Sourasky Medical Center, Tel Aviv University, Tel Aviv, Israel, [2]Tel Aviv Sourasky Medical Center, Tel Aviv, Israel, [3]Haifa University, Haifa , Israel

P12.69 **Aging of the primary visual cortex is accompanied by diminished neurotrophic factor**

JONG PIL KIM[1], MI SUK LEE[1], YURA CHOI[1], DASOM KIM[1], SEUNG HEE CHOI[1], YOUNGSHIK CHOE*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P12.70 **The contribution of cerebral vascular pulsations to perivascular drainage in Alzheimer's disease and aging**

SHINHEUN KIM[1], PETER LEE[1], YONG JEONG*[1]
[1]KAIST, Daejeon, Korea, Republic of

P12.71 **Common and rare *CSDE1* variants associate with autism risk and interferes with neuronal development and synaptic transmission**

HUI GUO*[1], YING LI[2], LU SHEN[1], KUN XIA[1]
[1]Central South University, Changsha, China, [2]Central South University, CHANGSHA, China

P12.72 **The Strategy of screening novel substrates for hyper-activated Cdk5 by LC-MS/MS**

DANA KIM[1], YOUNG J. OH[1], NURI YUN*[2]
[1]Department of Systems Biology, Yonsei University College of Life Science and Biotechnology, Seoul, Korea, Republic of, [2]Institute of Life Science and Biotechnology, Yonsei University, Seoul, Korea, Republic of

P12.73 **Cupric chloride induces neuronal death by causing abnormal autophagic flux**

YOONKYUNG KIM[1], MINJUNG CHOO[1], YOUNG J. OH*[1]
[1]Department of Systems Biology, Yonsei University College of Life Science and Biotechnology, Seoul, Korea, Republic of

P12.74 **Deregulated autophagy is an upstream event that directly contributes to caspase-dependent neuronal cell death**

YUHYUN CHUNG[1], GISEONG CHO[1], YOUNG J OH*[1]
[1]Yonsei university/systems biology, Seoul, Korea, Republic of

P12.75 **Negr1 controls adult hippocampal neurogenesis and affective behaviors**

KYUNGCHUL NOH[1], HYUNKYOUNG LEE[2], TAE-YONG CHOI[2], YEONHEE JOO[3], SOO-JOENG KIM[1], HYEJIN KIM[3], JIN YOUNG KIM[1], JEONG WON JAHNG[1], SOOJIN LEE[3], SE-YOUNG CHOI[1], SUNG JOONG LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of, [3]Chungnam National University, Daejeon, Korea, Republic of

P12.76 **Amyloid precursor protein regulates depolarization-induced calcium-mediated signaling in brain slices**

SPIROS EFTHIMIOPOULOS*[1], MARIA CHATZISTAVRAKI[1], PANAGIOTA PAPAZAFIRI[1]
[1]National and Kapodistrian University of Athens, Ilisia, Greece

P12.77 **Systemic human umbilical cord-derived mesenchymal stem cells administration restore abnormal behaviors in schizophrenia animal model**

MIN-JUNG YOU[1], HYUN-SUN PARK[1], BOHYUN YANG[1], KYU BEOM JANG[1], SANG-HYUK LEE[2], MINSOO KWON*[1]
[1]CHA university, Seong-nam, Korea, Republic of, [2]Bundang CHA hospital, Seong-nam, Korea, Republic of

P12.78 **Particulate matter exposure and hippocampal redox imbalance in old mice**

JIMIN LEE[1], SOO JIN PARK[2], SEUNGHOON LEE[3], DO YUP LEE[2], SUNHO PARK[3], EOSU KIM*[1]
[1]Yonsei University, Seoul, Korea, Republic of, [2]Kookmin University, Seoul, Korea, Republic of, [3]Dankook University, Yongin, Korea, Republic of

P12.79 **The impacts of early social experience on social novelty preference and neural circuits**

GAEUN PARK[1], CHANGHYEON RYU[2], YONG SEOK LEE*[1]
[1]Department of Physiology, Department of Biomedical Sciences, College of Medicine, Seoul National University, Seoul, 03080, Korea, Republic of, [2]The Picower institute for learning and memory, MIT, Cambridge, Massachusetts, 02139, USA

P12.80 **Frontal lobe epilepsy is associated with lower dopaminergic neurotransmission**

LUISA ROCHA*[1], DANIEL FONSECA-BARRIETOS[1], MARIO ALONSO-VANEGAS[2], FRANCIA CARMONA[1], IRIS MARTINEZ[3]
[1]Center of Research and Advanced Studies, Mexico City, Mexico, [2]Hospital HMG, Mexico City, Mexico, [3]National Institute of Neurology and Neurosurgery, Mexico City, Mexico

P12.81 **Inhibitory neuron-specific expression of a raspathy-associated mutant Kras impairs learning and memory in mice**

HYUN-HEE RYU[1], MINKYUNG KANG[1], KYOUNG-DOO HWANG[1], YONG-SEOK LEE*[1]
[1]Department of Physiology, Seoul National University College of Medicine, Seoul, Korea, Republic of

P12.82 **Blocking Lin28a prevents epilepsy-associated cognitive impairment by ameliorating aberrant hippocampal neurogenesis**

CHEONG A BAE[1], JAE-MIN LEE[1], JUNG-HO CHA[2], SEONG YUN KIM[1], JENNY HSIEH[3], KYUNG-OK CHO*[1]
[1]Department of Pharmacology, College of Medicine, The Catholic University, Seoul, Korea, Republic of, [2]Department of Anatomy, College of Medicine, The Catholic University , Seoul, Korea, Republic of, [3]Department of Biology, The University of Texas at San Antonio, Texas, USA

P12.83 **CRISPR/Cas9-mediated gene editing strategy to modulate *Plp1* expression for Pelizaeus Merzbacher disease caused by *Plp1* duplication**

GYU-BON CHO[1], JAE YOUNG LEE*[1]
[1]Toolgen, Seoul, Korea, Republic of

P12.84 **Molecular decoding of post traumatic stress disorder via time-resolved measurement of newly synthesized and existing RNA**

YE EUN KIM[1], JOUNG-HUN KIM[2], SEUNG TAE BAEK*[1]
[1]Division of Integrative Biosciences and Biotechnology, POSTECH, Pohang, Korea, Republic of, [2]Department of Life Sciences, POSTECH, Pohang, Korea, Republic of

P12.85 **Development of a tetracycline regulatable conditional mouse model of Parkinson's disease expressing parkin substrate, ZNF746**

HYOJUNG KIM[1], YUNJONG LEE[1], HYOJUNG KIM*[2]
[1]Sungkyunkwan University, Suwon, Korea, Republic of, [2]University, Suwon, Korea, Republic of

P12.86 **The deubiquitinase USP13 regulates parkin stability and function**

JI SOO PARK*[1], YUN JONG LEE[2], HAN SEOK KO[3]
[1]SungKyunKwan, suwon, Korea, Republic of, [2]SungKyunKwan university, suwon, Korea, Republic of, [3]Johns hopkins university, baltimore, Korea, Republic of

P12.87 **The role of UFM1 system in autism**

JINA LEE[1], SOOJIN LEE[1], HEE MIN YOO*[2]
[1]Department of Microbiology and Molecular Biology, Chungnam National University (CNU), Daejeon, Korea, Republic of, [2]Korea Research Institute of Standards and Science (KRISS), Daejeon, Korea, Republic of

P12.88 **Linalyl acetate protects the neurovascular unit from calcium-related ischemic injury**

GEUN HEE SEOL*[1], YU SHAN HSIEH[1], YOU KYOUNG SHIN[1]
[1]Korea University, Seoul, Korea, Republic of

P12.89 **Vagus nerve stimulation attenuates glial-mediated inflammation in the poly-I:C- induced fatigue in rats**

KANGWOO LEE[1], BYUNG-GON JO[1], HYE-JEONG AHN[1], CHANG-GUE SON[1], UK NAMGUNG*[1]
[1]Department of Korean Medicine, Daejeon University, Daejeon, Korea, Republic of

P12.90 **Plasma N-cadherin is increased in Alzheimer's disease**

JI-YOUNG CHOI[1], SUN-JUNG CHO[2], JUNG HYUN PARK[2], SANG-MOON YUN[2], CHULMAN JO[2], YOUNG HO KOH*[1]
[1]Korea National Institute of Health, Cheongju, Korea, Republic of, [2]Korea National Institute of Health, Cheonju, Korea, Republic of

P12.91 **σ1a adaptin regulates APP transgolgi sorting in neurons**

JIE YU[1], JINGWEI XU[1], JUNYU XU*[1]
[1]Zhejiang University, Hangzhou, China

P12.92 **Ethanolic extracts of candidate Indian traditional medicines *Acorus calamus*, *Terminalia chebula* and *Achyranthes aspera* are neuroprotective in *Zebrafish***

VIJAY PARAMANIK*[1], MAHARI J BASUMATARY[1], GURUSHARAN NAGESH[1], JEETENDRA K KUSHWAHA[1], KHULESHWARI KURREY[1]
[1]Indira Gandhi National Tribal University, Amarkantak (MP), Anuppur, India

P12.93 **Pharmacokinetic-pharmacodynamic (PK-PD) modeling of effect of naringenin & its surface modified nanocarriers on associated & core behaviours of autism spectrum disorders (ASD)**

RANJANA BHANDARI[1], JYOTI PALIWAL[3], ANURAG KUHAD*[2]
[1]University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, India, Chandigarh, India, [2]University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, India, [3]PhaEx Consulting, Gurgaon, Haryana, Gurgaon, Haryana, India

P12.94 **Acupuncture attenuates the reinstatement of cocaine-seeking by enhancing GABAergic inhibition in the ventral tegmental area**

EUN YOUNG JEONG[1], EUN YOUNG JANG[2], SEONG SHOON YOON[1], BONG HYO LEE[1], SUCHAN CHANG[1], HEE YOUNG KIM[1], WYJU JIN[3], CHAE HA YANG*[1]
[1]Daegu Haany University, Daegu, Korea, Republic of, [2]Korea Institute of Toxicology, Daejeon, Korea, Republic of, [3]Daegu-Gyeongbuk Medical Innovation Foundation Medical Device Development Center, Daegu, Korea, Republic of

P12.95 **Role of simvastatin in restoration of behavioral and synaptic deficits in Angelman syndrome mouse model**

VIPENDRA KUMAR[1], TRIPTI JOSHI[1], NIHAR RANJAN JANA*[2]
[1]NATIONAL BRAIN RESEARCH CENTRE, Gurgaon, India, [2]Indian Institute of Technology Kharagpur, Kharagpur, India

P12.96 **Crocus sativus restores dopaminergic and noradrenergic damages induced by lead in Meriones shawi: A possible link with Parkinson's disease**

LAHCEN TAMEGART[1], ABDELLATIF ABBAOUI[1], ABDELAATI ELKHIAT[1], MY MUSTAPHA BOUYATAS[2], HALIMA GAMRANI*[1]
[1]Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakech, Morocco, [2]Cadi Ayyad University, Multidisciplinary Faculty of Safi, Department of Biology, Morocco, Safi, Morocco

P12.97 **Korean Red Ginseng extract mitigates CSDS-induced mood disorders by modulating NMDA receptor**

SU-JEONG SUNG[1], BO-RAM LEE[1], YONG-HYUN KO[1], SEOK-YONG LEE[1], CHOON-GON JANG*[1]
[1]SUNGKYUNKWAN UNIVERSITY, SUWON, Korea, Republic of

P12.98 **A portable tablet task for assessment of short-term memory**

YOUNES ADAM TABI*[1], ULRIK DITLEV ERIKSEN[2], NILS SØRENSEN[2], PETER SEMSÁG[2], SANJAY MANOHAR[1], MASUD HUSAIN[1]
[1]University of Oxford, Oxford, UK, [2]BRAIN+ ApS, Copenhagen, Denmark

P12.99 **Pre-treatment with yes-10 (a combination of *clematis mandshurica rurp.* and *erigeron annuus (l.) pers.* extract) protects neurons and attenuates gliosis in the gerbil hippocampus following ischemia/reperfusion**

YOUNG EUN PARK[1], BORA KIM[1], CHEOL WOO PARK[1], TAE-KYEONG LEE[1], JAE-CHUL LEE[1], JI HYEON AHN[2], JOON-HA PARK[2], JUNG HOON CHOI[3], KI-YEON YOO[4], CHOONG HYUN LEE[5], MOO-HO WON*[1]
[1]Kangwon National University, School of Medicine, Chuncheon, Gangwon, Korea, Republic of, [2]Department of Biomedical Science and Research Institute for Bioscience and Biotechnology, Hallym University, Chuncheon, Gangwon, Korea, Republic of, [3]Kangwon National University, College of Veterinary Medicine, Chuncheon, Gangwon, Korea, Republic of, [4]Gangneung-Wonju National University, College of Dentistry and Research institute of Oral Biology, Gangneung Gangwon, Korea, Republic of, [5]Dankook University, College of Pharmacy, Cheonan, Chungcheongnam, Korea, Republic of

P12.100 **β-Lapachone exerts neuroprotective effect in MPTP-injected mice by upregulating the p-AMPK / Nrf2 / HO-1 signaling pathways in astrocytes**

DO-YEON KIM[1], JIN-SUN PARK[1], JUNG-EUN PARK[1], HEE-SUN KIM*[1]
[1]Department of Molecular Medicine, Tissue Injury Defense Research Center, Ewha Womans University School of Medicine, Seoul, Korea, Republic of

P12.101 **Ongoing clinical trial on the development of brain convergence-based techniques and platforms to intervene depression in young adults**

JIHOON JANG[1], HYOSANG LEE[2], UNJOO LEE[3], HONG JIN JEON*[1]
[1]Samsung medical center, Seoul, Korea, Republic of, [2]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of, [3]Hallym University, Kangwon, Korea, Republic of

P12.102 **RbAp48 expression and neuronal damage in the gerbil hippocampus following 5 min of transient ischemia**

TAE-KYEONG LEE[1], BORA KIM[1], YOUNG EUN PARK[1], CHEOL WOO PARK[1], JAE-CHUL LEE[1], JI HYEON AHN[2], JOON HA PARK[2], JEONG HWI CHO[3], HYUN-JIN TAE[3], KI-YEON YOO[4], CHOONG-HYUN LEE[5], JUNG HOON CHOI[6], MOO-HO WON*[1]
[1]Department of Neurobiology, Kangwon National University School of Medicine, Chuncheon, Korea, Republic of, [2]Department of Biomedical Science and Research Institute for Bioscience and Biotechnology, Hallym University, Chuncheon, Korea, Republic of, [3]Bio Safety Research Institute, College of Veterinary Medicine, Chonbuk National University, Iksan, Korea, Republic of, [4]Department of Oral Anatomy, College of Dentistry and Research Institute of Oral Biology, Gangneung-Wonju National University, Gangneung, Korea, Republic of, [5]Department of Pharmacy, College of Pharmacy, Dankook University, Cheonan, Korea, Republic of, [6]Department of Anatomy, College of Veterinary Medicine, Kangwon National University, Chuncheon, Korea, Republic of

P12.103 **Japanese dodder seeds attenuate neuronal damage and memory impairment in models of Alzheimer's disease**

IN GYOUNG JU[1], JIN GYU CHOI[2], NAMKWON KIM[1], MYUNG SOOK OH*[1]
[1]Department of Life and Nanopharmaceutical Sciences, Graduate school, Kyung Hee University, 26 Kyungheedae-ro, Dongdaemun-gu, Seoul 02447, Republic of Korea, Seoul, Korea, Republic of, [2]Department of Oriental Pharmaceutical Science, College of Pharmacy and Kyung Hee East-West Pharmaceutical Research Institute, Kyung Hee University, 26 Kyungheedae-ro, Dongdaemun-gu, Seoul 02447, Republic of Korea., Seoul, Korea, Republic of

P12.104 **Basal autophagy is insufficient to clear polyglutamine aggregates and ameliorate disease pathology in a Huntington's disease mouse model**

VIJAY KUMAR M J[1], DEVANSHI SHAH[1], MRIDHULA GIRIDHARAN[1], RAVI MANJITHAYA[1], JAMES CLEMENT*[1]
[1]Jawaharlal Nehru Centre For Advanced Scientific Research (JNCASR), Bangalore, India

Glia, glia–neuron interactions

P13.01 **Neurotoxicity on hippocampal neurons is mediated by specific activation patterns of microglia**

ROMMY VON BERNHARDI*[1], LUIS FELIPE VELASQUEZ[1], FRANCO MANZUR[1], FRANCISCO NOVILLO[1], SILVIA MARCA[2], PAOLA MUÑOZ[1], SEBASTIAN BELTRÁN[1], JUAN JOSE TRIVIÑO[1], ERICK PONCE[1], VALETINA RODRÍGUEZ[1], CONSTANZA ZÚÑIGA-TRASLAVIÑA[1], MARÍA TRIOLO-MIESES[1], JAIME EUGENIN[2]
[1]Pontificia Universidad Catolica de Chile School of Medicine, Santiago, Chile, [2]Universidad de Santiago de Chile, Santiago, Chile

P13.02 **Noradrenergic modulation of cerebellar glial activity during nociception**

SEUNG HA KIM[1], JAE YOON HWANG[1], SUN KWANG KIM[2], SANG JEONG KIM*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]College of Korean Medicine, Kyung Hee University, Seoul, Korea, Republic of

P13.03 **Mitochondrial dysfunction in senescence induced astrocytes**

MINJI BANG[1], DO GYEONG KIM[1], EDSON LUCK GONZALES[1], KYOUNG JA KWON[1], CHAN YOUNG SHIN*[1]
[1]Konkuk university, seoul, Korea, Republic of

P13.04 **A scaffolding protein Gab2 is involved in postnatal development and lipopolysaccharide-induced activation of brain microglia of the mice**

JE WOONG BYEON[1], YOUNG-RAE JO[2], YOON KYUNG SHIN[2], HYE RAN KIM[2], YUN YOUNG CHOI[2], YOUNG-HEE KIM[2], HANA GO[2], HWAN TAE PARK[2], HYUN-SEOK PARK*[1]
[1]Dong-A University, Busan, Korea, Republic of, [2]Dong-A University , Busan, Korea, Republic of

P13.05 **Functional changes between microglia and neurons in ATP-induced cortical damage model**

CHONG-HYUN KIM*[1], BOKYUNG SONG[2]
[1]Center for Neuroscience, Brain Science Institute, Korea Institure of Science and Technology; Division of Bio-Medical Science & Technology, KIST School, Korea Univerisity of Science and Technology, Seoul, Korea, Republic of, [2]Center for Neuroscience, Brain Science Institute, Korea Institute of Science and Technology; Division of Bio-Medical Science and Technology, KIST School, Korea University of Science and Technology, Seoul, Korea, Republic of

P13.06 **Role of microtubules in oligodendrocyte differentiation and myelination**

BOYOON LEE[1], EUN MI HUR*[2]
[1]Division of Bio-Medical Science& Technology, Department of Neuroscience, KIST School, Korea University of Science and Technology (UST), Bio-Medical Science &Technology, Department of Neuroscience, KIST School, Korea University of Science and Technology, Seoul, Korea, Republic of, [2]Department of Neuroscience, College of Veterinary medicine, Research Institute for Veterinary Science, and BK21 PLUS Program for Creative Veterinary Science Research, Seoul National University, Seoul, Korea, Republic of

P13.07 **Ubiquitin- ligase- associated protein, FBXL16 expression in glioma cells**

SITI AYUNI HASSANUDIN[1], ISHWAR PARHAR[2], TOMOKO SOGA*[2]
[1]Brain research institute of monash sunway, Kuala Lumpur, Malaysia, [2]Brain Research Institute Monash Sunway, Kuala Lumpur, Malaysia

P13.08 **AEG-1 regulates brain damage in cerebral ischemia**

YOUNGHYURK LEE[1], MINJI CHOI[1], SANG RYONG KIM[3], SEOK-GEUN LEE*[2]
[1]Department of Science in Korean Medicine Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Science in Korean Medicine KHU-KIST Department of Converging Science & Technology Kyung Hee University, Seoul, Korea, Republic of, [3]School of Life Sciences, BK21 Plus KNU Creative BioResearch Group, Institute of Life Science & Biotechnology, Kyungpook National University, Daegu, Korea, Republic of

P13.09 **Neuro-Glia interaction in pain circuit dynamics following peripheral nerve injury**

JAESUNG LEE[1], SUNG JOONG LEE*[1]

[1]Department of Neuroscience and Physiology, Dental Research Institute, BK21-Plus, School of Dentistry, Seoul National University, Seoul, Republic of Korea, Seoul, Korea, Republic of

P13.10 **mTOR-mediated metabolic reprogramming regulate microglia function in response to different stimuli**

YALING HU[1], WEIHAO MAI[1], LUNHAO CHEN[2], KELEI CAO[1], SHUMIN DUAN[1], ZHIHUA GAO*[1]

[1]Zhejiang university, Hangzhou, China, [2]First Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China

P13.11 **Role of Zona Incerta's microglia activation in inflammatory pain-induced anxiety.**

ZAHRA FARZIN POUR*[1]

[1]Hefei National Laboratory for Physical Sciences at the Microscale, Department of Biophysics and Neurobiology, University of Science and Technology of China, Hefei, Anhui 230027, People's Republic of China, Hefei, China

P13.12 **Neural stem cell plasticity of radial glial cells in zebrafish spinal cord**

YONGBO SEO[1], HAE-CHUL PARK*[1]

[1]korea university, Ansan, Korea, Republic of

P13.13 **Exon2-deleted TWIK-1 KO mice are not an appropriate model for TWIK-1 deficiency**

HYUN-GUG JUNG[1], AJUNG KIM[1], YEONJU BAE[2], JAE-YONG PARK[2], EUN MI HWANG*[1]

[1]KIST, Seoul, Korea, Republic of, [2]Korea university, Seoul, Korea, Republic of

P13.14 **Agmatine can potentiate the M2 microglial phenotype via transcription factor IRF2 / KLF2**

SUMIT BARUA[1], JI WON KIM[1], A-YOUNG SIM[1], JONG YOUL KIM[1], JONG EUN LEE*[2]

[1]Department of Anatomy, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Anatomy, BK21 Plus Project for Medical Science, Brain Research Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of

P13.15 **Role of autophagy in the development of myelinating glia in the mouse**

HWAN TAE PARK*[1], YOUNG-RAE JO[1], SO YOUNG JANG[1], HYE RAN KIM[1], HANA GO[1], YOUNG-HEE KIM[1], YOON KYUNG SHIN[1], YUN YOUNG CHOI[1], JE WOONG BYEON[1]

[1]Dong-A University, Busan, Korea, Republic of

P13.16 **Chemokine production by microglia mediates blood-derived monocytes trafficking in neuroinflammation**

MEIYING HUANG[1], JONG YOUL KIM[3], JOOHYUN PARK[1], JONG EUN LEE*[2]

[1]Department of Anatomy, BK21 Plus Project for Medical Science,Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Anatomy, BK21 Plus Project for Medical Science, Brain Research Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Department of Anatomy, Yonsei University College of Medicine, Seoul, Korea, Republic of

P13.17 **A dynamic spectrum of blood-derived monocytes in neuroinflammation following ischemic stroke**

JOOHYUN PARK[1], JONG YOUL KIM[3], MEIYING HUANG[1], YUMI OH[1], YOUNG-MIN HYUN[3], JONG EUN LEE*[2]

[1]Department of Anatomy, BK21 Plus Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Anatomy, BK21 Plus Project for Medical Science, Brain Research Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Department of Anatomy, Yonsei University College of Medicine, Seoul, Korea, Republic of

P13.18 **The effect of REV-ERBα on the inflammatory response in the 6-hydroxydopamine-injected mouse model of Parkinson's disease**

MIJUNG CHOI[1], JEONGAH KIM[1], KYOUNGHO SUK[2], KYUNGJIN KIM*[1]

[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]Kyungpook National University, Daegu, Korea, Republic of

P13.19 **Hevin-calcyon interaction promotes synaptic reorganization after brain injury**

JONG-HEON KIM[1], HYUN-GUG JUNG[3], HYUN SOO SHIM[4], JIN HAN[2], HOON RYU[5], JAE-YONG PARK[6], EUN MI HWANG[7], KYOUNGHO SUK*[2]

[1]Brain Science & Engineering Institute, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [2]Department of Biomedical Science, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [3]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology; School of Biosystems and Biomedical Sciences, College of Health Science, Korea University, Seoul, Korea, Republic of, [4]Center for Neuroscience, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [5]Center for Neuroscience, Brain Science Institute, Korea Institute of Science and Technology; VA Boston Healthcare System, Boston, MA, USA; Boston University Alzheimer's Disease Center and Department of Neurology, Boston University School of Medicine, Boston, MA, USA , Seoul, Korea, Republic of, [6]School of Biosystems and Biomedical Sciences, College of Health Science, Korea University, Seoul, Korea, Republic of, [7]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of

P13.20 **Early dysfunction of astrocytic $Ca2^+$ signaling in Alzheimer's disease**

CHIARA MAZZOLA[1], BEATRICE D'ORSI[1], ROSARIO RIZZUTO[1], DIEGO DE STEFANI*[1]

[1]University of Padua, Padua, Italy

P13.21 **Neuroprotective effects of Rheb(S16H) transduction against a neurotoxic inflammatory environment in the substantia nigra *in vivo***

SEHWAN KIM[1], GYEONG JOON MOON[1], UN JU JUNG[2], SANG RYONG KIM*[1]

[1]Kyungpook National University, Daegu, Korea, Republic of, [2]Pukyong National University, Busan, Korea, Republic of

P13.22 **Targeting Insulin Signalling as a Therapeutic Strategy to Rescue Alzheimer's Disease Pathology: Evidence from *in vitro* and *in vivo* studies**

SMRITI GUPTA[1], RAJAT SANDHIR*[2]

[1]Panjab University, Chandigarh, India, [2]Professor, Department of Biochemistry, Panjab UNiversity, Chandigarh, India

P13.23 **Proteomic analysis of transdedifferentiated Schwann cells during Wallerian degeneration**

JUN HYUNG LEE[1], MU WOONG KIM[2], MIN-SIK KIM*[1]

[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of, [2]Kyung Hee University, Seoul, Korea, Republic of

P13.24 **Microglia-astrocyte interaction can enhance the neurogenic potential of astrocytes after ischemic insult through the involvement of Na^+/Ca^{2+} exchanger 1**

ANTONELLA CASAMASSA[1], ORNELLA CUOMO[1], PASQUALE CEPPARULO[1], GIUSEPPE PIGNATARO[1], LUCIO ANNUNZIATO*[1]

[1]Division of Pharmacology, Department of Neuroscience, School of Medicine, Federico II University of Naples, Naples, Italy

Homeostatic and neuroendocrine systems

P14.01 **Transducer of ErbB2 (Tob) regulates stress in the brain**

MOHIELDIN YOUSSEF*[1], YUJI KIYAMA[2], HIROAKI HAMADA[3], TORU SUZUKI[4], TOSHIYA MANABE[5], TADASHI YAMAMOTO[6]

[1]Okinawa Institute of Science and Technology, Okinawa, Japan, [2]Laboratory of Biochemistry and Molecular Biology, Graduate school of medical and dental sciences, Kagoshima University, Kagoshima, Japan, [3]Neural Computation Unit, Okinawa Institute of Science and Technology (OIST), Okinawa, Japan, [4]Laboratory of immunogenetics, RIKEN Center for Integrative Medical Sciences, Yokohama, Japan, [5]Institute of Medical Science, University of Tokyo, Division of Neuronal Network, Tokyo, Japan, [6]Cell Signal Unit, Okinawa Institute of Science and Technology (OIST), Okinawa, Japan

P14.02 **Long-term caffeine intake exaggerates PTSD-like symptoms independent of HPA axis activity**

SANTOSH KUMAR PRAJAPATI[1], SAIRAM KRISHNAMURTHY*[1]

[1]Department of Pharmaceutical Engineering and Technology Indian Institute of Technology (Banaras Hindu University), Varanasi, India

P14.03 **Optogenetic manipulation of slow-wave sleep in mice**

XIANG FENG[1], YUN-TING SU[1], HUI-YING ZHAO[1], YONG HAN[1], YI LU[1], SHUMIN DUAN[1], YAN-QIN YU*[1]

[1]Department of Neurobiology and Physiology, Key Laboratory of Medical Neurobiology of Ministry of Health of China, Key Laboratory of Neurobiology, Zhejiang University School of Medicine, Hangzhou, China

P14.04 **Multiple endocrine neoplasia with psychiatric involvement: a case report and literature review**

SANA ABID*[1], IMEN ROJBI[1], IBTISSEM BEN NACEF[1], NADIA MCHIRGUI[1], KARIMA KHIARI[1], AMJED BEN HAOUALA[2]

[1]department of endocrinology -charles nicolle's hospital, tunis, Tunisia, [2]department of psychiatry- fattouma bourguiba hospital, monastir, Tunisia

P14.05 **The novel cryptochrome (CRY) inhibitors enhance molecular circadian rhythmicity and ameliorate food-induced obesity**

HYO KYEONG CHA*[1], HYE YOUNG LIM[1], SOOYOUNG CHUNG[2], JONG-WHA JUNG[3], GI HOON SON*[1]

[1]Department of Biomedical Sciences, College of Medicine, Korea University, Seoul, Korea, Republic of, [2]Department of Brain and Cognitive Sciences, Scranton College, Ewha Womans University, Seoul, Korea, Republic of, [3]College of Pharmacy, Research Institute of Pharmaceutical Sciences, Kyungpook National University, Daegu, Korea, Republic of

P14.06 **Regulatory peptides: the molecular aspects of biological mechanism**

TATIANA VYUNOVA*[1], LIOUDMILA ANDREEVA[1], KONSTANTIN SHEVCHENKO[1], NIKOLAY MYASOEDOV[1]

[1]Institute of Molecular Genetics of the Russian Academy of Sciences, Moscow, Russia

P14.07 **Ghrelin transport across the blood-cerebrospinal fluid barrier occurs in a ghrelin receptor independent-manner**

MAIA URIARTE DONATI*[1], PABLO N. DE FRANCESCO[1], DANIEL CASTROGIOVANNI[1], MONICA IMBERNON[2], VINCENT PREVOT[2], MARIO PERELLO[1]

[1]Laboratory of Neurophysiology of the Multidisciplinary Institute of Cell Biology, La Plata, Argentina, [2]Development and Plasticity of the Neuroendocrine Brain - Jean-Pierre Aubert Research Center, Lille, France

P14.08 **Are galaninergic retrotrapezoid nucleus neurons more responsive to long-term hypercapnia?**

AYSE DERELI[1], ZARWA YASEEN[1], NATASHA KUMAR*[1]

[1]UNSW Sydney, Kensington, Australia

P14.09 **Kisspeptin neuron-specific calcium oscillation in the mouse hypothalamic arcuate nucleus: Regulatory factors of its synchronization**

DOYEON KIM[1], SANGWON JANG[1], JEONGAH KIM[1], INAH PARK[1], KYOJIN KU[1], MIJUNG CHOI[1], HAN KYOUNG CHOE[1], KYUNGJIN KIM*[1]

[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P14.10 **Distinct neural circuits for food- and water-related presystemic regulation of VP release**

ANGELA KIM[1], JOSEPH C. MADARA[2], MARK L. ANDERMANN[2], BRADFORD B. LOWELL*[2]

[1]Harvard Medical School, Boston, USA, [2]Beth Israel Deaconess Medical Center, Boston, USA

P14.11 **TrkB receptors engage different signaling cascades regulating respectively KCC2 function, trafficking and degradation**

ISABEL PLASENCIA-FERNANDEZ*[1], MARC J. BERGERON[2], YVES DE KONINCK[1]

[1]Université Laval, CERVO Brain Research Centre, Quebec, Canada, [2]Université Laval, Quebec, Canada

P14.12 **Physiological stress response in Thai military recruits**

WILAIRATANA AJARIYAPORN[1], SUJIRA MUKDA[1], SUKONTHAR NGAMPRAMUAN*[1]

[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakhon Pathom, Thailand

P14.13 **Free fatty acids analysis changed by palmitate-induced autophagy in hypothalamic cells**

SEOKJAE PARK[1], TAE SEOK OH[2], EUN-KYOUNG KIM*[1]

[1]Department of Brain and Cognitive Sciences, Neurometabolomics Research Center, DGIST, Daegu, Korea, Republic of, [2]Department of Brain and Cognitive Sciences, DGIST, Daegu, Korea, Republic of

New technology - Neurotool

P15.01 **A single-molecule method for the quantification and visualization of microRNA in a neuronal cell using atomic force microscopy**

IKBUM PARK[1], HYUN JIN KIM[2], JOON WON PARK*[2]
[1]Research Institute of Industrial Science & Technology, Pohang, Korea, Republic of, [2]Pohang University of Science and Technology, Pohang, Korea, Republic of

P15.02 **Development of genetically encoded voltage Indicators (GEVIs) through testing heterogeneous voltage ranges and disrupting dimerization**

MD SOFEQUL ISLAM MUKIM[1], BRADLEY J. BAKER*[1]
[1]Korea Institute of Science & Technology (KIST), University of Science & Technology (UST), Seoul, Korea, Republic of

P15.03 **An efficient method of constructing parallel computing environment on a cluster for large-scale simulations in systems neuroscience**

MINJUNG KIM[1], HOJEONG KIM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of

P15.04 **Thermal analysis of photothermal neural stimuation using gold nanorod attached optical fibers**

WOONGKI HONG[1], HYUK-JUN KWON[1], YOONKEY NAM[2], HONGKI KANG*[1]
[1]DGIST, Daegu, Korea, Republic of, [2]KAIST, Daejeon, Korea, Republic of

P15.05 **Multifunctional neural probe integrated with push-pull microfluidic channels and microelectrode and biosensors for real-time monitoring of neurochemicals with neural spikes**

UIKYU CHAE[1], HYOGEUN SHIN[1], IL-JOO CHO*[1]
[1]Korea Institute of Science and Technolgy, Seoul, Korea, Republic of

P15.06 **Quantitative image analysis of meibomian gland using deep learning in dry eye disease**

A M MAHMUD CHOWDHURY[1], RIPON KUMAR SAHA[2], HO SIK HWANG[3], EUIHEON CHUNG*[1]
[1]Gwangju Institute of Science & Technology, Gwangju, Korea, Republic of, [2]Gwangju Institute of Science & Technology, Gwangju , Korea, Republic of, [3]Hallym University, Chuncheon, Chuncheon, Korea, Republic of

P15.07 **The mechanism of super-ecliptic based gevis**

BOK EUM KANG[1], LETICIA LEONG[1], BRADLEY BAKER*[1]
[1]KIST, Seoul, Korea, Republic of

P15.08 **Prefrontal GABA modulates frontoparietal functional connectivity after repetitive transcranial magnetic stimulation**

GAHAE HONG[1], JUNGYOON KIM[1, 2], SUJUNG YOON[1, 2], MYEONGJU KIM[1, 2], HAEJIN HONG[1, 2], EUNJI HA[1, 2], YOONJI JOO[1, 3], CHAEWON SUH[1, 2], IN KYOON LYOO*[1, 2, 3]
[1]Ewha Brain Institute, Ewha W. University, [2]Department of Brain and Cognitive Sciences, Ewha W. University, [3]Graduate School of Pharmaceutical Sciences, Ewha W. University

P15.09 ***In situ* validation and spatial mapping of diverse striatal cells identified by scRNA-seq in the mouse brain at single-cell resolution**

AMYEUNKYUNG CHOI*[1]
[1]bio-techne, Seoul, Korea, Republic of

P15.10 **Bright light exposure alters resting state functional connectivity of the anterior insula: A randomized controlled trial**

SHINWON PARK[1], JIYOUNG MA[1], SUJUNG YOON[1, 2], JUNGYOON KIM[1, 2], GAHAE HONG[1], MYEONGJU KIM[1, 2], JINSOL KIM[1, 2], RYEYOUNG KIM[1, 3], IN KYOON LYOO*[1, 2, 3]
[1]Ewha Brain Institute, Ewha W. University, [2]Department of Brain and Cognitive Sciences, Ewha W. University, [3]Graduate School of Pharmaceutical Sciences, Ewha W. Universit

P15.11 **Advancement of neuroscience-based technology for early intervention of posttraumatic syndrome**

JUNGYOON KIM*[1, 2], SUJUNG YOON[1, 2], GAHAE HONG[1], SHINWON PARK[1]
[1]Ewha Brain Institute, Ewha W. University, [2]Department of Brain and Cognitive Sciences, Ewha W. University

P15.13 **Development of a versatile and cost-efficient automated platform for brain tissue microdissection, single cell acquisition and adhesion analysis**

STANISLAV KARSTEN*[1], DAVID MA[1], ZHONGCAI MA[1], LILI KUDO[1]
[1]NeuroInDx, Inc., Torrance, USA

P15.14 **Questionnaire accuracy measurement and verification using bio signal sensor based virtual reality head mounted display**

SUNGU NAM[1], HOON-HEE KIM[1], DONG-HWA JEONG[1], YOUNGJO SONG[1], JEUNGMIN LEE[1], JAESEUNG JEONG*[1]
[1]KAIST, Daejeon, Korea, Republic of

P15.15 **Observing the dimerization and movement of heterogeneous voltage sensing domains via intermolecular FRET**

LEE MIN LEONG[1], BOK EUM KANG[1], BRADLEY J. BAKER*[1]
[1]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P15.16 **Diagnostic approaches for neurodevelopmental disorders using human-derived olfactory epithelial cells**

SU-JIN NOH[1], YOUNGSIK WOO[1], SOO JEONG KIM[1], BON SEONG GOO[1], DONG JIN MUN[1], SEUNGHYUN KIM[1], YOUNGSHIK CHOE[2], JOON WON PARK[1], SANG KI PARK*[1]
[1]Pohang University of Science and Technology, Pohang, Korea, Republic of, [2]Korea Brain Research Institute, Daegu, Korea, Republic of

P15.17 **Generation of miniature brains that mimic the cortical structure with six mature layers to model the development and diseases of human brain**

SEOYOUNG CHOI[1], EUNJEE KIM[1], KUNYOO SHIN*[1]
[1]Pohang University of Science and Technology (POSTECH), Pohang, Korea, Republic of

P15.18 **Development and applications of the novel genetically-encoded serotonin sensor**

XUELIN LI[1], JINXIA WAN[2], YULONG LI*[1]
[1]Peking University, Beijing, China, [2]Peking University, Beijing, China

P15.19 **A polydimethylsiloxane-based microelectrode array for multi-site electrocorticography**

KYEONG YEON LEE[1], JAE WON JANG[1], SOHEE KIM*[1]
[1]DGIST, Daegu, Korea, Republic of

P15.20 **Long-term in-vivo analysis of flexible penetrating microelectrode arrays**

JAEWON JANG[1], YOONA KANG[1], HEEWON SEO[1], SOHEE KIM*[1]
[1]Daegu Gyeong Institute of Science & Technology, Daegu, Korea, Republic of

P15.21 **XT-STORM: Deep 3D super-resolution imaging of expanded brain tissue**

YUJIAN WANG[1], XIN LI[1], GUOQIANG BI*[1]
[1]University of Science and Technology of China, Hefei, China

Physiology: neuronal excitability and synapse function

P16.01 **SGIP1α functions as an endocytic adaptor for the internalization of calcium sensor synaptotagmin 1**

SANG-EUN LEE[1], SOOMIN JEONG[1], UNGHWI LEE[1], SUNGHOE CHANG*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P16.02 **The impact of FKBP5 deficiency in the synaptic transmission and glucocorticoid receptor activation of the medial prefrontal cortex**

HAKYUN RYU[1], MYUNGHYUN CHEON[1], CHIHYE CHUNG*[1]
[1]konkuk university, seoul, Korea, Republic of

P16.03 **Altered synaptic scaling of PV^{+} interneurons underlying sensorimotor gating deficit in psychiatric disease mouse models**

JAE JIN SHIN[1], SOOYONG KIM[3], HWAYOUNG LEE[3], SANGYOUNG LEE[3], JOOMIN PARK[3], SANG JEONG KIM*[2]
[1]Institute for Basic Science, Daejeon, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of, [3]IBS, Daejeon, Korea, Republic of

P16.04 **Synaptic plasticity within the amygdala is altered by fear conditioning and extinction**

KWANGHOON PARK[1], CHIHYE CHUNG*[1]
[1]Konkuk University, Seoul, Korea, Republic of

P16.05 **Formation of Arc mRNA granules in P-bodies**

HYUNGSEOK C. MOON[1], HYE YOON PARK*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P16.06 **Whole-brain cellular mapping of stress exposure in male and female brains**

WOONHEE KIM[1], CHIHYE CHUNG*[1]
[1]Konkuk University, Seoul, Korea, Republic of

P16.07 **mGluR5/endocannabinoid signaling induces spike potentiation by tonic GABA currents in CA1 pyramidal neuron**

HYE-HYUN KIM[1], JOO MIN PARK[2], SUK-HO LEE[1], WON-KYUNG HO*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Institute for Basic Science, Daejeon, Korea, Republic of

P16.08 **SCAMP5-dependent localization of NHE6 to synaptic vesicles is critical for regulating quantal size at glutamatergic synapses**

UNGHWI LEE[1], DAEHUN PARK[1], SOOHYUN KIM[1], SANG-EUN LEE[1], YUJIN KIM[1], SUNGHOE CHANG*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P16.09 **Effect of neuromodulators on the short-term plasticity of thalamoprefrontal synapses**

JUNGMIN LEE[1], JONG-CHEOL RAH*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P16.10 **Functional analysis of genetic variations in the promoter and cytosolic domain of NMDARs**

VIKTOR KUCHTIAK[1], JIRI CERNY[3], VLADIMIR BENES[4], ZDENEK SEDLACEK[5], JIRI HORACEK[6], LADISLAV VYKLICKY[7], ALES BALIK*[2]
[1]Institute of Physiology, Czech Academy of Sciences / Faculty of Science, Charles University, Prague, Czech Republic, [2]Institute of Physiology, Czech Academy of Sciences, Prague, Czech Republic, [3]Institute of Biotechnology, Czech Academy of Sciences, Vestec, Czech Republic, [4]GeneCore, EMBL, Heidelberg, Germany, [5]Department of Biology and Medical Genetics, 2nd Faculty of Medicine and University Hospital Motol, Charles University, Prague, Czech Republic, [6]The National Institute of Mental Health, Klecany, Czech Republic, [7]Institute of Physiology, Czech Academy of Sciences, Prague, Czech Republic

P16.11 **The role of beta-actin mRNA localization in single dendritic spines studied by two-photon uncaging**

JAE YOUN SHIM[1], BYUN HUN LEE[1], HYUNG SEOK MOON[1], HYE YOON PARK*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P16.12 **Neural representation of fear in the cerebellum**

JAEGEON LEE[1], SOONHO SHIN[1], JEWOO SEO[1], TAEJIN KIM[1], SANG JEONG KIM*[1]
[1]Seoul National University College of Medicine Department of Physiology, Seoul, Korea, Republic of

P16.13 **Distinct synaptic vesicle recycling in inhibitory nerve terminals is coordinated by SV2A**

SOONDO HWANG[1], JAE RYUL BAE[1], WONGYONG LEE[1], SOULMEE KOH[1], SUNG HYUN KIM*[2]
[1]Department of Neuroscience, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Physiology, School of Medicine, Kyung Hee University, Seoul, Korea, Republic of

P16.14 **The role of DJ-1 in CNS synapses**

WONGYOUNG LEE[1], JAE WON KYUNG[3], JIN-MO KIM[4], SANG MYUN PARK[4], SUNG HYUN KIM*[2]
[1]Department of Neuroscience, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Physiology, School of Medicine, Kyung Hee University, Seoul, Korea, Republic of, [3]Department of Biomedical Science, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [4]Ajou University School of Medicine, Suwon, Korea, Republic of

P16.15 **Changes in glutamate receptors immunoreactivity in the hippocampus of epileptic rats with fast ripple activity.**

GUSTAVO A. CHIPRES-TINAJERO[1], MIGUEL A. NÚÑEZ-OCHOA[1], LAURA MEDINA-CEJA[1], LAURA MEDINA-CEJA*[1]
[1]Universidad de Guadalajara, Guadalajara, Mexico

P16.16 **Structure and plasticity of silent synapses in developing hippocampal neurons visualized by super-resolution imaging**

CHENG XU[1], GUO-QIANG BI*[1]
[1]University of Science and Technology of China, Hefei, China

P16.17 **Effect of testosterone on electrophysiological properties of RA projection neurons in adult female Zebra Finches (*Taeniopygia guttata*)**

DONGFENG LI*[1], TING CUI[1]
[1]South China Normal University, Guangzhou, China

P16.18 **TMEM16A-deficient cholinergic neurons of medial habenula mediate anxiogenic behaviors**

AJUNG KIM[1], CHANG-HOON CHO[2], SANGJOON LEE[1], OLEG YARISHKIN[1], HYUN-GUG JUNG[1], DA-YONG LEE[3], HYUN KIM[2], UHTAEK OH[1], HEH-IN IM[1], JAE-YONG PARK[2], EUN MI HWANG*[1]
[1]KIST, Seoul, Korea, Republic of, [2]Korea University, Seoul, Korea, Republic of, [3]KRIBB, Seoul, Korea, Republic of

P16.19 **Functional evidence for insulin and GLP1 action on neocortical neurogliaform cells**
GABOR MOLNAR*[1], SZABINA FURDAN[1], VERONIKA NAVAROVA[1], KATALIN MIKITE[1], MARTON ROZSA[1], EVA CSAJBOK[1], GABOR TAMAS[1]
[1]University of Szeged, Szeged, Hungary

P16.20 **Circadian regulation of the immediate early gene Neuronal Pentraxin 2 secretion: in vivo imaging study**
SEUNG-EON ROH[1], MEIFANG XIAO[1], JIECHAO ZHUO[1], ALENA SAVONENKO[2], PAUL WORLEY*[1]
[1]Johns Hopkins University Neuroscience, Baltimore, USA, [2]Johns Hopkins University Neuropathology, Baltimore, USA

P16.21 **Serotonergic modulation of prefrontal cortex plasticity: role of $5HT_{1A}$ in a depression animal model.**
JOSÉ FRANCIS-OLIVEIRA*[1], GUILHERME HIGA[2], ROBERTO DE PASQUALE[1]
[1]São Paulo University, São Paulo, Brazil, [2]ABC Federal University, Santo André, Brazil

P16.22 **Chemical LTD, but not LTP, induces transient accumulation of gelsolin in dendritic spines**
IRYNA HLUSHCHENKO*[1, 2], PIRTA HOTULAINEN[3]
[1]University of Helsinki / Minerva Institute for Medical Research, Helsinki, Finland, [2]University of Helsinki / Minerva Foundation Institute for Medical Research, Helsinki, Finland, [3]Minerva Foundation Institute for Medical Research, Helsinki, Finland

P16.23 **Changes in corticomotor excitability of the calf muscles during postural tasks**
ALENA MILITSKOVA*[1], ELVIRA MUKHAMETOVA[1], LEILA ZARIPOVA[1], TATIANA BALTINA[1]
[1]Kazan Federal University, Kazan, Russia

P16.24 **Cholinergic modulation of the intrinsic properties of subicular neuron via direct suppression of HCN channel**
SONALI VASNIK[1], SUJIT SIKDAR*[1]
[1]Indian Institute of Science, Bangalore, India

P16.25 **Effects of the antagonist of NMDA-receptors on electrical properties of the neurons of the visceral ganglion in terrestrial snail *Helix lucorum***
ANASTASIA FROLOVA[1], DINARA SILANTYEVA[1], VYACHESLAV ANDRIANOV[1], KHALIL GAINUTDINOV[1], DINARA SILANTYEVA*[1]
[1]Kazan Federal University, Kazan, Russia

P16.26 **In vivo activation of mossy cells inhibits dentate granule cells and reduces anxiety**
CHENG-CHANG LIEN*[1], KAI-YI WANG[1]
[1]National Yang-Ming University, Taipei, Taiwan, China

Physiology: systems/network functions, computational neuroscience

P17.01 **Timely activation of prefrontally-projecting basal forebrain parvalbumin neurons contributes to emergence or termination of global workspace in 40 Hz auditory evoked activation**
EUNJIN HWANG[1], RITCHIE E. BROWN[3], BERNAT KOCSIS[4], TAE KIM[5], JAMES T. MCKENNA[3], JAMES M. MCNALLY[3], HIO-BEEN HAN[2], JEE HYUN CHOI*[2]
[1]Lablup, Seoul, Korea, Republic of, [2]Center for Neuroscience, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [3]Department of Psychiatry, VA Boston Healthcare System and Harvard Medical School, West Roxbury, USA, [4]Department of Psychiatry, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, USA, [5]Department of Biomedical Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P17.02 **Role of the circuitry between cerebellum and VTA in stress-related behaviours**
SOOJI BAEK[1], YUKIO YAMAMOTO[3], HOJIN LEE[2], JINHYUN KIM[3], KEIKO YAMAMOTO*[2]
[1]KIST, Seoul, Korea, Republic of, [2]Korea Institute of Science and Technology (KIST), Korea University of Science and Technology (UST), Seoul, Korea, Republic of, [3]Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P17.03 **Bioinformatic analysis of long-range projectome from and to the posterior parietal cortex of the mouse**
SOOK JIN SON[1], SEUNG WOOK OH[2], JOHN A MORRIS[2], CHANGKYU LEE[3], JONG-CHEOL RAH*[1]
[1]Korea brain research institute, Daegu, Korea, Republic of, [2]Grace Medical Institute, Washington, USA, [3]Allen Institute for Brain Science, Seattle, USA

P17.04 **Responses characteristics stabilized by inhibitory inputs in hippocampal dentate gyrus**
NAOKI NAKAJIMA*[1], HIROFUMI HAYAKAWA[1], TOSHIKAZU SAMURA[2], TAKESHI AIHARA[1]
[1]Tamagawa University, Tokyo, Japan, [2]Yamaguchi University, Yamaguchi, Japan

P17.05 **Population coding of multiple types of information in dentate gyrus**
RYUICHI NAKAJIMA[1], TOMOYUKI MURANO[1], AKITO NAKAO[2], NAO HIRATA[1], SATOKO AMEMORI[1], AKIRA MURAKAMI[3], YUKIYASU KAMITANI[3], JUN YAMAMOTO[4], TSUYOSHI MIYAKAWA*[1]
[1]Division of Systems Medical Science, Institute for Comprehensive Medical Science, Fujita Health University, Toyoake, Aichi, Japan, [2]Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan, [3]Graduate School of Informatics, Kyoto University, Kyoto, Japan, [4]Department of Psychiatry, Neuroscience Division, The University of Texas Southwestern Medical Center, Dallas, TX, USA

P17.06 **Cell type-specific gap junction network of excitatory neurons in the developing neocortex**
NAO NAKAGAWA*[1], TOSHIHIKO HOSOYA[2]
[1]Kagoshima University, Kagoshima-shi, Japan, [2]RIKEN, Wako-shi, Japan

P17.07 **Cortical long-range horizontal connectivity for parsimonious coding of natural image**
SEUNGDAE BAEK[1], YOUNGJIN PARK[3], WOOCHUL CHOI[4], SE-BUM PAIK*[2]
[1]Department of Bio and Brain Engineering, Daejeon, Korea, Republic of, [2]Department of Bio and Brain Engineering, Program of Brain and Cognitive Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [3]Department of Bio and Brain Engineering, Daejeon, Korea, Republic of, [4]Department of Bio and Brain Engineering, Program of Brain and Cognitive Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P17.08 **Predicting the treatment response of obsessive-compulsive disorder based on resting-state functional connectivity biomarkers via machine-learning**
SEOYEON KWAK[1], MINAH KIM[3], TAE YOUNG LEE[3], JUN SOO KWON*[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Department of Neuropsychiatry, Seoul National University Hospital, Seoul, Korea, Republic of, [3]Seoul National University Hospital, Seoul, Korea, Republic of

P17.09 **Retinal origin of simple and complex cells in visual cortex**

GWANGSU KIM[1], JAESON JANG[1], SE-BUM PAIK*[1]
[1]KAIST, Daejeon, Korea, Republic of

P17.10 **Effect of sinusoidal supra-threshold stimulation on activation of excitatory and inhibitory neurons: A computational study**

HYEON SEO[1], SEUNGJUN RYU[3], HYOUNG-IHL KIM[3], SUNG CHAN JUN*[2]
[1]Medical Device Development Center, Daegu Gyeongbuk Medical Innovation Foundation (DGMIF), Daegu, Korea, Republic of, [2]School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea, Republic of, [3]Department of Biomedical and Science and Engineering (BMSE), Institute of Integrated Technology (IIT), Gwangju Institute of Science and Technology (GIST), Gwangju, Korea, Republic of

P17.11 **Energy landscape analysis of depressive brain state dynamics**

PAUL ROSSENER REGONIA[1], MASAHIRO TAKAMURA[2], NAHO ICHIKAWA[2], TAKASHI NAKANO[1], KAZUSHI IKEDA[1], GO OKADA[3], YASUMASA OKAMOTO[3], SHIGETO YAMAWAKI[3], JUNICHIRO YOSHIMOTO*[1]
[1]Nara Institute of Science and Technology, Ikoma, Japan, [2]Brain, Mind and KANSEI Sciences Reserch Center, Hiroshima University, Higashihiroshima, Japan, [3]Department of Psychiatry and Neurosciences, Institute of Biomedical and Health Sciences, Hiroshima University, Higashihiroshima, Japan

P17.12 **Automated synapse detection in serial electron microscope images of the cerebellum**

CHANGJOO PARK[1], JAWON GIM[3], JINSEOP S. KIM*[2]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [2]Korea Brain Research Institute (KBRI), Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [3]Korea Brain Research Institute (KBRI) , Daegu, Korea, Republic of

P17.13 **Cellular and subcellular organization of the cerebellum in serial electron microscope images**

YOON SEOK IM[1], SANG-KYU BAHN[2], JINSEOP KIM*[2]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Institution, Daegu, Korea, Republic of

P17.14 **Learning-related patterns of prefrontal neuronal activity during credit assignment**

EUNJEONG LEE*[1], WAEL ASAAD[2]
[1]Department of Neuroscience, Brown University, Providence, USA, [2]Department of Neuroscience and Department of Neurosurgery, Brown University, Providence, USA

P17.15 **A reconstruction pipeline with real-time 3D viewer for serial electron microscope images of the cerebellum**

JUNGEUN SON[1], JAWON GIM[1], SANG-KYU BAHN[1], JINSEOP KIM[1], JINSEOP KIM*[1]
[1]KBRI, Daegu, Korea, Republic of

P17.16 **Abnormal cortical folding correlates with working memory in unaffected relatives of schizophrenia**

IN KYUNG PARK[1], TAE YOUNG LEE[1], JUN SOO KWON*[2]
[1]Department of Brain and Cognitive Sciences, College of Natural Sciences, Seoul National University, Seoul, Korea, Republic of, [2]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of

P17.17 **Exploring and visualizing omics datasets in web-based integrated database**

JU YEON CHOI*[1], NAM UK KIM[1], YU JIN JANG[1], JUNG YOON HEO[1], BYUNG GEUN HA[1], SUNG JIN JEONG[1]
[1]KBRI, Daegu, Korea, Republic of

P17.18 **Characterizing selectivity of S1 neurons in mlutidimensional sensory feature space**

SA-YOON PARK[1], YOO RIM KIM[2], SUN KWANG KIM[3], SANG JEONG KIM[2], CHANG-EOP KIM*[1]
[1]Gachon University, Gyeonggi-do, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of, [3]Kyung Hee University, Seoul, Korea, Republic of

P17.19 **Causal relationship of CA3 back projection to dentate gyrus and its role in the CA1 fast ripple generation**

MIGUEL A. NÚÑEZ-OCHOA[1], GUSTAVO A. CHIPRÉS-TINAJERO[1], NADIA P. GONZÁLEZ-DOMÍNGUEZ[2], LAURA MEDINA-CEJA[1], LAURA MEDINA-CEJA*[1]
[1]Universidad de Guadalajara, Guadalajara, Mexico, [2]Instituto Tecnológico y de Estudios Superiores de Monterrey, Guadalajara, Mexico

P17.20 **Identification of saccade related regions in the frontal cortex of common marmoset**

WAJD AMLY[1], CHIH-YANG CHEN[1], DENIS MATROV[1], KUAN-TING HO[1], TADASHI ISA*[1]
[1]Department of Neuroscience, Graduate school of Medicine, Kyoto University, Kyoto, Japan

P17.21 **Prediction of brain morphology from structural MRI: A validation study using machine learning**

TAMMY D. KIM[1, 2], JUNGYOON KIM[1, 2], SUJUNG YOON[1, 2], IN KYOON LYOO[1, 2, 3], JAEUK HWANG*[4]
[1]Ewha Brain Institute, Ewha W. University, [2]Department of Brain and Cognitive Sciences, Ewha W. University, [3]Graduate School of Pharmaceutical Sciences, Ewha W. University, [4]Department of Psychiatry, Soonchunhyang University College of Medicine

P17.22 **Impaired limbic pathways to callous-unemotional traits in children with conduct disorder**

HYUNGYOU PARK*[1], MARCO CATANI[2], ARJUN SETHI[3]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Natbrainlab, Department of Forensic and Neurodevelopmental Sciences, Institute of Psychiatry Psychology and Neurosciences, King's College London, UK, London, UK, [3]Developmental Risk & Resilience Unit, Division of Psychology & Language Sciences, University College London, UK, London, UK

P17.23 **Automated dataset generation Pipeline for 3D Web visualization and cloud processing**

NAM UK KIM[1], BYEONG SOO KANG[2], SUNG JIN JEONG*[1]
[1]Korea Brain Research Institute, Dae-gu, Korea, Republic of, [2]SYSOFT, Dae-gu, Korea, Republic of

P17.24 **Abnormal auditory mismatch responses to sound duration deviants in a neurodevelopmental rat model of schizophrenia**

HIROYOSHI INABA*[1], HIDEKAZU SOTOYAMA[1], ITARU NARIHARA[1], HISAAKI NAMBA[1], EIICHI JODO[2], SATOSHI EIFUKU[2], HIROOKI YABE[3], HIROYUKI NAWA[1]
[1]Dept Mol Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan, [2]Dept Systems Neuroscience, Fukushima Med Univ Sch Med, Fukushima, Japan, [3]Dept Neuropsychiatry, Fukushima Med Univ Sch Med, Fukushima, Japan

Sensory and motor systems

P18.01 **Characterizing responses of retinal ganglion cells considering adequate stimulations for retinal prosthesis**

YOUNGINHA JUNG[1], SUNGMOO LEE[2], CHAE EUN LEE[1], YOON-KYU SONG*[1]
[1]Seoul National University, Suwon, Korea, Republic of, [2]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P18.02 **Mobility state maintenance by a novel thalamo-basal ganglia circuit through STN**

GEUNHONG PARK[1], WOOYEON SHIN[2], JEONGJIN KIM*[2]
[1]KAIST, Daejeon, Korea, Republic of, [2]Center for neuroscience, Korea institute of science and technology (KIST), Seoul, Korea, Republic of

P18.03 **Endocannabinoid receptor 1 contributes to fasting-induced analgesia**

JEONGYUN LEE[1], GRACE J LEE[1], PA REUM LEE[1], CHAN HEE WON[1], YOUNGNAM KANG[1], SEOG BAE OH*[1]
[1]seoul national university, seoul, Korea, Republic of

P18.04 **ALCAM is involved in spinal long-term potentiation and neuropathic pain**

DONG-HO YOUN*[1], EUN-SUNG PARK[1], ARAM KWON[2], SANG-MIN JEON[2], KI BUM PARK[3], HEE-JUNG CHO[2]
[1]Department of Oral Physiology, School of Dentistry, Kyungpook National University, Daegu, Korea, Republic of, [2]Department of Anatomy, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [3]Department of Anesthesia, Keimyung University Dongsan Hospital, Daegu, Korea, Republic of

P18.05 **Changes in brain activity associated with recovery of hand movements after spinal cord injury**

REONA YAMAGUCHI[1], TOSHINARI KAWASAKI[1], ZENAS CHAO[1], MASAHIRO MITSUHASHI[1], SATOKO UENO[1], TADASHI ISA*[1]
[1]Kyoto university, Kyoto-shi, Japan

P18.06 **Effects of artificial intelligence (AI) based Integrated Robotic-assisted Gait, Music, and Light Brain Fitness Training (BRAIN-FIT) on electroencephalography (EEG) brain mapping of frontal alpha asymmetry (FA) and Associated Psychological Behaviors in Anxiety and Depression**

JIWON SHIN[1], HAEUN PARK[1], CHANHEE PARK[1], JONGSEOK HWANG[1], HONGGI AN[2], JIYOUNG LEE[2], JUNGHUN HAN[2], SEJUNG YANG[2], SUNG HYUN YOU*[1]
[1]Department of Physical therapy, Yonsei University, Wonju, Korea, Republic of, [2]Department of Biomedical Engineering, Yonsei University, Wonju, Korea, Republic of

P18.07 **Neural activities from the primary motor cortex while a monkey observes movements of a robot arm for use of neuroprosthetic**

SEONG-MIN KIM[1], MINKI KIM[2], SUNG-YONG HYUN[1], SOYONG CHAE[2], HYEJIN PARK[1], SUNG-PHIL KIM[2], JEONG-WOO SOHN*[1]
[1]Catholic Kwandong University, Incheon, Korea, Republic of, [2]Ulsan National Institute of Science and Technology, Ulsan, Korea, Republic of

P18.08 **Transcriptomic evidence that von Economo neurons are regionally specialized extratelencephalic-projecting excitatory neurons**

JEREMY MILLER[1], REBECCA HODGE[1], MARK NOVOTNY[2], JONATHAN TING[1], BRIAN KALMBACH[1], TRYGVE BAKKEN[1], BRIAN AEVERMANN[2], ELIZA BARKAN[1], MADELINE BERKOWITZ-CERASANO[3], CHARLES COBBS[4], FRANCISCO DIEZ-FUERTES[2], SONG-LIN DING[1], JAMISON MCCORRISON[2], NICHOLAS SCHORK[2], SORAYA SHEHATA[1], KIMBERLY SMITH[1], SUSAN SUNKIN[1], DANNY TRAN[2], PRATAP VENEPALLY[5], ANNA MARIE YANNY[1], FRANK STEEMERS[6], JOHN PHILLIPS[1], AMY BERNARD[1], CHRISTOF KOCH[1], ROGER LASKEN[2], RICHARD SCHEUERMANN[2], ED LEIN*[1]
[1]Allen Institute for Brain Science, Seattle, USA, [2]J. Craig Venter Institute, La Jolla, USA, [3]Department of Neurological Surgery, University of Washington, Seattle, USA, [4]The Ben and Catherine Ivy Center for Advanced Brain Tumor Treatment, Swedish Neuroscience Institute, Seattle, USA, [5]J. Craig Venter Institute, Rockville, USA, [6]Illumina, Inc., San Diego, USA

P18.09 **Sophisticated neural networks for generating error signals that drive adaptation in reaching**

SHIGERU KITAZAWA[1], MASATO INOUE*[1]
[1]Osaka University, Osaka, Japan

P18.10 **Trans-spinal ultrasound stimulation**

JEUNGEUN KUM[1], EVGENII KIM[1], HYUNGMIN KIM*[1]
[1]Center for Bionics, Korea Institute of Science and Technology, Seoul, Korea, Republic of

P18.11 **Analysis of body movement using EEG for the limb activity of paralysis patients**

JONGSOOK SANGUANTRAKUL[1], NATTAWAT SOONTREEKULPONG[1], THANAWIN TRAKOOLWILAIWAN[1], YODCHANAN WONGSAWAT*[1]
[1]Department of Biomedical Engineering, Faculty of Engineering, Mahidol University, Nakhon Pathom, Thailand

P18.12 **Glial regulation in the insular cortex alleviates neuropathic pain caused by nerve injury**

SONGYEON CHOI[1], KYEONGMIN KIM[1], MYEOUNGHOON CHA[1], BAE HWAN LEE*[1]
[1]Yonsei University College of Medicine, Seoul, Korea, Republic of

P18.13 **Pain-relieving effect of mTOR inhibitors in the insular cortex of neuropathic rats**

KYEONGMIN KIM[1], SONGYEON CHOI[1], MYEOUNGHOON CHA[1], BAE HWAN LEE*[1]
[1]Yonsei University, Seoul, Korea, Republic of

P18.14 **Columnar scale representation of faces in the human inferotemporal cortex**

TOPI TANSKANEN*[1], R. ALLEN WAGGONER[1], KENICHI UENO[1], KANG CHENG[1], KEIJI TANAKA[1]
[1]RIKEN, Wako-shi, Japan

P18.15 **Astroglial changes in the zona incerta in response to motor cortex stimulation in a rat model of chronic neuropathy**

MYEOUNGHOON CHA[1], KYEONGMIN KIM[1], SONGYEON CHOI[1], BAE HWAN LEE*[1]
[1]Yonsei University College of Medicine, Seoul, Korea, Republic of

P18.16 **Anoctamin 1/TMEM16A in pruritoceptors mediates histamine-independent itch**

HYESU KIM[1], HUANJUN LU[1], HYUNGSUP KIM[1], JAE HYOUK CHOI[1], THIEN LUAN NGUYEN[1], SUNGMIN PAK[1], GYU-SANG HONG[1], UHTAEK OH*[1]
[1]Brain Science Institute, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P18.17 **Therapeutic inhibition of the necroptosis cell death signalling pathway in amyotrophic lateral sclerosis**

TAIDE WANG[1], NIRMA PERERA[1], JAMES MURPHY[2], DORIS TOMAS[1], BRADLEY TURNER*[1]
[1]The Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, [2]Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia

P18.18 **Effect of odor pleasantness on heat-induced pain: An fMRI study**

HAN-GUE JO*[1], OLGA WUDARCZYK[1], MARCEL LECLERC[1], CHRISTINA REGENBOGEN[1], ANGELIKA LAMPERT[1], MARKUS ROTHERMEL[1], UTE HABEL[1]
[1]RWTH Aachen University, Aachen, Germany

P18.19 **Chronic opioid administration results in μ-opioid receptor excitatory signaling at a descending pain facilitatory area of the brain**

ANA RITA COSTA[1], MARÍLA SOUSA[1], STEVEN P. WILSON[2], ISAURA TAVARES[1], ISABEL MARTINS*[1]
[1]Faculty of Medicine, University of Porto; i3s - institute for research and innovation in health, Porto, Portugal, [2]Dept. of Physiology, Pharmacology and Neurosciences, University of South Carolina, School of Medicine, USA, South Carolina, USA

P18.20 **Changes in Structural and Functional Neural Networks in Central Post-stroke Pain following Intracerebral Hemorrhage**

NA YOUNG KIM*[1], SEUNG BEEN HONG[2], YONG WOOK KIM[2]
[1]Yonsei University, Seoul, Korea, Republic of, [2]Departement & Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of

P18.21 **Piezo1 ion channel is expressed in mouse and human dorsal root ganglion neurons**

JU EUN ROH[1], SUNG-MIN HWANG[1], YONG HO KIM[1], CHUL-KYU PARK*[1]
[1]Department of Physiology, College of Medicine, Gachon University, Incheon, Korea, Republic of

P18.22 **Piezo2 expression in the spinal cord of neuropathic pain rat model**

PHAM THUY LINH[1], JUHEE SHIN[2], YIN YU HUA[2], HYO JUNG SHIN[2], NARA SHIN[2], HYEOK HEE KWON[2], JINPYO HONG[2], DONG WOON KIM*[1]
[1]ChungNam National University, Daejeon, Korea, Republic of, [2]Chungnam National University, Daejeon, Korea, Republic of

P18.23 **Ultra-high field 7T MRI in-vivo structural connectivity of the human cortico-subthalamic hyperdirect pathway**

DAE-HYUK KWON[1], ZANG-HEE CHO*[1]
[1]University of Suwon, Hwaseong, Korea, Republic of

P18.24 **PI3K inhibition reduces mechanical allodynia and sensitization of spinal TRPV1 receptors in a model of paclitaxel-induced painful neuropathy**

JIRI PALECEK*[1], PAVEL ADAMEK[1], MARIO HELES[1]
[1]Institute of Physiology, Czech Academy of Science, Prague, Czech Republic

P18.25 **Kinins and its B_1 and B_2 receptors are involved in a fibromyalgia-like pain symptoms model**

SARA OLIVEIRA*[1], INDIARA BRUSCO[1], CASSIA SILVA[2], RAHISA SCUSSEL[3], RICARDO MACHADO-DE-ÁVILA[3], SUSANA FISCHER[1]
[1]Federal University of Santa Maria, Santa Maria, Brazil, [2]Federal University of Uberlandia, Uberlandia, Brazil, [3]University of Extrem South Catarinense, Criciúma, Brazil

P18.26 **Role of Transient Receptor Potential Ankyrin 1 (TRPA1) on nociception caused by a murine model of breast cancer**

GABRIELA TREVISAN DOS SANTOS*[1], AMANDA SPRING DE ALMEIDA[1], FLÁVIA KARINE RIGO[2], SAMIRA DAL-TOÉ DE PRÁ[2], ALESSANDRA MARCONE MILIOLI[2], GABRIELE CHEIRAN PEREIRA[1], EVELYNE DA SILVA BRUM[1], CAREN TATIANE ANTONIAZZI[1], SARA MARCHESAN OLIVEIRA[1]
[1]Federal University of Santa Maria, Santa Maria, Brazil, [2]Universidade do Extremo Sul Catarinense, Criciúma, Brazil

P18.27 **Stem cells and neurodegenerative disorders: from basic research, large-scale cells expansion to clinical testing**

SERHIY FOROSTYAK*[1], PETR BENES[2], TEREZA KUCIRKOVA[2], YU MI PARK[3], MINJI LEE[3], TOMAS KASKO[4], HANA LEJDAROVA[5], LADISLAVA VYMETALOVA[2], ZDENEK KORISTEK[4]
[1]PRIMECELL ADVANCED THERAPY, A.S., Brno, Czech Republic, [2]International Clinical Research Center, St. Anne's University Hospital, Brno, Czech Republic, [3]Cell Therapy R&D Center, HansBiomed Corp., Seoul, Korea, Republic of, [4]PrimeCell Advanced Therapy Inc., National Tissue Centre Inc., Brno, Czech Republic, [5]Department of Transfusion & Tissue Medicine, University Hospital Brno, Brno, Czech Republic

P18.28 **Chromatic Pupillometry: Characterization of the pupillary light reflex in *Octodon degus***

ADRIAN PALACIOS[1], DAVID NEIRA[3], PALOMA HARCHA[3], NICOLAS PALANCA*[2]
[1]Centro Interdisciplinario de Neurociencia de Valparaiso, Universidad de Valparaiso, Valparaiso, Chile, [2]Centro Interdisciplinario Neurociencia Valparaiso, Universidad de Valparaiso, Valparaiso, Chile, [3]Centro Interdisciplinario Neurociencia Valparaiso, Universidad de Valparaiso, Chile, Valparaiso, Chile

Others

P19.01 **Brain functional connectivity changes induced by transcranial ultrasound stimulation**

ELOISE ANGULUAN*[1], YOUNG-JIN JUNG[2], AXEL YEN GARCIA[2], EVGENII KIM[3], JAE GWAN KIM[1]
[1]Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of, [2]Dongseo University, Busan, Korea, Republic of, [3]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P19.02 **A subgroup of VTA dopamine neurons projecting to the nucleus accumbens are differentially activated by acute vs. repeated stress**

JIN-YOUNG PARK[1], PYUNG-LIM HAN*[1]
[1]Department of Brain and Cognitive Sciences, Ewha Womans University, Seoul, Korea, Republic of

P19.03 **Dendritic transport of postsynaptic density protein 95 (PSD-95) by KIF5A**

KI-SEO YOO[1], KINA LEE[1], HYONG KYU KIM*[1]
[1]Chungbuk National University, Cheongju, Korea, Republic of

P19.04 **Expression mapping, quantification, and complex formation of GluD1 and GluD2 glutamate receptors in adult mouse brain**

KOHTAROU KONNO[1], CHIHIRO NAKAMOTO[2], KENJI SAKIMURA[2], MASANOBU KANO[3], MASAHIKO WATANABE*[1]
[1]Department of Anatomy, Faculty of Medicine, Hokkaido University, Sapporo, Japan, [2]Department of Animal Model Development, Brain Research Institute, Niigata University, Niigata, Japan, [3]Department of Neurophysiology, Graduate School of Medicine, the University of Tokyo, Tokyo, Japan

P19.05 **Calcium-mediated constriction of mitochondrial inner compartment for efficient mitochondrial division in neuron**

BONGKI CHO[1], WOONG SUN*[2]
[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of, [2]Korea University College of Medicine, Seoul, Korea, Republic of

P19.06 **Influence of social agreement and private confidence on social revision of shared preference estimation**

JAESEOB LIM[1], SANG-HUN LEE*[1]
[1]Seoul national university, Seoul, Korea, Republic of

P19.07 **Intronic eRNA is local regulator for gene expression and potential marker for ischemic stroke**

JAE-YEOL JOO*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P19.08 **Preliminary study and suggestions for the recognition of brain donation**

HO-WON LEE*[1], SOL JI HONG[2], YONG-HYUN LIM[3], JUNGEUN KIM[2], PAN-WOO KO[4], KI-SU PARK[5], JI WON OH[6], JI YOUNG PARK[7], SANGHAN LEE[7], JI-EUN KIM[8]
[1]School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [2]Kyungpook National University Chilgok Hospital Brain Bank, Daegu, Korea, Republic of, [3]Center of Self-Organizing Software-Platform, Kyungpook National University, Daegu, Korea, Republic of, [4]Department of Neurology, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [5]Department of Neurosurgery, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [6]Department of Anatomy, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [7]Department of Pathology, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [8]Department of Neurology, School of Medicine, Catholic University of Daegu, Daegu, Korea, Republic of

P19.09 **Nurr1 performs the anti-inflammatory function by regulating RasGRP1 expression in neuro-inflammation.**

MIHEE OH[1], BAEK-SOO HAN*[1]
[1]Korea Research Institute of Bioscience and Biotechnology, Daejeon, Korea, Republic of

P19.10 **Zinc is essential for adult hippocampal neurogenesis**

BO YOUNG CHOI[1], DAE KI HONG[1], JEONG HYUN JEONG[1], JAE-YOUNG KOH[2], SANG WON SUH*[1]
[1]Department of Physiology, Hallym University College of Medicine, Chuncheon, Korea, Republic of, [2]Department of Neurology, University of Ulsan College of Medicine, Seoul, Korea, Republic of

P19.11 **Postsynaptic cyclin Y modulates spatial memory and structural long-term potentiation through the cofilin-actin pathway**

JIYEON SEO[1], EUNSIL CHO[2], YOUNG-NA HUR[3], HEESUNG SOHN[4], SEUNG-MIN UM[5], EUNJOON KIM[5], MIKYOUNG PARK*[2]
[1]Center for Functional Connectomics and Center for Neuroscience, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [2]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology, Seoul, and Department of Neuroscience, Korea University of Science and Technology, Daejeon, Korea, Republic of, [3]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [4]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology and Department of Life Sciences, School of Natural Science, Hanyang University, Seoul, Korea, Republic of, [5]Center for Synaptic Brain Dysfunctions, Institute for Basic Science, and Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P19.12 **Generation of gene-corrected iPSC line from Parkinson's disease patient iPSC with LRRK2 G2019S mutation using BAC-based homologous recombination**

SEO-YOUNG LEE[1], SANGKYUN JEONG[1], SUN-KU CHUNG*[1]
[1]Korea Institute of Oriental Medicine, Daejeon, Korea, Republic of

P19.13 **A new psychoactive substance, 25N-NBOMe exhibits rewarding and reinforcing effects via the dopaminergic system**

KWANG-HYUN HUR[1], JEE-YEON SEO[1], YONG-SUP LEE[2], HYOUNG-CHUN KIM[3], SEOK-YONG LEE[4], CHOON-GON JANG*[1]
[1]Sungkyunkwan university, Suwon, Korea, Republic of, [2]Kyung Hee University, Seoul, Korea, Republic of, [3]Kangwon National University, Chuncheon, Korea, Republic of, [4]Sungkyunkwan University, Suwon , Korea, Republic of

P19.14 **A chaos wavelet analysis on the EEG of patients with panic disorder**

ADEDOYIN ADERINWALE*[1]
[1]KAIST & Electronics and Telecommunications Research Institute of Korea (ETRI), Daejeon, Korea, Republic of

P19.15 **Enhanced delivery of cell penetrating peptide fused proteins to mammalian cells**

JINSAEM LEE[1], JIN SUN KANG[3], SANG-MI KIM[4], CHANG-HWAN PARK*[2]
[1]University, Seoul, Korea, Republic of, [2]Department of Microbiology, College of Medicine, Hanyang University, Seoul, Korea, Republic of, [3]Graduate School of Biomedical Science & Engineering, Seoul, Korea, Republic of, [4]Hanyang Biomedical Research Institute, Seoul, Korea, Republic of

P19.16 **Development of microfluidics device to study mechanosensory neurons in the diapause of *Caenorhabditis elegans***

SUNGJONG KIM[1], JUNHO LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P19.17 **Establishment of contustion spinal injury animal model using stereotaxic apparatus**

DOH-HEE KIM*[1], SEUNG-HEE LEE[1], HYUN-JUN KIM[1], KYUNG-HOON HAN[1]
[1]Seoul Medical Center, Seoul, Korea, Republic of

P19.18 **Intranasal administration of melanin-concentrating hormone modulates stress response by mTOR signaling pathway**

JU-YOUNG OH[1], QUAN FENG LIU[2], JAE-HWAN JANG[1], CAI HUA[3], HA JIN JEONG[3], SONGHEE JEON[3], HI-JOON PARK*[1]
[1]Department of Korean Medical Science, Graduate School of Korean Medicine, Kyung Hee University, Seoul, Korea, Republic of, [2]Department of Neuropsychiatry, Graduate School of Oriental Medicine, Dongguk University, Gyeongju, Korea, Republic of, [3]Department of Biomedical Sciences, Center for Creative Biomedical Scientists at Chonnam National University, Gwangju, Korea, Republic of

P19.19 **High dose of Japanese encephalitis virus infection induces the increase of proteolytic cleavage of Bax of human neuroblastoma SH-SY5Y cells**

ARISARA SAMUTPONG[1], PRAPIMPUN WONGCHITRAT[1], HATAIRAT LEARDSAMRAN[1], KUNTIDA KITIDEE*[1]
[1]Center for Research and Innovation, Faculty of Medical Technology, Mahidol University, Nakhon Pathom, Thailand

P19.20 **Abnormal activation of NMDA receptors by Glufosinate ammonium.**

YEJI KIM[1], DAESI KANG[1], DONG HO WOO*[1]
[1]Korea Institute of Toxicology, Daejeon, Korea, Republic of

P19.21 **Functional expression of neuronal differentiation-specific surface antigen**

JINA SOHN[1], SANG CHUL KIM[1], YUJEONG CHU[1], SANG-MI KIM[3], CHANG-HWAN PARK*[2]
[1]Graduate School of Biomedical Science and Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Department of Microbiology, College of Medicine, Hanyang University, Seoul, Korea, Republic of, [3]Hanyang Biomedical Research Institute, Seoul, Korea, Republic of

P19.22 **Transthyretin oligomers as a biomarker for heart failure**

SEONGSOO AN*[1], GIL YONG PARK[1], ANGELO JAMERLAN[1], KYUHWAN SHIM[1]
[1]Gachon university, Seongnam, Korea, Republic of

P19.23 **Propionic acid inhibits neuronal maturation through dysregulating of autophagic flux**

HYOSUN CHOI[1], JI YOUNG MUN*[1]
[1]KBRI, Daegu, Korea, Republic of

P19.24 **Synaptic ERK2 phosphorylates and regulates metabotropic glutamate receptor 1 in vitro and in neurons**

JU HWAN YANG[1], JIEUN KIM[1], SUMIN SOHN[1], SUNGHYUN KIM[1], EUN SANG CHOE*[1]
[1]Department of Biological Sciences, Pusan National University, Busan, Korea, Republic of

P19.25 **Tentonin 3/ TMEM150c, a mechanotransduction channel forArterial-pressure sensing baroreceptors**

HUANJUN LU[1], HYESU KIM[2], HYUNGSUP KIM[2], SUNGMIN PAK[2], THIEN-LUAN NGUYEN[2], JUNGWON WEE[2], GYU-SANG HONG[2], JAE HYOUK CHOI[2], UHTAEK OH*[1]
[1]Brain Science Institute, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [2]Brain Science Institute, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P19.26 **Neural precursor cells/dopamine neuron direct conversion using hybrid nanofiber scaffolds**

SEUNGHWAN KO[1], MI-SUN LIM[3], SANG-MI KIM[4], KEESUNG KIM[5], CHANG-HWAN PARK*[2]
[1]Graduate School of Biomedical Science & Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Department of Microbiology, College of Medicine, Hanyang University, Seoul, Korea, Republic of, [3]Research and Development Center, Jeil Pharmaceutical Company, Yongin, Korea, Republic of, [4]Hanyang Biomedical Research Institute, Seoul, Korea, Republic of, [5]Research Institute of Advanced Materials, Seoul National University, Seoul, Korea, Republic of

P19.27 **Mannose-binding lectins of calf brain cell nuclear membrane**

TAMAR MACHARADZE[1], RUSUDAN AKHALKATSI*[1]
[1]Iv.Javakhishvili Tbilisi State University, Tbilisi, Georgia

P19.28 **Post-translational lipid modifications of cyclin Y regulate activity-dependent trafficking of synaptic proteins**

YURI CHOI[1], JUNG-HWA HONG[1], EUNSIL CHO[2], SUYEON KIM[1], SU IN LEE[1], MIKYOUNG PARK*[2]

[1]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [2]Center for Functional Connectomics, Brain Science Institute, Korea Institute of Science and Technology, Seoul, and Department of Neuroscience, Korea University of Science and Technology, Daejeon, Korea, Republic of

P19.29 **Calcium alteration mediated by prion protein governs neuron cell damage through AMPK-autophagy flux in primary neuron cells**

JI-HONG MOON[1], SANG-YOUEL PARK*[1]

[1]Biosafty Research Institute, Chonbuk National University, IKSAN, Korea, Republic of

P19.30 **An efficient feature based EEG signal analysis for automatic classification of normal sleep and sleep deprivation**

MOHAMMADREZA SEDGHI*[1], MAHDAD ESMAEILI[1], ALI FAKHARI[2], SAEID CHARSOUEI[3], FATEMEH SHEKHKANLU MILAN[4], MAHDI DOLATYARI ESLAMI[5], ALI AHMADALIPOUR[6]

[1]Department of Medical Bioengineering, Faculty of Advanced Medical Sciences, Tabriz University of Medical Sciences, Tabriz, Iran, [2]Research Center of Psychiatry and Behavioral Sciences, Tabriz University of Medical Sciences, Tabriz, Iran, [3]Department of Neurology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran, [4]Department of food hygiene and quality control, Faculty of veterinary Medicine, University of Tabriz, Tabriz, Iran, [5]Faculty of veterinary Medicine, University of Tabriz, Tabriz, Iran, [6]Research Center of Psychiatry and Behavioral Sciences, Tabriz University of Medical Sciences, Tabriz, Iran

P19.31 **Herb X reverses multi-drug resistance by increasing drug permeability in blood-brain-barrier and intestinal barrier**

YONG-HWI KANG[1], NAMHUN LEE*[2]

[1]Dunsan Korean Medicine Hospital of Daejeon University, Daejeon, Korea, Republic of, [2]Cheonan Korean Medicine Hospital of Daejeon University, Cheonan, Korea, Republic of

P19.32 **Generation of gene expression profiles for AD model mice by GAN deep learning**

JINHEE PARK[1], MOOKYUNG CHEON*[1]

[1]KBRI, Daegu, Korea, Republic of

P19.33 **The new designer phenethylamines, 2C-C and 2C-P produce rewarding effects via dopaminergic system activation**

YOUNG-JUNG KIM[1], SHI-XUN MA[1], KWANG-HYUN HUR[1], YOUYOUNG LEE[1], SEOK-YONG LEE[1], CHOON-GON JANG*[1]

[1]SungKyunKwan University, Suwon, Korea, Republic of

P19.34 **RCI002 is a novel therapeutic agent for pain treatment via inhibiting TRPV1 channel**

HAWON JEON[1, 2], KIHWAN LEE[1, 2], CHUL-KYU PARK[1, 2], YONG HO KIM*[1, 2]

[1]Gachon Pain Center and Department of Physiology, College of Medicine, Gachon University, Incheon 21999, Korea, Republic of, [2]Department of Health Sciences and Technology, GAIHST, Gachon University, Incheon 21999, Republic of Korea

P19.35 **Structural and functional study of orphan nuclear receptor Nor1 in control of food intake and energy homeostasis**

JUN YEOB YOO*[1], CONG BAO KANG[2], RISHIKESAN SANKARANARAYANAN[1], SANGYONG JUNG[3], HO SUP YOON[1]

[1]School of Biological Sciences, Nanyang Technological University, Singapore, Singapore, [2]Experimental Drug Development Centre (EDDC), Agency for Science Technology and Research (A*STAR), Singapore, Singapore, [3]Singapore Bioimaging Consortium (SBIC), Agency for Science Technology and Research (A*STAR), Singapore and Dept. of Physiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore

P19.36 **Input-specific alteration of LRRTM3-deficient hippocampus using volume electron microscopy**

NA-YOUNG SEO[1, 3], GYU HYUN KIM[1], SANG-HOON LEE[2], JAEWON KO[3], YANG HOON HUH[4], KEA JOO LEE*[1, 3]

[1]Synaptic Circuit Plasticity Lab, Department of Structure & Function of Neural Network, Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [2]Advanced Neural Imaging Center, Korea Brain Research Institute (KBRI), Daegu , Korea, Republic of, [3]Department of Brain and Cognitive Sciences, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu , Korea, Republic of, [4]Electron Microscopy Research Center, Korea Basic Science Institute (KBSI), Cheongju, Korea, Republic of

P19.37 **Impaired mitochondrial respiration by *Crif1* deletion in endothelial cells disrupts blood-brain barrier through the alteration of actin dynamics**

MIN JOUNG LEE[1], YUNSEON JANG[1], JEONGSU HAN[1], SOO JEONG KIM[1], XIANSHU JU[1], YU LIM LEE[1], JIANCHEN CUI[1], MIN JEONG RYU[2], SONG-YI CHOI[3], WOOSUK CHUNG[4], GI RYANG KWEON[1], CHEAJEONG HEO[5], JUN YOUNG HEO*[1]

[1]Department of Medical science, Chungnam National University School of Medicine, Deajeon, Korea, Republic of, [2]Research Institute for Medical Science, Chungnam National University School of Medicine, Deajeon, Korea, Republic of, [3]Department of Pathology, Chungnam National University School of Medicine., Deajeon, Korea, Republic of, [4]Department of anesthesiology and pain medicine, Chungnam National University Hospital, Deajeon, Korea, Republic of, [5]Center for Integrated Nanostructure Physics (CINAP), Center for Neuroscience Imaging Research (CNIR), Institute for Basic Science (IBS), Suwon, Korea, Republic of

P19.38 **Role of the nucleotide-binding domain, leucine rich containing (NLR) proteins in glioblastoma angiogenesis.**

SHIVANJALI SAXENA*[1], SUSHMITA JHA[1]

[1]Indian Institute of Technology Jodhpur, Jodhpur, India

P19.39 **Serum CXCL13 reflects local B-cell mediated inflammatory demyelinating peripheral neuropathy**

YOUNGHEE KIM[1], SO YOUNG JANG[2], YOON KYUNG SHIN[2], YOUNG RAE JO[2], BYEOL-A YOON[2], NAM JUN KIM[2], SOO HYUN NAM[3], BYUNG-OK CHOI[3], HA YOUNG SHIN[4], SEUNG WOO KIM[4], SE HOON KIM[4], JONG KUK KIM[2], HWAN TAE PARK*[1]

[1]Dong-A University, Busan, Korea, Republic of, [2]Dong-A University, busan, Korea, Republic of, [3]Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of, [4]Yonsei University College of Medicine, Seoul, Korea, Republic of

P19.40 **The new designer drug 25E-NBOMe induces rewarding effects and decreases dopamine release in the nucleus accumbens**

YOUYOUNG LEE[1], YOUNG-JUNG KIM[1], SEOK-YONG LEE[1], SHI-XUN MA[1], JEONG-HOON KIM[2], JUNG WON LEE[2], SOOYEUN LEE[3], YONG-SUP LEE[4], CHOON-GON JANG*[1]

[1]Sungkyunkwan University, Suwon, Korea, Republic of, [2]Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Keimyung University, Daegu, Korea, Republic of, [4]Kyung Hee University, Seoul, Korea, Republic of

P19.41 **Morphological and physiological dynamics of Neuronal spines in presence of Semiconducting Single Walled Carbon Nanotube**

ABHINOY KISHORE*[1]

[1]Indian Institute of Science, Bengaluru, India

Tue. (Sept. 24)

Poster Session (3)

Cognition and behavior

P20.01 **GDE-4 mediates pheromone avoidance behavior of *C. elegans***

YONGJIN CHEON[1], YEONJI PARK[1], KYUHYUNG KIM*[1]
[1]DGIST, Daegu, Korea, Republic of

P20.02 **Neural mechanisms underlying circadian control of social prioritization**

JIHOON KIM[1], SOOMIN LEE[2], BOIL KIM[1], DAMHYEON KWAK[1], KYUNGJIN KIM[1], HAN KYOUNG CHOE*[1]
[1]DGIST, Daegu, Korea, Republic of, [2]DGIST, DAe, Korea, Republic of

P20.03 **Oxytocin neuron-specific knockdown of Ift88, an essential gene for ciliogenesis, impairs social recognition behavior**

HYUNYOUNG KIM[1], EUJUNG KIM[2], JIHOON KIM[2], HYOEUN LEE[3], MIN-SEON KIM[4], HYUNGJU PARK[3], KEETAE KIM[5], HAN KYOUNG CHOE*[2]
[1]Brain and Cognitive Sciences, Daegu Gyeonbuk Institute of Science and Technology (DGIST), Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [2]Brain and Cognitive Sciences, Daegu Gyeonbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [3]Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [4]Asan Medical center, University of Ulsan College of Medicine, Seoul, Korea, Republic of, [5]Department of New Biology, Daegu Gyeonbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P20.04 **Identification of novel mammalian proprioceptive receptor using proprioceptor-specific CRISPR/Cas9 genome editing**

EUJUNG KIM[1], HAN KYOUNG CHOE*[1]
[1]Department of Brain and Cognitive Sciences, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P20.05 **CRISPR/Cas9-based Single adeno-associated virus system to target mammalian molecular clock machinery**

BOIL KIM[1], KYOJIN KU[1], MIJUNG CHOI[1], INAH PARK[1], MINJEONG CHUN[1], JIHOON KIM[1], KYUNGJIN KIM[1], HAN KYOUNG CHOE*[1]
[1]DGIST, Daegu, Korea, Republic of

P20.06 **Differential patterns of CSF amyloid-β and tau alteration in dementia in the Chinese population**

LI HONGLEI[1], YE LING-QI[1], WU ZHI-YING*[1]
[1]Department of Neurology and Research Center of Neurology, Second Affiliated Hospital, Zhejiang University School of Medicine, hangzhou, China

P20.07 **The effects of lateral habenula lesions on foraging and avoidance behavior in rats living in a naturalistic, risky foraging environment**

BRYAN SCHUESSLER*[1], JEANSOK KIM[2]
[1]Department of Psychology, University of Washington, Seattle, USA, [2]Department of Psychology and Program in Neuroscience, University of Washington, Seattle, USA

P20.08 **Environmental enrichment effects on neurodevelopment, behavior and HPA axis activity in male and female Wistar rats with early life adverse experiences**

KAREN CORREDOR*[1], LAURA HERRERA-ISAZA[1], JUAN PABLO QUINTANILLA[1], JOHANNA MARCELA DURAN[1], GLADYS S MARTINEZ[2], FERNANDO P CARDENAS[1]
[1]Universidad de los Andes, Bogotá, DC, Colombia, [2]Centro de Investigación en Biomodelos, Bogotá, DC, Colombia

P20.09 **Reactivation maintains LTP at CS inputs to the lateral amygdala enabling selective fear memory persistence**

JUNG-PYO OH[1], JEONG-TAE KWON[1], SANGRAK JIN[1], MIRAN YOO[1], HYUNG-SU KIM[1], YIRE JEONG[1], HYE-YEON CHO[1], MIN SOO KANG[1], BYUNG-KWAN CHO*[1], JIN-HEE HAN*[1]
[1]Department of Biological Sciences, KAIST Institute for the BioCentury (KIB), Korea Advanced Institute of Science and Technology (KAIST), Daejeon 34141, Korea, Republic of

P20.10 **Hypothalamic Pathways Mediating Shock-based Passive Avoidance**

JULIETTE VIELLARD*[1], CYRIL HERRY[2], NEWTON CANTERAS[3]
[1]University of São Paulo, institute of biomedical science; University of Bordeaux, INSERM Magendie Institute, São Paulo, Brazil, [2]University of Bordeaux, INSERM Magendie Institute, Bordeaux, France, [3]University of São Paulo, institute of biomedical science, São Paulo, Brazil

P20.11 **Effects of deletion of peroxiredoxins II on bilateral common carotid artery occlusion-induced impairments of hippocampal function**

YOON-SUN JANG[1], SANG-WOOK SHIN[1], JUNG-SOO HAN*[1]
[1]Konkuk univ., Seoul, Korea, Republic of

P20.12 **Low sensitivity of basolateral amygdala and ventral hippocampus are related to tame behavior in mice.**

HIROMICHI NAGAYAMA[1], YUJI IMAI[2], YUKI MATSUMOTO[3], TSUYOSHI KOIDE*[2]
[1]SOKENDAI, Mishima, Japan, [2]National Institute of Genetics, Mishima, Japan, [3]Research and Development Section, Anicom Specialty Medical Institute Inc., Shinjuku, Japan

P20.13 **Prenatal methamphetamine exposure and prenatal hypoxia influence short term memory**

ANNA OCHOZKOVÁ*[1], ROMANA ŠLAMBEROVÁ[1], LÝDIA MIHALČÍKOVÁ[1], ANNA YAMAMOTOVÁ[1]
[1]Department of Physiology Third Faculty of Medicine, Charles University, Prague, Praha 2, Czech Republic

P20.14 **The chemosensory GPCR SRI-14 is required for concentration-dependent DMTS odor preference in *C. elegans***

WOOCHAN CHOI[1], SANGEUN RYU[1], KYUHYUNG KIM*[1]
[1]DGIST, Daegu, Korea, Republic of

P20.15 **Differential encoding of events during approach-avoidance conflict situation by the prelimbic cortex**

JI HOON JEONG[1], SUNWHI KIMM[1], JAEYONG LEE[1], JUNE-SEEK CHOI*[1]
[1]Korea University, Seoul, Korea, Republic of

P20.16 **Chronic pain impairs pair-bond maintenance in monogamous rodents, prairie voles**

YOJI OSAKO*[1], REIKO NOBUHARA[2], TAKAHIRO OKUDA[3], CHIHARU HIDAKA[1], YOUNG-CHANG ARAI[2], MAKOTO NISHIHARA[2], LARRY YOUNG[4], KAZUNARI YURI[1]
[1]Department of Neurobiology and Anatomy, Kochi Medical School, Kochi University, Kochi, Japan, [2]Multidisciplinary Pain Center, Aichi Medical University, Aichi, Japan, [3]Department of Physical Therapy, Tosa Rehabilitation College, Kochi, Japan, [4]Center for Translational Social Neuroscience, Yerkes National Primate Center, Emory University School of Medicine, Atlanta, USA

P20.17 **"Retrotransposition bursts" in the adult brain: stress, running, and operant learning increase the number of L1 retrotransposon DNA copies in the mouse brain**

KONSTANTIN ANOKHIN*[1], OLGA IVASHKINA[2]
[1]Lomonosov Moscow State University, Moscow, Russia, [2]NRC "Kurchatov Institute", Moscow, Russia

P20.18 **Effects of lateral habenula (LHb) lesions on association of CS with non-reward in Pavlovian appetitive conditioning**

IN-BEOM JIN[1], DONG-HEE KIM[1], YONG-JAE JEON[1], JUNG-SOO HAN*[1]
[1]Konkuk University, Seoul, Korea, Republic of

P20.19 **Endocrinal and behavioral consequences of chasing stress emulating predatory threat**
JI-HYE LEE[1], GYEONG HEE PYEON[1], JUNE-SEEK CHO*[1]
[1]Korea University, Seoul, Korea, Republic of

P20.20 **Brain connectivity between left hemisphere regions during driving performance**
MI-HYUN CHOI*[1], SOON-CHEOL CHUNG[1]
[1]Konkuk university, Chungju, Korea, Republic of

P20.21 **Fear extinction requires ASIC1a-dependent regulation of hippocampal-prefrontal correlates**
WEI-GUANG LI[1], TIAN-LE XU*[1]
[1]Shanghai Jiao Tong University School of Medicine, Shanghai, China

P20.22 **Investigating the link between bodily self-consciousness (BSC) and grid cells**
HYUK-JUNE MOON*[1], BAPTISTE GAUTHIER[2], HYEONG-DONG PARK[2], NATHAN FAIVRE[3], OLAF BLANKE[2]
[1]Laboratory of Cognitive Neuroscience (LNCO), Center of Neuroprosthetics (CNP) and Brain Mind Institute (BMI), École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, Lausanne, Switzerland, [2]Laboratory of Cognitive Neuroscience (LNCO), Center of Neuroprosthetics (CNP) and Brain Mind Institute (BMI), École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, [3]CNRS, LPNC UMR 5105, Université Grenoble Alpes, Grenoble, France

P20.23 **Unpleasant sound elicits negative emotion and reinstates drug seeking**
YU FAN[1], SUCHAN CHANG[1], SOO-MIN LEE[1], CHAE HA YANG[1], HEE YOUNG KIM*[1]
[1]Department of physiology, College of Korean Medicine, Daegu Haany University, Daegu, Korea, Republic of

P20.25 **Neural circuitry underlying individual differences in context-dependent facial emotion reading**
KUN IL KIM[1], WI HOON JUNG[2], NURI KIM[1], HACKJIN KIM*[1]
[1]Korea University, Seoul, Korea, Republic of, [2]Daegu University, Gyeongsan, Korea, Republic of

P20.26 **Striatal cholinergic interneurons control nicotine reward and somatic withdrawal**
BAEKSUN KIM[1], JUNSUNG WOO[1], CHANGJOON LEE[1], HEH-IN IM*[1]
[1]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P20.27 **The expression and behavioral analyses of mutants for the small G protein ARL8B in mouse**
NAOKO UEDA[1], AYAKO ISHII[2], YUJI IMAI[2], KAZUTO YOSHIMI[2], TSUYOSHI KOIDE*[1]
[1]SOKENDAI/National institute of Genetics, Mishima city, Shizuoka, Japan, [2]National institute of Genetics, Mishima city, Shizuoka, Japan

P20.28 **Affect of *Esr1* polymorphisms in maternal behavior in mouse**
LALITHADEVI MALLARAPU[1], AKIRA TANAVE[3], YUJI IMAI[2], TSUYOSHI KOIDE*[2]
[1]SOKENDAI UNIVERSITY/National Institute of Genetics, Mishima, Japan, [2]National Institute of Genetics, Mishima, Japan, [3]RIKEN , Osaka, Japan

P20.29 **Diffusion model confirmed the critical role of interference control during novel metaphor comprehension**
MINHO SHIN[1], HEE-DONG YOON[1], HYEON-AE JEON*[1]
[1]Department of Brain and Cognitive Sciences, DGIST (Daegu Gyeongbuk Institute of Science and Technology), Daegu, Korea, Republic of

P20.30 **Sleep and parent-reported executive functioning in typically developing and drug-naïve ADHD children**
MARINE ELIOZISHVILI*[1], TAMAR BASISHVILI[2], TINATIN TCHINTCHARAULI[2], NATO DARCHIA[2]
[1]Ilia State University, Tbilisi, Georgia, [2]Ilia State University, T.Oniani Laboratory of Sleep-Wakefulness Cycle Study, Tbilisi, Georgia

P20.31 **Encoding of Contextual Fear Memory in the Hippocampal - Amygdala Engram Cell Pathway**
JUN-HYEONG CHO*[1], WOONG BIN KIM[1]
[1]University of California Riverside, California, USA

P20.32 **Enduring effects of excessive sucrose intake during childhood on the dopaminergic system in mice**
WON-HUI CHOE[1], YOUNG-A LEE[1], YUKIORI GOTO[2], KYUNG-A LEE*[1]
[1]Daegu Catholic University, Gyeongsan, Korea, Republic of, [2]Primate Research Institute, Kyoto University, Aichi, Japan

P20.33 **Gait ignition failure in JNPL3 human Tau-mutant mice**
HOCHUNG JANG[1], NA-YOUNG SEO[1], KEA JOO LEE*[1]
[1]Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of

P20.34 **Conceptual diversity of executive function in a performance-based test, self-reporting scale, and gamification method.**
HYUNJOO SONG*[1], EUNSOL SOHN[1], MYOUNGJI IM[1], YEONSU KIM[1], HANAH JEONG[1], JINHYEONG CHOI[1]
[1]Seoul Woman's University, Seoul, Korea, Republic of

P20.35 **The lateral hypothalamic and BNST GABAergic projections to the anterior ventrolateral periaqueductal grey regulate feeding**
HAO WANG*[1], SIJIA HAO[1], XIAOMENG WANG[1]
[1]Zhejiang University, Hangzhou, China

P20.36 **Rapamycin attenuates the inhibition of autophagy activation, postsynaptic dysfunctions and impairedspatial memoryinduced by long-termsocial isolation**
SHAO LI*[1], BIN WANG[2]
[1]Department of Physiology, College of Basic Medical Sciences, Dalian Medical University, Dalian, China, [2]Department of Physiology, College of Basic Medical Sciences,Dalian Medical University, Dalian, China

P20.37 **Identification of a cerebellar output processing negative emotion**
KYOUNG-DOO HWANG[1], HYUN-HEE RYU[1], SANG JEONG KIM[1], YONG-SEOK LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P20.38 **Virus-mediated overexpression of radixin in the nucleus accumbens inhibits the development of amphetamine- induced conditioned locomotor activity**
WEN TING CAI[1], WHA YOUNG KIM[1], MYUNGJI KWAK[1], JEONG-HOON KIM*[1]
[1]Yonsei University College of Medicine, Seoul, Korea, Republic of

P20.39 **Fear signals from the amygdala influence spatial information processing in the hippocampus in risky foraging situations**
MI-SEON KONG[1], HANZHANG DING[1], EUN JOO KIM[1], SANG GEON PARK[2], JEIWON CHO[3], JEANSOK KIM*[1]
[1]University of Washington, Seattle, USA, [2]Korea University of Science & Technology, Daejeon, Korea, Republic of, [3]Catholic Kwandong University, Incheon, Korea, Republic of

P20.40 **Modeling behavioral symptoms of neuropsychiatric disorders through administration of acute low-dose MK-801**
DARINE FROY MABUNGA[1], DONGHYUN PARK[1], KEREMKLEROO JYM ADIL[1], CHAN YOUNG SHIN*[1]
[1]Konkuk University, Seoul, Korea, Republic of

P20.41 **Tactile modulation of memory and anxiety requires dentate granule cells along the dorsoventral axis**

HUI LIU[1], CHI WANG[1], KUN LI[1], XIAODONG WANG*[1]
[1]Zhejiang University, Hangzhou City, China

P20.42 **Visual responses of primate orbitofrontal neurons and their contribution to the preference judgment**

SHINTARO FUNAHASHI*[1]
[1]Beijing Institute of Technology, Beijing, China

P20.43 **The effects of chronic metformin treatment on cognitive functions in C57BL6/J**

SO YEON CHO[1], EOSU KIM*[1]
[1]Yonsei University, Seoul, Korea, Republic of

P20.44 **Odor descriptor survey of mixtures of odorants detected by narrowly tuned odorant receptors**

KYU BO KIM[1], DOKYEONG KIM[1], SEUNGHEE LEE[1], WONCHEOL KIM[1], YOOJIN ROH[1], KWANGSU KIM[1], JIYUN CHOE[1], CHEIL MOON*[1]
[1]DGIST, DAEGU, Korea, Republic of

P20.45 **The effect of ulinastatin after hypoxia in learning and memory of zebrafish**

YEONHWA KIM[1], TOO JAE MIN*[2]
[1]Korea University, Ansan, Korea, Republic of, [2]Korea University College of Medicine, Ansan, Korea, Republic of

P20.46 **Pain perception and visual feedback in virtual reality**

MINHEE SEO[1], SANGBIN JEON[2], BYUNGCHEOL KIM[2], JEHKWANG RYU[1], KYOUNGMIN LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Joongbu University, Seoul, Korea, Republic of

P20.47 **Neuroscience-based technology development for early detection and diagnosis of posttraumatic syndrome**

IN KYOON LYOO*[1, 2, 3], SUJUNG YOON[1, 2], GAHAE HONG[1], JIYOUNG MA[1], ILHYANG KANG[1], EUN NAMGUNG[1]
[1]Ewha Brain Institute, Ewha W. University, [2]Department of Brain and Cognitive Sciences, Ewha W. University, [3]Graduate School of Pharmaceutical Sciences, Ewha W. University

P20.48 **Anterior paraventricular thalamus to ventromedial nucleus of the hypothalamus projection modulates compulsive sucrose seeking induced by high-fat diet**

ZHENXIN YUAN[1], XIAOLIN MA[1], YUDONG ZHOU*[1]
[1]Zhejiang University, Hangzhou, China

P20.49 **Neuroprotective effects of Garcinia kola on an experimental model of Alzheimer's disease**

EDMOND NGWAFONG MOUOFO*[1, 2], NENE AHIDJO[3], ALFRED K. NJAMNSHI[4]
[1]University of Yaounde 1, Yaoundé, Cameroon, [2]Neuroscience Laboratory, Faculty of Medicine and Biomedical Sciences, Yaounde, Cameroon, [3]Neuroscience Laboratory, Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1, Yaounde, Cameroon, [4]Neuroscience Laboratory, Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1, Yaoundé, Cameroon

P20.50 **Hippocampal response to sleep-related pictures moderates the association between sleep disturbance and impulsivity**

SEOG JU KIM*[1], HAYOUNG LEE[2], KYUNG HWA LEE[2], JEONG EUN JEON[2], SEONG MIN OH[3], SEHYUN JEON[1], YU JIN LEE[2]
[1]Department of Psychiatry, Samsung Medical Center, Sungkyunkwan University, Seoul, Korea, Republic of, [2]Department of Psychiatry and Center for Sleep and Chronobiology, Seoul National University, College of Medicine and Hospital, Seoul, Korea, Republic of, [3]Dongguk University, College of Medicine, Seoul, Korea, Republic of

P20.51 **Neuronal maturation in the hippocampal dentate gyrus via chronic oral administration of Artemisa annua extract is independent of cyclooxygenase 2 signaling pathway in diet-induced obesity mouse model**

PAN SOO KIM[1], DONG-HWA CHOI[1], SANG-KYU PARK[3], HYEOK JIN KWON[1], SUN SHIN YI*[2]
[1]Biocenter, Gyeonggido Business & Science Accelerator, Suwon, Korea, Republic of, [2]Departments of Biomedical Laboratory Science College of Medical Sciences, Soonchunhyang University, Asan, Korea, Republic of, [3]Medical Biotechnology, College of Medical Sciences, Soonchunhyang University, Asan, Korea, Republic of

P20.52 **Rodent side-bias models for learning tasks**

YOUNGJO SONG[1], JERALD KRALIK[1], SOL PARK[2], IL-HWAN CHOE[2], HEE-SUP SHIN[2], JAESEUNG JEONG*[1]
[1]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [2]Institute for Basic Science (IBS), Daejeon, Korea, Republic of

P20.53 **Individual differences in adaptive threat learning are associated with differential c-Fos expression in medial prefrontal cortex**

JINGCHU HU[1], XIAOYI FENG[1], LUYAO WU[1], CHENG LONG*[1]
[1]School of Life Sciences, South China Normal University, Guangzhou, China

P20.54 **Short-term effect of propofol on mice sleep pattern**

KYUNG JIN SEO[1], EUN JI CHEONG*[1]
[1]Yonsei Univ, seoul, Korea, Republic of

P20.55 **Glutamine supplementation ameliorates chronic stress-induced mild cognitive impairment of mice**

JI HYEONG BAEK[1], HYEONWI SON[1], JAE SOON KANG[1], HYUN JOON KIM*[1]
[1]Department of Anatomy and Convergence Medical Sciences, Bio Anti-Aging Medical Research Center, Institute of Health Sciences, School of Medicine, Gyeongsang National University, Jinju 52727, Gyeongnam, Korea, Republic of

P20.56 **Mismatch responses for sound sequence in the songbird auditory forebrain**

CHIHIRO MORI[1], KAZUO OKANOYA*[1]
[1]Dept Life Sci, Grad Sch Arts & Sci, Univ of Tokyo, Tokyo, Japan

P20.57 **Effect of low dose radiation on Cognition, Cortisol, Serotonin and Antioxidant status**

MAHESH BEKAL*[1], LUE SUN[2], SUSUMU UENO[3], TAKASHI MORITAKE[1]
[1]Department of Radiological Health Science, University of Occupational and Environmental Health, Kitakyushu, Japan, [2]Health Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, [3]Department of Occupational Toxicology, University of Occupational and Environmental Health, Kitakyushu, Japan

P20.58 **A mouse behavioral paradigm for probing ensemble summary representation**

YOUNG-BEOM LEE[1], YEE-JOON KIM*[1], DOYUN LEE*[1]
[1]Institute for Basic Science, Daejeon, Korea, Republic of

P20.59 **Bilingual lexical processing and cross-linguistic interaction : a behavioral and fMRI Study**

SOHYEON JEON[1], KYOUNGMIN LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P20.60 **Analysis of cell diversity in human and mouse basal ganglia by single-cell RNA sequencing**

FENGJIAO LI[1], MOHAMMAD IMAM HASAN BIN ASAD[2], XIANGSHAN YUAN[1], WEIWEI XIAN[1], QIONG LIU[1], WENSHENG LI[1], GUOMIN ZHOU[1], EDWIN WANG[2], LINYA YOU*[1]
[1]Department of Human Anatomy & Histoembryology, School of Basic Medical Sciences, Fudan University, Shanghai, China, [2]University of Calgary, Cumming School of Medicine, Calgary, Alberta, Canada, Alberta, Canada

P20.61 **Endothelium-derived Semaphorin 3G regulates cognitive function**

DANYANG CHEN[1], NINGHE SUN[2], CHAO TAN[2], NANNAN LU[2], FENG HAN*[1]

[1]College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, China, China, [2]College of Pharmaceutical Sciences, Zhejiang University , Hangzhou,China, China

P20.62 **Age-related loss of pattern separation capabilities in female Sprague-Dawley rats**

GUSTAVO MOREL*[1], MARTINA CANATELLI MALLAT[1], PRISCILA CHIAVELLINI[1], MARIANNE LEHMANN[1], RODOLFO GOYA[1]

[1]Biochemistry Research Institute of La Plata "Professor Doctor Rodolfo R. Brenner" (INIBIOLP), La Plata, Argentina

P20.63 **Role of environmental enrichment in locomotion, anxiety, memory and social interaction of Wistar rats under chronic treatment of methylphenidate**

LAURA HERRERA-ISAZA*[1], KAREN CORREDOR[2], FERNANDO CARDENAS[2], SANTIAGO ZARATE[2], ANGELA GOMEZ[2]

[1]Universidad de Los Andes, Bogota, Colombia, [2]Universidad de los Andes, Bogota, Colombia

P20.64 **Dopamine-dependent modulation of memory formation in the hippocampus**

JEONGRAK PARK[1], YONG-SEOK OH*[1]

[1]DGIST, Daegu, Korea, Republic of

P20.65 **Investigating the effects of air pollutant nanoparticles on the onset or progression of Alzheimer's disease**

CHARLOTTE FLEMING[1], CINDY GUNAWAN[2], MOJTABA GOLZAN[3], FRASER TORPY[4], PETER IRGA[5], KRISTINE MCGRATH*[1]

[1]School of Life Sciences, University of Technology Sydney, Sydney, Australia, [2]ithree Institute of Infection, Immunity and Innovation, University of Technology Sydney, Sydney, Australia, [3]Vision Science Group, Graduate School of Health (Orthoptics Discipline), University of Technology Sydney, Sydney, Australia, [4]School of life Sciences, University of Technology Sydney, Sydney, Australia, [5]School of Life Sciences and Centre for Green Technology, School of Civil and Environmental Engineering, University of Technology Sydney, Sydney, Australia

P20.66 **Effects of repeated trauma on functional brain network in mediating posttraumatic stress symptoms of firefighters**

SUJUNG YOON[1, 2], JUNGYOON KIM[1, 2], GAHAE HONG[1], SUJI LEE[1, 2], EUNJI HA[1, 2], HAEJIN HONG[1, 2], YOONJI JOO[1, 3], IN KYOON LYOO*[1, 2, 3]

[1]Ewha Brain Institute, Ewha W. University, [2]Department of Brain and Cognitive Sciences, Ewha W. University, [3]Graduate School of Pharmaceutical Sciences, Ewha W. University

P20.67 **Mao-b-dependent gaba in the hippocampal reactive astrocytic induces cognitive impairment in animal model of rheumatoid arthritis**

WOOJIN WON[1], SANG YOUN JUNG[2], C.JUSTIN LEE*[1]

[1]Institute for Basic Science (IBS) and KU-KIST, Daejeon and Seoul, Korea, Republic of, [2]CHA University, Seongnam, Gyeonggi-do, Republic of Korea, Gyeonggi-do, Korea, Republic of

P20.68 **Sociocognitive motives mediating human social knowledge sharing behavior, gossip**

JEUNGMIN LEE[1], JERALD KRALIK[1], JAESEUNG JEONG*[1]

[1]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of

P20.69 **Quantitative EEG and subjective evaluations of daily news stories after an association task of smart-device pictures and emotion words**

HYE-JIN KIM[1], TAEJUN LEE[2], SUNG-PHIL KIM[2], SANG HEE KIM*[1]

[1]Korea University, Seoul, Korea, Republic of, [2]Ulsan Naitional Institute of Science and Technology (UNIST), Ulsan, Korea, Republic of

P20.70 **Differential relationship between prefrontal and visual representations in emotional and neutral encoding**

DOYOUNG PARK[1], TAEHYUN KIM[1], SUE-HYUN LEE*[1, 2]

[1]Department of Bio and Brain Engineering, College of Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [2]Program of Brain and Cognitive Engineering, College of Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P20.71 **Functional connectivity between the DMPFC and VLPFC predicts the resolution of emotional conflict arising from the preceding emotional event**

SHIN AH KIM[1], SANG HEE KIM*[1]

[1]Korea University, Seoul, Korea, Republic of

P20.72 **Prefrontal cortex activity measured by fNIRS in componential episodic memory task**

JUNG HAN SHIN[1], SANG AH LEE*[1]

[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P20.73 **Subjective memory complaints and mild cognitive decline in Peruvian population: A neuropsychological and neurophysiological approximation**

BRENDA NADIA CHINO VILCA*[1, 2], JONATHAN ZEGARRA-VALDIVIA[3], LUDWING PAREDES[4], ROSANGELA CAMLLA[4], CARMEN PAREDES[4], ROXANA CASTILLO[4], FERNANDO MAEZTÚ[5]

[1]Universidad Nacional de San Agustín de Arequipa- Perú / Centro de Tecnología Biomédica (Madrid- España), Universidad Autónoma de Barcelona, Arequipa, Peru, [2]Universidad Nacional de San Agustín de Arequipa- Perú, Centro de Tecnología Biomédica (Madrid- España), Universidad Autónoma de Barcelona, Arequipa, Peru, [3]Universidad Nacional de San Agustín de Arequipa - Perú / Cajal Institute - Spain, Madrid, Spain, [4]Universidad Nacional de San Agustín de Arequipa, Arequipa, Peru, [5]Centro de Tecnología Biomédica (Madrid- España), Madrid, Spain

P20.74 **Calorie intake and cognitive function in the elderly: data from the Korean Frailty and Aging Cohort Study (KFACS)**

JONG-MIN PARK[1], JOOHEE LEE[1], YOONJU KIM[1], CHANG WON WON[2], YOUN-JUNG KIM*[1]

[1]College of Nursing Science, Kyung Hee University, Seoul, Korea, Republic of, [2]Elderly Frailty Research Center, Department of Family Medicine, College of Medicine, Kyung Hee University, Seoul, Korea, Republic of

P20.75 **Effects of maternal obesity and hypoxic-ischemic brain injury on behavioural outcomes in offspring**

BHARTI BISWAS[1], VALSAMMA EAPEN[3], MARGARET MORRIS[2], NICOLE JONES*[2]

[1]M.Sc, Department of Pharmacology, School of Medical Sciences, UNSW Sydney, NSW, Australia, Australia, [2]PhD, Department of Pharmacology, School of Medical Sciences, UNSW Sydney, NSW, Australia, Australia, [3]PhD, School of Psychiatry, UNSW Sydney, NSW, Australia, Australia

P20.76 **Representations of associative memory in the hippocampus and the association cortex during cued recall**

JOONYOUNG KANG[1, 2], SUE-HYUN LEE*[1, 2]

[1]Department of Bio and Brain Engineering, College of Engineering, KAIST, Korea, Repulic of, [2]Program of Brain and Cognitive Engineering, College of Engineering, KAIST, Korea, Repulic of

P20.77 **Differential change of light and deep NREM sleep by thalamic PLCβ4**

JOOHYEON HONG[1], GO EUN HA[1], HANKYUL KWAK[1], YELIN LEE[1], HYEONYEONG JEONG[1], PANN-GHILL SUH[2], EUNJI CHEONG*[1]

[1]Yonsei Univ, Seoul, Korea, Republic of, [2]Unist of Science and Technology, Ulsan, Korea, Republic of

P20.78 **Measuring trust with information gathering behavior: speed of trust formation and its stability.**

JEONGEUN LEE[1], KYOUNG-MIN LEE*[1]

[1]program in cognitive science, Seoul nat'l university, seoul, Korea, Republic of

P20.79 **Dissociable neural signatures of prefrontal cortex for subjective and objective memory performance**

YUJIN RAH[1], JUNG HAN SHIN[1], SANG AH LEE*[1]
[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P20.80 **Quantitative analysis of maternal behavior in the long arm octopus, *Octopus minor***

SEONMI JO*[1], KI HYUN KIM[1], SEUNG-HYUN JUNG[1], HA YEUN SONG[1], CHUN CHEOL KIM[2], KYEONG SIG LEE[2], YUN SEOL KIM[2], HYE SUCK AN[3]
[1]Department of Genetic Resources Research, National Marine Biodiversity Institute of Korea, Seocheon, Korea, Republic of, [2]Resources Creation Research Institute, Jeollanam-do Institute of Ocean & Fisheries Technology, Sinan, Korea, Republic of, [3]National Marine Bio-Resources and Information Center, National Marine Biodiversity Institute of Korea, Seocheon, Korea, Republic of

P20.81 **Regulation of memory trace by a component of Radix Polygalae in fear conditioning model**

GAEUL HAN*[1], HYUNWOO PARK[2], HUI JIN[2], JEONGHUN LEE[1], WOORI BAE[1], JUNHYUK CHOI[1], SEUNG-YUN CHA[1], SUNGHO MAENG[1]
[1]Graduate School of East-West Medical Science, Kyung-Hee University,, Yongin, Korea, Republic of, [2]Center for Nutraceutical and Pharmaceutical Materials, Myongji University, Yongin, Korea, Republic of

P20.82 **Hunger makes fish winner in the social conflict through modulation in the habenula-IPN pathway**

HARUNA NAKAJO[1], MING-YI CHOU[2], MASAE KINOSHITA[1], LIOR APPELBAUM[3], HITOSHI OKAMOTO*[1]
[1]Lab. for Neural Circuit Dynamics for Decision Making, RIKEN Center for Brain Science, Tokyo, Japan, [2]Department of Life Science, National Taiwan University, Taipei, Taiwan, China, [3]Faculty of Life Sciences, Bar-Ilan University, Ramat-Gan, Israel

P20.83 **High ω3-polyunsaturated fatty acids in fat-1 mice prevent scopolamine-induced memory impairment through BDNF signaling**

DABI KIM[1], EUNJI KIM[1], TAE WOONG HWANG[1], YU-ON JEONG[3], JIN YOUNG JEONG[4], DAE EUN CHOI[5], KYUNG AH YOON[6], JWA-JIN KIM*[2]
[1]Department of Medical Science, Chungnam national university, Daejeon 35015, Korea, Republic of, [2]Cancer Research Institute, Department of Nephrology, School of Medicine, Chungnam National University, Daejeon 35015, Korea, Republic of, [3]Cancer Research Institute, School of Medicine, Chungnam National University, Daejeon 35015, Korea, Republic of, [4]Department of Medical Science, Department of Nephrology, School of Medicine, Chungnam National University, Daejeon 35015, Korea, Republic of, [5]Department of Nephrology, School of Medicine, Chungnam National University, Daejeon 35015, Korea, Republic of, [6]Department of Clinical Laboratory Science, Daejeon Health Sciences College, Daejeon 34504, Korea, Republic of

P20.84 **Neuromodulatory control of social behavior in amygdala**

JEONGTAE KWON[1], ALEC SHERFFIELD[1], JINGXUAN FAN[1], DANIEL CHO[1], SHIVANI BIGLER[1], GLORIA CHOI*[1]
[1]Picower Institute of Learning and Memory, MIT, Cambridge, MA, USA

Development

P21.01 **Abnormal cerebellar development and gait in mice with a cerebellum-specific deletion of the α subunit of the heterotrimeric Go protein**

JUNG-MI CHOI[1], HYE LIM CHA[1], HUY-HYEN OH[1], NARAYAN BASHYAL[1], SUNG-SOO KIM[1], LUTZ BIRNBAUMER[2], HAEYOUNG SUH-KIM*[1]
[1]Ajou University School of Medicine, Suwon, Korea, Republic of, [2]School of Medical Sciences, Catholic University of Argentina, Buenos Aires, Argentina

P21.02 **ADHD-related developmental alterations in functional connectivity**

HYEJIN KANG[1], JOHANNA INHYANG KIM[3], YOUNGMIN HUH[4], HYEKYOUNG LEE[4], SEUNGGYUN HA[4], JUNG LEE[2], JAE-WON KIM[2], DONG SOO LEE[5], BUNG-NYUN KIM*[2]
[1]BK21 Plus Global Translational Research on Molecular Medicine and Biopharmaceutical Sciences, Seoul National University, Seoul, Korea, Republic of, [2]Division of Child and Adolescent Psychiatry, Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Department of Neuropsychiatry, Hanyang University Hospital, Seoul, Korea, Republic of, [4]Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Korea, Republic of, [5]Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, and College of Medicine or College of Pharmacy, Seoul National University, Seoul, Korea, Republic of

P21.03 **Particular patterns of stimulation induce BDNF promoter activity preferentially in developing cortical neurons.**

YUMI MIYASAKA[1], NOBUHIKO YAMAMOTO*[1]
[1]Graduate School of Frontier Biosciences, Osaka University, Suita city, Japan

P21.04 **Thyroid hormones and their derivatives promote dopamine neuron differentiation**

EUN-HYE LEE[1], SANG-MI KIM[1], CHANG-HWAN PARK*[1]
[1]Hanyang University, Seoul, Korea, Republic of

P21.05 **Common regulatory targets of NFIA and NFIX mediate postnatal cerebellar development**

TRACEY HARVEY*[1], JAMES FRASER[1], ALEXANDRA ESSEBIER[1], ALEXANDER BROWN[2], RAUL DAVILA[1], MIKAEL BODEN[1], RICHARD GRONOSTAJSKI[3], MICHAEL PIPER[1]
[1]University of Queensland, Brisbane, Australia, [2]Stanford University, Stanford, USA, [3]State University of New York at Buffalo, Buffalo, USA

P21.06 **Selenium impact assessment on brains of prenatally lead exposed Wistar rats.**

BONIFACE ECHEFU*[1], SUNDAY MUSA[1], UDUAK UMANA[1], WILSON HAMAN[1], PAUL ABEL[1]
[1]Department of Human Anatomy, Faculty of Basic Medical Sciences, College of Medical Sciences, Ahmadu Bello University, Zaria., Zaria, Nigeria

P21.07 **Chloride channel-4 knockout mice show delayed neuronal differentiation and neurodevelopment**

YENI KIM*[1], SONGHEE JEON[2], JINJU HAN[3], HAJIN JEONG[1], BOM-LEE LEE[1], SEONGMI LEE[1], SOHEE JUNG[2]
[1]National Center for Mental Health, Seoul, Korea, Republic of, [2]Chonnam National University, Gwangju, Korea, Republic of, [3]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P21.08 **Neuroligin-3 regulates dendritic development in cultured neuron by modulating Akt/mTOR signaling**

JIABIN FENG[1], RUI ZHENG[1], JUNYU XU*[1]
[1]Zhejiang University, Hangzhou, China

P21.09 **Time-course changes in neuronal proliferation and incorporation in avian, amphibian and mammalian brains**

AMADI OGONDA IHUNWO*[1], PILANI NKOMOZEPI[2], PEDZISAI MAZENGENYA[1]
[1]University of the Witwatersrand, Johannesburg, South Africa, [2]University of Johannesburg, Johannesburg, South Africa

P21.10 **Identification of the mechanisms for the development of oligodendrocytes in the zebrafish central nervous system**

HWAN-KI KIM[1], SUHYUN KIM[1], DONG-WON LEE[1], YONGBO SEO[1], EUNMI KIM[1], INYOUNG JEONG[1], HAE-CHUL PARK*[1]
[1]Department of Biomedical Sciences, Korea University, Seoul, Republic of Korea, Ansan-si, Korea, Republic of

P21.11 **Roles of *Nk2.1/scro* homeobox gene in the development of optic lobe neuroblast in *Drosophila melanogaster***

JISOO LEE[1], SHIN-YOUNG PARK[2], SIUK YOO*[1]
[1]Yeungnam University, Gyeongsan-si, Gyeongbuk, Korea, Republic of, [2]Yeungnam University, Gyeongsan-si, Gyeongbuk, Korea, Republic of

P21.12 **Ectopic expression of HRAS gain-of-function mutation resulted in neurological abnormalities associated with nevus sebaceous syndrome in developing mouse brain**

KIHURN SO[1], SEUNG TAE BAEK*[1]
[1]Pohang University of Science and Technology, Pohang, Korea, Republic of

P21.13 **Developmental mechanisms of nevus sebaceous syndrome caused by dysregulation of RAS/MAPK pathway**

YE EUN KIM[1], SEUNG TAE BAEK*[1]
[1]Pohang University of Science and Technology, Pohang, Korea, Republic of

P21.14 **Analysis of the mechanisms underlying injury-induced corticofugal projections by CRISPR/Cas9-mediated gene knock-out**

LEECHUNG CHANG*[1], NOBUHIKO YAMAMOTO[1]
[1]Osaka Univ, Grad Sch. Frontier Biosci., Suita-shi, Osaka-fu, Japan

P21.15 ***Mtss1*: a potential effector in Sema3E/Plexin-D1 signaling involving synaptogenesis in the striatum**

NAMSUK KIM[1], MI-HEE JUN[1], RI YU[1], YAN LI[1], JIN-YOUNG JEONG[1], JUNG-WOONG KIM[2], WON-JONG OH*[1]
[1]Neurovascular Biology Lab, Korea Brain Research Institute (KBRI), DAEGU, Korea, Republic of, [2]Department of Life Science, College of Natural Sciences, Chung-Ang University, Seoul, Korea, Republic of

P21.16 **Development of sensory gating mechanism in VPA-induced rat model of autism spectrum disorder**

SUEDA TUNCAK*[1], BULENT GOREN[1], PİNAR OZ[2]
[1]Bursa Uludag University, Bursa, Turkey, [2]Uskudar University, Istanbul, Turkey

P21.17 **Regulation of microtubule dynamics by Gcap14 coordinate neurodevelopmental processes**

DONGJIN MUN[1], EUNBYUL CHO[1], JINYEONG YOO[1], YUBIN WON[1], SANG KI PAR*[1]
[1]POSTECH, POHANG, Korea, Republic of

P21.18 **ErbB3 binding protein 1 (EBP1) is an essential regulator for embryonic development, controlling SUV39H1/DNMT1 gene-silencing unit**

HYO RIM KO[1, 2], INWOO HWANG[1, 2], EUN-JU JIN[1, 2], TAEGWAN YUN[1, 2], DONGRYEOL RYU[1], JONG-SUN KANG[1, 2, 3], JOO-HO SHIN[1, 2, 3], AND JEE-YIN AHN*[1, 2, 3]
[1]Department of Molecular Cell Biology, [2]Single Cell Network Research Center, Sungkyunkwan University School of Medicine, Suwon 16419, Korea, [3]Samsung Biomedical Research Institute, Samsung Medical Center, Seoul 06351, Korea

P21.19 **The identification of ubiquitin proteasome system in the developmental disease as Fragile X syndrome**

KEY-HWAN LIM[1], BYUNG GEUN HA[1], JUNG YOON HEO[1], YU-JIN JANG[1], TAE-SHIN PARK[1], SUNG-JIN JEONG*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P21.20 **Extraciliary roles of the ciliopathy protein JBTS17 in mitosis and neurogenesis**

HYOWON HONG[1], KWANGSIC JOO[3], SANG MIN PARK[1], JIMYUNG SEO[2], MIN HWAN KIM[2], EUNBIE SHIN[1], HAE IL CHEONG[4], JEONG HO LEE[2], JOON KIM*[2]
[1]Biomedical Science and Engineering Interdisciplinary Program, KAIST, Daejeon, Korea, Republic of, [2]Graduate School of Medical Science and Engineering, KAIST, Daejeon, Korea, Republic of, [3]Department of Opthalmology, Seoul National University College of Medicine, Seoul National University Bundang Hospital, Seongnam, Korea, Republic of, [4]Research Coordination Center for Rare Disease, Seoul National University Hospita, Seoul, Korea, Republic of

P21.21 **Differential expression profiling of exosomal mitochondria components in the developmental disorder**

BYUNG GEUN HA[1], JUNG YOON HEO[1], YU-JIN JANG[1], TAE-SHIN PARK[1], KEY-HWAN LIM[1], SUNG-JIN JEONG*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P21.22 **JAK3 modulates the migration of gabaergic interneurons during development of murine cortex**

A YOUNG KIM[1], JEE MIN CHUNG[1], EUN JOO BAIK*[1]
[1]Department of Physiology, Ajou University school of medicine, Suwon, Korea, Republic of

P21.23 **FAM19A5 is a rostral-caudal organizer in the mouse cortex development**

DASOM KIM[1], SEUNG HEE CHOI[1], JAEMYUNG JANG[1], YOUNGSHIK CHOE*[1]
[1]KBRI (Korea Brain Research Institute), Daegu, Korea, Republic of

P21.24 **Effects of Rotenone, a Mitochondrial Inhibitor, on Cultured Neural Stem Cells of Mouse Subventricular Zone**

KI YOUB PARK*[1], MAN SU KIM[2]
[1]Korea Science Academy of KAIST, Busan, Korea, Republic of, [2]Inje University, Kim Hae, Korea, Republic of

P21.25 **Initiation of primary neurogenesis in *Xenopus*: Inhibition of BMP signaling and/ or inductive signaling**

ZOBIA UMAIR[1], SEUNG HWAN LEE[3], JAEBONG KIM*[2]
[1]zobia.umair@hallym.ac.kr, Chuncheon, Korea, Republic of, [2]Professor, Chucheon, Czech Republic, [3]hallym University, Chuncheon, Czech Republic

P21.26 **Interaction of Ankycorbin and Tara regulates dendritic spine dynamics**

SOO JEONG KIM[1], YOUNGSIK WOO[1], SU-JIN NOH[1], YUBIN WON[1], EUN BYUL CHO[1], SANG KI PARK*[1]
[1]Pohang university of science and technology, Pohang, Korea, Republic of

P21.27 **Requirement of inputs from sequentially developed parallel fibers for cerebellar organization**

HEEYOUN PARK[1], TAEGON KIM[2], YUKIO YAMAMOTO[2], KEIKO TANAKA-YAMAMOTO*[1]
[1]KIST (Korea Institute of Science and Technology), UST (Korea University of Science and Technology), Seoul, Korea, Republic of, [2]KIST (Korea Institute of Science and Technology), Seoul, Korea, Republic of

P21.28 **The role of spatial boundaries in episodic memory in young children**

JIYUN KIM[1], YUJIN RAH[2], SANG AH LEE*[2]
[1]Korea University, Seoul, Korea, Republic of, [2]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

Disorders of the nervous system

P22.01 **Resting-state functional connectivity of the raphe nucleus as a predictor of the response to selective serotonin reuptake inhibitors in patients with obsessive-compulsive disorder**

MINAH KIM[1], SEOYEON KWAK[3], YOUNGWOO YOON[4], YOO BIN KWAK[3], TAEKWAN KIM[3], TAE YOUNG LEE[2], JUN SOO KWON*[2]

[1]Seoul National University Hospital, Seoul, Korea, Republic of, [2]Department of Neuropsychiatry, Seoul National University Hospital, Seoul, Korea, Republic of, [3]Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of, [4]Department of Psychiatry, Washington University in St. Louis, St. Louis, USA

P22.02 **Postsynaptic density protein DLG2 has a novel role in cortical neuronal development relevant to schizophrenia aetiology**

BRET SANDERS[1], TOM STEWARD[2], DANIEL WHITCOMB[2], ANDREW POCKLINGTON[1], EUNJU JENNY SHIN*[1]

[1]Cardiff University, Cardiff, UK, [2]The University of Bristol, Bristol, UK

P22.03 **Induction of GDNF and GFRα-1 following to AAV1-Rheb(S16H) administration in the hippocampus *in vivo***

MIN-TAE JEON[1], SANG RYONG KIM*[1]

[1]Kyungpook National University, Daegu, Korea, Republic of

P22.04 **"D-cell hypothesis of schizophrenia" indicates mechanisms of progressive pathology of schizopnrenia**

KEIKO IKEMOTO*[1]

[1]Iwaki City Medical Center, Iwaki City, Japan

P22.05 **Role of nucleus accumbens core in alleviation of neuropathic pain induced by chronic compression of DRG**

ELINA KC[1], HYEONG CHEOL MOON[1], SANG HWAN HYUN[3], YOUNG SEOK PARK*[2]

[1]Department of Neuroscience, Chungbuk National University, Cheongju, Korea, Republic of, [2]Department of Neurosurgery, Chungbuk National University Hospital, Cheongju, Korea, Republic of, [3]Department of Veterinary Medicine, Chungbuk National University, Cheongju, Korea, Republic of

P22.06 **Optogenetic stimulation in motor cortex and PKCγ knockdown at dorsal root ganglions alter hyperalgesia behaviors in chronic compressed DRG pain rat model**

JAISAN ISLAM[1], ELINA KC[1], HYEONG CHEOL MOON[1], KYOUNG HA SO[3], SANG HWAN HYUN[3], YOUNG SEOK PARK*[2]

[1]Department of Neuroscience, Chungbuk National University, Cheongju, Korea, Republic of, [2]Department of Neurosurgery, Chungbuk National University Hospital, Cheongju, Korea, Republic of, [3]Department of Veterinary Medicine, Chungbuk National University, Cheongju, Korea, Republic of

P22.07 **Roles of pericytes in the development of schizophrenia**

SEUNGEUN YEO[1], JONGHYUK YOON[1], HYUN JIN JUNG[1], YURA CHOI[1], DASOM KIM[1], SEUNG HEE CHOI[1], SU-JIN NOH[2], YOUNGSIK WOO[2], SANG KI PARK[2], YOUNGSHIK CHOE*[1]

[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Pohang University of Science and Technology, Pohang, Korea, Republic of

P22.08 **Drd1 dentate gyrus neurons are central for learning deficits of Alzheimer's disease mice**

YURA CHOI[1], SEUNG HEE CHOI[1], DASOM KIM[1], MI SUK LEE[1], YOUNGSHIK CHOE*[1]

[1]KBRI (Korea Brain Research Institute), Daegu, Korea, Republic of

P22.09 **Amyloid clearance by oligodendrocyte-mediated microglial activation**

SOONBONG BAEK[1], SEUNGEUN YEO[1], YOUNGSHIK CHOE*[1]

[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P22.10 **Cell type-specific deletion of *Shank3* exons 14–16 in mice differentially affects synaptic and behavioral phenotypes**

TAESUN YOO[1], HEEJIN CHO[1], JISEOK LEE[2], HARAM PARK[1], YE-EUN YOO[1], ESTHER YANG[3], JIN YANG KIM[3], HYUN KIM[3], EUNJOON KIM*[2]

[1]KAIST, Daejeon, Korea, Republic of, [2]IBS, Daejeon, Korea, Republic of, [3]Korea University, Seoul, Korea, Republic of

P22.11 **The effect of continuous high intensity white noise on cognitive functions, emotional sphere and the structure/ultrastructure of auditory and emotion-related brain regions in female rats**

MZIA ZHVANIA*[1], NINA GOGOKHIA[1], NADEZHDA JAPARIDZE[2], NINO POCHKHIDZE[1]

[1]Ilia State University, Tbilisi, Georgia, [2]I. Beritashvili Center of Experimental Biomedicine and New Vision University, Tbilisi, Georgia

P22.12 **Assessment of the effect of triclosan on neuronal cells cause neurological disorders**

PARUL KATIYAR[1], SOMESH BANERJEE[3], PARTHA ROY*[2]

[1]IIT Roorkee, ROORKEE, India, [2]IIT ROORKEE, Haridwar, India, [3]IIT ROORKEE, ROORKEE, India

P22.13 **Sociability and cognitive behaviors improved in SOB administrated model rats induced by ibotenic acid.**

HYEMI LEE[1], EUNJUN SEO[1], YUNHEE KIM KWON*[1]

[1]Kyunghee University, Seoul, Korea, Republic of

P22.14 **Anxiolytic effect of exercise against repeated restraint stress through 5-HT$_{2A}$-mediated suppression of the adenosine A$_{2A}$ receptor in the basolateral amygdala**

YEA-HYUN LEEM[1], HEE-SUN KIM*[1]

[1]Department of Molecular Medicine and Tissue Injury Defense Research Center, School of Medicine, Ewha Womans University, Seoul, Korea, Republic of

P22.15 **Anti-inflammatory and neuroprotective effects of PDE-10 inhibitor in neuroinflammation and Parkinson's disease animal models**

JUNG-EUN PARK[1], DO-YEON KIM[1], HEE-SUN KIM*[1]

[1]Department of Molecular Medicine and Tissue Injury Defense Research Center, School of Medicine, Ewha Womans University, Seoul, Korea, Republic of

P22.16 **Lipid profiling of parkin-mutant human skin fibroblasts**

ANGELA CORCELLI*[1], SIMONA LOBASSO[1], PAOLA TANZARELLA[1], DANIELE VERGARA[2], MICHELE MAFFIA[2], TIZIANA COCCO[1]

[1]University of Bari A Moro, Bari, Italy, [2]University of Salento, Lecce, Italy

P22.17 **Autophagy regulates elongation of primary cilia in Rk1- treated neuroblastoma cell**

SUNGKUN CHUN*[1], JUNG-MI OH[1]

[1]Department of Physiology, Chonbuk National University Medical School, Jeonju, Korea, Republic of

P22.18 **A novel de novo ATP1A3 mutation in motor neuron disease mimicking rapid onset dystonia parkinsonism**

SU MIN LIM[1], YOUNG-EUN KIM[1], JINSEOK PARK[1], MINYEOP NAHM[1], HAE-CHUL PARK[2], CHANG-SEOK KI[3], KI-WOOK OH[4], SEUNG HYUN KIM*[1]

[1]Hanyang University, seoul, Korea, Republic of, [2]Hanyang University, kyunggi, Korea, Republic of, [3]green cross genome, kyunggi, Korea, Republic of, [4]hanyang university, seoul, Korea, Republic of

P22.19 **Saffron inhibits astrogliosis and glial scar after chronic cerebral ischemia/reperfusion injury in rats**

QI ZHANG[1], YILU YE[1], XINYING ZHU[1], YITING QIU[1], YUEPING YU*[1]
[1]Hangzhou Medical College, Hangzhou, China

P22.20 **Evaluation of the DNA methylation of brain-derived neurotrophic factor (*bdnf*) gene promoter I as a biomarker in psychiatric disorders**

JUDY SNG*[1], TZENG SUAN LEE[1], SHUJUAN PUANG[2], SOK HONG KHO[2], QIAN HUI CHEW[3], JIE YIN YEE[3], KANG SIM[3]
[1]National University of Singapore, Singapore, Singapore, [2]Nanyang Technological University, Singapore, Singapore, [3]Institute of Mental Health, Singapore, Singapore

P22.21 **Correlation between in vivo GABA-A/benzodiazepine receptor availability and genetic liability in unaffected relatives of schizophrenia: A [11C]flumazenil PET study**

JUNHEE LEE[1], BRYAN YOUNGWOO YOON[3], KANG IK KEVIN CHO[4], SEONGHO SEO[5], JAE SUNG LEE[6], JAE MIN JEONG[6], MINAH KIM[2], TAE YOUNG LEE[2], JUN SOO KWON*[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Department of psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Department of psychiatry, Washington University in St. Louis, MO, USA, [4]Institute of human behavioural medicine, SNU-MRC, Seoul, Korea, Republic of, [5]Department of neuroscience, Gachon University College of Medicine, Incheon, Korea, Republic of, [6]Department of nuclear medicine, Seoul National University College of Medicine, Seoul, Korea, Republic of

P22.22 **PICALM- and mTORC1-mediated early endosomal disturbance upregulates Aβ generation under high glucose conditions**

CHANG WOO CHAE[1], HYUN JIK LEE[2], GEE EUHN CHOI[2], YOUNG HYUN JUNG[2], JUN SUNG KIM[2], JAE RYONG LIM[2], SEO YIHL KIM[2], IN KOO HWANG[2], JE KYUNG SEONG[2], HO JAE HAN*[1]
[1]Seoul national university, seoul, Korea, Republic of, [2]Seoul national university, Seoul, Korea, Republic of

P22.23 **Effect of glucocorticoid on mitophagy inhibition in hippocampal neurons and subsequent progression of dementia in stress-induced mouse via repressing PGC1α-NIX axis**

GEEEUHN CHOI[1], HO JAE HAN*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P22.24 ***ANXA11* mutations in ALS cause dysregulation of calcium homeostasis and stress granule dynamics**

MINYEOP NAHM[1], SU MIN LIM[3], MIN-YOUNG NOH[2], KI-WOOK OH[2], CHANG-SEOK KI[4], SEUNG HYUN KIM*[2]
[1]Hanyang University, Seoul, Korea, Republic of, [2]Department of Neurology, College of Medicine, Hanyang University, Seoul, Korea, Republic of, [3]Biomedical Research Institute, Hanyang University, Seoul, Korea, Republic of, [4]Green Cross Genome Corporation, Yongin, Korea, Republic of

P22.25 **Therapeutic effects of gene modified mesenchymal stem cells in chronic stroke**

SUBASH MARASINI[1], SEUNG-WAN YOO[1], DA YOUNG CHANG[1], SUNG-SOO KIM[1], HAYOUNG SUH-KIM*[1]
[1]Department of Anatomy, Ajou University, Suwon, Korea, Republic of

P22.26 **Acupuncture alleviates chronic stress induced depressive-like symptoms through central neural mechanism**

MIN-JU LEE[1], SEUL-KI WON[1], UK NAMGUNG[1], JEEYOUN JUNG[2], SO-MIN LEE[2], JI-HYE SONG[1], GEUN-HYANG EOM[1], JI-YEUN PARK*[1]
[1]Daejeon University, Daejeon, Korea, Republic of, [2]Korea Institute of Oriental Medicine (KIOM), Daejeon, Korea, Republic of

P22.27 **Pharmacological inhibition of circadian nuclear receptor REV-ERBs recovers mood disorders in Parkinson's disease of mouse model**

JEONGAH KIM[1], MIJUNG CHOI[2], SANGWON JANG[2], DOYEON KIM[2], INAH PARK[2], WOONG SUN[3], GI HOON SON[3], HAN KYOUNG CHOE[2], KYUNGJIN KIM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of, [2]Daegu Gyeongbuk Institute of Science and Technology , Daegu, Korea, Republic of, [3]Korea university, Seoul, Korea, Republic of

P22.28 **Decrease CD4⁺ T cells O-GlcNAcylation level improves experimental autoimmune encephalomyelitis**

RANRAN HAN[1], XIAOFENG MA[2], JUNWEI HAO*[1]
[1]Tianjin Medical University Gerneral Hospital, Tianjin, China, [2]Tianjin Medical University General Hospital, Tianjin, China

P22.29 **Formation of vesicular amyloid plaques by loss-of-function of primary cilia and Ift88 function**

HYUN JIN JUNG[1], JAEMYUNG JANG[1], SEUNGEUN YEO[1], SEUNG HEE CHOI[1], YURA CHOI[1], DASOM KIM[1], YOUNGSHIK CHOE*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P22.30 **MPO-0029, a novel COX-2 inhibitor, alleviates lumbar spinal stenosis-induced mechanical allodynia**

JEE YOUN LEE[1], HAE YOUNG CHOI[1], CHAN SOL PARK[1], TAE YOUNG YUNE*[1]
[1]Kyunghee University, Seoul, Korea, Republic of

P22.31 **Slingshot-1 impairs the clearance of mitochondria and tau via p62**

DAVID KANG*[1], CENXIAO FANG[1], JUNG A WOO[1], TIAN LIU[1], SARA CAZZARO[1], XINGYU ZHAO[1]
[1]USF Health College of Medicine, Byrd Neuroscience Institute, Tampa, USA

P22.32 **Protective role of AEG-1 in nigral dopaminergic neurons *in vivo***

EUNJU LEEM[1], TAE YEON KIM[1], UN JU JUNG[2], SANG RYONG KIM*[1,3]
[1]School of Life Sciences, BK21 plus KNU Creative BioResearch Group, Kyungpook National University, Daegu 41566, Korea, [2]Department of Food Science and Nutrition, Pukyong National University, Busan 48513, Korea, [3]Brain Science and Engineering Institute, Kyungpook National University, Daegu 41944, Korea.

P22.33 **Over-expression of Ifnar1 and the neurogenic-to-gliogenic shift: a potential mechanism in Down syndrome brain**

KAI-LENG TAN*[1], QIWEN TAN[1], WEN TAN[1]
[1]Guangdong University of Technology, Guangzhou, China

P22.34 **Alterations of plasma lipid profile in schizophrenia**

DMITRY ZUBKOV*[1], ANNA TKACHEV[1], ALINA EGOROVA[1], ELENA STEKOLSCHIKOVA[1], ANNA VANYUSHKINA[1], PHILIPP KHAITOVICH[1]
[1]Skolkovo Institute of Science and Technology, Moscow, Russia

P22.35 **Enhancement of stroke recovery by DNMT inhibition**

IN-AE CHOI[1], JI HEE YUN[1], JI-HYE KIM[1], DONG-HEE CHOI*[1,2], JONGMIN LEE*[1,3]
[1]Center for Neuroscience Research, Institute of Biomedical Science and Technology, Konkuk University, Seoul, Korea, Republic of, [2]Department of Medical Science Konkuk University School of Medicine, Konkuk University, Seoul, Korea, Republic of, [3]Department of Rehabilitation Medicine, Konkuk University School of Medicine, Konkuk University, Seoul, Korea, Republic of

P22.36 **Conformational signaling of ASIC1a channel-mediated acidotic neuronal cell death**

XU TIAN-LE*[1]
[1]Collaborative Innovation Center for Brain Science, Department of Anatomy and Physiology, Shanghai Jiao Tong University School of Medicine, Shanghai, China

P22.37 **Changes in plasma levels of some specialized pro-resolving mediators, CD59, and IL-6 after ischemic and traumatic brain injuries in rats**

SHINHAE KANG[1], A RA KOH[2], SONG HEE LEE[2], JUN-SUB JUNG[1], SANG WON SUH[2], DONG-KEUN SONG*[1]
[1]Departments of Pharmacology, Hallym University College of Medicine, Chuncheon, Korea, Republic of, [2]Departments of Physiology, Hallym University College of Medicine, Chuncheon, Korea, Republic of

P22.38 **Subtyping autism: Can we predict treatment response in Autism Spectrum Disorder?**

VALSAMMA EAPEN*[1], NISHA MATHEW[2], AMANDA MAZZONI[2]
[1]University of New South Wales, Sydney, Australia, [2]UNSW Faculty of Medicine, Randwick, Australia

P22.39 **The dominant negative effect of Taiwanese APP mutation revealed by induced neuron from patient's iPSC**

TANIA DEVINA*[1], IRENE HAN-JUO CHENG[2]
[1]Program in Molecular Medicine, National Yang Ming University and Academia Sinica Taipei, Taiwan, Taipei, Taiwan, China, [2]Institute of Brain Science, National Yang Ming University, Taipei, Taiwan, Taipei, Taiwan, China

P22.40 **Small molecule lead discovery for ADHD using medicinal chemistry platform technology at NDDC, DGMIF**

GA YOUNG PARK[1], EUN BI KO[2], JIHEE KANG[2], SERI BAE[2], CHUN YOUNG IM[2], CHAN-YOUNG SHIN[3], KYUNG JA KWON[4], MINSOO SONG*[1]
[1]DGMIF, Deagu, Korea, Republic of, [2]DGMIF, Daegu, Korea, Republic of, [3]Department of Neuroscience, School of Medicine, Konkuk Univ., Seoul, Korea, Republic of, [4]Center for Neuroscience Research, Institute of Biomedical Science and Technology, Konkuk Univ., Seoul, Korea, Republic of

P22.41 **AMPA receptor-control essential for modulation of social behaviors**

CHILLY GAY REMONDE[1], JI-WOON KIM[1], EDSON LUCK GONZALES[1], KWANGHOON PARK[1], RI JIN KANG[1], CHIHYE CHUNG[1], CHAN YOUNG SHIN*[1]
[1]Konkuk University, Seoul, Korea, Republic of

P22.42 **Decreased expression of genes involved in axonal development in the frontal cortex of FKBP5 deficient mice**

KOEUL CHOI[1], JOONHEE LEE[1], HYO JUNG KANG*[1]
[1]Department of Life Science, Chung-Ang University, Seoul, Korea, Republic of

P22.43 **Gallic acid attenuates blood spinal cord barrier disruption by inhibiting Jmjd3 expression and activation after spinal cord injury**

CHAN SOL PARK[1], JEE YOUN LEE[1], HAE YOUNG CHOI[1], TAE YOUNG YUNE*[1]
[1]Kyung Hee University, Seoul, Korea, Republic of

P22.44 **Integrated analysis of gene expression profiles regulated by Gata1 in cortical neurons**

KOEUL CHOI[1], JUN GYOUNG PARK[1], HYO JUNG KANG*[1]
[1]Department of Life Science, Chung-Ang University, Seoul, Korea, Republic of

P22.45 **Neuroprotective effect of aquilariae lignum extract against glutamate-induced excitotoxicity in HT22 hippocampal cells**

SEUNG JU HWANG[1], CHANG-GUE SON*[1]
[1]Institiute of Traditional Medicine and Bioscience, Daejeon Oriental Hospital of Daejeon Univ., 1136 Dunsan-dong, seo-gu, Daejeon, Korea 35235, Korea, Republic of

P22.46 **Effect of chronic hypobaric hypoxia on the expression of Neuropeptide Y in an animal model of Parkinson's disease**

OSCAR NÚÑEZ*[1], ROY ANDRADE[1], LUIS AGUILAR[1]
[1]UPCH, Lima, Peru

P22.47 **Polymodal sensitivity of hTREK-1 channel to ischemia related factors**

SOURAJIT MUKHERJEE[1], SUJIT SIKDAR*[2]
[1]Indian Institute of Science, Bangalore, India, [2]Molecular Biophysics Unit, Indian Institute of Science, Bangalore, India

P22.48 **Role of adult hippocampal neurogenesis in the antidepressant effects of lactate**

PIERRE MAGISTRETTI[1], ANTHONY CARRARD[2], FREDERIC CASSE[3], SOPHIE BURLET-GODINOT[2], NICOLAS TONI[4], JEAN-LUC MARTIN*[2]
[1]KAUST, Thuwal, Saudi Arabia, [2]Center for Psychiatric Neurosciences, Lausanne University Hospital, Lausanne, Switzerland, [3]University of Lausanne, Lausanne, Switzerland, [4]University of Lausanne, Lausaanne, Switzerland

P22.49 **Autoantibodies to synapsin I in limbic encephalitis sequestrate cytosolic synapsin I and disrupt synaptic function**

ANNA ROCCHI*[1], FABIO BENFENATI[1]
[1]Istituto Italiano di Tecnologia, Genova, Italy

P22.50 **The physiological role of o-glcnacylation in the dopamine system**

BYEONG EUN LEE[1], HYUN-JIN KIM[2], HYE YUN KIM[2], HA-EUN LEE[2], JIEUN LEE[2], BYUNG-GYU KIM[3], KYUNGJAE MYUNG[3], PANN-GHILL SUH[4], JAE-ICK KIM*[1]
[1]School of Life Sciences, Ulsan National Institute of Science and Technology (UNIST), Ulsan 44919, Republic of Korea, Ulsan, Korea, Republic of, [2]School of Life Sciences, Ulsan National Institute of Science and Technology (UNIST), Ulsan 44919, Republic of Korea , Ulsan, Korea, Republic of, [3]Center for Genomic Integrity, Institute for Basic Science, Ulsan 44919, Republic of Korea, Ulsan, Korea, Republic of, [4]Korea Brain Research Institute (KBRI), Daegu 41062, Republic of Korea, Daegu, Korea, Republic of

P22.51 **Epileptiform activity reduced by lactate through HCA1 and GIRK channel activation in rat subicular neurons**

POOJA JORWAL[1], SUJIT SIKDAR*[1]
[1]Indian Institute of Science, Bangalore, India

P22.52 **Animal model for chronic fatigue syndrome: model evaluation and establishment**

JIN-SEOK LEE[1], CHANG-GUE SON*[1]
[1]Dunsan Hospital of Daejeon University, Daejeon, Korea, Republic of

P22.53 **Discovery of Disease-modifying Drug Inhibiting Alpha-synuclein Aggregation in Lewy Body Dementia**

KOHJI FUKUNAGA*[1], KAZUYA MATSUO[1], AN CHENG[1], YASUHARU SHINODA[1]
[1]Tohoku University Graduate School of Pharmaceutical Sciences, Sendai, Japan

P22.54 **The theory of dove-like particles**

SUN ZUODONG*[1]
[1]Ya'ou Brain Science Institute of Heilongjiang province, Harbin, China

P22.55 **Cell cycle molecule Cdc25A and its role in Parkinson's disease related neurodegeneration**

ANOY KUMAR DAS[1], SUBHAS BISWAS*[1]
[1]CSIR- Indian Institute of Chemical Biology, Kolkata, India

P22.56 **Characterization of molecular mechanism underlying A-to-I RNA editing defects in ALS**

SEUNGYEOL KIM[1], INJUN CHA[1], SUNGBAE LEE*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of

P22.57 **Survivin knockdown increased anti-cancer effect of Rh2 in human neuroblastoma cells**

JUNG-MI OH[1], SUNGKUN CHUN*[1]
[1]Chonbuk National University Medical School, Jeonju, Korea, Republic of

P22.58 **Puma, a pro-apoptotic protein, modulates autophagy in an Alzheimer's disease model**

AKASH SAHA[1], SURAIYA SALEEM[1], SUBHAS BISWAS*[1]
[1]CSIR- Indian Institute of Chemical Biology, Kolkata, India

P22.59 **Plasma tau/$A\beta_{1-42}$ ratio predicts brain tau deposition and neurodegeneration in Alzheimer's disease**

JONG-CHAN PARK[1], SUN-HO HAN[1], DAHYUN YI[2], MIN SOO BYUN[2], JUN HO LEE[2], SUKJIN JANG[3], KANG KO[2], SO YEON JEON[2], YUN-SANG LEE[3], YU KYEONG KIM[4], DONG YOUNG LEE[2], INHEE MOOK-JUNG*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, Korea, Republic of, [3]College of medicine, Seoul National University, Seoul, Korea, Republic of, [4]SMG SNU Boramae Medical Center, Seoul, Korea, Republic of

P22.60 **Deletion of PLCγ1 in GABAergic neurons leads to seizures in mice**

HYE YUN KIM[1], YONG RYOUL YANG[2], HONGIK HWANG[3], HYUN-JUN JANG[1], JEONGYEON KIM[4], ESTHER YANG[5], HYUN KIM[5], HYEWHON RHIM[3], PANN-GHILL SUH[4], JAE-ICK KIM*[1]
[1]School of Life Sciences, Ulsan National Institute of Science and Technology (UNIST), Ulsan 44919, Republic of Korea, Ulsan, Korea, Republic of, [2]Aging Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon 34141, Republic of Korea, Daejeon, Korea, Republic of, [3]Center for Neuroscience, Brain Science Institute, Korea Institute of Science and Technology (KIST), Seoul 136-791, Republic of Korea, Seoul, Korea, Republic of, [4]Korea Brain Research Institute (KBRI), Daegu 41062, Republic of Korea, Daegu, Korea, Republic of, [5]Department of Anatomy, College of medicine, Korea University, Seoul, 136-705, Republic of Korea, Seoul, Korea, Republic of

P22.61 **Quantitative analysis of SCD-A-117 leaf extract and its biological activities on the neuroprotection and anti-neuroinflammation**

YU JIN KIM[1], HYE-SUN LIM[1], JOO-HWAN KIM[2], MINKYUN NA[3], SOO-JIN JEONG*[1]
[1]Korea Institute of Oriental Medicine, Daejeon, Korea, Republic of, [2]Gachon University, Seongnam, Korea, Republic of, [3]Chungnam National University, Daejeon, Korea, Republic of

P22.62 **Effects of electrical stimulation to improve myelination towards Charcot–Marie–Tooth (CMT) therapy**

ASEER INTISAR[1], WOON HAE KIM[1], HYUN YOUNG SHIN[1], SEUNG JOON LEE[1], MIN YOUNG KIM[1], YU SEON KIM[2], YOON JEONG MO[2], YUN-IL LEE[2], MINSEOK S. KIM*[1]
[1]Department of New Biology, DGIST, Daegu, Korea, Republic of, [2]Well Aging Research Center, DGIST, Daegu, Korea, Republic of

P22.63 **Role of Cofilin in Tau/Microtubule dynamics and Tauopathy**

JUNGA ALEXA WOO[1], TIAN LIU[1], CENXIAO FANG[1], SARA CAZZARO[1], TERESA KEE[1], PATRICK LEPOCHAT[1], KSENIA YRIGOIN[1], XINGYU ZHAO[1], XINMING WANG[1], STEPHEN LIGGETT[1], DAVID KANG*[1]
[1]University of South Florida, Tampa, USA

P22.64 **Linalool attenuates cell death against oxidative stress and mitochondrial dysfunction in neurodegenerative diseases**

ANGELICA MARIA SABOGAL GUAQUETA*[1], FABIAN HOBBIE[1], ASMAA OUN[1], ERIK BODDEKE[1], GLORIA PATRICIA CARDONA GOMEZ[2], AMALIA DOLGA[1]
[1]University of Groningen, Groningen, Netherlands, [2]University of Antioquia, Medellín, Colombia

P22.65 **The effect of retromer dysfunction on the clearance and transfer of intra- and extra-cellular beta-amyloid and alpha-synuclein in neurons**

NAZIRA ALBARGOTHY*[1], ANNA ANSELL SCHULTZ[1], CHRISTOPHER SACKMANN[1], MARTIN HALLBECK[1]
[1]Division of Clinical Pathology and Neurobiology, Department of Clinical and Experimental Medicine, Linköping University, Linköping, Sweden

P22.66 **3D electron tomographic analysis of age-dependent difference on the rate of altered synaptic vesicles by RF-EMF exposure in the mouse cerebral cortex**

YANG HOON HUH*[1], HYO-JEONG KIM[1], EUNYOUNG MOON[1], JU HWAN KIM[2], HAK RIM KIM[2]
[1]Korea Basic Science Institute, Ochang, Korea, Republic of, [2]Dankook University, College of Medicine, Cheonan-si, Korea, Republic of

P22.67 **Intra-arterial stem cells therapy activates BDNF-TrkB signaling pathway to improve post-stroke outcome in senescent rodent model of ischemic stroke**

PALLAB BHATTACHARYA*[1], DEEPANEETA SARMAH[1], HARPREET KAUR[1], DILEEP YAVAGAL[2]
[1]National Institute of Pharmaceutical Education and Research (NIPER), Ahmedabad., Gandhinagar, India, [2]Neurology and Neurosurgery,University of Miami Miller School of Medicine, Miami, USA

P22.68 **Regionally increased brain perfusion in the Parkinson's disease with mild cognitive impairment compared to the cognitively normal Parkinson's disease**

EUN HYUNG CHOI[1], JI HYUN KO*[1]
[1]University of Manitoba, Winnipeg, Canada

P22.69 **Targeting mitochondrial calcium to fight neurological deficits: role of the MCU in the pathogenesis of Alzheimer's disease and status epilepticus**

BEATRICE D'ORSI[1], LUISA GALLA[1], ELISA GREOTTI[1], EDWARD BEAMER[2], TOBIAS ENGEL[2], DIEGO DE STEFANI[1], TULLIO POZZAN[1], ROSARIO RIZZUTO*[1]
[1]University of Padua, Padua, Italy, [2]Royal College of Surgeons in Ireland, Dublin, Ireland

P22.70 **Electroacupuncture therapy ameliorates motor dysfunction via brain-derived neurotrophic factor and glial cell line-derived neurotrophic factor in a mouse model of Parkinson's disease**

MALK EUN PAK[1, 2], DA HEE JUNG[1, 2], HONG JU LEE[1, 2], SUNG MIN AHN[3], HWA KYOUNG SHIN[1, 2, 3], BYUNG TAE CHOI PHD*[1, 2, 3]
[1]Department of Korean Medical Science, School of Korean Medicine, [2]Graduate Training Program of Korean Medicine for Healthy-Aging, [3]Korean Medical Science Research Center for Healthy-Aging, Pusan National University, Yangsan 50612, Korea

P22.71 **Corynoxine play a neuroprotection role on a rotenone rat model of Parkinson's disease**

LEILEI CHEN[1], YUJV HUANG[1], JUXIAN SONG[2], MIN LI[2], JUNXIA XIE*[1]
[1]Institute of Brain Science and Disease, Qingdao University, Qingdao, China, [2]School of Chinese Medicine, Hong Kong Baptist University, Hong Kong, Hong Kong SAR, China

P22.72 **Exercise-induced inflammatory responses-reduced a-synuclein aggregation and improve motor function in a transgenic mouse model of Parkinson's disease**

TAE-KYUNG KIM[1], EUN-JIN BAE[1], HYUN KYUNG CHUNG[1], HE-JIN LEE[2], SEUNG-JAE LEE*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]Konkuk University College of Medicine, Seoul, Korea, Republic of

P22.73 **PDZ-GEF1 mediates Aβ oligomer-induced synaptic dysfunction**

YOU NA JANG[1], HOCHUNG JANG[3], KEA JOO LEE*[2]
[1]Synaptic Circuit Plasticity Lab., Dept.of Structure & Function of Neural Network, KBRI, Daegu, Korea, Republic of, [2]Synaptic Circuit Plasticity Lab., Dept.of Structure & Function of Neural Network, KBRI, Deagu, Korea, Republic of, [3]Synaptic Circuit Plasticity Lab., Dept.of Structure & Function of Neural Network, KBRI, Deagu, Korea, Republic of

P22.74 **Neuroprotective effect and mechanisms of lactoferrin on MPTP induced mice model of Parkinson's disease**

YAN QU[1], JUN WANG[1], JUNXIA XIE*[1]
[1]Qingdao University, Qingdao, China

P22.75 **Neuroprotective role of TNFα-loaded Ln^{3+}-based upconversion nanoparticles in mouse model of Huntington's disease**

PRAGYA KOMAL[1], MANJARI SKV[3], ANURAG GAUTAM[2], ANURAG GAUTAM*[2]
[1]Assistant Professor, Department of Biology, BITS-Pilani Hyderabad, Hyderabad, India, [2]Associate Professor, O.P Jindal University (OPJU), Raigarh, Department of Chemistry, Raigarh, India, [3]Department of Biology, BITS-Pilani Hyderabad, Hyderabad, India

P22.76 **Highly selective microglial uptake of Ceria–Zirconia nanoparticles for enhanced analgesic treatment of neuropathic pain**

BOOMIN CHOI[1], MIN SOH[2], JUNYOUNG OH[1], HEEHONG HWANG[1], TAEGHWAN HYEON[2], SUNG JOONG LEE*[1]
[1]Department of Neuroscience and Physiology, Dental Research Institute, School of Dentistry, Seoul National University, Seoul, Korea, Republic of, [2]Center for Nanoparticle Research, Institute for Basic Science (IBS), Seoul, Korea, Republic of

P22.77 **The impact of the gut microbiota on Huntington's disease mice**

CAROLINA DE MOURA GUBERT*[1], GERALDINE KONG[1], JAMIE LIEW[1], CHLOE LOVE[1], THIBAULT RENOIR[1], ANTHONY HANNAN[1]
[1]The Florey Institute of Neuroscience and Mental Health, Melbourne, Australia

P22.78 **Proteomic profiling of nucleus accumbens synaptosomes following short- and long-term withdrawal from cocaine self-administration in mice**

YUN YOUNG YIM[1], CALEB J. BROWNE[1], JUNSHI WANG[2], RASHAUN S. WILSON[3], ANGUS C. NAIRN[4], YAN DONG[5], ERIC J. NESTLER*[1]
[1]Icahn School of Medicine at Mount Sinai, New York, USA, [2]University of Pittsburgh, Pittsburgh, USA, [3]Yale/NIDA Neuroproteomics Center, New Haven, USA, [4]Yale School of Medicine, Connecticut Mental Health Center, New Haven, USA, [5]University of Pittsburgh, Pittsburgh, USA

P22.79 **Transcriptional signatures of treatment resistant depression in mouse models**

ANGELICA TORRES-BERRIO[1], ERIC M. PARISE[1], TREVONN GYLES[2], FREDDYSON J. MARTÍNEZ-RIVERA[1], CALEB J. BROWNE[1], ERIC J. NESTLER*[1]
[1]Icahn School of Medicine at Mount Sinai, New York, USA, [2]Morehouse College, Atlanta, USA

P22.80 **Functional connectivity mapping of hyper-homocystemia and chronic cerebral hypoperfusion co-induced vascular cognitive impairment mouse models**

ZIYU WANG*[1]
[1]KAIST, Daejeon, Korea, Republic of

P22.81 **Hippocampal inhibitory interneurons modulate behavioral despair in mice**

SANG HO YOON[1], WOO SEOK SONG[1], SUNG PYO OH[1], MYOUNG-HWAN KIM*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P22.82 **Genetic spectrum and variability in Chinese patients with amyotrophic lateral sclerosis**

LI HONG-FU*[1], ZHI-JUN LIU[2], HUI-XIA LIN[3], QIAO WEI[2], ZHI-YING WU[2]
[1]Second Affiliated Hospital,Zhejiang University School of Medicine, Hangzhou, China, [2]Zhejiang University School of Medicine, Hangzhou, China, [3]Fujian Medical University, Fuzhou, China

P22.83 **DRG2 depletion is associated with Smith-Magenis syndrome in mice**

HYE RYEONG LIM[1], JEONGAH KIM[2], RI YU[1], JONG HYUK YOON[1], JEONG WOO PARK[3], CHANG MAN HA*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]DGIST, Daegu, Korea, Republic of, [3]Ulsan University, Ulsan, Korea, Republic of

P22.84 **Inhibition of TBK1 regulates the UPS impairment via p62 phosphorylation in TDP-43 proteinopathies**

SHINRYE LEE[1], SEYEON KIM[1], HYUNG-JUN KIM*[1]
[1]Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of

P22.85 **Validation of novel small molecules in ALS/FTD disease model with TDP-43 toxicity**

YU-MI JEON[1], YOUNGHWI KWON[2], HYUNG-JUN KIM*[1]
[1]Department of Neural Development and Disease, Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of, [2]Department of Brain&Cognitive Sciences, DGIST, Daegu, Korea, Republic of

P22.86 **Investigating the contribution of astrocytic cholesterol transport in neuronal Aβ generation using human-induced pluripotent stem cells**

WOOJIN JEONG[1], HYEIN LEE[1], JINSOO SEO*[1]
[1]DGIST, Daegu, Korea, Republic of

P22.87 **Intellectual disability and cytogenetic abnormalities**

BOUTAINA BELKADY*[1], RACHIDA CADI[2], SANAA NASSEREDDINE[3], ABDELHAMID BARAKAT[4]
[1]University Hassan II of Morocco/ Faculty of Sciences Ain Chock, Casablanca, Morocco, [2]Laboratory of Physiopathology, Molecular Genetics and Biotechnology, Faculty of sciences Ain Chock, Casablanca, Morocco, [3]Laboratory of Cytogenetics, Institut Pasteur of Morocco, Casablanca, Morocco, [4]Laboratory of Genomics and Human Genetics, Institut Pasteur of Morocco, Casablanca, Morocco

P22.88 **Long-term transcranial DC stimulation facilitates cognitive functions recovery in alcohol use disorder**

DENIS KIM[1], ZOYA SHIN[1], ANVAR SARIEV*[2]
[1]Tashkent Medical Academy, Department of Psychiatry, Tashkent, Uzbekistan, [2]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P22.89 **Migraine-associated photophobia: a new mice model for light aversion study**

CRISTINA ALBA-DELGADO*[1], MARIE RAQUIN[1], MOHAMED A. ZKIM[1], CHRISTINE CERCY[1], PAUL AVAN[1], RADHOUANE DALLEL[1], ISABELLE RANCHON-COLE[1]
[1]Université Clermont Auvergne, Neuro-Dol, INSERM/UCA U1107, Clermont-Ferrand, France

P22.90 **miR-34b/c inhibition attenuates ischemia-induced death of hippocampal neurons and rescues aberrant synaptic plasticity and cognitive deficits**

JEE-YEON HWANG*[1, 2], HYAE-RAN BYUN[3], MORGAN PORCH[3], FABRIZIO PONTARELLI[3], BRENDA COURT-VAZQUEZ[3], SUZANNE R. ZUKIN[3]
[1]Department of Pharmacology and Neuroscience, Creighton University School of Medicine, Omaha, USA, [2]Department of Pharmacology and Neuroscience, Creighton University School of Medicine, Omaha, NE, USA, [3]Dominick P. Purpura Department of Neuroscience, Albert Einstein College of Medicine, New York, NY, USA

P22.91 **Effect of Combination Therapy with Drug, Device, and Exercise for Improving Post Stroke Gait: A Randomised Controlled Trial**

BAIJNATH ROY[1], ROHIT BHATIA[1], NAND KUMAR[1], SANJAY WADHAWA[1], M.V PADMA SRIVASTAVA*[1]
[1]All India Institute of Medical Sciences, New Delhi, India

P22.92 **Functional characterization of mGlu7 mutations identified in patients with developmental disability**

JAEMAN SONG[1], YOUNG HO SUH*[2]
[1]seoul national university, Seoul, Korea, Republic of, [2]seoul national university, seoul, Korea, Republic of

P22.93 **Presenilin 2 (PS2) N141I mutation mediates corticosterone-induced autophagic cell death of adult hippocampal neural stem cells**

JIHYUN HONG[1], HYUN-KYU AN[1], HYUNHEE PARK[1], SEONG-WOON YU*[1]
[1]DGIST, Daegu, Korea, Republic of

P22.94 **Development of technology based on specific metabolic regulation of neurodegenerative disease(Research Center for Metabolic Regulation Neurodegenerative disease)**

MYEONG OK KIM*[1], MYEONG OK KIM[1]
[1]Gyeongsang National University, Jinju, Korea, Republic of

P22.96 **Visualizing neural correlates of Tourette's-like motor tics in brain slices with genetically encoded voltage indicators**

JUN KYU RHEE[1], BRADLEY J. BAKER*[2]
[1]UST, KIST School, Seoul, Korea, Republic of, [2]KIST, Seoul, Korea, Republic of

P22.97 **Investigation of cortical synaptic structures in elevated protein synthesis of microglia using serial block-face SEM**

GYU HYUN KIM[1], ZHI-XIANG XU[2], SANG-HOON LEE[1], NA YOUNG DO[1], CHAN HEE LEE[1], BAOJI XU[2], KEA JOO LEE*[1]
[1]Korea Brain Research Institute (KBRI), Dae-gu, Korea, Republic of, [2]The Scripps Research Institute, Florida, USA

P22.98 **The FDA-approved drug Carvedilol improves vison and retinal morphology in a zebrafish model of retinitis pigmentosa**

LOGAN GANZEN*[1], YUK FAI LEUNG[1]
[1]Purdue University, West Lafayette, USA

P22.99 **Studying blood vessel architecture at capillary level in mouse brain**

JONG SOON WON[1], SANG IL GUM*[1]
[1]binaree, Daegu, Korea, Republic of

P22.100 **Potential biomarkers in patients with multiple sclerosis in relapsing and remitting phases**

ELAHEH GHOVEHOUD[1], SHOHREH TEIMURI[3], JAFAR VATANDOOST[4], AREF HOSSEINI[5], MASOOD ETEMADIFAR[6], MOHAMMAD HOSSEIN NASR ESFAHANI[7], TIMOTHY L. MEGRAW[8], KAMRAN GHAEDI*[2]
[1]hakim sabzevari university-sabzevar-Iran / Department of Cellular Biotechnology, Cell Science Research Center, Royan Institute of Biotechnology, ACECR, Isfahan, Iran, Isfahan, Iran, [2]Division of Cellular and Molecular Biology, Department of Biology, Faculty of Sciences, University of Isfahan, Isfahan, Iran/ Department of Cellular Biotechnology, Cell Science Research Center, Royan Institute of Biotechnology, ACECR, Isfahan, Iran, Isfahan, Iran, [3]Institute of Cell Biology, University of Bern, Bern, Switzerland, Bern, Switzerland, [4]Department of Biology, Hakim Sabzevari University, Sabzevar, Iran, Sabzevar, Iran, [5]Institute of Biochemistry and Molecular Medicine, NCCR TransCure, University of Bern, Bern, CH-3012, Switzerland, Bern, Switzerland, [6]Department of Neurology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran, Isfahan, Iran, [7]Department of Cellular Biotechnology, Cell Science Research Center, Royan Institute for Biotechnology, ACECR, Isfahan, Iran, Isfahan, Iran, [8]Department of Biomedical Sciences, Florida State University College of Medicine, West Call Street, Tallahassee, FL 32306-4300, USA, Florida, USA

P22.101 **JBPOS0101 suppress status epilepsy activity by modulation of mGluR1 and mGluR4**

HO-SUB PARK[1], EUN-SANG HWANG[1], GA-YOUNG CHOI[3], JAE-HO KHIL[4], JI-HO PARK*[2]
[1]Department of Gerontology, Graduate School of East-West Medical Science, Kyung Hee University, Yongin, Korea, Republic of, [2]Department of East-West Medicine, Graduate School of East-West Medical Science, Kyung Hee University, Yongin, Korea, Republic of, [3]Department of Alternative and Complementary Medicine, Graduate School of East-West Medical Science, Kyung Hee University, Yongin, Korea, Republic of, [4]Department of Sports Medicine, Graduate School of Sports Science, Kyung Hee University, Yongin, Korea, Republic of

P22.102 **Rapid removal of Amyloid-β aggregates using superparamagnetic nanoparticles**

SHEN NING[1], ALEXANDER ROMPALA[1], NANDA K. N. SHANMUGAM[1], INKYU KIM[1], ALEX S. RODRIGUEZ[1], STEPHANIE HARTMANN[1], SHAUN R. PATEL[1], SE HOON CHOI[1], RUDOLPH E. TANZI[1], DOO YEON KIM*[1]
[1]Genetics and Aging Research Unit, MassGeneral Institute for Neurodegenerative Disease, Massachusetts General Hospital, Harvard Medical School, Charlestown, USA

P22.103 **Modified-Sopungsunkiwon ameliorates amyloid beta oligomer-induced memory deficits and neurodegeneration in Alzheimer's disease models**

JIN GYU CHOI[1], NAMKWON KIM[1], BOH RAH JOO[1], MYUNG SOOK OH*[1]
[1]Kyung Hee University, Seoul, Korea, Republic of

P22.104 **Structural and functional brain changes following electroconvulsive therapy (ECT) in schizophrenia patients: A systematic review**

SUN-YOUNG MOON[1], MINAH KIM[1], TAE YOUNG LEE[1], JUN SOO KWON*[1]
[1]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Republic of Korea, Seoul, Korea, Republic of

P22.105 **Role Of *Withania Somnifera* In Ischemic Stroke Model Produced By Unilateral Internal Carotid Artery Ligation: A Histological Staining With 2, 3, 5 Triphenyltetrazolium Chloride And Behavior Analysis**

SARUN KOIRALA*[1], GP ROUNIAR[2], SANDIP SHAH[3], BHAWESH KOIRALA[4], LAXMAN KHANAL[5]
[1]B.P. KOIRALA INSTITUTE OF HEALTH SCIENCES, dharan, Nepal, [2]B. P. Koirala Institute of Health Sciences, Professor Department of Clinical Pharmacology and Therapeutics, dharan, Nepal, [3]B. P. Koirala Institute of Health Sciences, Department of anatomy, dharan, Nepal, [4]B. P. Koirala Institute of Health Sciences, Department of Clinical Pharmacology and Therapeutics, dharan, Nepal, [5]B. P. Koirala Institute of Health Sciences, Department of anatomy, dharan, Nepal

Glia, glia–neuron interactions

P23.01 **Control of neuroinflammation and cognitive functions of experimental animals by optogenetic and chemogenetic manipulation of hippocampal astrocytes**

JAE-HONG KIM[1], YUJUNG KIM[1], MICHIKO NAKAMURA[2], IL-SUNG JANG[2], MAAN-GEE LEE[1], KYOUNGHO SUK*[1]

[1]Department of Biomedical Science and Department of Pharmacology, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, [2]Department of Pharmacology, School of Dentistry, Kyungpook National University, Daegu, Korea, Republic of

P23.02 **Effects of optogenetic astrocyte activation in hippocampus on mouse behavior**

WOO-HYUN CHO[1], KYUNGCHUL NOH[2], ELLANE BARCELON[2], SUNG JOONG LEE*[2]

[1]Seoul university, Seoul, Korea, Republic of, [2]Department of Neuroscience and Physiology and Dental Research Institute, School of Dentistry, Seoul National University, Seoul, Korea, Republic of

P23.03 **SNARE-mediated and glia-specific communication ensures proper nerve morphology and function**

MATHIAS BÖHME[1], KRISTINA PONIMASKINE[1], ANTHONY MCCARTHY[1], ALEXANDER WALTER*[1]

[1]Leibniz Institute for Molecular Pharmacology, Berlin, Germany

P23.04 **Gut microbiota modulates genes involved in the astrocyte-neuron lactate shuttle in the hippocampus**

MICHAEL MARGINEANU[1], EOIN SHERWIN[2], ANNA GOLUBEVA[2], VERONICA PETERSON[2], ALAN HOBAN[3], KIERAN REA[2], JOHN F. CRYAN[4], PIERRE MAGISTRETTI*[1]

[1]KAUST, Thuwal, Saudi Arabia, [2]APC Microbiome Ireland, Cork, Ireland, [3]Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland, [4]APC Microbiome Ireland; Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland

P23.05 **Myelin degeneration induced by accumulation of mutant superoxide dismutase 1 promotes pathology of amyotrophic lateral sclerosis**

SUHYUN KIM[1], AH-YOUNG CHUNG[1], JI EUN NA[2], SE JEONG LEE[2], SANG HOON JEONG[3], EUNMI KIM[1], IM JOO RHYU[2], HAE-CHUL PARK*[1]

[1]Department of Biomedical Sciences, College of Medicine, Korea University, Seoul, Korea, Republic of, [2]Department of Anatomy, College of Medicine, Korea University, Seoul, Korea, Republic of, [3]Biomedical Research Center, Korea University Ansan hospital, Ansan, Korea, Republic of

P23.06 **Nanostructured surfaces promote differentiation of rat neural stem cells into oligodendrocytes**

KRISHNA D. SHARMA[1], KARRER M. ALGHAZALI[3], AMBAR B. RANGUMAGAR[4], ANINDYA GHOSH[4], ALEXANDRU S. BIRIS[3], JENNIFER Y. XIE*[2]

[1]Department of Molecular Biosciences, Arkansas State University, Jonesboro, AR, USA, [2]Department of Basic Sciences, New York Institute of Technology College of Osteopathic Medicine, Jonesboro, AR, USA, [3]Center for Integrative Nanotechnology Sciences, University of Arkansas at Little Rock, Little Rock, AR, USA, [4]Department of Chemistry, University of Arkansas at Little Rock, Little Rock, AR, USA

P23.07 **Neuregulin1type3-erbb2/3 signaling is required for selective myelination of primary motor nerves by schwann cells in the zebrafish pns**

DONG-WON LEE[1], SUHYUN KIM[1], EUNMI KIM[1], INYOUNG JEONG[1], HWAN-KI KIM[1], BOA KIM[1], HAE-CHUL PARK*[1]

[1]Department of Biomedical Sciences, Korea University, Seoul, Korea, Republic of

P23.08 **Brain microglial activation in chronic pain-associated affective disorder**

ELLANE BARCELON[1], WOO-HYUN CHO[1], SANG BEOM JUN[2], SUNG JOONG LEE*[1]

[1]Department of Neuroscience and Physiology and Dental Research Institute, School of Dentistry, Seoul National University, Seoul, Korea, Republic of, [2]Department of Electronic and Electrical Engineering, Ewha Womans University, Seoul, Korea, Republic of

P23.09 **Astrocytes and learning dependent synaptic stabilization: role of glycogen-derived lactate**

ELENA VEZZOLI[1], CORRADO CALÌ[2], LUISA PONZONI[3], ELISA SOGNE[2], NICOLAS GAGNON[2], MAURA FRANCOLINI[3], DANIELA BRAIDA[3], MARIAELVINA SALA[4], ANDREA FALQUI[2], PIERRE J. MAGISTRETTI*[2]

[1]Dipartimento di Bioscienze, Università degli Studi di Milano; King Abdullah University of Science and Technology (KAUST), Biological and Environmental Science & Engineering (BESE) Division; Dipartimento di Biotecnologie Mediche e Medicina Traslazionale, Università degli Studi di Milano, Milan, Italy, [2]King Abdullah University of Science and Technology (KAUST), Biological and Environmental Science & Engineering (BESE) Division, Thuwal, Saudi Arabia, [3]Dipartimento di Biotecnologie Mediche e Medicina Traslazionale, Università degli Studi di Milano, Milan, Italy, [4]CNR, Institute of Neuroscience, Milan, Italy

P23.10 **Glutamosome in neuron-glia cross-talk: functional regulation of physical assembly of astroglial metabolic enzymes and SLC1A amino acid transporters by neuronal factors**

GEORGI GEGELASHVILI*[1], OLE J BJERRUM[2]

[1]Ilia State University, Tbilisi, Georgia, [2]University of Copenhagen, Copenhagen, Denmark

P23.11 **The effects of 6-hydroxydopamine on iron metabolism in astrocytes are mediated by hypoxia-inducible factor-2α**

MANMAN XU[1], JUN WANG[1], JUNXIA XIE*[1]

[1]Qingdao University, Qingdao, China

P23.12 **Functional stoichiometry and membrane topology of the astrocytic membrane protein, MLC1**

BYOUNG-CHEOL LEE[1], JUNMO HWANG[1], BO-YOUNG YOON[1], GA-YOUNG LEE[2], KIPOM KIM[2], KUNWOONG PARK[1], HYUN-HO LIM*[1]

[1]Department of Structure and Function of Neural Network, Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Brain Research Core Facilities, Korea Brain Research Institute, Daegu, Korea, Republic of

P23.13 **Low dose ionizing radiation is possible strategy for shifting of the Microglial activation phenotype**

WEONKUU CHUNG*[1], SE YOUNG CHOI[2], MI JOO JUNG[2], DONG WOOK KIM[2], JONG KIL LEE[3], HAK YOUNG RHEE[4], CHANWOO KIM[5], GOEN-HO JAHNG[6]

[1]Kyunghee University hospital at Gangdong, Seoul, Korea, Republic of, [2]Department of Radiation Oncology, Kyunghee University hospital at Gangdong, Seoul, Korea, Republic of, [3]Department of Pharmacy, College of Pharmacy, Kyung Hee University, Seoul, Korea, Republic of, [4]Department of Neurology, Kyung Hee University Hospital at Gangdong, Seoul, Korea, Republic of, [5]Department of Nuclear Medicine, Kyung Hee University Hospital at Gangdong, Seoul, Korea, Republic of, [6]Department of Radiology, Kyung Hee University Hospital at Gangdong, Seoul, Korea, Republic of

P23.14 **Molecular basis of the immune receptor TREM2 and the generation of monoclonal antibodies against TREM2, a risk factor in Alzheimer's disease**

HYUN JUNG KIM[1], YEON-WOO PARK[1], HEE SOON CHOI[1], HYUN-HO LIM*[1]

[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P23.15 **Sparse reconstruction of neurons and glial cells of layer VI somatosensory cortex of a juvenile rat**

CORRADO CALI*[1], KALPANA KARE[1], DANIYA BOGES[1], MARCO AGUS[2], MARKUS HADWIGER[2], PIERRE MAGISTRETTI[1]

[1]KAUST, BESE, Thuwal, Saudi Arabia, [2]KAUST, VCC, Thuwal, Saudi Arabia

P23.16 **The astrocytic membrane protein megalencephalic leukoencephalopathy with subcortical cysts 1 (MLC1) induces membrane protrusion and regulates cellular motility**

JUNMO HWANG[1], HYUN-HO LIM*[1]

[1]Department of Structure and Function of Neural Network, Korea Brain Research Institute, Daegu, Korea, Republic of

P23.17 **Expression and potential roles of TROY, a member of the TNF receptor superfamily, in astrocytes**

TOMOKO HISAOKA[1], TADASUKE KOMORI[1], TOSHIO KITAMURA[2], YOSHIHIRO MORIKAWA*[1]
[1]Wakayama Medical University, Wakayama, Japan, [2]The Institute of Medical Science, The University of Tokyo, Tokyo, Japan

P23.18 **Regulation of adult hippocampal synaptic transmission by astrocytic synapse pruning**

JIYOUNG KIM[1], HYOEUN LEE[1], HAN KYOUNG CHOE[2], WON-SUK CHUNG[3], HYUNGJU PARK*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Daegu Gyeongbuk Institute of Science & Technology, Daegu, Korea, Republic of, [3]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P23.19 **Differential temporal susceptibility to chemotherapeutic treatment in proliferative glioblastoma cancer cells displaying redox and metabolic oscillations**

MARIO E. GUIDO*[1], PAULA M WAGNER[2]
[1]CIQUIBIC CONICET Universidad Nacional de Cordoba, Córdoba, Argentina, [2]CIQUIBIC CONICET Universidad Nacional de Cordoba, Cordoba, Argentina

P23.20 **The anti-inflammatory potential of STVNa in modulating microglial activation in cerebral ischemia-reperfusion injury**

QIWEN TAN[1], HUI HU[1], KAI-LENG TAN[1], WEN TAN*[1]
[1]Guangdong University of Technology, Guangzhou, China

P23.21 **Astrocytic TTF-1 mediates LPS-induced hypothalamic inflammation by modulating NF-κB signaling**

BORA JEONG[1], JIN WOO KIM[1], BYUNG JU LEE*[1]
[1]University of Ulsan, Ulsan, Korea, Republic of

P23.22 **Spinal astrocytes contribute to bone cancer pain in mice through interleukin 17A/ interleukin 17 receptor A**

HUIZHU LIU[1], XUEJING LÜ[1], NING LÜ[1], YUQIU ZHANG*[1]
[1]Institutes of Brain Science, State Key Laboratory of Medical Neurobiology and MOE Frontiers Center for Brain Science, Fudan University, Shanghai, China

P23.23 **Neuroprotective effect of exogenous melatonin on the noradrenergic neurons of adult male rats' locus coeruleus nucleus following REM sleep deprivation**

SOMAYE MESGAR*[1], BEHNAM JAMEIE[2]
[1]Neuroscience Resaech Center, Tehran, Iran, [2]Neuroscience Research Center (NRC), Iran University of Medical Sciences, Tehran, Iran, Tehran, Iran

P23.24 **Phenotypic changes of microglia in adult mice brainstem induced by hypercapnia**

JAIME EUGENIN*[1], ESTEFANÍA IRRIBARRA[1], SEBASTIÁN BELTRÁN-CASTILLO[2], DANIELA CÁCERES[1], ROMMY VON BERNHARDI[2]
[1]Universidad de Santiago de Chile (USACH), Santiago, Chile, [2]Pontificia Universidad Católica de Chile, Santiago, Chile

Homeostatic and neuroendocrine systems

P24.01 **Ghrelin receptor signaling in dopamine neurons mediates high fat intake in a binge eating model**

MARIA CORNEJO*[1], FRANCO BARRILE[1], GUADALUPE GARCIA ROMERO[1], DANIELA CASSANO[1], MARIA JOSE TOLOSA[1], MIRTA REYNALDO[1], MARIA FLORENCIA ANDREOLI[2], MARIO PERELLO[1]
[1]IMBICE, La Plata, Argentina, [2]IDIP, La Plata, Argentina

P24.02 **A neural basis for the tonic suppression of sodium appetite**

SEAHYUNG PARK[1], KEVIN WILLIAMS[2], CHEN LIU[2], JONG WOO SOHN*[1]
[1]KAIST, Daejeon, Korea, Republic of, [2]University of Texas Southwestern Medical Center, Austin, USA

P24.03 **The bed nucleus of striatum projected to the arcuate nucleus regulates anxiety-like behavior**

XIANGLIAN JIA[1], KANG HUANG[1], ZHONGHUA LU[1], LIPING WANG*[1]
[1]Shenzhen Institutes of Advanced Technology,Chinese Academy of Sciences, Shenzhen, China

P24.04 **Hypothalamic TonEBP regulates leptin action through control of NF-κB activation**

DONG HEE KIM[1], HAN RAE KIM[1], DASOL KANG[1], BORA JEONG[1], KWANG KON KIM[1], BYUNG JU LEE*[1]
[1]University of Ulsan, Ulsan, Korea, Republic of

P24.05 **Dose-dependent effect of AdipoRon on modulating adult hippocampal neurogenesis and neurocognitive behaviours in mice**

HO YIN THOMAS LEE[1], AHADULLAH[1], SONATA SUK YU YAU[1], HO YIN THOMAS LEE*[1]
[1]The Hong Kong Polytechnic University, Hong Kong, Hong Kong SAR, China

P24.06 **A hypothalamic circuit for behavioral thermoregulation**

HOE-GON RYU[1], SIEUN JUNG[1], MYUNGSUN LEE[1], DONG-YOON KIM[1], GYURYANG HEO[1], MINYOO KIM[1], JONG WHI PARK[1], HAN-EOL PARK[1], DONG-JUN KOO[1], SUNG-YON KIM*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P24.07 **Phosphorylation of eukaryotic translation initiation factor 2α in AgRP neurons is important in control of whole body energy balance**

KWANG KON KIM[1], JAE GEUN KIM[2], BYUNG JU LEE*[1]
[1]University of Ulsan, Ulsan, Korea, Republic of, [2]Incheon National University, Incheon, Korea, Republic of

P24.08 **Role of specific phospholipase C beta subtypes in serotonin 2C receptor activation of arcuate POMC neurons**

JEEWON CHOI[1], JONG-WOO SOHN*[1]
[1]KAIST, Daejeon, Korea, Republic of

P24.09 **Studies on the role of insulin signaling in the autonomic nervous system**

UISU HYUN[1], JONG-WOO SOHN*[1]
[1]Department of Biological Sciences, KAIST, Daejeon, Korea, Republic of

P24.10 **Role of serotonin 2C receptors expressed by CRH neurons**

EUN-SEON YOO[1], JONG-WOO SOHN*[1]
[1]KAIST, Daejeon, Korea, Republic of

P24.11 **Dissociative symptom and basal cortisol level in patients with PTSD**

DONGIL MIN[1], SEUNG YEON BAIK[1], AERAN KWON[1], MIN JIN JIN[1], YOURIM KIM[1], SEUNG-HWAN LEE*[2]
[1]Clinical Emotion and Cognition Research Laboratory, Goyang-si, Korea, Republic of, [2]Department of Psychiatry, Ilsan Paik Hospital, Inje University College of Medicine, Goyang-si, Korea, Republic of

P24.12 **Clarifying the brain mechanism underlying the link between social hierarchy and glucose metabolism**

RIKAKO UKICHI[1], YUKARI TAKAHASHI[1], YAE K. SUGIMURA[1], FUSAO KATO*[2]
[1]Department of Neuroscience, The Jikei University School of Medicine, Tokyo, Japan, [2]Department of Neuroscience, The Jikei University School of Medicine, Tokyo, Japan

P24.13 **Insulin synthesized in the paraventricular nucleus of the hypothalamus regulates body length by modulating pituitary growth hormone production**

KYUNGCHAN KIM[1], JAEMEUN LEE[1], JAE HYUN CHO[1], EUN-KYOUNG KIM*[1]
[1]Department of Brain and Cognitive Sciences, DGIST, Daegu, Korea, Republic of

New technology – Neurotool

P25.01 **Development of improved light sheet theta microscopy for whole brain neuron network imaging**

HOONCHUL CHANG[1], BUMJU KIM[1], KI HEAN KI HEAN*[1]
[1]POSTECH, Pohang, Korea, Republic of

P25.02 **FxClear, a free-hydrogel electrophoretic tissue clearing method for rapid de-lipidation of tissues with high preservation of immunoreactivity**

EUNSOO LEE[1], JUNGYOON CHOI[1], JUNE HOAN KIM[1], WOONG SUN*[1]
[1]Korea University College of Medicine, Seoul, Korea, Republic of

P25.03 **High resolution whole brain neuron network imaging by orthogonal light sheet microscopy with focus sweeping**

BUMJU KIM[1], HOONCHUL CHANG[1], KI HEAN KIM*[1]
[1]POSTECH, Pohang, Korea, Republic of

P25.04 **Volume entropy and maturation of normal rat brain**

HWANHEE LEE[1], SEUNGGYUN HA[3], HONGYOON CHOI[1], HYEJIN KANG[1], HYEKYOUNG LEE[4], SEONHEE LIM[5], DONG SOO LEE*[2]
[1]Department of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea, Republic of, [2]Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, and College of Medicine or College of Pharmacy, Seoul National University, Seoul, Korea, Republic of, [3]Radiation Medicine Research Institute, Seoul National University College of Medicine, Seoul, Korea, Republic of, [4]Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Republic of Korea, Seoul, Korea, Republic of, [5]Department of Mathematical Sciences, Seoul National University, Seoul, Korea, Republic of

P25.05 **Simulation study of implantable magnetic stimulation on a rat brain**

KYEONG JAE LEE[1], SOHEE KIM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of

P25.06 **PARIS, an optogenetic method for functionally mapping gap junctions**

LING WU[1], AO DONG[2], LITING DONG[2], SHI-QIANG WANG[2], YULONG LI*[1]
[1]Peking university, China, Beijing, China, [2]Peking university, Beijing, China

P25.07 **A specific, sensitive genetically-encoded fluorescent sensor for detecting somatostatin**

TONGRUI QIAN[1], HUAN WANG[1], YULONG LI*[1]
[1]Peking University, Beijing, China

P25.08 **High spatial and temporal resolution differentiation of cortical vessels in nonhuman primate**

LIANG ZHU[1], ZHAOCHONG CAI[2], MENGQI WANG[1], ANNA WANG ROE[1], JUN QIAN[2], WANG XI*[1]
[1]Interdisciplinary Institute of Neuroscience and Technology, Zhejiang University School of Medicine, Hangzhou, China, [2]State Key Laboratory of Modern Optical Instrumentations, Center for Optical and Electromagnetic Research, Joint Research Laboratory of Optics of Zhejiang Normal University and Zhejiang University, Zhejiang University, Hangzhou, China

P25.09 **Generation of neuronal cell type-specific BAC transgenic mouse models for brain mapping**

JIWOO KIM[1], HAYOUNG YANG[1], HYUNDUK KIM[1], YUJIN KIM[1], SUNGBO SHIM*[1]
[1]Chungbuk National University, Cheongju, Korea, Republic of

P25.10 **MALDI mass spectrometry imaging of neuroprotective proteins against amyloid beta at a single cell resolution based on micro-scale metal pattern arrays**

JAEMYUNG JANG[1], SEUNGEUN YEO[1], HYUN JIN JUNG[1], DASOM KIM[1], YOUNGSHIK CHOE*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P25.11 **An agarose gel-based neurosphere culture system leads to enrichment of neuronal lineage cells in vitro**

KYUHEE PARK[1], YEONJU NAM[2], YOUNMUN CHOI*[2]
[1]Gyeonggido Business & Science Accelerator, Gwanggyo-ro147, Yeongtong-gu, Wuson, Gyeonggi-do, 16229, Republic of Korea, Korea, Republic of, [2]Gyeonggido Business & Science Accelerator, Suwon, Korea, Republic of

P25.12 **Magneto is ineffective in controlling electrical properties of cerebellar Purkinje cells**

FANGXIAO XU[1], LIN ZHOU[1], YING SHEN*[1]
[1]Zhejiang University, Hangzhou, China

P25.13 **Neural interfaces by hydrogels**

XIAOMENG WANG[1], HAO SHENG[2], HAO WANG*[1]
[1]Zhejiang University, Hangzhou, China, [2]Xi'an Jiaotong University, Xi'an , China

P25.14 **DXplorer: Intelligent and interactive dendritic spine analysis based on 3D morphological features**

JUNYOUNG CHOI[1], SANG-EUN LEE[2], EUNJI CHO[2], YUTARO KASHIWAGI[3], SHIGEO OKABE[3], SUNGHOE CHANG[2], WON-KI JEONG*[1]
[1]Ulsan National Institute of Science and Technology, Ulsan, Korea, Republic of, [2]Department of Physiology and Biomedical Sciences, Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Department of Cellular Neurobiology, Graduate School of Medicine, University of Tokyo, Tokyo, Japan

P25.15 **Blind deconvolution microscopy using cycle consistent CNN with explicit PSF layer**

JONG CHUL YE*[1], SUNGJUN LIM[1]
[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P25.16 **Functional ultrasound - novel in-vivo imaging technique for pre-clinical CNS drug discovery**

DIANA MISZCZUK[1], ANNA-MARI KARKKAINEN[1], JUHO KOPONEN[1], TUUKKA MIETTINEN[1], ARTEM SHATILLO*[1]
[1]Charles River Discovery Services, Kuopio, Finland

P25.17 **An improved second generation genetically-encoded dopamine sensor for in vivo studies**

YIZHOU ZHUO[1], FANGMIAO SUN[1], JIANZHI ZENG[1], YAJUN ZHANG[2], MIAO JING[1], JINGHENG ZHOU[3], JIESI FENG[1], HUAN WANG[1], GUOHONG CUI[3], YULONG LI*[1]
[1]State Key Laboratory of Membrane Biology, Peking University School of Life Sciences; PKU-IDG/McGovern Institute for Brain Research; Peking-Tsinghua Center for Life Sciences, Beijing, China, [2]Department of Pharmacology, University of Virginia School of Medicine, Charlottesville, USA, [3]Neurobiology Laboratory, National Institute of Environmental Health Sciences, National Institutes of Health, Research Triangle Park, Durham, USA

P25.18 **Infant skull stripping based on the fuzzy c-means thresholding in T2-weighted magnetic resonance images**

INYOUNG BAE[1], DONGCHAN KIM[2], SUNKYUE KIM[1], YEJI HAN*[2]
[1]Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [2]Gachon University, Incheon, Korea, Republic of

P25.19 **Identification of neuronal ensembles that promote drug addiction**

KEVIN BEIER*[1]
[1]University of California, Irvine, Irvine, USA

P25.20 **Multi-adaptable double exponential model for event-related ROI detection in calcium imaging data**

JIHO PARK[1], KYUNGSOO KIM[1], JI-WOONG CHOI*[1]
[1]DGIST, Daegu, Korea, Republic of

Physiology: neuronal excitability and synapse function

P26.01 **Rab3 interacting molecule 1(RIM1) gene is transcriptionally regulated by NeuroD1**

NARAYAN BASHYAL[1], TAE-YOUNG LEE[2], JUNG-MI CHOI[2], SUNG-SOO KIM[2], SUH HAEYOUNG*[2]
[1]Ajou University, Suwon, Korea, Republic of, [2]Ajou University School of Medicine, Suwon, Korea, Republic of

P26.02 **Antibody screening for the investigating the clustering patterns of ion channels in the cortical neurons**

EUNA LEE[1], JUNMO HWANG[2], HYUN-HO LIM*[2]
[1]DGIST, KBRI, Daegu, Korea, Republic of, [2]Korea Brain Research Institute, Daegu, Korea, Republic of

P26.03 **Synaptic regulation of intrinsic excitability of hippocampal CA3 pyramidal cells: ex-vivo study**

KISANG EOM[1], DONG-GU LEE[1], WON-KYUNG HO[1], SUKHO LEE*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P26.04 **Specific motor learning memory traces are affected by SK2 channels-dependent modulation of excitability in cerebellar Purkinje cells**

GIORGIO GRASSELLI[1], HENK-JAN BOELE[2], HEATHER K. TITLEY[1], NORA BRADFORD[1], LISA VAN BEERS[2], LINDSEY JAY[1], CHRIS I. DE ZEEUW[2], MARTIJN SCHONEWILLE[2], CHRISTIAN HANSEL*[1]
[1]Department of Neurobiology, University of Chicago, Chicago, USA, [2]Department of Neuroscience, Erasmus MC, Rotterdam, Netherlands

P26.05 **Lactate enhances NMDA receptor responses via two distinct mechanisms**

GABRIEL HERRERA-LOPEZ[1], FOUAD LEMTIRI-CHLIEH[3], HANAN MAHMOOD[2], LORENE MOTTIER[2], HUBERT FIUMELLI[2], PIERRE J. MAGISTRETTI*[2]
[1]Cinvestav-IPN, Mexico City, Mexico, [2]BESE, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, [3]Department of Neuroscience, UConn Health, Farmington, USA

P26.06 **The relation of functional states of dendritic spines with contents of micro-RNA**

HYUN JIN KIM[1], IK-BUM PARK[2], KI-BONG SUNG[1], HA-MIN LEE[1], JUNG HYUN PYO[1], SOYEON YUN[1], JOUNG-HUN KIM*[1]
[1]Dept. of Life Sciences, POSTECH, Pohang, Korea, Republic of, [2]Division of Integrative Biosciences and Biotechnology, and Research Institute of Industrial Science and Technology, POSTECH, Pohang, Korea, Republic of

P26.07 **The distinct structural and functional heterogeneity of dopamine synapses in the brain**

HYUN-JIN KIM[1], BYUNGJAE HWANG[1], BYEONG EUN LEE[1], JIEUN LEE[1], YOUNGEUN LEE[1], JUNG-HOON PARK[1], JAE-ICK KIM*[1]
[1]UNIST, Ulsan, Korea, Republic of

P26.08 **Functional role of the C-terminal domain of Bestrophin-1, a calcium-activated chloride channel**

DONG-HYUN KIM[1], JUNMO HWANG[1], HYUN-HO LIM*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P26.09 **Deficiency of DKK2 increases the spine density and excitatory synaptic transmission in CA1 neurons**

WOO SEOK SONG[1], SANG HO YOON[1], SUNG PYO OH[1], KYEONG-YEOL PARK[1], MYOUNG-HWAN KIM*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P26.10 **EGTA can inhibit vesicular release in the 'nanodomain' distance from Ca channels**

YUKIHIRO NAKAMURA*[1]
[1]Jikei University, Tokyo, Japan

P26.11 **Circadian Regulation by REV-ERBα Mediates Hippocampal E-LTP in a Time-dependent Manner**

JA EUN CHOI[1], SOMI KIM[1], JISU LEE[1], KYUNGJIN KIM[2], MIN-JEONG KIM[1], ILGANG HONG[1], BONG-KIUN KAANG*[1]

[1]Seoul National University, Seoul, Korea, Republic of, [2]Department of Brain and Cognitive Sciences, DGIST, Daegu, Korea, Republic of

P26.12 **Age-related shift in the hippocampal synaptic plasticity is dependent on p75 neurotrophin receptor**

LIK WEI WONG[1], WEI LIN[1], YEE SONG CHONG[1], SAJIKUMAR SREEDHARAN*[1]

[1]National University of Singapore, Singapore, Singapore

P26.13 **Cellular mechanisms responsible for melanocortin-4 receptor effects in sympathetic preganglionic neurons.**

SANG-HYEON JU[1], JONG-WOO SOHN*[2]

[1]Graduate School of Medical Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [2]Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P26.14 **Neural mechanisms of a novel GLP-1 receptor agonist-mediated appetite suppression**

SUJIN YOO[1], EUNSEON YOO[1], JONG-WOO SOHN*[1]

[1]KAIST, Daejeon, Korea, Republic of

P26.15 **Agrin as a presynaptic differentiation inducer and its proteolytic regulation by MMPs**

MARILYN JANICE OENTARYO[1], CHI WAI LEE*[1]

[1]The University of Hong Kong, Hong Kong, Hong Kong SAR, China

P26.16 **Role of specific GIRK channel subunits in arcuate NPY/AgRP neurons**

YOUJIN OH[1], JONG-WOO SOHN*[1]

[1]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of

P26.17 **β-amyloid preconditioning enhance cellular tolerance towards Aβ-induced toxicity via the BDNF pathway**

XIN YI YEO[1], SEUNG HYUN BAEK[2], FANG ZHEN WEE[1], JIONG TANG[1], SANGYONG JUNG[1], DONG-GYU JO*[2]

[1]Singapore Bioimaging Consortium (SBIC), A*STAR, Singapore, Singapore, [2]School of Pharmacy, Sungkyunkwan University, Suwon, Korea, Republic of

P26.18 **Dopamine D2 receptors regulate the action potential threshold by modulating T-type calcium channels in stellate cells of the medial entorhinal cortex**

ZHUO HUANG*[1], XUEQIN JIN[2]

[1]Peking university, Beijing, China, [2]Peking University, Beijing, China

P26.19 **Temporal gating of synaptic competition in the lateral amygdala by cannabinoid receptor modulation of the thalamic input**

NATALIA MADEIRA[1], ANA DRUMOND[1], ROSALINA FONSECA[1], ROSALINA FONSECA*[1]

[1]NOVA Medical School - Universidade NOVA de Lisboa, Lisbon, Portugal

P26.21 ***Neurl1* and *neurl2* are required for the regulation of hippocampus-dependent spatial memory and protein-synthesis dependent LTP**

JAEHYUN LEE[1], CHAERY LEE[1], POJEONG PARK[1], SOMI KIM[1], HYE-RYEON LEE[1], YESEUL LEE[1], EUN-HYE JANG[1], YOUNG-YUN KONG[1], BONG-KIUN KAANG*[1]

[1]Seoul National University, Seoul, Korea, Republic of

P26.22 **Molecular control of the cholinergic interneuron activity in the developing striatum**

YADOLLAH RANJBAR-SLAMLOO*[1], NOORYA AHMED[1], LINGXIAO GAO[1], SHAAM AL ABED[1], ALEXANDER RCOM-H'CHEO-GAUTHIER[1], YOVINA SONTANI[1], EHSAN ARABZADEH[1], NATHALIE DEHORTER[1]

[1]Australian National University, Canberra, Australia

P26.23 **Glutamatergic activity modulates presynaptic spatial specificity in *C. elegans***

WANG MENGQING[1], ZHIYONG SHAO*[1]

[1]Department of Neurosurgery, State Key Laboratory of Medical Neurobiology and MOE Frontiers Center for Brain Science, Institutes of Brain Science, Zhongshan Hospital, Fudan University, Shanghai, 200032, China, Shanghai, China

P26.24 **Role of neuronal activity and metaplastic state in homeostatic synaptic plasticity**

BRYCE GRIER[1], VARUN CHOKSHI[2], ANDREW DYKMAN[2], CRYSTAL LANTZ[3], ERNST NIEBUR[1], ELIZABETH QUINLAN[3], HEY-KYOUNG LEE*[1]

[1]Johns Hopkins University School of Medicine, Baltimore, USA, [2]Johns Hopkins University, Baltimore, USA, [3]University of Maryland, College Park, USA

P26.25 **Age-related cognitive impairment: Role of reduced Synaptobrevin-2 levels in the decline of learning and memory and changes in neurotransmission**

FERENC DEAK*[1], ALBERT OROCK[1], SREEMATHI LOGAN[1]

[1]Univ. Oklahoma HSC, Oklahoma City, USA

P26.26 **Peripheral nerve injury induces rapid turnover of cortical NCAM1 and synaptic reorganization**

JI-IL KIM[1], HYOUNG-GON KO[1], JUN-HYEOK CHOI[1], DONG IK PARK[2], SUKJAE KANG[1], CHAE-SEOK LIM[1], SU-EON SIM[1], JAEHOON SHIM[1], SIYONG KIM[1], TAE-HYEOK CHOI[1], SANGHYUN YE[1], JAEHYUN LEE[1], POJEONG PARK[1], SOMI KIM[1], JEEHAEH DO[1], JIHYE PARK[1], ARIFUL ISLAM[1], HYUN JEONG KIM[1], CHRISTOPH TURCK[2], GRAHAM COLLINGRIDGE[3], MIN ZHUO[3], JIAH LEE[1], BONG-KIUN KAANG*[1]

[1]Seoul National University, Seoul, Korea, Republic of, [2]Max Planck Institute of Psychiatry, Munich, Germany, [3]University of Toronto, Toronto, Canada

Physiology: systems/network functions, computational neuroscience

P27.01 **Characterization of prefrontal projections to dorsomedial striatal compartments**

KYUHYUN CHOI[1], SARA SEYEDROUDBARI[1], MARC FUCCILLO*[1]
[1]University of Pennsylvania, Philadelphia, USA

P27.02 **Network connectivity associated with delusion in patients with schizophrenia**

MINJI HA[1], TAE YOUNG LEE[2], JUN SOO KWON*[2]
[1]Department of Brain and Cognitive Sciences, Seoul National University College of Natural Science, Seoul, Korea, Republic of, [2]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of

P27.03 **Nucleus accumbens may contain neural representation of morphine withdrawal syndrome related behaviors**

AMIR-MOHAMMAD ALIZADEH*[1], ABBAS HAGHPARAST[1], MOHAMMAD ISMAIL ZIBAII[2], SHOLEH JAMALI[1]
[1]Shahid Besheti University/Neuroscience Research Center, Tehran, Iran, [2]Shahdi Behesti University/Laser and Plasma Research Institute, Tehran, Iran

P27.04 **Altered functional connectivity of prefrontal cortex in healthy elderly and Alzheimer's disease patient during a verbal fluency task: an fNIRS study**

MINHEE KIM[1], THIEN NGUYEN[1], BYEONG C. KIM[2], JEONGHWAN GWAK[3], JANG JAE LEE[4], KYU YEONG CHOI[4], KUN HO LEE[4], JAE GWAN KIM*[1]
[1]Department of Biomedical Science and Engineering, GIST, Gwangju, Korea, Republic of, [2]Department of Neurology, Chonnam National University Medical School, Gwangju, Korea, Republic of, [3]Department of Software, Korea National University of Transportation, Chungju, Korea, Republic of, [4]Department of Biomedical Science, Chosun University, Gwangju, Korea, Republic of

P27.05 **Dopamine ramping as a prediction error signal in the presence of dynamic sensory cues**

HYUNGGOO KIM[1], NAOSHIGE UCHIAGE*[1]
[1]Harvard University, Cambridge, USA

P27.06 **Identification of transcriptomic changes during brain aging and neurodegeneration using interactome-based Support Vector Machine model**

TIBOR NANASI*[1], ISTVAN ULBERT[1], TONY WYSS-CORAY[2], BENOIT LEHALLIER[3]
[1]MTA-TTK, Budapest, Hungary, [2]Stanford University; VA Palo Alto Health Care System, Stanford, CA; Palo Alto, CA, USA, [3]Stanford University, Stanford, CA, USA

P27.07 **Study of the gap junction network in C. elegans**

TAEGON CHUNG[1], JEAHYUNG HEO[1], KYUNGWON PARK[1], SANGYEOL KIM[1], IKSOO CHANG*[1]
[1]Department of Brain and Cognitive Sciences, Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of

P27.08 **Decline of unidirectional alpha connections in the aging brain**

BÁLINT FILE*[1], BRIGITTA TÓTH[2], ZSÓFIA KARDOS[2], ROLAND BOHA[2], ISTVÁN ULBERT[1], ZOLTÁN SOMOGYVÁRI[3], MÁRK MOLNÁR[2]
[1]Pázmány Péter Catholic University, Budapest, Hungary, [2]Institute of Cognitive Neuroscience and Psychology, RCNS, HAS, Budapest, Hungary, [3]Wigner Research Centre for Physics, HAS, Budapest, Hungary

P27.09 **Neural control of high nutrient induced morning activity peak delay in Drosophila**

SANG HYUK LEE[1], EUNJOO CHO[1], EUN YOUNG KIM*[1]
[1]Ajou University, suwon, Korea, Republic of

P27.10 **Universality in the transition to lissencephaly for cortical morphology across length scales for individual human cortices**

BRUNO MOTA*[1], YUJIANG WANG[2]
[1]UFRJ, Rio de Janeiro, Brazil, [2]Newcastle University, Newcastle, UK

P27.11 **Vasoactive intestinal peptide regulates the expression patterns of corticotrophin-releasing hormone (CRH) in the paraventricular nucleus**

INAH PARK[1], JEONGAH KIM[1], DOYEON KIM[2], SANGWON JANG[1], KYOJIN KU[1], MIJUNG CHOI[1], YOUNGSHIK CHOE[3], KYUNGJIN KIM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of, [3]Korea Brain Research Institute (KBRI), Daegu, Korea, Republic of

P27.12 **Universal control of diverse aggressive behaviors by the posterior substantia innominata**

ZHENGGANG ZHU[1], YANQIN YU[1], SHUMIN DUAN*[1]
[1]Zhejiang University, Hangzhou, China

P27.13 **Social context modulates auditory activity in a songbird VTA/SNc**

SHIN YANAGIHARA*[1], MAKI IKEBUCHI[2], CHIHIRO MORI[1], RYOSUKE O. TACHIBANA[1], KAZUO OKANOYA[1]
[1]The University of Tokyo, Tokyo, Japan, [2]RIKEN, Wako-Shi, Japan

P27.14 **Emerging spatial representations in hippocampal neurons in mice navigating in virtual reality**

NURI JEONG[1], STEPHANIE PRINCE[1], ABIGAIL PAULSON[1], LU ZHANG[1], MATTHEW ATTOKAREN[1], ANNABELLE SINGER*[1]
[1]Coulter Dept. of Biomedical Engineering, Georgia Institute of Technology and Emory School of Medicine, Atlanta, USA

P27.15 **The alteration of brain connectivity in frontal lobe epilepsy patients based on the alpha band analysis after vagal nerve stimulation**

ZHI-JI WANG[1], BAO-HUA ZHU[1], EUN-SEONG KIM[1], JUN-GE LIANG[2], YUN-JUNG HUR[3], DONG-PYO LEE[4], HEUNG-DONG KIM[5], NAM-YOUNG KIM*[1]
[1]RFIC Center, Kwangwoon University, Seoul, Korea, Republic of, [2]RFIC Center, Kwangwoon University; Jiangnan University, Seoul; Wuxi, China, [3]Department of Pediatrics, Haeundae Paik Hospital, Inje University College of Medicine, Pusan, Korea, Republic of, [4]Epilepsy Research Institute, Yonsei University, College of Medicine, Seoul, Korea, Republic of, [5]Epilepsy Research Institute, Yonsei University, College of Medicine; Department of Pediatrics, Pediatric Epilepsy Clinic, Severance Children's Hospital, Yonsei University College of Medicine, Seoul, Korea, Republic of

P27.16 **Identification of epileptogenic zone based on network-connectivity analysis derived from the frequency spectrum of the recorded EEG**

ZHI-JI WANG[1], EUN-SEONG KIM[1], JUN-GE LIANG[2], YUN-JUNG HUR[3], DONG-PYO LEE[4], HEUNG-DONG KIM[5], NAM-YOUNG KIM*[1]
[1]RFIC Center, Kwangwoon University, Seoul, Korea, Republic of, [2]RFIC Center, Kwangwoon University; Jiangnan University, Seoul; Wuxi, China, [3]Department of Pediatrics, Haeundae Paik Hospital, Inje University College of Medicine, Pusan, Korea, Republic of, [4]Epilepsy Research Institute, Yonsei University, College of Medicine, Seoul, Korea, Republic of, [5]Epilepsy Research Institute, Yonsei University, College of Medicine; Department of Pediatrics, Pediatric Epilepsy Clinic, Severance Children's Hospital, Yonsei University College of Medicine, Seoul, Korea, Republic of

P27.17 **Modeling the effects of cortisol in serotonergic-kynurenic pathways in the etiology of depressive behavior**

FELIPE DALVI-GARCIA*[1], LUIS LOPES DA FONSECA[3], CECILIA HEDIN-PEREIRA[4], ANA TEREZA RIBEIRO DE VASCONCELOS[2], EBERHARD VOIT[3]
[1]National Laboratory for Scientific Computing, Petrópolis, Brazil, [2]National Laboratory of Scientific Computing, Petrópolis, Brazil, [3]Georgia Institute of Technology, Atlanta, USA, [4]Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

P27.18 **Responses to hypercapnia and hypoxia of neurons in the cardio-respiratory center of the ventral medulla of newborn rats**

HIROSHI ONIMARU*[1], KEIKO IKEDA[2], HIROYUKI IGARASHI[3], HIROMU YAWO[4], KAZUTO KOBAYASHI[5], SATORU ARATA[6], KIYOSHI KAWAKAMI[7], MASAHIKO IZUMIZAKI[8]

[1]Showa University, 1-5-8 Hatanodai, Shinagawaku, Tokyo, Japan, [2]Department of Physiology, International University of Health and Welfare (IUHW), 4-3 Kozunomori, Narita City, Chiba 286-8686, Japan, [3]Department of Physiology and Pharmacology, Schulich School of Medicine and Dentistry, Robarts Research Institute, Western University, London, Ontario, N6A 5B7, Canada, [4]The Institute for Solid State Physics, The University of Tokyo, Kashiwa 277-8581, Japan, [5]Dept Mol Genet, (Inst Bio Sic,) Fukushima Med Univ, Fukushima, Japan, [6]Department of Biochemistry, Faculty of Arts and Sciences, Showa University, Fujiyoshida, Yamanashi 403-0005, Japan, [7]Division of Biology, Center for Molecular Medicine, Jichi Medical University, Shimotsuke, Tochigi 329-0498, Japan, [8]Department of Physiology, Showa University School of Medicine, Tokyo 142-8555, Japan

P27.19 **Effect of cannabinoids in prefrontal on effort-based decision making mediates via the change in p-CREB and p-GSK3**

ZAHRA FATAHIVANANI*[1], ABBAS HAGHPARAST[1]

[1]Shahid Beheshti University of Medical Science, Tehran, Iran, Tehran, Iran

P27.20 **Computational analysis of damaging nsSNP in Human *STXBP1* gene involved in early infantile epileptic encephalopathy: molecular modelling and dynamics study**

AL MEHDI KRAMI*[1], RACHIDA ROKY[2], ABDELHAMID BARAKAT[3], HALIMA NAHILI[3]

[1]Laboratory of Physiology and Molecular Genetics, Department of Biology, Faculty of Sciences Ain Chock / Laboratory of Genomics and Human Genetics, Institut Pasteur du Maroc, 20360, Casablanca, Morocco., Casablanca, Morocco, [2]Laboratory of Physiology and Molecular Genetics, Department of Biology, Faculty of Sciences Ain Chock, casablanca, Morocco, [3]Laboratory of Genomics and Human Genetics, Institut Pasteur du Maroc, 20360, Casablanca, Morocco., casablanca, Morocco

P27.21 **Lipidomics of human brain regions**

ANNA TKACHEV*[1], EKATERINA KHRAMEEVA[1], MARIA OSETROVA[1], PHILIPP KHAITOVICH[1]

[1]Skolkovo Institute of Science and Technology, Moscow, Russia

P27.22 **Traumatic memory engram cells replay in the resting state of a conscious mouse**

KSENIA TOROPOVA*[1], OLGA IVASHKINA[1], ANNA GRUZDEVA[1], ANNA IVANOVA[2], ELENA KONOVALOVA[3], DMITRY IVASHKIN[2], ALEKSEY IVANITSKY[4], KONSTANTIN ANOKHIN[5]

[1]Institute of Advanced Brain Studies MSU; NRC Kurchatov Institute, Moscow, Russia, [2]NRC Kurchatov Institute, Moscow, Russia, [3]Anokhin Institute of Normal Physiology, Moscow, Russia, [4]Institute of Higher Nervous Activity and Neurophysiology of RAS, Moscow, Russia, [5]Institute of Advanced Brain Studies MSU; Anokhin Institute of Normal Physiology, Moscow, Russia

P27.23 **Studies on the lateralization of mouse insular cortex in mediating aversive behavior**

KAI QIAN[1], YU WU[1], SHUANG QIU*[1]

[1]Zhejiang universtiy, Hangzhou, China

P27.24 **Cortical propagation of slow-oscillation-associated waves unveiled by fast line fMRI scanning**

FELIPE AEDO JURY*[1], DIRK CLEPPIEN[2], LARA HAMZEHPOUR[1], ALBRECHT STROH[3]

[1]Institute of Pathophysiology - University Medical Center Mainz, Mainz, Germany, [2]German Resilience Center, Mainz, Germany, [3]Institute of Pathophysiology - University Medical Center Mainz / German Resilience Center, Mainz, Germany

Sensory and motor systems

P28.01 **Luminance signals in the human brain**

JEROME SANES*[1], SHAI SABBAH[2], MICHAEL WORDEN[1], DAVID BERSON[1]

[1]Brown University, Providence, USA, [2]Hebrew University Jerusalem, Jerusalem, Israel

P28.02 **Modulation of nociception by social bonds in the monogamous rodent: c-Fos expression in the brain "pain matrix" under conditions of inflammatory pain**

TAKAHIRO OKUDA[1], YOJI OSAKO[2], KOU TAKAHASHI[2], KENJIRO TANAKA[2], TAKAO OKABE[1], HIDEAKI TAKEBAYASHI[3], LARRY YOUNG[4], TAKAHIRO USHIDA[5], KAZUNARI YURI*[2]

[1]Department of Physical Therapy, Tosa Rehabilitation College, Kochi, Japan, [2]Department of Neurobiology and Anatomy, Kochi Medical School, Kochi University, Kochi, Japan, [3]Department of Physical Therapy, Tosa Rehabilitation College, kochi, Japan, [4]Center for Translational Social Neuroscience, Yerkes National Primate Center, Emory University School of Medicine, Atlanta, USA, [5]Multidisciplinary Pain Center, Aichi Medical University, Aichi, Japan

P28.03 **Neuroimaging evidence for auditory motion velocity discrimination**

I-HUI HSIEH*[1], CHAO-AN MENG[1]

[1]National Central University, Jhongli City, Taiwan, China

P28.04 **Electrical activity evoked by 10kHz spinal cord stimulation on superficial dorsal horn neurons in neuropathic pain rats**

DONGCHUL LEE*[1], KWAN YEOP LEE[2], KERRY BRADLEY[3], DAVID SPANSWICK[4]

[1]Nevro Corp, Redwood city, USA, [2]Nevro, Redwood city, USA, [3]Nevro, Redwood City, USA, [4]University of Warwick, Warwick, UK

P28.05 **FMRFamide-related neuropeptide FLP-12 regulate head locomotion of *C. elegans***

DO-YOUNG KIM[1], CHUNGYU PARK[1], KYUNGMIN MOON[1], JINMAHN KIM[1], KYUHYUNG KIM*[1]

[1]DGIST, Daegu, Korea, Republic of

P28.06 **Analysis of neural signals recorded from substantia nigra pars compacta for brain machine interface in freely moving rat**

HAE-YONG PARK[1], SEONGJIN HER[2], CHIN SU KOH[3], HWAN GON LEE[4], IN SEOK SEO[1], KYUNG HWAN KIM[2], JIN WOO CHANG[3], HYUNG-CHEUL SHIN*[1]

[1]Department of Physiology, College of Medicine, Hallym University, Chuncheon, Korea, Republic of, [2]Department of Biomedical Engineering, College of Health Science, Yonsei University, Wonju, Korea, Republic of, [3]Department of Neurosurgery, College of Medicine, Yonsei University, Seoul, Korea, Republic of, [4]Department of Physical Education, Hallym University, Chuncheon, Korea, Republic of

P28.07 **Central processing of itch in the midbrain reward center**

XIN-YU SU[1], MING CHEN[2], TIAN-LE XU*[1]

[1]Collaborative Innovation Center for Brain Science, Department of Anatomy and Physiology, Shanghai Jiao Tong University School of Medicine, Shanghai 200025, China, Shanghai, China, [2]iHuman Institute, ShanghaiTech University, Shanghai 201210, China, Shanghai, China

P28.08 **Machine-learning based automatic and real-time detection of mouse scratching behaviors**

KYEONGHO LEE[1], INGYU PARK[3], KAUSIK BISHAYEE[4], UNJOO LEE*[2]

[1]Department of Brain and Cognitive Sciences, DGIST, Daegu 42988, Daegu, Korea, Republic of, [2]Department of Electrical Engineering, Hallym University, Chuncheon 24252, Chuncheon, Korea, Republic of, [3]Department of Electrical Engineering, Hallym University, Chuncheon 24252, Chuncheon , Korea, Republic of, [4]Department of Pharmacology, College of Medicine, Hallym University, Chuncheon 24252, Chuncheon , Korea, Republic of

P28.09 **Odor-taste multisensory integration in *Drosophila***
HONGPING WEI[1], HOKTO KAZAMA[1], HOKTO KAZAMA*[1]
[1]Center for Brain Science, RIKEN,Japan, Saitama, Japan

P28.10 **Positive impact of enriching the environment during development on the mouse visual system**
CHRISTIAN CASANOVA*[1], STÉPHANIE HO-TRAN[1], ANTHIA ROJEWSKI[1], SOLENN TISSIER[1], SAMUEL BÉLANGER[1], OLIVIA BIBOLLET-BAHENA[1]
[1]University of Montreal, Montreal, Canada

P28.11 **Serotonin 1B receptors are involved in presynaptic inhibition of proprioceptive afferent transmission to jaw-closing motoneurons**
TOMIO INOUE*[1], AI NAGATA[2], KIYOMI NAKAYAMA[1], SHIRO NAKAMURA[1], AYAKO MOCHIZUKI[1], MASANORI DANTSUJI[1], KOUTARO MAKI[2]
[1]Department of Oral Physiology, Showa University School of Dentistry, Tokyo, Japan, [2]Department of Orthodontics, Showa University School of Dentistry, Tokyo, Japan

P28.12 **Effect of *C. Sporogenes*-derived metabolites on the circadian rhythm of *Period2* and *Bmal1* expression**
KYOJIN KU[1], INAH PARK[2], JEONGAH KIM[2], DOYEON KIM[3], SANGWON JANG[2], MIJUNG CHOI[2], HAN KYOUNG CHOE[2], KYUNGJIN KIM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of, [2]Department of Brain and Cognitive Sciences, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [3]Interdisciplinary Program in Neuroscience, College of Natural Sciences, Seoul National University, Seoul, Korea, Seoul, Korea, Republic of

P28.13 **Dysregulated miR-18b by MITF promotes CTGF expression in DMD**
KYUNG WON CHOI[1], JUNG JOON SUNG*[1]
[1]Seoul Nation University Hospital, Seoul, Korea, Republic of

P28.14 **Gait selection of *Caenorhabditis elegans* is regulated by mechanosensitive DEG/ENaC channels**
KYEONG MIN MOON[1], JINMAHN KIM[1], JIHYE YEON[1], KYUHYUNG KIM*[1]
[1]DGIST, Deagu, Korea, Republic of

P28.15 **Audio-motor and visual-motor synchronization in healthy children and children with cerebellum lesions**
ANASTASIA KOVALEVA*[1], VICTOR ANISIMOV[2], MARINA SHURUPOVA[2]
[1]Anokhin Research Institute of Normal Physiology, Moscow, Russia, [2]Lomonosov Moscow State University, Moscow, Russia

P28.16 **Prior expectation reduces the trial-by-trial variation of pursuit direction and interneuronal correlations in macaque area MT**
JEONGJUN PARK[1], SEOLMIN KIM[2], JOONYEOL LEE*[2]
[1]Sungkyunkwan University, suwon-si, Korea, Republic of, [2]Sungkyunkwan University, Suwon-si, Korea, Republic of

P28.17 **Effect of local hypothermia of the spinal cord on the motor evoked potentials of the hindlimb muscles after spinal cord injury in rat**
DINARA SILANTYEVA*[1], EKATERINA LOBAN[1], MARIA RAIMOVA[1], TATYANA BALTINA[1]
[1]Kazan Federal University, Kazan, Russia

P28.18 **Efferent projections of granular insular cortex receiving proprioception from jaw-closing muscle spindles**
FUMIHIKO SATO[1], YUMI TSUTSUMI[1], HARUKA OHARA[1], YUME UEMURA[1], TAKAHIRO FURUTA[1], ATSUSHI YOSHIDA*[1]
[1]Department of Oral Anatomy and Neurobiology, Graduate School of Dentistry, Osaka University, Suita, Japan

P28.19 **cIAP1 may be involved in survival of the olfactory system**
SUNJU LEE[1], SUN AE MOON[1], SO YEUN KIM[1], CHEIL MOON*[1]
[1]DGIST, Daegu, Korea, Republic of

P28.20 **The gap-pre-pulse inhibition of the acoustic startle reflex: statistics, criticism and future applications**
ACHIM SCHILLING*[1], PATRICK KRAUSS[1], KONSTANTIN TZIRIDIS[1], HOLGER SCHULZE[1]
[1]Experimental Otolaryngology, Neuroscience Group, University Hospital Erlangen, Erlangen, Germany

P28.21 **Functionally associated classification of human olfactory receptor superfamily in the function associated manner**
JIYUN CHOE[1], SANG EUN RYU[1], JISUB BAE[1], TAMMY SHIM[1], CHEIL MOON*[1]
[1]DGIST, Daegu, Korea, Republic of

P28.22 **Haptic, visual, auditory surface texture perception**
JUNSUK KIM*[1], YOSUP SO[1], HYEONJEONG LEE[1], JAE-HWAN KANG[1]
[1]Institute for Basic Science, Suwon, Korea, Republic of

P28.23 **Dorsal and ventral processing streams of somatosensory system in human**
SEOKYUN RYUN[1], MINKYU KIM[2], JUNE SIC KIM[1], CHUN KEE CHUNG*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National Univesity, Seoul, Korea, Republic of

P28.24 **The olfactory bulb contributes to the accommodation of odor responses: The input-output transformation**
LAWRENCE COHEN*[1], DOUGLAS STORACE[2]
[1]Yale and KIST, New Haven and Seoul, USA, [2]Florida State University, Tallahassee, USA

P28.25 **Programmed Death-ligand 1 downregulates TRPV1 function in Dorsal root ganglion neurons and alleviates mice bone cancer pain**
CAO QILAI[1], ZHANG YU-QIU*[1]
[1]Fudan University, ShangHai, China

P28.26 **Analysis of tongue strength and swallowing in COPD and Healthy Ageing**
ISABELLA EPIU*[1], CLAIRE BOSWELL-RUYS[2], SIMON GANDEVIA[2], JANE BUTLER[2], ANNA HUDSON[2]
[1]Neuroscience Research Australia - UNSW, Sydney, Australia, [2]Neuroscience Research Australia, Sydney, Australia

P28.27 **Ocular torsion and vertical divergence: A joint motor output for multisensory balance integration in the roll plane**
TOBIAS WIBBLE*[1], TONY PANSELL[1]
[1]Karolinska Institutet, Stockholm, Sweden

P28.28 **Effect of chronic alcohol consumption on visual stimulus onset and offset in the rat visual cortex and lateral geniculate nucleus**
OSVALDAS RUKSENAS*[1], REDAS DULINSKAS[1]
[1]Vilnius University, Vilnius, Lithuania

Tuc. (Sept. 24)

Others

P29.01 **Behavioral changes after nicotine challenge are associated with α7 nicotinic acetylcholine receptor stimulated glutamate release in the rat dorsal striatum**

SUMIN SOHN[1], IN SOO RYU[2], JU HWAN YANG[1], JIEUN KIM[1], SUNGHYUN KIM[1], EUN SANG CHOE*[1]
[1]Department of Biological Sciences, Pusan National University, Busan, Korea, Republic of, [2]Research Center for Safety Pharmacology, Korea Institute of Toxicology, Daejeon, Korea, Republic of

P29.02 **Integrated proteomics approach for understanding of Alzheimer's disease**

JONG HYUK YOON*[1], DAYEA KIM[2], JAEYOON KIM[3], HYEONGJOO LEE[4], JAEWANG GHIM[4], BYUNG JUN KANG[3], PARKYONG SONG[3], SUNG HO RYU[3], TAEHOON G. LEE[4]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of, [2]Daegu-Gyeongbuk Medical Innovation Foundation, Daegu, Korea, Republic of, [3]Pohang University of Science and Technology, Pohang, Korea, Republic of, [4]NovaCell Technology, Inc., Pohang, Korea, Republic of

P29.03 **Regulatory effects of histone deacetylase inhibitors on Schwann cell growth and axonal regeneration**

KI-JOONG KIM[1], UK NAMGUNG*[1]
[1]Daejeon University, Daejeon, Korea, Republic of

P29.04 **Searching for neural circuits involved in courtship behavior and ovipositor extension in *Drosophila Melanogaster***

HSIAOCHI CHENG*[1], TSUNG-HAN KUO[1]
[1]National Tsing Hua University, Taiwan, Hsinchu, Taiwan, China

P29.05 **Coenzyme Q10 influences on the levels of TNF-α and IL-10 and the ratio of Bax/Bcl2 in a menopausal rat model following lumbar spinal cord injury**

MARYAM SOLEIMANI*[1], SEYED BEHNAMEDIN JAMEIE[2], SAJAD HASSANZADEH[2]
[1]Department of Medical Basic Sciences, University of social Welfare and Rehabilitation Sciences, Tehran, Iran, Tehran, Iran, [2]Neuroscience Research Center (NRC), Iran University of Medical Sciences, Tehran, Iran, Tehran, Iran

P29.06 **Continuous speech-evoked EEG signals reveal dominant components in spoken sentence comprehension**

TRANG LE THI[1], YOUNGMIN NA[1], MINJAE JEON[1], JIHWAN WOO*[1]
[1]Department of Biomedical Engineering, University of Ulsan, Ulsan, Korea, Republic of

P29.07 **High-throughput epitope profiling of antibodies in the plasma of Alzheimer's disease patients using random peptide microarrays**

KYU-YOUNG SIM[1], KUN HO LEE[2], SANG-HEON PARK[1], KYU YEONG CHOI[3], JUNG EUN PARK[2], JUNG SUP LEE[2], BYEONG C. KIM[4], JEONGHWAN GWAK[5], WOO KEUN SONG[1], SUNG-GYOO PARK*[1]
[1]Gwangju Institute of Technology and Science, Gwangju, Korea, Republic of, [2]National Research Center for Dementia, Chosun University; Department of Biomedical Science and BK21-plus Research Team for Bioactive Control Technology, Chosun University, Gwangju, Korea, Republic of, [3]National Research Center for Dementia, Chosun University, Gwangju, Korea, Republic of, [4]National Research Center for Dementia, Chosun University; Department of Neurology, Chonnam National University Medical School, Gwangju, Korea, Republic of, [5]5Biomedical Research Institute & Department of Radiology, Seoul National University Hospital, Seoul, Korea, Republic of

P29.08 **Effect of ethanol leaf extract of *Moringa oleifera* on oxidative enzymes, nissl granules and histomorphology of inferior colliculus following quinine toxicity in Wistar rats**

IDORENYIN UMOH*[1], THERESA EKANEM[2], JUSTINA UDOTONG[1], HERBERT MBAGWU[1]
[1]University of Uyo, Uyo, Nigeria, [2]University of Calabar, Calabar, Nigeria

P29.09 **Sympathetic activity mediates extra-medullary erythropoiesis in the primo vascular system of heart failure rats**

PAN DONG RYU*[1], YIMING SHEN[1]
[1]Department of Veterinary Pharmacology, College of Veterinary Medicine and Research Institute for Veterinary Science, Seoul National University, Seoul 08826, Republic of Korea, Seoul, Korea, Republic of

P29.10 **Hemodynamic correlation imaging of the mouse brain for application in unilateral neurodegenerative diseases**

SEUNG-HO PAIK[1], YOUNGWOON CHOI[1], ZEPHANIAH PHILLIPS V[1], BEOP-MIN KIM*[1]
[1]KOREA University, Seoul, Korea, Republic of

P29.11 **Beneficial effects of hMSC treatment in LPS-induced animal model of cerebellar ataxia**

DONGYEONG YOON[1], KYONGHO SUK[2], JUNGWAN HONG[3], SANG RYONG KIM*[1, 3]
[1]School of Life Sciences, BK21 plus KNU Creative BioResearch Group, Kyungpook National University, Daegu 41566, Republic of Korea, [2]Department of Pharmacology, BK21 plus KNU Biomedical Convergence Program, School of Medicine, Kyungpook National University, Daegu 41944, Republic of Korea, [3]Brain Science and Engineering Institute, Kyungpook National University, Daegu 41944, Republic of Korea

P29.12 **The effect of social environment on the health of *Drosophila***

SHENG-HAO WANG[1], PIN-YUN SHEN[2], YI-LIN CHEN[2], YU-CHIAO LIN[1], TSUNG-HAN KUO*[1]
[1]National Tsing Hua University, Hsinchu, Taiwan, China, [2]National Hsinchu Girl's Senior High School, Hsinchu, Taiwan, China

P29.13 **Classification of Parkinson's disease using resting-state hemodynamic signals and convolutional neural network**

SHIN-YOUNG KANG[1], YOUNGWOON CHOI[1], SEUNG-HO PAIK[1], ZEPHANIAH PHILLIPS V[1], BEOP-MIN KIM*[1]
[1]Korea University, Seoul, Korea, Republic of

P29.14 **Social environment mediates lifespan and physiology in Drosophila**

YU-CHIAO LIN[1], SHENG-HAO WANG[1], PIN-YUN SHEN[2], YI-LIN CHEN[2], TSUNG-HAN KUO*[1]
[1]National Tsing Hua University, Hsinchu, Taiwan, China, [2]National Hsinchu Girl's Senior High School, Hsinchu, Taiwan, China

P29.15 **Therapy for neuroblastoma using aptamer-miRNA / siRNA conjugates targeting the LPAR pathway**

HEEYOUNG PARK[1], ALI SADRA[1], SUNG-OH HUH*[1]
[1]Department of Pharmacology, College of Medicine, Institute of Natural Medicine, Hallym University, Chuncheon, Gangwon-do, 24252, Republic of Korea., Chuncheon, Korea, Republic of

P29.16 **Impact of IDH1 mutation on long-term survival in Mongolian patients with diffuse brain glioma**

ENKHEE OCHIRJAV*[1], TUUL BALDANDORJ[1], GHEEYOUNG CHOE[2], BAYARMAA ENKHBAT[1]
[1]Mongolian National University of Medical Sciences, Ulaanbaatar, Mongolia, [2]Seoul National University Bundang Hospital, Seongnam, Korea, Republic of

P29.17 **Exploring the ligand efficacy and signal transduction of Cannabinoid Receptor 1 (CB1) using Molecular Dynamics simulations**

SANG HO JI[1], SANG WON JUNG[1], WOOKYUNG YU*[1]
[1]DGIST, Daegu, Korea, Republic of

P29.18 **Targeting the difficult-to-drug CD71 and MYCN with gambogic acid and vorinostat an a class of neuroblastomas**

KAUSIK BISHAYEE[1], VINAY DUBEY[1], ALI SADRA[1], SUNG-OH HUH*[1]
[1]Department of Pharmacology, College of Medicine, Institute of Natural Medicine, Hallym University, South Korea, Chuncheon, Korea, Republic of

P29.19 ***Aquilariae Lignum*** **extract attenuates brain injury by hippocampal oxidative stress in chronic restraint mice**

SUNG BAE LEE[1], CHANG GUE SON*[1]
[1]Institute of Traditional Medicine and Bioscience, Daejeon University, Daejeon, Korea, Republic of

P29.20 **Plasma contact factors as novel diagnostic biomarkers for Alzheimer's disease**

JUNG EUN PARK[1], DO SUNG LIM[1], YEONG HEE CHO[1], KYU YEONG CHOI[1], JANG JAE LEE[1], BYEONG C. KIM[2], KUN HO LEE[1], JUNG SUP LEE*[1]
[1]Chosun University, Gwangju, Korea, Republic of, [2]Chonnam National University Medical School, Gwangju, Korea, Republic of

P29.21 **Characterization of molecular mechanisms underlying voltage-Gated Ca^{2+} channel modulation by DREADD**

YONG-SEOK KIM[1], BYUNG-CHANG SUH*[1]
[1]DGIST, Daegu, Korea, Republic of

P29.22 **Rapid resensitization of ASIC2a is conferred by three amino acid residues in the N-terminus**

JAE SEUNG LEE[1], HAE-JIN KWEON[1], BYUNG-CHANG SUH[1], HYOSANG LEE*[1]
[1]DGIST, Daegu, Korea, Republic of

P29.23 **Effects of mGluR5 knockout on acute NMDA receptor antagonist-induced changes in glucose metabolism: an [^{18}F]FDG microPET and MRS study**

YO-HAN JOO[1], YUN-KWAN KIM[1], IN-GYU CHOI[1], YI-SEUL CHOE[1], YOUNG-DON SON[3], HANG-KEUN KIM[3], HYEONJIN KIM[4], JONG-HOON KIM*[2]
[1]Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [2]Department of Psychiatry, Gachon University College of Medicine, Gil Medical Center, Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [3]Department of Biomedical Engineering, College of Health Science, Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [4]Department of Radiology, Seoul National University Hosptial, Seoul, Korea, Republic of

P29.24 **Association between human *in vivo* metabotropic glutamate receptor-5 availability and white matter microstructural integrity: A [^{11}C]ABP688 PET and diffusion tensor imaging study**

JONG-HOON KIM*[1], SONG-E KIM[2], YO-HAN JOO[2], YOUNG-DON SON[3], SANG-YOON LEE[4], HANG-KEUN KIM[3]
[1]Department of Psychiatry, Gachon University College of Medicine, Gil Medical Center, Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [2]Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [3]Department of Biomedical Engineering, College of Health Science, Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of, [4]Department of Neuroscience, Gachon University College of Medicine, Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of

P29.25 **Functional networks study of Gα protein using coevolution analysis**

MINJAE SEO[1], WOOKYUNG YU*[1]
[1]DGIST(Daegu gyeongbuk institute of science & technology), DAEGU, Korea, Republic of

P29.26 **LTP induces translocation of MAP2 to dendritic spines of hippocampal neurons**

YOONJU KIM[1], KEA JOO LEE*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P29.27 **Development of a novel amyloid specific gadolinium contrast agent for MR imaging modality in alzheimer's disease mouse brain**

AHRUM BAEK[1], GARAM CHOI[2], HEE-KYUNG KIM[1], YONGMIN CHANG*[1]
[1]Kyungpook national university, Daegu, Korea, Republic of, [2]Myungmoon Bio. Co., Ltd., Daegu, Korea, Republic of

P29.28 **Analysis of immune alterations and their relationship to bacterial infection after stroke**

MINHA KIM[1], YUREE LIM[1], YENA OH[1], MYUNG-SHIN JEON*[1]
[1]Inha University/College of Medicine/Translational Research Center, Inha University Hospital, Incheon, Korea, Republic of

P29.29 **Ischemic damage on neural retina is induced by unilateral common carotid artery occlusion**

DEOKHO LEE[1], KI YOUNG YOON[2], HYUN BEOM SONG*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University , Seoul, Korea, Republic of

P29.30 **Transduced Tat-CIAPIN1 protects dopaminergic neuronal cells from MPP^+- and MPTP-induced damage**

YEONJOO CHOI*[1], DAE WON KIM[2], MIN JEA SHIN[1], JINSEU PARK[1], KYU HYUNG HAN[1], SUNG-WOO CHO[3], WON SIK EUM[1], SOO YOUNG CHOI[1]
[1]Hallym University, Chuncheon, Korea, Republic of, [2]Gangneung-Wonju National University, , Gangneung, Korea, Republic of, [3]University of Ulsan College of Medicine, Seoul, Korea, Republic of

P29.31 **Advanced trap lateral flow immunoassay sensor for the detection of cortisol in human body fluids**

HYUN-KYUNG OH[1], GYEO-RE HAN[1], MIN-GON KIM*[1]
[1]Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P29.32 **Low-intensity, Kilohertz Frequency Spinal Cord Stimulation Differently Affects Excitatory and Inhibitory Neurons in the Rodent Superficial Dorsal Horn**

KWAN YEOP LEE*[1], CHILMAN BAE[2], JUN-HO LA[2], DONGCHUL LEE[1], ZACK KAGAN[1], KERRY BRADLEY[1]
[1]Nevro Corp, Redwood city, USA, [2]Department of Neuroscience, Cell Biology, and Anatomy, University of Texas Medical Branch, Galveston, USA

P29.33 ***Rauwolfia vomitoria Afzel.*** **root bark extract affects behaviour and brain microstructures**

MOSES EKONG*[1], MOKUTIMA ELUWA[2], MONDAY AKPANABIATU[1], THERESA EKANEM[2]
[1]University of Uyo, Uyo, Nigeria, [2]University of Calabar, Calabar, Nigeria

P29.34 **Effects of *Nigella sativa* (black seed) on the brain of mice exposed to environmental pollutant toluene**

SHEENA TIONG*[1], NUR LISA MOHD YUSOFF[1], DURRIYYAH SHARIFAH HASAN ADLI[2]
[1]University of Malaya, Kuala Lumpur, Malaysia, [2]University of Malaya, Kuala Lumpur, Malaysia

P29.35 **Immunohistochemical assessment of the effect of codeine containing cough medication on the prefrontal cortex and cerebellum of wistar rats**

THERESA EKANEM*[1, 2], VICTOR ARCHIBONG[3], ANOZENG IGIRI[4]
[1]University of Calabar, Cross River State, Nigeria, Calabar, Nigeria, [2]Department of Aantomical Sciences, Faculty of Basic Medical Sciences, University of Calabar., Calabar, Nigeria, [3]Department of Anatomy, Faculty of Biomedical Sciences, Kampala International University,, Ishaka, Uganda, [4]Department of Anatomical Sciences, Faculty of Basic Medical Sciences, University of Calabar., Calabar, Nigeria

P29.36 **A modulated microwave on-chip probe system for brain stimulation**

SEONGWOOG OH[1], JINHYUN KIM[1], JEIWON CHO[2], JUNGSUEK OH*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Catholic Kwandong University, Gangneung-si, Korea, Republic of

P29.37 **Neuronal circuit of spexin 1/2 neurons and its role of spexin 1 in the zebrafish habenula**

INYOUNG JEONG[1], EUNMI KIM[1], SUHYUN KIM[1], JAE YOUNG SEONG[2], HAE-CHUL PARK*[1]
[1]Korea University, Ansan, Korea, Republic of, [2]Korea University, Seoul, Korea, Republic of

Wed. (Sept. 25)

Poster Session (4)

Cognition and behavior

P30.01 **MAO-B inhibitor improves memory functions in the mouse model of post-operative cognitive decline**

SUNGHO MAENG*[1], MINSU YOU[1], JUNHYUK CHOI[1], WOORI BAE[1], GAEUL HAN[1], SEUNG-YUN CHA[1], JEONGHUN LEE[1]

[1]Graduate School of East-West Medical Science, Kyung-Hee University, Yongin, Korea, Republic of

P30.02 **Alteration of GABA transporter impairs cognitive behavior in Sting knockout mice**

CHIRANJIVI NEUPANE[1], RAMESH SHARMA[1], HYUN JIN SHIN[1], SU EUN PARK[1], JIN BONG PARK*[1]

[1]Department of Medical Sciences, Department of BK21 Plus, School of Medicine, Chungnam National University, Daejeon, Korea, Republic of

P30.03 **The submissive state is tuned by the habenulo-interpeduncuclo-median raphe pathway and is overridden by activation of the 5HT neurons in the median raphe**

MIHO MATSUMATA[1], KENZO HIRAO[2], TAKUMA KOBAYASHI[2], TAKU SUGIYAMA[2], YUKI KOBAYASHI[2], ARTHUR HUANG[2], THOMAS MCHUGH[2], SHIGEYOSHI ITOHARA[2], HITOSHI OKAMOTO*[2]

[1]Hiroshima Univ., Hiroshima, Hiroshima, Japan, [2]RIKEN Center for Brain Science (CBS), Wako, Saitama, Japan

P30.04 **Asymmetric P300 features in Alzheimer's disease may be related to cognitive decline - An EEG study**

EUNPYO KIM[1], SEHYEON JANG[1], JEONGHWAN GWAK[2], KYU YEONG CHOI[3], BYEONG C. KIM[4], JONG-IN SONG[1], KUN HO LEE[5], SUNG CHAN JUN*[1]

[1]School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of, [2]Biomedical Research Institute & Department of Radiology, Seoul National University Hospital (SNUH), Seoul, Korea, Republic of, [3]National Research Center for Dementia, Chosun University; Department of Biomedical Science, Chosun University, Gwangju, Korea, Republic of, [4]Department of Neurology, Chonnam National University Medical School; National Research Center for Dementia, Chosun University, Gwangju, Korea, Republic of, [5]National Research Center for Dementia, Chosun University; Department of Biomedical Science, Chosun University; BK21-plus Research Team for Bioactive Control Technology, Chosun University, Gwangju, Korea, Republic of

P30.05 **Lateral orbitofrontal cortex is associated with human cognitive dynamics in the congruency sequence effect**

NAN LI[1], KANG CHENG[1], R ALLEN WAGGONER[1], KEIJI TANAKA*[1]

[1]RIKEN, Wako, Japan

P30.06 **The effect of audio-visual stimulation on sleep quality**

HYEYEOUN JOO[1], HYUNWOO NAM[3], DAE LIM KOO[3], JEH-KWANG RYU[4], SUNKYUE KIM[5], KYOUNG-MIN LEE*[2]

[1]Interdisciplinary program in Cognitive Science, Seoul National University, Seoul, Korea, Republic of, [2]Department of Neurology, Seoul National University Hospital, Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Department of Neurology, Boramae Medical Center, Seoul National University College of Medicine, Seoul, Korea, Republic of, [4]Institution for Cognitive Science, Seoul National University, Seoul, Korea, Republic of, [5]Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of

P30.07 **Dissociable PFC activity and attentional modulation in response to two kinds of affective arousal**

HANEUL SONG[1], SANG AH LEE*[1]

[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P29.38 **Post-translational modulation of O-linked β-N-acetylglucosamine (O-GlcNAcylation) regulates autophagic activity and autophagosomes formation in mouse cortical astrocytes**

MD. ATAUR RAHMAN[1], HONGIK HWANG[1], YOONJEONG CHO[2], HYEWHON RHIM*[1]

[1]Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of, [2]Korea Institute of Science and Technology (KIST), and Division of Bio-Medical Science and Technology, KIST School, Korea University of Science and Technology (UST) Seoul 02792, Republic of Korea., Seoul, Korea, Republic of

P29.39 **Gene expression changes in the spinal cord segments following contusion spinal cord injury and its implications in gene therapy**

SANKAR VENKATACHALAM*[1], FELICIA MARY MICHAEL[1], PREEJA CHANDRAN[1], KHAVIYAA CHANDRAMOHAN[1], KRITHIKA IYER[1]

[1]Department of Anatomy, University of Madras, Chennai, India

P29.40 **Plasma biomarker panel for brain Aβ deposition in Alzheimer's disease**

SUN-HO HAN[1], JONG-CHAN PARK[1], HANGYEORE LEE[2], HYOBIN JEONG[3], MIN SOO BYUN[1], JINGI BAE[2], HOKEUN KIM[2], DAHYUN YI[1], YU KYEONG KIM[4], SEONG A SHIN[4], DONG YOUNG LEE[5], DAEHEE HWANG[1], SANG-WON LEE[2], INHEE MOOK-JUNG*[1]

[1]Seoul National University, Seoul, Korea, Republic of, [2]Korea University, Seoul, Korea, Republic of, [3]Genome Biology Unit, Heidelberg, Korea, Republic of, [4]SMG-SNU Boramae Medical Center, Seoul, Korea, Republic of, [5]Seoul National University Hospital, Seoul, Korea, Republic of

P30.08 **Improved sleep-wake behavior after gamma entrainment with acoustic stimulation in a mouse model of Alzheimer's disease**

MINCHEOL PARK[1], SEUNGJUN RYU[1], JUHO LEE[1], JIEUN JUNG[1], TAE KIM*[1]
[1]Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P30.09 **Mathematical approach on social hierarchical behaviors with cBRAIN(The novel system for research of collective animals)**

CHAE WOO KIM[1, 2], JISOO KIM[1, 3], WOOSEUP YOUM[4], SUNG Q LEE*[4], JEE HYUN CHOI*[1, 2]
[1]Korea Institute of Science and Technology, Seoul, Korea, Republic of, [2]University of Science and Technology, Seoul, Korea, Republic of, [3]Korea University., Seoul, Korea, Republic of, [4]Electronics and Telecommunications Research Institute., Daejeon, Korea, Republic of

P30.10 **The effect of chemogenetic inhibition of an alcohol-context encoding neuronal ensemble in the ventral subiculum on context-induced relapse, after punishment imposed abstinence in rats**

JENNIFER VAN KLAVEREN*[1], NATHAN MARCHANT[2], DUSTIN SCHETTERS[2], MICHEL VAN DEN OEVER[3], MARIANA PINTO DE MATOS[3], TACO DE VRIES[2]
[1]University of Amsterdam/ Dept. of Anatomy & Neurosciences, VU University Medical Center, Amsterdam, Netherlands, [2]Dept. of Anatomy & Neurosciences, VU University Medical Center, Amsterdam, Netherlands, [3]Dept. of Molecular and Cellular Neurobiology, Center for Neurogenomics and Cognitive Research, Neuroscience campus Amsterdam, VU University Amsterdam, Amsterdam, Netherlands

P30.11 **Typical development of statistical learning for anticipatory pursuit eye movements**

CHRISTINE DERUELLE*[1], ALICE ROBIN[1], CHLOÉ PASTUREL[1], ANNA MONTAGNINI[1], GUILLAUME MASSON[1]
[1]Institut de Neurosciences de la Timone, Aix-Marseille Université & CNRS, Marseille, France

P30.12 **Regulation of memory maintenance**

PAVEL BALABAN*[1]
[1]Institute of Higher Nervous Activity & Neurophysiology, Moscow, Russia

P30.13 **Relative effects of body position and spatial cognition on presence when playing virtual reality games**

AELEE KIM[1], KYOUNG-MIN LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P30.14 **Improving attention level through interactive neurofeedback game**

HYUNJI KIM[1], S. KIM[1], E. LEE[1], K. WON[2], S. C. JUN[2], MINKYU AHN*[1]
[1]Handong Global University, Pohang, Korea, Republic of, [2]Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P30.15 **Behavioural study on stress-induced modulation of cognitive flexibility in the hippocampus**

JAE-YOUNG JOO[1], JI-WOO CHOI[1], JOON-GYU HEO[1], SEUNG-MI OH[1], YOUNG-MI LEE[1], SEO-JIN OH[2], YUN-GWON YEO[2], YONG-SEOK OH*[2]
[1]School of Undergraduate Studies, Daegu-Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]Molecular Psychiatry Laboratory, Department of Brain-Cognitive Science, Daegu-Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P30.16 **Influence of transcranial direct current stimulation on inhibition related oscillatory brain activity**

BERNIS SUTCUBASI[1], EMINE ELIF TULAY[3], ZEYNEP KUCUK[4], ZEYNEP TARMAN[2], BARIS METIN[2], BERNA SARI[2], BERNA SARI*[2]
[1]Uskudar University, Istanbul, Turkey, [2]Department of Psychology, Uskudar University, Istanbul, Turkey, [3]Technology Transfer Office, Uskudar University, Istanbul, Turkey, [4]Innovative Center of Applied Neurosciences, Istinye University, Istanbul, Turkey

P30.17 **The involvement of EAAC1 in Early-life stress induced Depression-like behavior**

RAN-SOOK WOO*[1], HAN BYEOL KIM[1], JI-YOUNG YOO[1], SEUNG-YEON YOO[1], JUN-HO LEE[2]
[1]Eulji University, Daejeon, Korea, Republic of, [2]Daejeon University, Daejeon, Korea, Republic of

P30.18 **A comparative study of neurocognitive side-effects of various treatments for childhood epilepsy in zambia**

RAVI PAUL*[1], SUSAN CHUNGU[2]
[1]University of Zambia, Lusaka, Zambia, [2]University of Zambia, Lusaka, Zambia

P30.19 **Effect of listening to high arousal music with different valences on reaction time and interference control: Evidence from Simon task**

MOHAMED SOBEEH*[1], GÜRKAN ÖZTÜRK[2], MOHAMED HAMED[3]
[1]1-Regenerative and Restorative Medical Research Center, Istanbul Medipol University, Turkey 2- Neuroscience and Biotechnology program, Faculty of Science, Alexandria University, Egypt, Cairo, Egypt, [2]1- Professor of Physiology, International School of Medicine, Istanbul Medipol University, Turkey. 2- Regenerative and Restorative Medical Research Center, Istanbul Medipol University, Turkey, Istanbul , Turkey, [3]MD of Neurology, Faculty of Medicine, Al-Azhar University. , Cairo, Egypt

P30.20 **Beneficial effects of environmental enrichment on substrate utilization and neurobehavioral functions**

SOONIL PYO[1], SUK-YOUNG SONG[3], JI HEA YU[2], JUNG HWA SEO[2], YOON-KYUM SHIN[1], SOOHYUN WI[2], AHREUM BAEK[2], BAE-GEUN NAM[3], EUNJU CHO[1], SEONGMOON JO[1], JEONGHYUN HEO[3], SUNG-RAE CHO*[2]
[1]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Republic of Korea, Seoul, Korea, Republic of, [2]Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Graduate Program of Nano Science and Technology, Yonsei University, Seoul, Republic of Korea, Seoul, Korea, Republic of

P30.21 **The ClC-type chloride channel CLH-1 regulates gustatory learning in the nematode *C. elegans***

CHANHYUN PARK[1], YUKI SAKURAI[1], SHINJI KANDA[1], YUICHI IINO[1], HIROFUMI KUNITOMO*[1]
[1]Department of Biological Sciences, The University of Tokyo, Tokyo, Japan

P30.22 **Scalp acupuncture for post-stroke cognitive impairment: A systematic review and meta-analysis**

HUI ZHANG[1], MICHELLE PARK[2], YONGMEI YAN[1], MIKALA C OSANI[3], RAVEENDHARA R BANNURU[2], CHENCHEN WANG*[2]
[1]Shaanxi University of Chinese Medicine, Xianyang, China, [2]Tufts University School of Medicine, Boston, Massachusetts, United States, Boston, USA, [3]Center for Treatment Comparison and Integrative Analysis, Division of Rheumatology, Tufts Medical Center, Boston, Massachusetts, United States, Boston, USA

P30.23 **Negr1 KO mice show socially submissive phenotype when co-housed with wild-type mice**

KEEBUM PARK[1], KYUNGCHUL NOH[1], SUNG JOONG LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P30.24 **Discrimination learning using USV is affected by the biologically prepared associations between USVs and pleasure/distress**

SHIOMI HAKATAYA*[1], YUMI SAITO[1], NORIKO KATSU[1], MAKIKO KAMIJO[1], SHOKO YUKI[2], KAZUO OKANOYA[1]
[1]The University of Tokyo, Tokyo, Japan, [2]Doshisha University, Kyoto, Japan

P30.25 **Vitamin B1 deficiency impairs hippocampal dependent memory through brain inflammation and hippocampal degeneration followed by down-regulation of CREB signaling**

RYUHEI TSUJI[1], TAKUYA KISHIMOTO[1], KAN NAGATA[1], TAMAE WATANABE[1], SATOSHI KIDA*[2]
[1]Department of Bioscience, Tokyo University of Agriculture, Tokyo, Japan, [2]Graduate School of Agriculture and Life Sciences, The University of Tokyo, Tokyo, Japan

P30.26 **Tract-based fractional anisotropy predicts WAIS intelligence quotient indices and subtest performance**

DAYLIN GONGORA[1], MAYRIM VEGA-HERNANDEZ[2], PEDRO VALDES-SOSA[1], MARJAN JAHANSHAHI[3], MARIA BRINGAS-VEGA*[1]

[1]The Clinical Hospital of Chengdu Brain Science Institute, MOE Key Lab for Neuroinformation, University of Electronic Science and Technology of China/Cuban Neuroscience Center, Chengdu, China, [2]Cuban Neuroscience Center, Havana, Cuba, [3]The Clinical Hospital of Chengdu Brain Science Institute, MOE Key Lab for Neuroinformation, University of Electronic Science and Technology of China/UCL Queen Square Institute of Neurology, Chengdu, China

P30.27 **DSCR1 regulates adult hippocampal neurogenesis by modulating the *miR-124*/TET1 regulatory axis.**

CHI YEOL CHOI[1], TAEHOON KIM[1], KYUNG-TAI MIN*[1]

[1]UNIST, Ulsan, Korea, Republic of

P30.28 **The specific role of GABAergic interneurons in fear extinction**

XU ZHANG[1], XUELIAN FAN[1], WEIDONG LI*[1]

[1]Shanghai Jiao Tong University, Shanghai, China

P30.29 **Tonic signaling of habenula and periaqueductal gray for eye contact and sentimental reasons**

HYUNCHAN LEE[1], KAZUTAKA MAEDA[1], OKIHIDE HIKOSAKA*[1]

[1]Laboratory of Sensorimotor Research, National Eye Institute, Bethesda, USA

P30.30 **Functional implication of retinoic acid-responsive subpopulation of dentate granule cells in encoding of reward-associated spatial memory**

YUN-GWON YEO[1], YONG-SEOK OH*[1]

[1]Molecular Psychiatry Laboratory, Department of Brain-Cognitive Science, Daegu-Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P30.31 **Active visual perception induced by spontaneous rhythmic eye movement**

WOOCHUL CHOI[1], SE-BUM PAIK*[1]

[1]KAIST, Daejeon, Korea, Republic of

P30.32 **Brazilian Açaí influences anxiety related behavior, antioxidative enzymes and BDNF release in rats**

MICHELE SCHULTZ*[1], EMERSON PEREIRA[1], DANIELA MIRANDA[1], SIMONE TEIXEIRA[1], SORAIA COSTA[1]

[1]University of São Paulo, São Paulo, Brazil

P30.33 **A corticotrophin-releasing factor homolog sets the level of sexual motivation in female *Drosophila***

DO-HYOUNG KIM[1], YOUNG-HOON JANG[1], KANG-MIN LEE[1], YOUNG-JOON KIM*[1]

[1]Gwangju Institue of Science and Technology, Gwangju, Korea, Republic of

P30.34 **Fear memory generalization: does puberty and sex matter?**

ANA PAULA CRESTANI*[1], FERNANDA NOGUEIRA LOTZ ALVES[2], MIRELLE ARAUJO CASAGRANDE[2], BRUNO POPIK[2], KETLYN TALISE KNAK GUERRA[2], LUCAS DE OLIVEIRA ALVARES[2], JORGE ALBERTO QUILLFELDT[2]

[1]University of São Paulo, Ribeirão Preto, Brazil, [2]Federal University of Rio Grande do Sul, Porto Alegre, Brazil

P30.35 **Intraoperative mapping of cognitive control regions in the frontal cortex using electrocorticography**

MOATAZ ASSEM*[1], MIKE HART[2], RAFAEL ROMERO-GARCIA[3], JESSICA INGHAM[4], ALEXA MCDONALD[4], LUCA VILLA[3], ROHITASHWA SINHA[2], JOHN DUNCAN[5], THOMAS SANTARIUS[6], YARA EREZ[1]

[1]MRC Cognition and Brain Sciences Unit, University of Cambridge, Cambridge, UK, [2]Department of Neurosurgery, Addenbrooke's hospital, Cambridge, Cambridge, UK, [3]Department of Psychiatry, University of Cambridge, Cambridge, UK, [4]Department of Neuropsychology, Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK, [5]MRC Cognition and Brain Sciences Unit, University of Cambridge & Department of Experimental Psychology, University of Oxford, Cambridge, UK, [6]Department of Neurosurgery, Addenbrooke's hospital, Cambridge & Physiology, Development and Neuroscience, University of Cambridge, Cambridge, UK

P30.36 **Blockade of cannabinoid type 2 receptor inhibits a working memory impairment relevant for schizophrenia**

LUIS EDUARDO NUNES*[1], GILDA NEVES[1], NEWTON CASTRO[1], BRENDA ANDRADE[1], GISELY CUNHA[1], NATHALIA CUNHA[1], THAINÁ LIONE[1], NICOLE NAZARETH[1], ADRIANA MARQUES[1], BRUNA FERREIRA[2], FABIOLA DINIZ[2], GUSTAVO FERREIRA[2]

[1]Institute of Biomedical Sciences, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, [2]Institute of Medical Biochemistry, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

P30.37 **Influence of early life experience on vocal responsiveness to social signal in songbirds**

TOMOKO FUJII[1], MAKI IKEBUCHI[2], KAZUO OKANOYA*[1]

[1]The University of Tokyo, Meguro, Tokyo, Japan, [2]RIKEN , Wako, Saitama, Japan

P30.38 **HDAC2/SUV39H1-regulated hippocampal stress adaptation system controls persistent depressive behavior**

JUNG-EUN LEE[1], PYUNG-LIM HAN*[1]

[1]Ewha Womans University, Seoul, Korea, Republic of

P30.39 **Temporal order memory performance as a behavioral biomarker of Alzheimer's disease**

JIEUN HWANG[1], JIN HYUCK PARK[2], SANG AH LEE*[1]

[1]Korea Advanced Institute of Science and Technology(KAIST), Daejeon, Korea, Republic of, [2]Soon Chun Hyang University, Asan, Korea, Republic of

P30.40 **Amygdala responses to subthreshold angry faces predict attention bias to suprathreshold angry faces**

HEUNGSIK YOON[1], SANG HEE KIM*[1]

[1]Korea University, Seoul, Korea, Republic of

P30.41 **Analysis of the neuroanatomical correlates representing depressive phenotypes projected into the currently used behavioral tests**

EUN-HWA LEE[1], PYUNG-LIM HAN*[1]

[1]Department of Brain and Cognitive Sciences, Ewha Womans University, Seoul, Korea, Republic of

P30.42 **Visual working memory load induces similar representational structures in a distributed cortical network**

JINYONG CHUNG[1], DO-JOON YI*[1]

[1]Yonsei University, Seoul, Korea, Republic of

P30.43 **Feedback-based social perception training influence interpretations of ambiguous social cues**

YUSEOK JEONG[1], SANGHEE KIM*[1]

[1]Korea University, Seoul, Korea, Republic of

P30.44 **Accumbal adenosine A2A receptor inactivation facilitates goal-directed behavior by pavlovian-instrumental transfer and the striatal collateral connectivity**

JIANG FAN CHEN*[1], YAN HE[2], YAN LI[2], XINRAN PAN[2], ZHILAN PU[2], MOZI CHEN[2]
[1]State Key Laboratory of Ophthalmology, Optometry and Visual Science, School of Optometry and Ophthalmology and Eye Hospital, Wenzhou Medical University, China, Wenzhou, China, [2]Wenzhou Medical University, Wenzhou, China

P30.45 **Value-coding neurons in the subthalamic nucleus: Current and historical value coding for controlled and automatic saccade**

HAIYAN JIANG[1], HYOUNG F. KIM*[1]
[1]School of Biological Sciences, Seoul National University, Gwanak-gu, Seoul, 08826; Center for Neuroscience Imaging Research, Institute for Basic Science, Suwon, Korea, Republic of

P30.46 **The neural representation of rich event memory in the human brain**

SAEBYUL LEE[1], SU KEUN JEONG*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P30.47 **Visual working memory load induces similar representational structures in a distributed cortical network**

JINYONG CHUNG[1], DO-JOON YI*[2]
[1]Yonsei university, Seoul, Korea, Republic of, [2]Yonsei University, Seoul, Korea, Republic of

P30.48 **Effects of environmental enrichment and stress paradigm experience on adolescent period alter behaviors and neurochemistry in rats**

RONGHUA YUAN[1], JI HYE PARK[3], YIN YI XIONG[4], EUL SIG CHOI[3], MI JUNG HAN[3], SEOUL LEE*[2]
[1]Department of Pharmacology, Wonkwang University School of Medicine, Jeonbuk, Korea, Republic of, [2]Department of Pharmacology and Wonkwang Brain Research Institute, Wonkwang University School of Medicine, Iksan, Korea, Republic of, [3]Department of Pharmacology and Wonkwang Brain Research Institute, Wonkwang University School of Medicine, Jeonbuk , Korea, Republic of, [4]Department of Pharmacology, Wonkwang University School of Medicine, Jeonbuk, Korea, Republic of

P30.49 **Control of action for visuoauditory synchrony**

YESEUL CHOI[1], KYOUNGMIN LEE[1], MINHEE SEO[1], JEH-KWANG RYU*[1]
[1]University, Seoul, Korea, Republic of

P30.50 **Impaired Cognitive abilities in first-degree sibling of individuals with Temporal lobe epilepsy**

LANGZI TAN[1], LILI LONG*[2]
[1]xiangyayiyuan,Central South University, Changsha, Hunan province, China, [2]Xiangya hospital of Central south university, Changsha, Hunan province, China

P30.51 **Gait pattern analysis to suggest one of factors classifying alzheimer's disease level using deep learning based on convolutional neural network**

CHEOL-BIN PARK[1], HYUNSU JEONG[1], KYU YEONG CHOI[3], BYEONG C. KIM[4], JANG JAE LEE[5], KUN HO LEE[3], JONG-IN SONG[1], JEONGHWAN GWAK*[2]
[1]School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of, [2]Department of Software, Korea National University of Transportation, Chungju, Korea, Republic of, [3]National Research Center for Dementia, Chosun University, Gwangju, Korea, Republic of, [4]Department of Neurology, Chonnam National University Medical School, Gwangju, El Salvador, [5]Department of Biomedical Science, Chosun University, Gwangju, Korea, Republic of

P30.52 **Positive effects of physical fitness on cognitive control among older adults**

MINHA CHANG[1], JEH-KWANG RYU[1], DA HEI JUNG[1], KYOUNG-MIN LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P30.53 **The role of Acorus tatarinowii Schott on hippocampal neuron protection in Alzheimer's disease**

LITING JI[1], YUNBO FU[1], YUJIA ZHANG[2], CHANGYU LI*[1]
[1]University, Hangzhou, China, [2]University, Hangzhou, China

P30.54 **Mechanistic pathway involved in hypobaric hypoxia inducing cognitive impairment and neurodegeneration**

PRIYANKA RANI[1], ANJU KATYAL*[1]
[1]University of Delhi, New Delhi, India

P30.55 **Contribution of prosodic cues in song learning by Bengalese finches *Lonchura striata* var. *domestica***

TOMOKO MIZUHARA[1], RYOSUKE TACHIBANA[1], KAZUHIRO WADA[2], KAZUO OKANOYA[1], KAZUO OKANOYA*[1]
[1]the University of Tokyo, Tokyo, Japan, [2]Hokkaido University, Hokkaido, Japan

P30.56 ***Moringa oleifera* ameliorates the cholinergic-mediated memory via modulating the oxidative stress biomarkers in dementia mice model**

SADIA YEASMIN[1], SADIKA ISLAM[3], ISRAT YESMIN[3], FARHANA YASMIN[3], ABDUL KAIUM[3], MD. ASHRAFUR RAHMAN*[2]
[1]Dept. of Pharmaceutical sciences, North South University, Dhaka, Bangladesh, [2]Assistant Professor, Dept. of Pharmaceutical sciences, North South University, Dhaka, Bangladesh, [3]Dept. of Pharmaceutical sciences, North South University, Dhaka, Bangladesh

P30.57 **Increased anxiety-like and depression-related behaviors during the postpartum period in inbred BALB/c and C57BL/6 strains**

HIROTAKA SHOJI[1], TSUYOSHI MIYAKAWA*[1]
[1]Division of Systems Medical Science, Institute for Comprehensive Medical Science, Fujita Health University, Toyoake, Japan

P30.58 **Neuregulin1 improves social deficits and anxiety-like behavior induced by COCl2 microinjection into the mouse ventral hippocampus**

RAN-SOOK WOO*[1], SEUNG-YEON YOO[1], JI-YOUNG YOO[1], HAN-BYEOL KIM[1], JUN-HO LEE[2]
[1]Eulji University, College of Medicine, Daejeon, Korea, Republic of, [2]Daejeon University, Daejeon, Korea, Republic of

P30.59 **Earlier age at onset for APOE e4-mediated β-amyloid deposition in East Asians**

TAMIL INIYAN GUNASEKARAN[1], JANG JAE LEE[1], YU YONG CHOI[1], SARANG KANG[1], JUNGSOO GIM[3], KYU YEONG CHOI[1], KUN HO LEE*[2]
[1]National Research Center for Dementia, Chosun University, Gwangju, Korea, Republic of, [2]National Research Center for Dementia, Chosun University, Department of Life Science, Chosun University, Department of Biomedical Science, Chosun University, Gwangju, Korea, Republic of, [3]National Research Center for Dementia, Chosun University, Department of Biomedical Science, Chosun University, Gwangju, Korea, Republic of

P30.60 **From fMRI to chords: Chord-based neural decoding for natural music**

YICHUAN X. MA*[1]
[1]Department of Electrical and Electronic Engineering, The University of Hong Kong, Hong Kong, Hong Kong SAR, China

P30.61 **The GABA-permeable Best1 channel maintains deep Non-REM sleep duration**

JEA KWON[1], JOOHYUN HONG[2], HANKYUL KWAK[2], EUNJI CHEONG[2], C. JUSTIN LEE*[1]
[1]KU-KIST Graduate School of Converging Science and Technology, Korea University, Seoul, Korea, Republic of, Center for Cognition and Sociality, Institute for Basic Science, Daejeon, Korea, Republic of, [2]Department of Biotechnology, College of Life Science and Biotechnology, Yonsei University, Seoul, Korea, Republic of

P30.62 **Altered core networks of brain connectivity and personality traits in Internet gaming disorder**

JIWON CHUN[1], CHANG-HYUN PARK[1], HYUN CHO[1], DAI-JIN KIM*[1]
[1]Catholic University of Korea College of Medicine, Seoul, Korea, Republic of

P30.63 **Direct coordinate transformation from the retinotopic to the allocentric in the monkey precuneus**

MOTOAKI UCHIMURA[1], HIRONORI KUMANO[1], SHIGERU KITAZAWA*[1]
[1]Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan

P30.64 **Effect of tremor on neuropsychological and psychological variables in Parkinson's disease**

MARÍA INMACULADA RUIZ-GARCÍA*[1], CARMEN SAEZ-ZEA[2], MIRIAM SICRE-MARQUEZ[1], JOSE ANTONIO MUELA MARTÍNEZ[1]
[1]University of Jaen, Jaen, Spain, [2]University of Granada, Granada, Spain

P30.65 **Accumbal MeCP2 in dopamine D2 receptor-expressing neurons regulates cocaine intake after exposure to chronic restraint stress in mice**

JINHEE BAE[1], SUJIN AHN[1], SANGJOON LEE[1], HEH-IN IM*[1]
[1]Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P30.66 **Hierarchical inference as a normative account for serial dependence**

DONG-GYU YOO[1], SUNGJE KIM[1], JUNGWON RYU[1], SANG-HUN LEE*[1]
[1]Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of

P30.67 **Dopaminergic circuitry regulating compulsive eating behavior**

BOKYEONG KIM[1], JA-HYUN BAIK*[1]
[1]Korea University, Seoul, Korea, Republic of

P30.68 **Attenuation of scopolamine-Induced learning and memory impairment by α-pinene in C57BL/6 Mice**

JUNG-HEE JANG*[1], CHAN LEE[1]
[1]Keimyung University, School of Medicine, Daegu, Korea, Republic of

P30.69 **Role of M1 receptor in the retrieval of old consolidated memory in rats**

ZEHRA BATOOL*[1], SAIDA HAIDER[2], SHABANA U. SIMJEE[3]
[1]Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan, [2]Neurochemistry and Biochemical Neuropharmacology Research Unit, Department of Biochemistry, University of Karachi, Karachi, Pakistan, [3]H.E.J. Research Institute of Chemistry, International Centre for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan

P30.70 **How do adolescents with and without depression differ in brain activity when neurofeedback is given during self-face processing?**

SEWON OH[1], JIA YUAN TEOH[2], GARRY SMYDA[3], BRIANNA BARSTAD[4], SUMAYA MOHAMED[2], SHABAD WASHIST[4], KAMIL UGURBIL[5], JOHN STRUPP[6], KATHLEEN THOMAS[7], HANNAH SCOTT[2], KARINA QUEVEDO[2], KARINA QUEVEDO*[2]
[1]Department of Psychology, College of Liberal Arts, University of Minnesota - Twin Cities, Minneapolis, USA, [2]Department of Psychiatry, Medical School, University of Minnesota - Twin Cities, Minneapolis, USA, [3]School of Public Health, University of Pittsburgh, Pittsburgh, USA, [4]Department of Neuroscience, Medical School, University of Minnesota - Twin Cities, Minneapolis, USA, [5]Department of Medicine, Medical School, University of Minnesota - Twin Cities, Minneapolis, USA, [6]Minnesota Supercomputing Institute, Minneapolis, USA, [7]Center for Neurobehavioral Development, Medical School, University of Minnesota - Twin Cities, Minneapolis, USA

P30.71 **Alternations of the effective connectivity during working memory in Schizophrenia : Dynamic Causal Modeling of EEG**

JINSEOK EO[1], SUK KYOON AN[1], HAE-JEONG PARK*[1]
[1]University, Seoul, Korea, Republic of

P30.72 **Effects of trait sensitivity to negative feedback on motivation and anxiety of rats following acute administration of antidepressant drugs**

RAFAL RYGULA*[1], KAROLINA NOWORYTA-SOKOLOWSKA[1], ANNA KOZUB[1], ROBERT DROZD[1]
[1]Maj Institute of Pharmacology Polish Academy of Sciences, Krakow, Poland

P30.73 **Hippocampal 5HT1A and 5HTT alterations lead to cognitive deficits associated with major depressive disorder in a 14-day combined stress rat model**

GWLADYS NGOUPAYE*[1], THOBEKA MADLALA[2], MUSA MABANDLA[2]
[1]Department of Animal Biology, Faculty of Science, University of Dschang, P.O. Box 67, Dschang, Cameroon, Dschang, Cameroon, [2]Discipline of Human Physiology, School of Laboratory Medicine & Medical Sciences, College of Health Sciences, University of KwaZulu-Natal, Durban, 4000. South Africa , Durban, South Africa

P30.74 **The effect of sexual behavior and social interaction in the memory of old and young male rats**

ALEJANDRO TAPIA-DE JESÚS*[1], LUIS RODRIGUEZ-SERRANO[1], MARIA FLORENCIA MATA-ESQUIVIAZ[1], PEDRO ESPINOZA-VILLAFRANCA[1], MARIA ELENA CHAVEZ[1], GUSTAVO LAGO[1], OSCAR GALICIA-CASTILLO[1], SAID HERNÁNDEZ-GONZALEZ[1], ISABEL LÓPEZ-CORTINA[1], XIMENA PALACIOS-BAUTISTA[1], MARIO BUENROSTRO-JAURÉGUI[1]
[1]Universidad Iberoamericana, Ciudad de México, Mexico

P30.75 **The effect of chronic cerebral hypoperfusion on the pathology of Alzheimer's disease: A positron emission tomography study in rats**

JUNG-IN LEE[1], JAE-HYUNG PARK[1], JEONG-HO HONG[1], SANG-WOO LEE[2], KYUNG-WHA YOON[1], HYUN DONG JI[2], KYOUNG SOOK WON[1], BONG-IL SONG[1], HAE WON KIM*[1]
[1]Keimyung University, School of Medicine, Daegu, Korea, Republic of, [2]Kyungpook National University, School of Medicine, Daegu, Korea, Republic of

P30.76 **Construal level and ego depletion influence on self-control performance of military personnel with and without burnout**

ALEXANDER UNGER*[1,2], JULIE PAPASTAMATELOU[1], LENING A. OLIVERA-FIGUEROA[3]
[1]Ludwigshafen University of Business and Society, Ludwigshafen, Germany, [2]Ludwigshafen University of Business and Scoiety, Ludwigshafen, Germany, [3]Yale University School of Medicine, New Haven, USA

P30.77 **Experience of defeat in the social conflict induces potentiation of glutamatergic transmission in the ventral interpeduncular nucleus**

MASAE KINOSHITA[1], MING-YI CHOU[1], HITOSHI OKAMOTO*[1]
[1]Lab. for Neural Circuit Dynamics of Decision Making, RIKEN CBS, Saitama, Japan

P30.78 **Does methamphetamine exposure affect sexual behavior and locomotor activity in male rats?**

LÝDIA MIHALČÍKOVÁ*[1], ANNA OCHOZKOVÁ[1], ROMANA ŠLAMBEROVÁ[1]
[1]Charles University, Third faculty of medicine, Prague, Czech Republic

P30.79 **Pistachio supplementation effectively rescued PD-like motor and non-motor symptoms and attenuated the behavioral, neurochemical and biochemical deficits induced by rotenone toxicity in rats**

SAIDA HAIDER*[1], SYEDA MADIHA[1], ZEHRA BATOOL[2], SAIQA TABASSUM[3]
[1]Neurochemistry and Biochemical Neuropharmacology Research Unit, Department of Biochemistry, University of Karachi, Karachi, Pakistan, [2]Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan, [3]Department of Biosciences, Shaheed Zulfiqar Ali Bhutto University, Karachi, Pakistan

P30.80 **Psychological resilience mediates associations of political attitudes with intrinsic functional brain connectivity**

TAEKWAN KIM[1], JI-WON HUR[3], SEOYEON KWAK[1], JUN SOO KWON*[2]
[1]Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of, [2]Department of Psychiatry, Seoul National University College of Medicine; Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of, [3]Department of Psychology, Chung-Ang University, Seoul, Korea, Republic of

P30.81 **Resting-state functional connectivity of the striatum predicts improvement in negative symptoms and general functioning in patients with first-episode psychosis: A 1-year naturalistic follow-up study**

SANGHOON OH[1], MINAH KIM[1], TAE YOUNG LEE[3], TAEKWAN KIM[4], JUN SOO KWON*[2]
[1]Department of Psychiatry, Seoul National University College of Medicine; Department of Neuropsychiatry, Seoul National University Hospital, Seoul, Korea, Republic of, [2]Department of Psychiatry, Seoul National University College of Medicine; Department of Neuropsychiatry, Seoul National University Hospital; Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences; Institute of Human Behavioral Medicine, Seoul National University Medical Research Center, Seoul, Korea, Republic of, [3]Department of Neuropsychiatry, Seoul National University Hospital, Seoul, Korea, Republic of, [4]Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of

P30.82 **Activation of leptin receptor-expressing neurons in lateral hypothalamus enhances food-seeking behavior without altering food intake in mice**

YOUNG HEE LEE[1], DONG-SOO HA[2], JOON SEOK PARK[2], HYUNG JIN CHOI*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University, Seoul, Korea, Republic of

Development

P31.01 **Effects of rapamycin treatment on impaired social interaction and gene expression in mice treated prenatally with valproic acid**

HIROKO KOTAJIMA[1], TOSHIYUKI KOBAYASHI[2], HIROFUMI KASHII[1], ATSUSHI SATO[3], YOKO HAGINO[1], MIHO TANAKA[3], YASUMASA NISHITO[1], YUKIO TAKAMATSU[1], SHIGEO UCHINO[4], KAZUTAKA IKEDA*[1]
[1]Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan, [2]Juntendo University, Tokyo, Japan, [3]The University of Tokyo Hospital, Tokyo, Japan, [4]School of Science and Engineering, Teikyo University, Tochigi, Japan

P31.02 **Retinotopic mapping as a determinant of columnar and salt-and-pepper organization of orientation tuning in visual cortex**

JAESON JANG[1], MIN SONG[3], SE-BUM PAIK*[2]
[1]Department of Bio and Brain Engineering, KAIST, Daejeon, Korea, Republic of, [2]Department of Bio and Brain Engineering, Program of Brain and Cognitive Engineering, KAIST, Daejeon, Korea, Republic of, [3]Department of Bio and Brain Engineering, Program of Brain and Cognitive Engineering, KAIST, Daejeon, Korea, Republic of

P31.03 **Event related potentials of emotional face processing in premature and full-term infants**

CINTLI CAROLINA CARBAJAL-VALENZUELA*[1], EFRAIN SANTIAGO RODRÍGUEZ[2], THALIA HARMONY[3], GLORIA NÉLIDA AVECILLA-RAMÍREZ[1]
[1]Autonomus University of Queretaro, Queretaro, Mexico, [2]National Autonomus University of Mexico, Queretaro, Mexico, [3]National Aunonomus University of Mexico, Queretaro, Mexico

P31.04 **Neuro-inflammatory changes in young adult depressive mice induced by accumulative mild stress in the early-life course**

JINHO KIM*[1], EUNJOO NAM[2], YOO-HUN SUH[3], KEUN-A CHANG[2]
[1]Department of Health Sciences and Technology, GAIHST, Gachon University, Incheon 21999, Korea, Incheon, Korea, Republic of, [2]Department of Pharmacology, College of Medicine, Gachon University, Incheon 21936, Korea, Incheon, Korea, Republic of, [3]Neuroscience Research Institute, Gachon University, Incheon 21565, Korea, Incheon, Korea, Republic of

P31.05 **Establishment of hESC-derived DRG-like structure to model peripheral neuropathies**

YOUNG HYUN CHE[1], SEUNG KWON LIM[1], JEONG HEE KIM[1], SUNG SU HANG[1], YONG JUN KIM*[1]
[1]Department of Pathology, College of Medicine, Kyung Hee University, Seoul, Korea, Republic of

P31.06 **The effect of prenatal exposure to opioids on the cerebellum using the developing chicken embryo**

MUSSIE GHEZU HADERA*[1], JANNIKE MØRCH ANDERSEN[2], SYNNE STEINSLAND[2], RAGNHILD ELIZABETH PAULSEN[1]
[1]School of Pharmacy, University of Oslo, Oslo, Norway, [2]Department of Forensic Sciences, Oslo University Hospital, Oslo, Norway

P31.07 **The roles of intercellular Vax1 transfer in mouse visual system development**

KWANG WOOK MIN[1], YOUNG HOON SUNG[2], NAM SUK KIM[1], JAE HYUN KIM[1], JEE MYUNG YANG[1], HAN WOONG LEE[2], SEUNG-HEE LEE[1], JIN WOO KIM*[1]
[1]KAIST, Daejeon, Korea, Republic of, [2]Yonsei university, Seoul, Korea, Republic of

P31.08 **SIAH 1, an E3 ligase facilitates ubiquitination and proteasomal degradation of Akt3 in neuron**

EUN-JU JIN[1], HYO RIM KO[1], SANG BAE LEE[2], CHUNG KWON KIM[1], TAEGWAN YUN[1], SUNG-WOO CHO[3], KYE WON PARK[4], JEE-YIN AHN*[1]
[1]Department of Molecular Cell Biology, Sungkyunkwan University School of Medicine, Suwon, Korea, Republic of, [2]3Institute for Cancer Genetics, Columbia University Medical Center, New York 10032, USA, New York, USA, [3]Department of Biochemistry and Molecular Biology, University of Ulsan, College of Medicine, Seoul, Korea, Republic of, [4]Department of Food Science and Biotechnology, College of Biotechnology and Bioengineering, Sungkyunkwan university, Suwon, Korea, Republic of

P31.09 **Biased synaptic connections from mossy fibers to cerebellar granule cells**

KEIKO TANAKA-YAMAMOTO*[1], YUKIO YAMAMOTO[2], TAEGON KIM[2]

[1]Korea Institute of Science and Technology (KIST), University of Science and Technology (UST), Seoul, Korea, Republic of, [2]Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P31.10 **High glucose alters the DNA methylome in human neural progenitor cells**

THAMEEM DHEEN*[1], DEEPIKA KANDILYA[1], SUKANYA SHYAMASUNDAR[1], DHIRAJ KUMAR SINGH[1], KARTHIK MALLILANKARAMAN[1], MANOOR PRAKASH HANDE[1], WALTER STUNKEL[1], YAP SENG CHONG[1]

[1]National University of Singapore, Singapore, Singapore

P31.11 **Development of metacognition in adolescence**

KELSSY KAWATA[1], KIYOTO KASAI[1], SHINSUKE KOIKE[1], YUKO NAKAMURA*[1]

[1]The Tokyo University, Tokyo, Japan

P31.12 **Nervous system associated pathway reconstruction to decipher the neuroethology of *Oryctes rhinoceros*, the coconut rhinoceros beetle**

KUMAR ARVIND[1], RAJESH M.K.[2], TONY GRACE*[1]

[1]Central University of Kerala, Kasaragod, India, [2]ICAR-Central Plantation Crops Research Institute (ICAR-CPCRI), Kasaragod, India

P31.13 **Postsynaptic SNX9 is required for normal synaptic growth interacting with Ack and regulates synaptic level of Glutamate receptor**

HYUN GWAN PARK[1], SEUNGBOK LEE*[1]

[1]Seoul National University, Seoul, Korea, Korea, Republic of

P31.14 **Biological roles of *CLCN4* in human neuronal development**

DAYEON KIM[1], HYUNSU DO[1], GEURIM SON[1], YENI KIM[2], SONGHEE JEON[3], JINJU HAN*[1]

[1]Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, [2]National Center for Mental Health, Seoul, Korea, Republic of, [3]Chonnam National University, Gwangju, Korea, Republic of

P31.15 **Optimization and classification of developmental brain diseases using machine learning of functional brain networks**

HYUNSEOK BAHNG[1], SOLE YOO[3], HAE-YOON CHOI[3], CHONGWON PAE[2], HAE-JEONG PARK*[2]

[1]Brain Korea 21 PLUS Project for Medical Science, Yonsei University, Seoul, Korea, Republic of, [2]Department of Nuclear Medicine and Radiology, and Severance Biomedical Science Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Institute of Human Complexity and Systems Science, System Science Center for Brain and Cognition, Yonsei University, Seoul, Korea, Seoul, Korea, Republic of

P31.16 **Cell type-specific translatome profiling of cortical neural progenitors in the developing brain**

JANE JUNG[1], HOSUNG JUNG*[2]

[1]Brain Korea 21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Anatomy and Brain Research Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of

P31.17 **Correlations between father-child interaction and brain structure**

MICHIKO ASANO*[1], KAZUO OKANOYA[1]

[1]The University of Tokyo, Tokyo, Japan

P31.18 **Fetal and neonatal brain development and skeletal growth are impaired by iodine excess during pregnancy in associated with thyroid dysfunction in rodent**

WOOJIN SONG[1], HYUNGJIN CHOI*[1]

[1]seoul national university, seoul, Korea, Republic of

P31.19 **Dynamics of axonal β-actin mRNA in live hippocampal neurons**

BYUNG HUN LEE[1], SEOKYOUNG BANG[2], SEUNGRYUL LEE[2], HYEYOON PARK*[1]

[1]Department of Physics and Astronomy, Seoul National University, Seoul, 08826, Korea, Seoul, Korea, Republic of, [2]Division of WCU (World Class University) Multiscale Mechanical Design School of Mechanical and Aerospace Engineering Institute of Advanced Machinery and Design Seoul National University, Seoul, Seoul, Korea, Republic of

P31.20 **EphA3 ectodomain and GDNF regulate FAK activity during axon growth of retinal ganglion cells**

GONZALO SPELZINI*[1], MARA MEDORI[1], LUISA RENEE TERUEL[1], VIVIANA SANCHEZ[1], LUCIANO FIORE[1], GABRIEL SCICOLONE[1]

[1]CONICET – Universidad de Buenos Aires, Instituto de Biología Celular y Neurociencias "Prof. E. De Robertis" (IBCN); Universidad de Buenos Aires, Facultad de Medicina, Departamento de Biología Celular, Histología, Embriología y Genética, Buenos Aires, Argentina

P31.21 **Calmodulin mediates Ca^{2+}-dependent inhibition of Tie2 signaling and acts as a developmental brake during embryonic angiogenesis**

JIYEON OHK[1], BOYOON CHOI[1], HOSUNG JUNG*[1]

[1]Yonsei University College of Medicine, Seoul, Korea, Republic of

P31.22 **Ribosome heterogeneity in retinal development**

HYEYOUNG KIM[1], HOSUNG JUNG*[1]

[1]Yonsei university, seoul, Korea, Republic of

P31.23 **A possible association between Zika Virus infection and CDK5RAP2 mutations**

ESTEPHANIA CANDELO*[1], ANA MARIA SANZ[2], DIANA RAMIREZ[3], LORENA DIAZ[3], ANA MARIA GRANADOS[2], FERNANDO ROSSO[2], HARRY PACHAJOA[4]

[1]Universidad Icesi-University College London, London, UK, [2]Fundacion Valle del Lili, Cali, Colombia, [3]Universidad Icesi, Cali, Colombia, [4]Universidad Icesi-Fundacion Valle del Lili, Cali, Colombia

P31.24 **Brain and molecular aging biomarkers in youths exposed to maltreatment: A longitudinal study**

MATEUS LEVANDOWSKI*[1, 2], LUCAS POITEVIN BANDINELLI[3], ANDRE ZUGMAN[4], SINTIA BELANGERO[4], ANDREA JACKOWSKI[4], KATHRYN ERICKSON-RIDOUT[5], KATJA FRANKE[6], PEDRO PAN[4], GIOVANNI SALUM[7], AUDREY TYRKA[5], RODRIGO GRASSI-OLIVEIRA[8]

[1]Universidade Federal de Pelotas, Porto Alegre, Brazil, [2]Universidade do Vale do Rio dos Sinos, Porto Alegre, Brazil, [3]Uniritter, Porto Alegre, Brazil, [4]UNIFESP, São Paulo, Brazil, [5]Brown University, Providence, USA, [6]Jena University Hospital, Jena, Germany, [7]UFRGS, Porto Alegre, Brazil, [8]PUCRS, Porto Alegre, Brazil

P31.25 **Id2 regulates α-tubulin acetylation by Sirt2, promoting axon growth**

BYEONG-SEONG KIM[1], TAEGWAN YOON[2], JEE-YIN AHN*[2]

[1]Sungkyunkwan university, Suwon, Korea, Republic of, [2]Sunkyunkwan university, Suwon, Korea, Republic of

P31.26 **The role of nArgBP2 in the axonal growth cone**

JEAYEOK HONG[1], HOSUNG JUNG*[2]

[1]Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Yonsei University College of Medicine, Soeul, Korea, Republic of

Wed. (Sept. 25)

Disorders of the nervous system

P32.01 **Nurr1 ligands ameliorate behavioural deficits on Parkinson's disease-context *in vivo* models**

HUI TING TOH[1], SREEKANTH RAJAN[1], JUN YEOB YOO[1], ADELINE-HENRY BASIL[3], ZIYIN WANG[3], GERALDINE GOH[3], KAH-LEONG LIM[4], HO SUP YOON*[2]

[1]School of Biological Sciences, Nanyang Technological University, Singapore, Singapore, [2]School of Biological Sciences and NTU Institute of Structural Biology, Nanyang Technological University, Singapore, Singapore, [3]National Neuroscience Institute, Singapore, Singapore, [4]National Neuroscience Institute; Department of Physiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore

P32.02 **Neuregulin1 attenuates H_2O_2-induced reductions in EAAC1 protein levels and reduces H2O2-induced oxidative stress**

JI-YOUNG YOO[1], HAN-BYEOL KIM[1], SEUNG-YEON YOO[1], JUN-HO LEE[2], RAN-SOOK WOO*[1]

[1]Eulji University, Daejeon, Korea, Republic of, [2]Daejeon University, Daejeon, Korea, Republic of

P32.03 **Zinc dyshomeostasis plays a key role in inflammasome formation in cultured neurons and astrocytes following LPS or OGD exposure**

HYUN SEO PARK[1], JAE-YOUNG KOH*[2]

[1]Asan institute for life science, Seoul, Korea, Republic of, [2]Department of Neurology, ASAN medical center, Seoul, Korea, Republic of

P32.04 **Characterization of adult hippocampal neurogenesis and hippocampal function in p53 knockout mice**

YE WON LEE[1], SEONGHEE JUNG[1], SEONGWON CHOE[1], HYEONJEONG JEONG[1], SEONG-WOON YU*[1]

[1]DGIST, Daegu, Korea, Republic of

P32.05 **Mutation screening in Chinese patients with familial Alzheimer's disease by whole-exome sequencing**

QING-QING TAO[1], BIN JIANG[2], ZHI-YING WU*[1]

[1]Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China, [2]Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou , China

P32.06 **Increases of intracellular zinc under sublethal concentration activates neurite outgrowth**

JIHEE KIM[1], YANG-HEE KIM*[1]

[1]Sejong University, Seoul, Korea, Republic of

P32.07 **Changes in the coupling of slow-waves with spindles tracks motor recovery after stroke**

JAEKYUNG KIM[1], APRIL HISHINUMA[1], LING GUO[1], SEOK-JOON WON[2], KARUNESH GANGULY*[1]

[1]University of California, San Francisco, San Francisco, USA, [2]San Francisco Veterans Affairs Medical Center, San Francisco, USA

P32.08 **Changes associated with the high-fat diet in the expression of D1R/D2R dopaminergic receptors in the frontal cortex of a murine model of sporadic Alzheimer's Disease**

JESUS MENDIOLA-PRECOMA[1], ARELY JANET FLORES-MONZON[1], LAURA CRISTINA BERUMEN[1], JESICA ESTHER ESCOBAR-CABRERA[1], GUADALUPE GARCIA-ALCOCER*[1]

[1]Posgrado en Ciencias Químico-Biológicas, Universidad Autónoma de Querétaro, Querétaro, Mexico

P32.09 **ZnO folic acid conjugated nano-particles induce apoptosis on Glioblastoma U-87MG tumor cell: An in vitro study**

SEYED BEHNAMEDIN JAMEIE*[1, 2], MONA FARHADI[3], MARFAVI ZAHRA[3], VAHID PIRHAJATI[4], MELIKASADT JAMEIE[4], MANASADAT JAMEIE[4]

[1]Neuroscience Research Center Iran University of Medical Sciences, Tehran, Iran, [2]Neuroscience Reseach Center, Iran University of Medical Sciences, Tehran, Iran, [3]Department of Microbiology, Karaj Branch, Islamic Azad University, Karaj, Iran, Tehran, Iran, [4]Neuroscience Reseach Center, Iran University of Medical Sciences, Tehran, Iran

P32.10 **Discovery of two-photon MAO-B chemical probes for neurodegenerative diseases**

RINA KWAG[1], JIHYE SEONG[3], HYUNAH CHOO*[2]

[1]Department of Chemistry, Korea University / Center of Neuro-Medicine, Brain Science Institute, Korea Institute of Science and Technology, seoul, Korea, Republic of, [2]Center of Neuro-Medicine, Brain Science Institute, Korea Institute of Science and Technology / Division of Bio-Medical Science and Technology, KIST school, Korea University of Science and Technology (UST), seoul, Korea, Republic of, [3]Center of Neuro-Medicine, Brain Science Institute, Korea Institute of Science and Technology / Convergence Research Center for Diagnosis Treatment Care of Dementia, Korea Institute of Science and Technology / Division of Bio-Medical Science and Technology, KIST school, Korea University of Science and Technology (UST), seoul, Korea, Republic of

P32.11 **Orexin and MCH neurons double ablated mice showed severe sleep attack and cataplexy**

HUNG CHIJUNG[1], DAISUKE ONO[2], AKIHIRO YAMANAKA*[2]

[1]Nagoya University, Nagoya, Japan, Japan, [2]Department of Neuroscience II, Research Institute of Environmental Medicine, Nagoya University, Nagoya, Japan, Japan

P32.12 **Stigmasterol stimulates neuronal migration through Reln-ApoER2-JNK signaling in neurosphere migration assays**

MD. NAZMUL HAQUE[1], MD. ABDUL HANNAN[1], RAJU DASH[1], HOJIN CHOI[1], IL SOO MOON*[1]

[1]Department of Anatomy, Dongguk University Graduate School of Medicine, Gyeongju 38066, Korea, Republic of

P32.13 **Chromatin-bound oxidized α-synuclein causes strand breaks in neuronal genomes in in vitro models of Parkinson's Disease**

VELMARINI VASQUEZ[1], JOY MITRA[2], PAVANA M. HEGDE[2], ARVIND PANDEY[3], SHILADITYA SENGUPTA[2], SANKAR MITRA[2], K. S. RAO[4], MURALIDHAR HEGDE*[1]

[1]Department of Radiation Oncology, Houston Methodist Research Institute, Houston, TX,, USA, [2]Department of Radiation Oncology, Houston Methodist Research Institute, Houston, TX,, USA, [3]Department of Radiation Oncology, Houston Methodist Research Institute, Houston, TX,, USA, [4]Centre for Neuroscience, Instituto de Investigaciones Científicas y Servicios de Alta Tecnología, Panama, Panama

P32.14 **Association between polygenic risk scores for attention-deficit/hyperactivity disorder and asthma in the 1982 Pelotas birth cohort**

DOUGLAS TEIXEIRA LEFFA*[1], FERNANDO BARROS[2], LUIS AUGUSTO ROHDE[1], LUCIANA TOVO-RODRIGUES[2]

[1]UFRGS, Porto Alegre, Brazil, [2]UFPel, Pelotas, Brazil

P32.15 **Environmental enrichment modulates depressive-like behavior and hippocampal neuroplasticity in the YAC128 mouse model of Huntington's disease**

PATRICIA S BROCARDO*[1], EVELINI PLÁCIDO[1], ANA CLAUDIA WINK[1], CRISTINE DE PAULA NASCIMENTO-CASTRO[1], ANA LÚCIA S. RODRIGUES[1], JOANA GIL-MOHAPEL[2]

[1]Universidade Federal de Santa Catarina, Florianopolis, Brazil, [2]University of Victoria, Victoria, Canada

P32.16 **Hemispherical asymmetry in reports gene or protein expression related to mood disorders in the brain of rodents: a pilot systematic review**

MAURICIO SCHULER NIN*[1], FELIPE B. ALMEIDA[2], FERNANDA F. S. DA SILVA[2], ALAN R. FONSECA[2], CARINA F. FEDDERN[2], GREICE CALETTI[3], ROSANE GOMEZ[3], HELENA M. T. BARROS[2]

[1]Pharmacology Department - UFRGS, Porto Alegre, Brazil; IPA Metodista, Porto Alegre, Brazil, [2]Pharmacology Department - UFCSPA, Porto Alegre, Brazil, [3]Pharmacology Department - UFRGS, Porto Alegre, Brazil

P32.17 **Galectin-1 improves cognition and reduces Amyloid-β deposits in an animal model of Alzheimer's disease possibly by modulating microglia phenotype and increasing Aβ clearance**

JESSICA LORENA PRESA*[1], CARLOS POMILIO[1], ANGELES VINUESA[1], MELISA BENTIVEGNA[1], AGUSTINA ALAIMO[2], AMAL GREGOSA[1], KWANG SIK KIM[3], JUAN BEAUQUIS[1], GABRIEL RABINOVICH[1], FLAVIA SARAVIA[1]

[1]Faculty of Exact and Natural Sciences, University of Buenos Aires & IBYME, Buenos Aires, Argentina, [2]Faculty of Exact and Natural Sciences, University of Buenos Aires, Buenos Aires, Argentina, [3]John Hopkins University, Baltimore, USA

P32.18 **Modulation of microglia and presynaptic protein expression after mesenchymal stem cells treatment in a rat model of Alzheimer's disease**

MARIA FLORENCIA ZAPPA VILLAR*[1], JULIETTE LOPEZ HANOTTE[1], JOAQUIN PARDO[1], GUSTAVO RAMON MOREL[1], MARIANA GABRIELA GARCIA[2], PAULA CECILIA REGGIANI[1]
[1]CONICET - National University of La Plata (UNLP), La Plata, Argentina, [2]CONICET - Universidad Austral, Pilar, Argentina

P32.19 **Sex-specific alterations in behavior and neuroinflammation in a mouse model of autism**

AMAICHA DEPINO*[1], NADIA KAZLAUSKAS[1], ARACELI SEIFFE[1], MARCOS CAMPOLONGO[1], CECILIA ZAPPALA[1]
[1]University of Buenos Aires-CONICET, Buenos Aires, Argentina

P32.20 **Psychostimulants are not identical pharmacological agents: distinct effects of psychostimulant drugs on the regulation of class IIa HDACs in the mouse mesocorticolimbic and striatal systems**

VERONICA BISAGNO*[1], MARIA ALEJANDRA BERNARDI[1], OSCAR TORRES[2], MAXIMO SOSA[1], JAVIER MUÑIZ[1], FRANCISCO URBANO[3], EDGAR GARCIA-RILL[4], JEAN LUD CADET[5]
[1]ININFA UBA-CONICET, Buenos Aires, Argentina, [2]San Diego Mesa College, Department of Behavioral Sciences, San Diego, USA, [3]IFIByNE UBA-CONICET, Buenos Aires, Argentina, [4]CTN, Department of Neurobiology and Developmental Sciences, UAMS, Little Rock, USA, [5]NIH/NIDA, Molecular Neuropsychiatry Research Branch, Baltimore, USA

P32.21 **Manipulation of macrophage polarization to facilitate repair in injured spinal cord**

SIN-NING SHANNON HO[1], KIN-WAI TAM[3], GRAHAM KA-HON SHEA[1], DAISY KWOK-YAN SHUM[2], YING-SHING CHAN*[2]
[1]Department of Orthopaedics and Traumatology, The University of Hong Kong, Hong Kong, Hong Kong SAR, China, [2]School of Biomedical Sciences and State Key Laboratory of Brain and Cognitive Sciences, The University of Hong Kong, Hong Kong, Hong Kong SAR, China, [3]School of Biomedical Sciences, The University of Hong Kong, Hong Kong, Hong Kong SAR, China

P32.22 **Short-term hypoxia differentially affects excitatory and inhibitory retinocollicular synaptic transmission**

HANNA DUMANSKA*[1], NICKOLAI VESELOVSKY[1]
[1]Bogomoletz Institute of Physiology, National Academy of Science of Ukraine, Kyiv, Ukraine

P32.23 **The effect of sodium iodate on vitrectomized canine retinal degeneration model**

SEONGKWANG CHA[1], JUNGRYUL AHN[1], YURIM JEONG[1], SEONG-WOO KIM[2], YONG SOOK GOO*[1]
[1]Department of Physiology, Chungbuk National University School of Medicine, Cheongju, Korea, Republic of, [2]Department of Ophthalmology, Korea University College of Medicine, Seoul, Korea, Republic of

P32.24 **Perineuronal net aberrations as a putative mechanism of behavioral and neural alterations in *DISC-1* mutation model of schizophrenia**

RAZIA SULTANA[1], CHARLES LEE*[1]
[1]Department of Comparative Biomedical Sciences, School of Veterinary Medicine, Louisiana State University, Baton Rouge, USA

P32.25 **The effect of alpha-mangostin and alpha-mangostin nanoencapsulated in rotenone-induced Parkinson's disease mice**

ROMGASE SAKAMULA[1], WACHIRYAH THONG-ASA*[1]
[1]Department of Zoology, Faculty of Science, Kasetsart University

P32.26 **Paint thinner inhalation induces behavioral impairment, altered neurogenesis and molecular changes in the hippocampus of adult mice**

HANAA MALLOUL*[1], SARA BONZANO[2], MOHAMMED BENNIS[1], GIOVANNA GAMBAROTTA[3], SILVIA DE MARCHIS[4], SAADIA BA-M'HAMED[1]
[1]Faculty of Science Semlalia, Cadi Ayyad University, Marrakech, Morocco, [2]Department of Life Sciences and Systems Biology, University of Turin, Turin, Italy, [3]Department of Clinical and Biological Sciences, University of Turin, Orbassano, Italy, [4]Department of Life Sciences and Systems Biology, University of Turin, Turin, Italy

P32.27 **Methyl jasmonate abrogates rotenone-induced Parkinsonian-like symptoms through inhibition of oxidative stress, release of pro-inflammatory cytokines, nuclear factor kappa-B and α -synuclein expressions**

SOLOMON UMUKORO*[1], AKINYINKA ALABI[2], ABAYOMI AJAYI[1], ADEWALE BAKRE[1]
[1]University of Ibadan, Ibadan, Nigeria, [2]Olabisi Onabanjo University, Shagmu, Nigeria

P32.28 **The neuroprotective role of hSP-2 in a *Drosophila* model of Parkinson's disease**

SHARMIN SHIRINA[1], HEA-JONG CHUNG[1], ISLAM MD SAIDUL[1], SEONG-TSHOOL HONG*[1]
[1]Department of Biomedical Sciences and Institute for Medical Science, Chonbuk National University Medical School, Jeonju, Korea, Republic of

P32.29 **The neuroprotective function of dSP-2 in a *Drosophila* model of Parkinson's disease**

ISLAM MD MINARUL[1], ISLAM MD SAIDUL[1], HEA-JONG CHUNG[1], SEONG-TSHOOL HONG*[1]
[1]Chonbuk National University Medical School, Jeonju, Korea, Republic of

P32.30 **Clozapine-induced chemogenetic activation augment the post-stroke recovery in capsular infarct model**

SUNWOO LEE[1], SEUNGJUN RYU[1], JONGWOOK CHO[1], RA GYUNG KIM[1], JUN SOO KIM[1], JI-YOUNG PARK[1], SOYEON JUNG[1], HYONG-IHL KIM*[1]
[1]Gwangju Institute of Science and Technology Neuromodulation Laboratory, Gwangju, Korea, Republic of

P32.31 **Genetic aspect of leukodystrophies in moroccan population**

ADNANE KARKAR*[1], IMEN DORBOZ[2], SELLAMA NADIFI[1], ODILE BOESPFLUG-TANGUY[2]
[1]Genetics and Molecular Pathology Laboratory, Medical school of Casablanca, Hassan II University, Casablanca, Morocco, [2]Inserm U1141, Paris Diderot University, Sorbonne Paris Cité, DHU PROTECT, Robert Debré Hospital, Paris, France

P32.32 **Molecular mechanisms of G protein-coupled receptor signaling in the modulation of anxiety and conditioned fear**

MEEJUNG KO[1], TERRANCE CHIANG[2], ARBAAZ MUKADAM[1], GRACE MULIA[1], JULIA CHESTER[3], RICHARD VAN RIJN*[1]
[1]Dept. of Medicinal Chemistry and Molecular Pharmacology, College of Pharmacy, Purdue University, West Lafayette, IN, USA, [2]Dept. of Medicinal Chemistry and Molecular Pharmacology, College of Pharmacy, Purdue University, West Lafayette, USA, [3]Dept. of Psychological Sciences, College of Health and Human Sciences, Purdue University, West Lafayette, IN, USA

P32.33 **Correlation between decrease of neuronal noise and depressive symptom severity**

SEOKHO YUN[1], BUMSEOK JEONG*[1]
[1]Graduate School of Medical Science & Engineering, KAIST, Daejeon, Korea, Republic of

P32.34 **Screening for SGCE mutations in Moroccan sporadic patients with Myoclonus-Dystonia Syndrome**

LAILA RACHAD*[1], HICHAM EL OTMANI[2], SELLAMA NADIFI[2]
[1]University Hassan II, Faculty of Medicine and Pharmacy of Casablanca, Morocco, Casablanca, Morocco, [2]Hassan II University, Faculty of Medicine and Pharmacy of Casablanca, Morocco, Casablanca, Morocco

P32.35 **Sleep EEG as an index of brain maturation in typically developing and drug-naïve ADHD children**

NATO DARCHIA*[1], TAMAR BASISHVILI[2], MARINE ELIOZISHVILI[2], NIKOLOZ ONIANI[2], TINATIN TCHINTCHARAULI[2], IRINE SAKHELASHVILI[2], TENGZIZ ONIANI JR[3], IAN GLENN CAMPBELL[4], IRWIN FEINBERG[4]
[1]Ilia State University, T. Oniani Laboratory of Sleep-Wakefulness Cycle Study, Tbilisi, Georgia, [2]Ilia State University, T.Oniani Laboratory of Sleep-Wakefulness Cycle Study, Tbilisi, Georgia, [3]Ilia State university, T.Oniani Laboratory of Sleep-Wakefulness Cycle Study, Tbilisi, Georgia, [4]University of California, Davis, Department of Psychiatry and Behavioral Sciences, Davis, USA

P32.36 **Associations of white matter hyperintensities with poststroke depression: A one year longitudinal study**

GYUON KIM[1], JAE-MIN KIM*[2]
[1]Chonnam National University Hospital, Gwangju, Korea, Republic of, [2]Chonnam national university, Gwangju, Korea, Republic of

P32.37 **Delineation of brain structural connectivity in Schizophrenia at different stages**

AKIKO UEMATSU*[1], HIDENORI YAMASUE[2], KIYOTO KASAI[3], SHINSUKE KOIKE[1]
[1]Graduate School of Arts and Science Center for Evolutionary Cognitive Science, the University of Tokyo, Tokyo, Japan, [2]Departmentof Psychiatry, Hamamatsu University School of Medicine, Hamamatsu, Japan, [3]Department of Neuropsychiatry, the University of Tokyo Hospital, Tokyo, Japan

P32.38 **The prolyl hydroxylase inhibitor - ethyl-3,4-dihydroxy benzoate (EDHB) can enhance functional recovery and reduce injury severity in a rodent model of endothelin-1 induced focal stroke**

NICOLE JONES*[1], THOMAS FATH[2], HONG NGUYEN[1]
[1]School of Medical Sciences, UNSW Sydney, Sydney, Australia, [2]Dementia Research Centre, Department of Biomedical Sciences, Macquarie University, Sydney, Australia

P32.39 **LRRK2 kinase activity regulates α-Synuclein spreading via rab35 phosphorylation**

EUN-JIN BAE[1], DONG-KYU KIM[1], CHANGYOUN KIM[2], EDWARD ROCKENSTEIN[3], AYSE ULUSOY[4], MICHAEL KLINKENBERG[4], GA RAM JEONG[5], JAE RYUL BAE[5], HE-JIN LEE[6], BYUNG-DAE LEE[7], DONATO A DI MONTE[4], ELIEZER MASLIAH[2], SEUNG-JAE LEE*[1]
[1]Seoul National University, College of Medicine, Seoul, Korea, Republic of, [2]Molecular Neuropathology Section, Laboratory of Neurogenetics, National Institute on Aging, National Institutes of Health, Bethesda, USA, [3]Department Neurosciences, School of Medicine, University of California, San Diego, USA, [4]German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany, [5]Department of Neuroscience, Graduate School, Kyung Hee University, Seoul, Korea, Republic of, [6]Department of Anatomy, School of Medicine, Konkuk University, Seoul, Korea, Republic of, [7]Department of Physiology, School of Medicine, Kyung Hee University, Seoul, Korea, Republic of

P32.40 **Long-term Outcome of Subthalamic Nucleus Deep Brain Stimulation for Parkinson's Disease: 10 Years and Beyond**

HYE RAN PARK[1], SUN HA PAEK*[2]
[1]Soonchunhyang University Seoul Hospital, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, Korea, Republic of

P32.41 **The NAc-DBS alleviates major depressive behavior in rodents**

SONG NAN[1], GAO YAN[2], LI BING[2], WANG YIZHENG*[2]
[1]Beijing Institute of Basic Medical Sciences, Beijing, China, [2]The Academy of Military Medical Sciences, Institute of Military Cognition and Brain Sciences, Beijing, China

P32.42 **Serum IGF-I deficiency and Alzheimer´s disease: implications for disease modeling**

JONATHAN ZEGARRA[1], ANDREA SANTI[2], ESTRELLA FÉRNANDEZ DE SEVILLA[2], ANGEL NUÑEZ[3], IGNACIO TORRES*[2]
[1]1.-Cajal Institute 2.- CIBERNED 3.- Universidad Nacional de San Agustín de Arequipa, Arequipa, Peru, [2]1.- Cajal Institute 2.- CIBERNED, Madrid, Spain, [3]Dept Neurosciences, UAM, Madrid, Spain, Madrid, Spain

P32.43 **Effects of curcumin on ultrastructural changes in pericytes and vascular basement membrane in the peripheral nerve and dorsal root ganglion of rats with cisplatin-induced neuropathy**

PHETNARIN KOBUTREE[1], DEPICHA JINDATIP[1], ATITAYA ROUMWONG[1], SITHIPORN AGTHONG*[1]
[1]Chulalongkorn University, Bangkok, Thailand

P32.44 **Characterization of synaptic and behavioral phenotypes in mice carrying a *de novo Shank3* mutation Q321R**

YE-EUN YOO[1], TAESUN YOO[1], SEUNGJOON LEE[1], JISEOK LEE[2], DOYOUN KIM[2], HYE-MIN HAN[3], YONG-CHUL BAE[3], EUNJOON KIM*[2]
[1]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [2]Institute for Basic Science (IBS), Daejeon, Korea, Republic of, [3]Kyungpook National University, Daegu, Korea, Republic of

P32.45 **Autophagic death of neural stem cells mediates chronic stress-induced decline of adult hippocampal neurogenesis and cognitive deficits**

SEONGHEE JUNG[1], SEONGWON CHOE[1], HANWOONG WOO[1], HYEONJEONG JEONG[1], HYUN-KYU AN[1], HYE YOUNG RYU[1], BO KYOUNG YEO[1], YE WON LEE[1], JI YOUNG MUN[2], HAN KYOUNG CHOE[1], EUN-KYOUNG KIM[3], SEONG-WOON YU*[1]
[1]DGIST, Daegu, Korea, Republic of, [2]university, Daegjeon, Korea, Republic of, [3]DGIST, Daegu, Korea, Republic of

P32.46 **Rapid-onset anti-depressant-like potential of xylopic acid in mice and zebrafish**

ROBERT BINEY*[1], CHARLES BENNEH[2], DONATUS ADONGO[2], ERIC WOODE[3]
[1]Department of Pharmacology, University of Cape Coast, Cape Coast, Ghana, [2]Department of Pharmacology, University of Health and Allied Sciences, Ho, Ghana, [3]Department of Pharmacology, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

P32.47 **LRRK2 regulates microglial neurotoxicity via NFATc2 in synucleinopathies**

CHANGYOUN KIM*[1], SUNGYONG YOU[2], ROBERT RISSMAN[3], SEUNG-JAE LEE[4], ANDREW SINGLETON[5], MARK COOKSON[6], ELIEZER MASLIAH[7]
[1]National Institue on Aging, Bethesda, USA, [2]Departments of Surgery and Biomedical Sciences, Cedars-Sinai Medical Center, Los Angeles, USA, [3]Department Neurosciences, School of Medicine, University of California, San Diego, La Jolla, USA, [4]Department of Biomedical Sciences, Neuroscience Research Institute, and Department of Medicine, Seoul National University College of Medicine, Seoul, Korea, Republic of, [5]Molecular Genetics Section, Laboratory of Neurogenetics, National Institute on Aging, National Institutes of Health, Bethesda, USA, [6]Cell Biology and Gene Expression Section, Laboratory of Neurogenetics, National Institute on Aging, National Institutes of Health, Bethesda, USA, [7]Molecular Neuropathology Section, Laboratory of Neurogenetics, National Institute on Aging, National Institutes of Health, Bethesda, USA

P32.48 **Tornado-FLIM acquisition for monitoring single-synapse presynaptic calcium dynamics in a mouse model of a migraine**

OLGA TYURIKOVA[1], ELIZABETH NICHOLSON[1], DIMITRI MICHAEL KULLMANN[1], DMITRI RUSAKOV[1], KIRILL VOLYNSKI*[1]
[1]UCL Institute of Neurology, London, UK

P32.49 **Circadian oscillation of Aβ-related molecules at the blood cerebrospinal fluid barrier**

TELMA QUINTELA*[1], ANA CATARINA DUARTE[1], ISABEL GONÇALVES[1], ANDRÉ FURTADO[1], CECILIA SANTOS[1]
[1]University of Beira Interior, Health Sciences Research Centre (CICS-UBI), Covilhã, Portugal

P32.50 **Modified excitability and persistent sodium current amplitude in cortical pyramidal neurons from a mouse model of Amyotrophic Lateral Sclerosis**

CRISTINA ZONA*[1], LUANA SABA[1], SILVIA CAIOLI[2]
[1]University of Rome Tor Vergata, Roma, Italy, [2]I.R.C.C.S. Fondazione S. Lucia, Roma, Italy

P32.51 **Association of circulating klotho and dipeptidyl peptidase-4 activity with inflammatory cytokines in elderly patients with Alzheimer's disease**

MOHSEN SEDIGHI*[1], TOURANDOKHT BALUCHNEJADMOJARAD[2], SOUDABEH FALLAH[3], NARIMAN MORADI[3], SIAMAK AFSHIN-MAJD[4], MEHRDAD ROGHANI[5]

[1]Department of Neuroscience, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran, [2]Department of Physiology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran, [3]Department of Biochemistry, School of Medicine, Iran University of Medical Sciences, Tehran, Iran, [4]Department of Neurology, School of Medicine, Shahed University, Tehran, Iran, [5]Neurophysiology Research Center, Shahed University, Tehran, Iran

P32.52 **Heterozygosity for *Nuclear Factor One X* in mice reveals neurological features of Malan syndrome**

SABRINA OISHI[1], DANYON HARKINS[1], NYOMAN KURNIAWAN[2], TOM J. BURNE[3], MICHAEL PIPER*[1]

[1]The School of Biomedical Sciences, The University of Queensland, Brisbane, Australia, [2]The Centre for Advanced Imaging, The University of Queensland, Brisbane, Australia, [3]The Queensland Brain Institute, The University of Queensland; Queensland Centre for Mental Health Research, The Park Centre for Mental Health, Brisbane, Australia

P32.53 **Assessment of the types and factors associated with stroke among adult patients admitted in adama hospital medical college, ethiopia**

TADESSE SEDA BEDASSA*[1]

[1]Adama Hospital Medical College, Adama, Ethiopia

P32.54 **Early growth response-1 stimulates acetylcholinesterase during the course of Alzheimer's disease**

AI-MIN BAO*[1], YU-TING HU[1], XIN-LU CHEN[1], SHU-HAN HUANG[1], JACKSON BOONSTRA[2], HUGO MCGURRAN[2], DICK SWAAB[2]

[1]Department of Neurobiology, Zhejiang University School of Medicine, Hangzhou, China, [2]Netherlands Institute for Neuroscience, an Institute of the Royal Netherlands Academy of Arts and Sciences, Amsterdam, Netherlands

P32.55 **Effects of *Pueraria lobate* and its active compound, Puerarin in the Animal Model of Parkinson's Disease**

NA-HYUN KIM[1], YE-JIN KIM[2], SO-YEON JEON[2], YUKIORI GOTO[3], JAE-SUE CHOI[4], YOUNG-A LEE*[2]

[1]Daegu Catholic University, Gyeongsan-si, Gyeongbuk, Korea, Republic of, [2]Daegu Catholic Univeristy, Gyeongsan-si, Gyeongbuk, Korea, Republic of, [3]Kyoto Univeisiry, Primate Research Institute, Inuyama, Aichi, Japan, [4]Pukyong National University, Busan, Korea, Republic of

P32.56 **Evaluation of inflammatory markers, prolactin and mean platelet volume as short-term outcome indicators in young adults with ischemic stroke**

AHMED DAHSHAN*[1], ASMAA EBRAHEIM[1], AHMED ELGHONEIMY[1], MOHAMMED FARRAG[1], LAILA RASHED[1]

[1]Cairo University, Cairo, Egypt

P32.57 **Valerenic acid treatment in a mouse model of Parkinson´s disease**

ALFREDO RODRIGUEZ-CRUZ[1], JESICA ESCOBAR-CABRERA[1], GUADALUPE GARCIA-ALCOCER[1], LAURA CRISTINA BERUMEN*[1]

[1]Posgrado Ciencias Químico Biológicas, Facultad de Química, Universidad Autónoma de Querétaro, México., Querétaro, Mexico

P32.58 **Activation of Adenosine A2A receptor-containing indirect medium spiny neurons in the dorsomedial striatum reduces ethanol containing conditioned reward seeking**

SA-IK HONG[1], SEOUNGWOO KANG[1], JIANG-FAN CHEN[2], DOO-SUP CHOI*[1]

[1]Mayo Clinic College of Medicine, Rochester, USA, [2]Boston University School of Medicine, Boston, USA

P32.59 **The antidepressant effect of STEP inhibitor (TC-2153) and its influence on the serotoninergic 5-HT$_{2A}$ receptors in the brain**

ELIZABETH KULIKOVA*[1], NIKITA KHOTSKIN[1], NINA ILLARIONOVA[1], IVAN SOROKIN[1], KONSTANTIN VOLCHO[2], ALEXANDER KULIKOV[1]

[1]Institute of Cytology and Genetics, Novosibirsk, Russia, [2]Novosibirsk Institute of Organic Chemistry, Novosibirsk, Russia

P32.60 **A distinct pathogenic mechanism of Tau aggregation involving hyperubiquitination**

JI HYEON KIM[1], MIN JAE LEE*[1]

[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P32.61 **Alterations of limbic-prefrontal cortical functional connectivity in the animal model of ADHD and its modulation by *Ecklonia Stolonifera Okamura***

SO-YEON JEON[1], NA-HYUN KIM[1], YE-JIN KIM[1], YUKIORI GOTO[2], JAE-SUE CHOI[3], YOUNG-A LEE*[1]

[1]Daegu Catholic Univeristy, Gyeongsan, Korea, Republic of, [2]Primate Research Institute, Kyoto Univesity, Inuyama, Aichi, Japan, [3]Pukyong National University, Busan, Korea, Republic of

P32.62 **The effect of exaggerated induced inflammatory disorders and related disturbances in microglia–neuron homeostasis on the precipitation and remission of neurological disorders**

MAI ANWAR*[1]

[1]Department of Biochemistry, National Organization for Drug Control and Research (NODCAR), Egypt., Cairo, Egypt

P32.63 **Kolaviron improves behavioral outcomes and cortico-hippocampal morphology in mice following cuprizone neurotoxicity**

GABRIEL OMOTOSO*[1], OLAYEMI OLAJIDE[1], ISMAIL GBADAMOSI[1], BERNARD ENAIBE[1], OLUWOLE AKINOLA[1], BAMIDELE OWOYELE[1], JOSEPH ADEBAYO[1]

[1]University of Ilorin, Ilorin, Nigeria

P32.64 **Sex-specific involvement of indirect-pathway medium spiny neurons in behavioral alteration of 16p11.2 hemi-deletion mouse model**

JAEKYOON KIM[1], CHRISTOPHER ANGELAKOS[2], JOSEPH LINCH[2], SARAH FERRI[1], TED ABEL*[1]

[1]Molecular Physiology and Biophysics, Iowa Neuroscience Institute, University of Iowa, Iowa City, USA, [2]Neuroscience Graduate Group, University of Pennsylvania, Philadelphia, USA

P32.65 **1-methyltryptophan, an IDO inhibitor protects against neuroinflammation, mitochondrial dysfunction, oxidative stress and apoptosis in 6-OHDA-induced Parkinson's disease in mice**

RUPINDER KAUR SODHI[1], YASHIKA BANSAL[1], RAGHUNATH SINGH[1], PRIYANKA SAROJ[1], ANURAG KUHAD*[1]

[1]Pharmacology Research Laboratory, University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, Chandigarh, India

P32.66 **Targeting glutamate receptors: a novel approach to frontotemporal dementia?**

OLGA KOPACH[1], NOEMÍ ESTERAS[2], DMITRI A. RUSAKOV[1], ANDREY Y. ABRAMOV*[2]

[1]Department of Clinical and Experimental Epilepsy, Institute of Neurology, University College London, London, UK, [2]Department of Molecular Neuroscience, Institute of Neurology, University College London, London, UK

P32.67 **Protective effects of diarylpropionitrile against hydrogen peroxide-induced damage in human neuroblastoma SH-SY5Y cells**

NOPPARAT SUTHPRASERTPORN[1], NIRUT SUWANNA[2], WIPAWAN THANGNIPON*[1]

[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Nakhonpathom, Thailand, [2]Department of Companion Animal Clinical Sciences, Faculty of Veterinary Medicine, Kasetsart University, Kamphaeng Saen, , Nakhonpathom, Thailand

P32.68 **Effects of B1-6-12 on ultrastructural changes in pericytes and vascular basement membrane in the peripheral nerve of rats with cisplatin-induced neuropathy**

SITHIPORN AGTHONG*[1], DEPICHA JINDATIP[1], ATITAYA ROUMWONG[1]
[1]Department of Anatomy, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

P32.69 **Quinolinic acid, induces depression-like symptoms via Nrf2/ARE pathway in olfactory bulbectomized mice model of depression: In vivo and in silico studies**

YASHIKA BANSAL[1], RAGHUNATH KHATRI[1], RUPINDER KAUR SODHI[1], PRIYANKA SAROJ[1], RICHA DHINGRA[2], PRAGYANSHU KHARE[3], MAHENDRA BISHNOI[3], KANTHI KIRAN KONDEPUDI[3], NEELIMA DHINGRA[2], ANURAG KUHAD*[1]
[1]Pharmacology Research Lab, University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, India, [2]Pharmachemistry Research Lab, University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, India, [3]Food and Nutritional Biotechnology, National Agri-Food Biotechnology Institute, SAS Nagar, Punjab, India

P32.70 **Resting state fMRI based target selection for individualized rTMS: Stimulation over the left parietal cortex enhances memory in patients with Alzheimer's disease**

JINTAO WANG[1], LILI WEI[1], YINGCHUN ZHANG[1], LUOYI XU[1], KEHUA YANG[1], WEI CHEN*[1]
[1]Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, and Key Laboratory of Medical Neurobiology of Zhejiang Province, Hangzhou, Zhejiang, China

P32.71 **In vivo confocal microscopy findings in multiple sclerosis patients**

ERDOST YILDIZ[1], AYŞE YİLDİZ TAŞ[1], AFSUN ŞAHIN*[1]
[1]Koç University, Istanbul, Turkey

P32.72 **Selenium reduces pain perception in acute 1-methyl-4-phenyl-1, 2, 3, 6-tetrahydropyridine (MPTP)-induced mouse model of Parkinson's disease**

BAMIDELE OWOYELE*[1], PATRICK ABOLARIN[1], ABDULRAZAQ NAFIU[1], ABDULBASIT AMIN[2], OLALEKAN OGUNDELE[3]
[1]University of Ilorin, Ilorin, Nigeria, [2]UNIVERSITY OF ILORIN, ILORIN, Nigeria, [3]Louisiana State University, Louisiana, USA

P32.73 **Neuronal expression of NUsc1, a single-chain variable fragment antibody against Ab oligomers, protects synapses and rescues memory in Alzheimer´s disease models**

MARÍA CLARA SELLÉS[1], JULIANA FORTUNA[2], MAGALI CERCATO[3], ANDRE BITENCOURT[4], AMANDA SOUZA[5], VANIA PRADO[6], MARCO PRADO[6], ADRIANO SEBOLLELA[4], OTTAVIO ARANCIO[7], WILLIAM KLEIN[8], FERNANDA DE FELICE[9], DIANA JERUSALINSKY[10], SERGIO FERREIRA*[2]
[1]UFRJ, Rio de Janeiro, Brazil, [2]Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, [3]University of Buenos Aires, Buenos Aires, Argentina, [4]University of Sao Paulo, Ribeirao Preto, Brazil, [5]University of Rio de Janeiro, Rio de Janiero, Brazil, [6]University of Western Ontario, London, Canada, [7]Columbia University, New York, USA, [8]Northwestern University , Evanston, USA, [9]University of Rio de Janeiro, Rio de Janeiro, Brazil, [10]University of Bueno Aires, Buenos Aires, Argentina

P32.74 **LXR/ApoE activation via intranasal route prevent cognitive deficits and facilitates amyloid beta clearance in a transgenic AD-like mouse model**

MARIA EUGENIA NAVAS GUIMARAES*[1], MARTIN ALEJANDRO BRUNO[1]
[1]Universidad Católica de Cuyo, San Juan, Argentina

P32.75 **Shank2 deletion in parvalbumin neurons leads to moderate hyperactivity, enhanced self-grooming, and suppressed seizure susceptibility in mice**

SEUNGJOON LEE[1], EUNEE LEE[3], RYUNHEE KIM[1], JIHYE KIM[4], SUHO LEE[4], HARAM PARK[4], ESTHER YANG[5], HYUN KIM[5], EUNJOON KIM*[2]
[1]KAIST, Daejeon, Korea, Republic of, [2]IBS / KAIST, Daejeon, Korea, Republic of, [3]Yonsei University, Seoul, Korea, Republic of, [4]IBS, Daejeon, Korea, Republic of, [5]Korea University, Seoul, Korea, Republic of

P32.76 **Functional study of a novel Charcot-Marie-Tooth disease-related gene: Promoting peripheral nerve regeneration via adeno-associated virus-mediated gene delivery**

DEEPAK PRASAD GUPTA[1], SUNG HEE PARK[2], KYOUNGHO SUK[3], GYUN JEE SONG*[2]
[1]Kyungpook National University, Catholic Kwandong University, Incheon, Korea, Republic of, [2]Catholic Kwandong University, Incheon, Korea, Republic of, [3]Kyungpook National University, Daegu, Korea, Republic of

P32.77 **Neuroprotective roles of sesamol in regulating sirtuin signaling against oxidative stress and molecular docking analysis**

WARALEE RUANKHAM[1], WILASINEE SUWANJANG[2], NAPAT SONGTAWEE[3], VIRAPONG PRACHAYASITTIKUL[1], SUPALUK PRACHAYASITTIKUL[4], KAMONRAT PHOPIN*[2]
[1]Department of Clinical Microbiology and Applied Technology, Faculty of Medical Technology, Mahidol University, Bangkok, Thailand, [2]Center for Research and Innovation, Faculty of Medical Technology, Mahidol University, Bangkok, Thailand, [3]Department of Clinical Chemistry, Faculty of Medical Technology, Mahidol University, Bangkok, Thailand, [4]Center of Data Mining and Biomedical Informatics, Faculty of Medical Technology, Mahidol University, Bangkok, Thailand

P32.78 **Poly(ADP-ribosylation) regulates stress granule dynamics, phase separation, and neurotoxicity of disease-related RNA-binding proteins**

YONGJIA DUAN[1], YANSHAN FANG*[1]
[1]Interdisciplinary Research Center on Biology and Chemistry, SIOC, Chinese Academy of Sciences, Shanghai, China

P32.79 **The retrograde transport of BDNF and proNGF diminishes with age in basal forebrain cholinergic neurons**

MARGARET FAHNESTOCK*[1], ARMAN SHEKARI[1]
[1]McMaster University, Hamilton, Canada

P32.80 **Clinical profile, risk factors and outcome of patients with stroke**

BHUPENDRA SHAH*[1], MANISH SUBEDI[2], BIJAY BARTAULA[2], VIVEK KATTEL[2]
[1]B. P. Koirala Institute of Health Sciences, Dharan, Nepal, [2]B.P.Koirala Institute of Health Sciences, Dharan, Nepal

P32.81 **Study of ^{1}H MRS metabolites in the deep gray matter of patients in the early stage of multiple sclerosis**

PETRA HNILICOVA*[1], EMA KANTOROVA[2], WOLFGANG BOGNER[3], MARIAN GRENDAR[4], DANIEL CIERNY[5], HUBERT POLACEK[6], STEFAN SIVAK[2], KAMIL ZELENAK[7], EGON KURCA[2], JAN LEHOTSKY[8]
[1]BioMed Martin - Division of Neurosciences, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava (JFMED CU), Martin, Slovak Republic, [2]Clinic of Neurology, JFMED CU, Martin, Slovak Republic, [3]Department of Biomedical Imaging and Image-guided Therapy, Medical University, Vienna, Austria, [4]BioMed Martin - Bioinformatic unit, JFMED CU, Martin, Slovak Republic, [5]Department of Clinical Biochemistry, JFMED CU, Martin, Slovak Republic, [6]Clinic of Nuclear Medicine, JFMED CU, Martin, Slovak Republic, [7]Clinic of Radiology, JFMED CU, Martin, Slovak Republic, [8]Department of Medical Biochemistry, JFMED CU, Martin, Slovak Republic

P32.82 **Mitochondrial fitness as promising predictive tool to monitor progression of Parkinson's disease**

ZUZANA TATARKOVA*[1], IVANA PILCHOVA[2], MARTIN KOLISEK[2], MICHAL CIBULKA[1], JAEKYUNG CECILIA SONG[3], WONCHEOL CHOI[3]
[1]Comenius University in Bratislava, Jessenius Faculty of Medicine, Department of Medical Biochemistry, Martin, Slovak Republic, [2]Comenius University in Bratislava, Jessenius Faculty of Medicine, Biomedical Center Martin, Martin, Slovak Republic, [3]Graduate Department of Integrative Life Sciences and Nexia Nano Cancer Institute, Dankook University, Yongin, Seoul, Korea, Republic of

P32.83 **Ketamine ameliorates seizure severity, depressive-like behavior and oxidative stress in petylenetetrazole-kindled rats**

BEN CHINDO*[1], SALIHU IDRIS[1], JAMILU YA'U[2], GODWIN AYUBA[3], NUHU DANJUMA[2]
[1]Department of Pharmacology and Toxicology, Kaduna State University, Kaduna, Nigeria, [2]Department of Pharmacology and Therapeutics, Ahmadu Bello University, Zaria, Nigeria, [3]Department of Anatomic Pathology and Forensic Medicine, Kaduna State University, Kaduna, Nigeria

P32.84 **Multi-target-directed ligands for management of Alzheimer's disease associated pathogenesis**

SHRUTI SHALINI[1], MANISHA TIWARI*[1]
[1]University of Delhi, Delhi, India

P32.85 **Evaluation of the role of ellagic acid on spatial memory activity and oxidative responses in pentylenetetrazole chronic epileptic rat model**

PHILEMON PAUL MSHELIA*[1], NUHU M. DANJUMA[2], RABIU A. MAGAJI[3], TAVERSHIMA DZENDA[4]
[1]Abubakar Tafawa Balewa University, Zaria, Nigeria, [2]Faculty of Pharmaceutical Sciences, Ahmadu Bello University, Zaria, Nigeria, [3]Department of Human Physiology, Ahmadu Bello University, Zaria, Nigeria, [4]Dept. of Veterinary Physiology, Ahmadu Bello University, Zaria, Nigeria

P32.86 **Neuroprotective role of pioglitazone in reversing hippocampal insulin resistance in Amyloid-β fibrils induced animal model of Alzheimer's disease**

SYED OBAIDUR RAHMAN[1], SUHEL PARVEZ[2], BIBHU PRASAD PANDA[1], ABUL KALAM NAJMI*[1]
[1]School of Pharmaceutical Education and Research (SPER), Jamia Hamdard, New Delhi, India, [2]School of Chemical and Life Sciences, Jamia Hamdard, New Delhi, India

P32.87 **The role of DNA damage in TDP-43-associated-Amyotrophic Lateral Sclerosis (ALS)**

MD SHAFI JAMALI*[1, 2], ANNA KONOPKA[1], ADAM WALKER[3], JULIE ATKIN[1]
[1]Macquarie University, Sydney, Australia, [2]Macquarie University, Sydeny, Australia, [3]Queensland Brain Institute, The University of Queensland, Queensland, Australia

P32.88 **Fingolimod improves the functional recovery of optic pathway and alleviates the expression level of histone deacetylase / sphingosine 1 phosphate receptor 1 in focal demyelination model of rat's optic chiasm**

MONA HASHEMIAN[1], HADI PARSIAN[3], FARZIN SADEGHI[4], MARYAM GHASEMI-KASMAN*[2]
[1]Student Research Committee, Babol University of Medical Sciences, Babol, Iran, Babol, Iran, [2]Neuroscience Research Center, Health Research Institute, Babol University of Medical Sciences, Babol, Iran, Babol, Iran, [3]Department of Clinical Biochemistry, Faculty of Medicine, Babol University of Medical Sciences, Babol, Iran, Babol, Iran, [4]Department of Medical Microbiology, Faculty of Medicine, Babol University of Medical Sciences, Babol, Iran, Babol, Iran

P32.89 **Ursin reduce neuronal loss and astrocytes activation in chemical kindling model of epilepsy**

SEYED RAHELEH AHMADIAN[1], MARYAM GHASEMI-KASMAN[3], MAHDI POURAMIR*[2]
[1]Student Research Committee, Babol University of Medical Sciences, Babol, Iran, babol, Iran, [2]Cellular and Molecular Biology Research Institute, Faculty of Medicine, Babol University of Medical Sciences, Babol, Iran, babol, Iran, [3]Cellular and Molecular Biology Research Center, Health Research Center, Babol University of Medical Sciences, Babol, Iran, babol, Iran

P32.90 **Long-term therapeutic efficacy of intravenous AAV-mediated hamartin replacement in mouse model of tuberous sclerosis type 1**

PIKE SEE CHEAH[1], SHILPA PRABHAKAR[1], XUAN ZHANG[1], MAX ZINTER[1], MARIA GIANATASIO[2], RODERICK BRONSON[3], DAVID KWIATKOWSKI[4], ANAT STEMMER-RACHAMIMOV[5], CASEY MAGUIRE[1], MIGUEL SENA-ESTEVES[6], BAKHOS TANNOUS[6], XANDRA BREAKEFIELD*[1]
[1]Molecular Neurogenetics Unit, Department of Neurology and Center for Molecular Imaging Research, Department of Radiology, Massachusetts General Hospital, and Neurodiscovery Center, Harvard Medical School, Boston, MA USA, Boston, USA, [2]Department of Pathology, Massachusetts General Hospital, Boston, MA USA, Boston, USA, [3]Rodent Histopathology Core Facility, Harvard Medical School, Boston, MA USA, Boston, USA, [4]Brigham and Women's Hospital, Harvard Medical School, Boston, MA USA, Boston, USA, [5]epartment of Pathology, Massachusetts General Hospital, Boston, MA USA, Boston, USA, [6]Department of Neurology, Horae Gene Therapy Center, University of Massachusetts Medical School, Worcester, MA USA, Boston, USA

P32.91 **Investigating the Brain Network consistently impaired in acquired pedophilia**

CRISTINA SCARPAZZA*[1], STEFANO FERRACUTI[2], PIETRO PIETRINI[3], GIUSEPPE SARTORI[4]
[1]university of padova, Padova, Italy, [2]University of Rome, Rome, Italy, [3]IMT LUcca, Lucca, Italy, [4]University of Padova, Padova, Italy

P32.92 **GABAergic entorhinal cortex control of hippocampal function in stress-related disorder: cellular and circuitry mechanisms**

SANGHEE YUN[1], FIONYA TRAN[1], IVAN SOLER[2], RYAN REYNOLDS[1], MAIKO SUAREZ[1], AMELIA EISCH*[1]
[1]The Children's Hospital of Philadelphia Research Institute, Philadelphia, USA, [2]University of Pennsylvania, Philadelphia, USA

P32.93 **Western diet impairs energy homeostasis in the CNS, drives astrogliosis, and limits recovery of function after experimental spinal cord injury**

HA NEUI KIM[1], HYESOOK YOON[1], MONICA LANGLEY[1], LAUREL KLEPPE[1], ALEKSEY MATVEYENKO[2], ISOBEL SCARISBRICK*[1]
[1]Department of Physical Medicine and Rehabilitation, Mayo Clinic, Rochester MN, USA, [2]Department of Physiology and Biomedical Engineering, Mayo Clinic, Rochester MN, USA

P32.94 **Epstein-Barr virus infection is a predisposing factor in multiple sclerosis: hypothesis based on immunology and epidemiology**

DAVID LÓPEZ VALENCIA*[1], ANGELA PATRICIA MEDINA ORTEGA[2], DIEGO FERNANDO HOYOS SAMBONÍ[3], TOMÁS ZAMORA BASTIDAS[4], LUIS REINEL VÁSQUEZ ARTEAGA[5], CAROLINA SALGUERO[6]
[1]Research Center on Microbiology and Parasitology (CEMPA), University of Cauca, From Lab to the Field Corporation (DLC), Popayán, Colombia, [2]Research Center on Microbiology and Parasitology (CEMPA), From Lab to the Field Corporation (DLC), Popayán, Colombia, [3]San Vicente de Paul Hospital, Mistrató, Risaralda, Colombia, [4]San José University Hospital, Research Center on Microbiology and Parasitology (CEMPA), University of Cauca, Popayán, Colombia, [5]Research Center on Microbiology and Parasitology (CEMPA), University of Cauca, Popayán, Colombia, [6]From Lab to the Field Corporation (DLC), Bogotá, Colombia

P32.95 **The Alzheimer Risk Factor CD2AP regulates ApoER2 Homestasis and Signaling in Brain Vasculature**

MINH DANG NGUYEN*[1], MILENE VANDAL[1], COLIN GUNN[1], PHILIPPE BOURASSA[2], STEVEN SEUNGJAE SHIN[1], CAMILLE BELZIL[1], YULAN JIANG[1], CYNTIA TREMBLAY[2], DAVID BENNETT[3], GRANT GORDON[1], FREDERIC CALON[2]
[1]University of Calgary, Hotchkiss Brain Institute, Calgary, Canada, [2]Laval University, Quebec, Canada, [3]Rush Alzheimer's disease Center, Rush University Medical Center, Chicago, USA

P32.96 **Onchocerciasis-associated epilepsy in the Democratic Republic of Congo: clinical description and relationship with microfilarial density**

JOSEPH NELSON SIEWE FODJO*[1], MICHEL MANDRO[2], DEBY MUKENDI[3], FLORIBERT TEPAGE[4], SONIA MENON[1], GERMAIN ABHAFULE[5], DEOGRATIAS ROSSY[6], AN HOTTERBEEKX[1], ROBERT COLEBUNDERS[1]
[1]Global Health Institute, University of Antwerp, Antwerp, Belgium, [2]Ministry of Health, Ituri, Bunia, Congo, Dem. Rep., [3]Mont Amba Neuropsychopathologic Centre, University of Kinshasa, Kinshasa, Congo, Dem. Rep., [4]Ministry of Health, Bas-Uélé, Buta, Congo, Dem. Rep., [5]Centre de Recherche en Maladies Tropicales de l'Ituri, Rethy, Congo, Dem. Rep., [6]National Onchocerciasis Control Program, Ituri, Bunia, Congo, Dem. Rep.

P32.97 ***Ptchd1*** **exon3 truncating mutations recapitulate more clinically relevant autistic-like traits in mice**

SANG-YOON KO[1], JONATHAN EPP[2], KIRTI MITTAL[3], TAIMOOR SHEIKH[3], VIOLET HA[2], BRYAN DEGAGNE[2], ANNA MIKHAILOV[4], LEON FRENCH[5], SHEENA A. JOSSELYN[1], JOHN B. VINCENT[6], PAUL FRANKLAND*[1]
[1]Neurosciences and Mental Health, The Hospital for Sick Children/ Dept. Physiology, University of Toronto, Toronto, Canada, [2]Neurosciences and Mental Health, The Hospital for Sick Children, Toronto, Canada, [3]University of Toronto, Molecular Neuropsychiatry and Development Lab, The Campbell Family Brain Research Institute, The Centre for Addiction & Mental Health, Canada, [4]Molecular Neuropsychiatry and Development Lab, The Campbell Family Brain Research Institute, The Centre for Addiction & Mental Health, Toronto, Canada, [5]Computational Neurobiology Lab, Campbell Family Mental Health Research Institute, Centre for Addiction & Mental Health, Toronto, Canada, [6]Molecular Neuropsychiatry and Development Lab, The Campbell Family Brain Research Institute, The Centre for Addiction & Mental Health/ Dept. Psychiatry, University of Toronto, Toronto, Canada

P32.98 **Neurodevelopmental deficits in human isogenic Fragile X Syndrome neurons**

KAGISTIA HANA UTAMI[1], NIELS H SKOTTE[2], ANA R COLACO[2], NUR AMIRAH BINTE MOHAMMAD YUSOF[1], BERNICE SIM[1], XIN YI YEO[3], HAN-GYU BAE[3], MARTA GARCIA-MIRALLES[1], CAROLA IZABELA RADULESCU[1], QIYU CHEN[1], GEORGIA CHALDAIOPOULOU[1], MAHMOUD A. POULADI*[1]
[1]TLGM A*STAR, Singapore, Singapore, [2]Novo Nordisk Foundation Center for Protein Research, Copenhagen, Denmark, [3]Singapore Bioimaging Consortium (SBIC), A*STAR, Singapore, Singapore

P32.99 **Taurine promotes axonal regeneration after a complete spinal cord injury in lampreys**

ANTÓN BARREIRO-IGLESIAS*[1], DANIEL SOBRIDO-CAMEÁN[1], BLANCA FERNÁNDEZ-LÓPEZ[2], NATIVIDAD PEREIRO[3], ANUNCIACIÓN LAFUENTE[3], MARÍA CELINA RODICIO[1]
[1]University of Santiago de Compostela, Santiago de Compostela, Spain, [2]University of Helsinki, Helsinki, Finland, [3]University of Vigo, Vigo, Spain

P32.100 **Abeta oligomers mediate proteasome inhibition especially at synapse**

FELIPE CAMPOS RIBEIRO[1], DANIELLE COZACHENCO FERREIRA[1], JULIANA TIEMI SATO FORTUNA[1], GUILHERME BRAGA DE FREITAS[1], FERNANDA GUARINO DE FELICE[1], SERGIO TEIXEIRA FERREIRA*[1]
[1]Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

P32.101 **Comparison of allelic mutations in the *Cacna1c*, L-type calcium channel subunit, a risk factor in neuropsychiatric diseases**

PETRINA LAU*[1], GARETH BANKS[1], ELEANOR HOBBS[1], PAT NOLAN[1], VALTER TUCCI[2], GLENDA LASSI[2]
[1]MRC Harwell Institute, Oxfordshire, UK, [2]Neurobehavioural Genetics Group NBT - IIT, Genova, Italy

P32.103 **Mixed herbal formula (DA-9805) protects dopaminergic cells from 6-hydroxydopamine-induced cytotoxicity by activating ERK/Nrf2 signaling cascades *in vitro* and *in vivo***

YOUNGJI KWON[1], HYEYOON EO[1], EUGENE HUH[1], YEOMOON SIM[1], JIN GYU CHOI[1], JIN SEOK JEONG[2], SEON-PYO HONG[2], YOUNGMI KIM PAK[2], MYUNG SOOK OH*[1]
[1]MKyung Hee University, Seoul, Korea, Republic of, [2]R&D Center of Dong-A ST, Seoul, Korea, Republic of

P32.104 **NKCC1 and KCC2, Chloride co-transporters, a potential way out in the pathophysiology of *Syngap1*$^{+/-}$ mice**

JAMES CLEMENT*[1, 2], VIJAYA VERMA[3], THOMAS BEHNISCH[4], RAVI MUDDASHETTY[5]
[1]Jawaharlal Nehru Centre for Adavanced Scientific Research, Bengaluru, India, [2]Assistant Professor, Jawaharlal Nehru Centre for Adavanced Scientific Research, Bengaluru, India, [3]Graduate Student, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru, India, [4]Professor, Institutes of Brain Sciences, Fudan University, Shanghai, India, [5]Assistant Professor, Institute for Stem Cell Biology and Regenerative Medicine, Bengaluru, India

P32.105 **The effect of p25 in dopaminergic neuronal cell death.**

HEYYOUNG KIM[1], WON-SEOK CHOI*[1]
[1]chonnam university, gwangju, Korea, Republic of

Glia, glia–neuron interactions

P33.01 **Bidirectional transcriptome analysis of activated microglia and rat bone marrow-derived mesenchymal stem cells in an in vitro coculture system**

DA YEON LEE[1], TAE HWAN SHIN[1], SHAHERIN BASITH[1], BALACHANDRAN MANAVALAN[1], GWANG LEE*[1]
[1]Department of Physiology and Department of Biomedical Sciences, Ajou University School of Medicine, Suwon, Korea, Republic of

P33.02 **Epigenetic modulation of microglia modulates the proinflammatory cytokines expression *in vitro***

GABRIELA CRUZ-CARRILLO[1], LARISA JAJAIRA MONTALVO-MARTINEZ[1], LIZETH FUENTES MERA[1], ALBERTO CAMACHO*[1]
[1]Autonomous University of Nuevo Leon, Monterrey, Mexico

P33.03 **TonEBP mediates LPS-induced memory loss**

GYUWON JEONG[1], HYUG MOO KWON*[1]
[1]UNIST, Ulsan, Korea, Republic of

P33.04 **Vaccinia-related kinase 2 is critical for microglia-mediated synapse elimination during neurodevelopment**

EUNJI OH[1], KYONG-TAI KIM*[1]
[1]POSTECH, Pohang, Korea, Korea, Republic of

P33.05 **Glial neuromodulation promote the post-stroke recovery**

JONGWOOK CHO[1], SUNWOO LEE[1], RA GYUNG KIM[1], JI-YOUNG PARK[1], SOYEON JUNG[1], HYOUNG-IHL KIM*[1]
[1]Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

P33.06 **Phosphatidylserine scrambling is required for developmental synaptic pruning**

URTE NENISKYTE*[1], AUGUSTE VADISIUTE[2], LUDOVICO COLETTA[3], KRISTINA JEVDOKIMENKO[2], DAIVA DABKEVICIENE[2], ALESSANDRO GOZZI[3], DAVIDE RAGOZZINO[4], CORNELIUS GROSS[5]
[1]Vilnius University, Vilnius, Lithuania, [2]Life Sciences Center, Vilnius University, Vilnius, Lithuania, [3]Istituto Italiano di Tecnologia, Genova, Italy, [4]Department of Physiology and Pharmacology, La Sapienza University of Rome, Rome, Italy, [5]Epigenetics and Neurobiology Unit, European Molecular Biology Laboratory, Rome, Italy

P33.07 **Autophagy mediates astrogenesis in adult hippocampal neural stem cells**

SEOL-HWA JEONG[1], SHINWON HA[2], KYUNGRIM YI[2], JAMIE JEONG-MIN CHU[1], SEOLSONG KIM[1], EUN-KYOUNG KIM[1], SEONG-WOON YU*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]DGIST, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Korea, Republic of

P33.08 **Peripheral blood mononuclear cells mediators drive astrocyte energetic failure in acute sepsis**

BRUNA BELLAVER*[1], ANDRÉIA SILVA DA ROCHA[1], DÉBORA GUERINI SOUZA[1], DOUGLAS TEIXEIRA LEFFA[1], GUILHERME SCHU[1], PÂMELA LUKASEWICZ FERREIRA[1], SAMUEL GREGGIO[2], GIANINA T. VENTURINI[2], JADERSON COSTA DA COSTA[2], EDUARDO R. ZIMMER[1]
[1]Federal University of Rio Grande do Sul, Porto Alegre, Brazil, [2]Preclinical Imaging Center, Brain Institute (Bralns) of Rio Grande do Sul, Porto Alegre, Brazil

P33.09 **Effect of *Hevea brasiliensis* extract on lipopolysaccharide-induced production of tumor necrosis factor alpha and interleukin 6 in C6 glioma cells**

JITRAPA PINYOMAHAKUL[1], CHUTIKORN NOPPARAT[1], RAPEPUN WITITSUWAANNAKUL[2], PIYARAT GOVITRAPONG[1], SUJIRA MUKDA*[1]
[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol Univesity, Nakhon Pathom, Thailand, [2]Department of Biochemistry, Faculty of Science, Prince of Songkla University, Songkla, Thailand

P33.10 **Nano hesperetin: Ameliorate glial activation, modulate conduction of visual signal in focal demyelination-model of multiple sclerosis**

SAEIDEH BARADARAN[1], MARYAM GHASEMI KASMAN[2], AKBAR HAJIZADEH MOGHADDAM*[1]
[1]Department of Biology, Faculty of Basic Sciences, University of Mazandaran, Babolsar, Iran, [2]Cellular and Molecular Biology Research Center, Babol University of Medical Sciences, Babol, Iran

P33.11 **Neurodegenerative astrogliosis mediated by oxidative stress in Alzheimer's diseased human model**

YOU JUNG KANG[1], HEEJUNG CHUN[2], CHANGJOON J. LEE[2], HANSANG CHO*[1]
[1]University of North Carolina, Charlotte, Charlotte, USA, [2]Cognitive Glioscience Group, Center for Cognition and Sociality, Institute of Basic Science, Seoul, Korea, Republic of

P33.12 **Aging and systemic inflammation increase serine racemase expression in CA3 hippocampal neurons**

SEBASTIAN BELTRAN-CASTILLO*[1], ROMMY VON BERNHARDI[2]
[1]Pontificia Universidad Catolica, Santiago, Chile, [2]Pontificia Universidad Católica de Chile, Santiago, Chile

P33.13 **The effects of acute stress over microglial dependent neuroinflammations in hippocampal structures, and its effects on emotional and spatial memory consolidation**

MARIA ALEJANDRA TANGARIFE*[1], LUIS FERNANDO CÁRDENAS[1], JESÚS LANDEIRA-FERNANDEZ[2], SILVIA MASIONNETTE[2]
[1]Universidad de los Andes, Bogotá D.C., Colombia, [2]Pontificia Universidade Católica do Rio de Janeiro, Rio de Janeiro, Brazil

P33.14 **Astrocytic modulation of synaptic transmission in NTS neurons of rats submitted to sustained hypoxia**

BENEDITO MACHADO*[1], LENI BONAGAMBA[1], DANIELA ACCORSI-MENDONCA[1]
[1]University of São Paulo, Ribeirão Preto, Brazil

P33.15 **Activity of glial cells in the spinal cord and the hippocampus after sciatic nerve injury in rats**

EVGENIIA EGOROVA*[1], ANNA STARINETS[1], IGOR MANZHULO[2]
[1]Far Eastern Federal University, Vladivostok, Russia, [2]A.V. Zhirmunsky National Scientific Center of Marine Biology, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia

P33.16 **Astrocytic insulin-like growth factor-1 protects neurons against excitotoxicity**

PING ZHENG*[1], BIN HE[1], WUSONG TONG[1]
[1]Shanghai Pudong New area People's Hospital, Shanghai, China

P33.17 **Cadmium triggers CCL2 production in astrocytes through the activation of MAPK and Akt pathways**

PORNPUN VIVITHANAPORN*[1], THITIMA KASEMSUK[2], SUTTINEE PHUAGKHAOPONG[3], RUEDEEMARS YUBOLPHAN[3]
[1]Mahidol University, Faculty of Science, Bangkok, Thailand, [2]Burapha University, Faculty of Pharmaceutical Sciences, Division of Pharmacology, Chonburi, Thailand, [3]Faculty of Science, Mahidol University, Department of Pharmacology, Bangkok, Thailand

P33.18 **Novel transcriptional effects of the neurotransmitter translocation process through the glial high-affinity Na^+-dependent glutamate/aspartate transporter (GLAST)**

ESTHER LOPEZ-BAYGHEN*[1], DINORAH HERNANDEZ-MELCHOR[1], LETICIA RAMIREZ-MARTINEZ[1], ANA CECILIA PALAFOX-GOMEZ[1], LUIS CID[1], ARTURO ORTEGA[1]
[1]Cinvestav-IPN, Mexico City, Mexico

P33.19 **Astrocyte-like glia promote synaptogenesis through neuronal CDC-42 and IQGAP/PES-7 in *C. elegans***

ZHIYONG SHAO*[1], XIAOHUA DONG[1], SHUHAN JIN[1]
[1]Department of Neurosurgery, State Key Laboratory of Medical Neurobiology and MOE Frontiers Center for Brain Science, Institutes of Brain Science, Zhongshan Hospital, Fudan University, Shanghai, 200032, China, Shanghai, China

P33.20 **The potential role of NG2 expressing cells in rat brain among different pathophysiological conditions**

ZAW MYO HEIN*[1], NATCHAREE KRAIWATTANAPIROM[1], BANTHIT CHETSAWANG[1]
[1]Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Bangkok, Thailand

P33.21 **Application of the Adenosine A2A receptor antagonist attenuates spatial memory deficit and extent of demyelination areas in lyolecithin-induced demyelination model**

ATEFEH AKBARI*[1, 2]
[1]Babol University of Medical Science, Ghaemshahr, Iran, [2]Babol University of Medical Science, Babol, Iran

P33.22 **Microglia as a potential link between pathological myelination and stereotypic behavior after exposure to maternal high-fat diet**

MAUDE BORDELEAU[1], GIAMAL LUHESHI[2], MARIE-ÈVE TREMBLAY*[1]
[1]CRCHU de Québec - Université Laval, Québec, Canada, [2]Douglas Mental Health University Institute, McGill University, Montréal, Canada

P33.23 **Inhibition of hedgehog signaling pathway alleviate neuroinflammation**

LONGTAI ZHENG[1], ZHONGQIANG CAO[1], XIN ZHAO[1], XUECHU ZHEN*[1]
[1]Jiangsu Key Laboratory of Neuropsychiatric Diseases and College of Pharmaceutical Sciences, Soochow University, Suzhou, China

P33.24 **Change in hypothalamic microglia dendrites by energy state**

TAEHWAN LEE[1], JAE GEUN KIM[2], BYUNG JU LEE*[1]
[1]Department of Biological Sciences, College of Natural Sciences, University of Ulsan, Ulsan 680-749, Korea, Republic of, [2]Division of Life Sciences, College of Life Sciences and Bioengineering, Incheon National University, Incheon 406-772, Korea, Republic of

Homeostatic and neuroendocrine systems

P34.01 **Tanycytic TSPO Inhibition Induces Lipophagy to Regulate Lipid Metabolism and Improve Energy Balance**

SEOLSONG KIM[1], NAYOUN KIM[1], SEOKJAE PARK[2], YOONJEONG JEON[2], JAEMEUN LEE[1], SEUNG-JUN YOO[3], JI-WON LEE[1], CHEIL MOON[3], SEONG-WOON YU[2], EUN-KYOUNG KIM*[2]

[1]Department of Brain and Cognitive Sciences, DGIST, Daegu, Korea, Republic of, [2]Department of Brain and Cognitive Sciences; Neurometabolomics Research Center, DGIST, Daegu, Korea, Republic of, [3]Department of Brain and Cognitive Sciences; Convergence Research Advanced Centre for Olfaction, DGIST, Daegu, Korea, Republic of

P34.02 **Maternal overfeeding primes ghrelin sensitivity in the hypothalamus leading to hyperphagia in the offspring**

ROGER MALDONADO RUIZ[1], MARCELA ÁRDENAS-TUEME[2], LARISA MONTALVO-MARTINEZ[1], ROMAN VIDAL-TAMAYO[3], LOURDES GARZA-OCAÑAS[4], DIANA RESÉNDEZ-PEREZ[2], ALBERTO CAMACHO[1], ALBERTO CAMACHO*[1]

[1]Universidad Autónoma de Nuevo León, College of Medicine, Department of Biochemistry, Monterrey, Mexico, [2]Universidad Autónoma de Nuevo León, Department of Cell Biology and Genetics, College of Biological Sciences, San Nicolas de los Garza, Mexico, [3]Universidad de Monterrey, Department of Basic Science, School of Health Sciences, San Pedro Garza, Mexico, [4]Universidad Autonoma de Nuevo Leon, Department of Pharmacology, College of Medicine, Dr. Eduardo Aguirre Pequeño SN, Monterrey Nuevo León, México., Monterrey, Mexico

P34.03 **Involvement of the ventral tegmental area in socially rewarding behavior in juvenile rats**

CHRISTINA J. REPPUCCI[1], REMCO BREDEWOLD[1], ASHLEY Q. CHAMBERS[1], CATHERINE L. WASHINGTON[1], ALEXA H. VEENEMA[1], CHRISTINA REPPUCCI*[1]

[1]Michigan State University, East Lansing, MI, USA

P34.04 **Leptin is a key regulator of glucose homeostasis in obesity**

STEPHANIE SIMONDS*[1], JACK PRYOR[2], MICHAEL COWLEY[3]

[1]Monash University, Melbounre, Australia, [2]Monash University, Melbourne, Australia, [3]Monash University, Melbourne, Australia

P34.05 **Effect of insulin deficiency on the morphine induced conditioning in diabetic rats**

AMIR-HOSSEIN BAYAT[1], REZVAN HASSANPOUR[3], ATIEH CHIZARI[4], ZAHRA MOUSAVI[4], ABBAS HAGHPARAST*[2]

[1]Saveh University of Medical Sciences, Saveh, Iran, [2]Neuroscience Research Center, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [3]Department of Clinical Pharmacy, Faculty of pharmacy, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [4]Islamic Azad University of Pharmaceutical Science, Tehran, Iran

P34.06 **Stress disrupts gamma oscillations in the rat nucleus accumbens during spontaneous social interaction**

ALEXIES DAGNINO-SUBIABRE*[1], MARCIA ARRIAGADA-SOLIMANO[1], CATHERINE PÉREZ-VALENZUELA[1], ANN ITURRA-MENA[1]

[1]Laboratory of Stress Neurobiology, Center for Integrative Neurobiology and Pathophysiology, Institute of Physiology, Faculty of Sciences, Universidad de Valparaíso, Valparaíso, Chile

P34.07 **Effects of an orexin receptor antagonist on hamster circadian activity rhythms**

ROBERT GANNON*[1]

[1]Valdosta State University, Valdosta, Georgia, USA

P34.08 **A neural circuit mechanism for monitoring and controlling ingestion**

DONG-YOON KIM[1], MINYOO KIM[1], GYURYANG HEO[1], HYUNSEO KIM[1], SIEUN JUNG[1], MYUNGMO AN[1], JONG HWI PARK[1], HAN-EOL PARK[1], MYUNGSUN LEE[1], SUNG-YON KIM*[1]

[1]Seoul National University, Seoul, Korea, Republic of

P34.09 **Membrane estrogen receptor stimulation of corticotropin-releasing hormone expression in a nerve cell line**

ZHENG FANG[1], YANG-JIAN QI[1], ZHONG REN[1], JUAN-LI WU[1], YANG HE[1], LEI GUO[1], HONG TAN[1], MAN-LI HUANG[2], YI SHEN[1], AI-MIN BAO*[1]

[1]Department of Neurobiology, and Department of Neurology of the Second Affiliated Hospital; Institute of neuroscience, NHC and CAMS key laboratory of Medical Neurobiology; Zhejiang Province Key Laboratory of Mental Disorder's Management; Zhejiang University School of Medicine, Hangzhou, China, [2]Department of Mental Health, Zhejiang Province Key Laboratory of Mental Disorder's Management; National Clinical Research Center for Mental Health Disorders, First Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China

P34.10 **sex-specific changes of steroid hormone metabolism in the cerebral cortex of mice after acute valproate exposure**

SOON AE KIM*[1], SUNG-HEE CHO[2], SUNG-YOUN CHANG[3], JUNG HOON CHAI[4]

[1]Department of Pharmacology, School of Medicine, Eulji University, Daejoen, Korea, Republic of, [2]Chemical Analysis Center, Korea Research Institute of Chemical Technology (KRICT), Daejeon, Korea, Republic of, [3]Innovative Therapeutics Research Center, Korea Research Institute of Chemical Technology (KRICT), Daejeon, Korea, Republic of, [4]Department of Pharmacology, School of Medicine, Eulji University, Daejeon, Korea, Republic of

P34.11 **Differential epigenetic programming of hippocampal steroidogenesis by cognitive stimulation and voluntary exercise**

MARÍA F. ROSSETTI*[1], ROCIO SCHUMACHER[1], GUILLERMINA CANESINI[1], GISELA P. LAZZARINO[1], JORGELINA VARAYOUD[1], JORGE G. RAMOS[1]

[1]Institute of Health and Environment of Litoral, CONICET- UNL., Santa Fe, Argentina

P34.12 **CRH induced microglia activation via CRHR1 under hypoxia**

YANHUA BI[1], FANGYUAN XIA[3], TINGTING SONG[4], JIZENG DU[3], XUEQUN CHEN*[2]

[1]Zhejiang University School of Medicine ; The Children's Hospital School of Medicine, Zhejiang University, Hangzhou, China, [2]Division of Neurobiology and Physiology, Department of Basic Medical Sciences, School of Medicine, Zhejiang University, China; Key Laboratory of Medical Neurobiology of Zhejiang Province, Insititute of Neuroscience, School of Medicine, Zhejiang University, Hangzhou, Hangzhou, China, [3]Division of Neurobiology and Physiology, Department of Basic Medical Sciences, School of Medicine, Zhejiang University, Hangzhou , China, [4]College of Life Sciences, Zhejiang University, Hangzhou, Hangzhou , China

P34.13 **A psychological stressor conveyed by appetite-linked neurons**

EUN JEONG LEE[1], NARESH HANCHATE[1], KUNIO KONDOH[1], AI PHUONG TONG[1], DONGHUI KWANG[1], ANDREW SPRAY[1], XIAOLAN YE[1], LINDA BUCK*[1]

[1]Fred Hutchinson Cancer Research Center, Seattle, USA

New technology – Neurotool

P35.01 **Template matching-based event-related ROI detection method for calcium imaging**
KYUNGSOO KIM[1], SEONGTAK KANG[1], JIHO PARK[1], YOUNG-EUN HAN[2], JONG-CHEOL RAH[2], JI-WOONG CHOI*[1]
[1]DGIST, Daegu, Korea, Republic of, [2]KBRI, Daegu, Korea, Republic of

P35.02 **Epidural sine waveform electrical brain stimulation have major effect on parvalbumin positive neurons**
JUNSOO KIM[1], SEUNGJUN RYU[1], KYUNGTAI KIM[1], HYUN SEO[1], RAGYUNG KIM[1], JONGWOOK CHO[1], JIYOUNG PARK[1], SUNWOO LEE[1], HANLIM SONG[1], HYOUNG-IHL KIM*[1]
[1]GIST, Gwangju, Korea, Republic of

P35.03 **Improvement of immunostaining of thick sample using Immunostainer**
MEEYUL HWANG*[1], GIL HYUN KIM[1]
[1]Binaree Inc., Deagu, Korea, Republic of

P35.04 **Advantages of Binaree tissue clearing method**
EUN SHIL LEE*[1], EUNJOO LEE[1]
[1]Binaree, Inc., Daegu, Korea, Republic of

P35.05 **Development of OptoDRD2 to precisely control the function of DRD2 by light**
HYUNBIN KIM[1], GEUNHONG PARK[1], JEONGJIN KIM[1], JIHYE SEONG*[1]
[1]KIST, Seoul, Korea, Republic of

P35.06 **Interactive automated tool for reliable seizure detection in rat and mouse models of epilepsy**
ARMEN SARGSYAN*[1], PABLO CASILLAS-ESPINOSA[2], WAYNE FRANKEL[3], DMITRI MELKONIAN[1], TERENCE O'BRIEN[2]
[1]Kaoskey Pty Ltd, Sydney, Australia, [2]The Department of Neuroscience, Central Clinical School, Monash University, Melbourne, Australia, [3]Department of Genetics and Development, Institute for Genomic Medicine, Columbia University Medical Center, New York City, USA

P35.07 **9.4T MRI images of the mouse basal ganglia: Segmentation volumes, T2-intensities, fractional anisotropy, and apparent diffusion coefficient values**
SANG-JIN IM[1], HYEON-MAN BAEK*[2]
[1]Gachon Advanced Institute for Health Sciences & Technology, Inchon, Korea, Republic of, [2]Gachon University, Inchon, Korea, Republic of

P35.08 **Pediatric brain extraction from T2-weighted MR images using 3D dual frame U-Net and human connectome database**
DONGCHAN KIM[1], JONG-HEE CHAE[2], SUNKYUE KIM[3], YEJI HAN*[1]
[1]Gachon University, Incheon, Korea, Republic of, [2]Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Neuroscience Research Institute, Gachon University, Incheon, Korea, Republic of

P35.09 **Rapid and uniform staining of thick biological tissues with antibody using electro-magnetic focused immuno-histo chemistry**
MYEONGSU NA[1], KITAE KIM[1], SUNGHOE CHANG*[1]
[1]Seoul National University College of Medicine, Seoul, Korea, Republic of

P35.10 **Miniaturized ultrasound systems for modulation of sleep of freely moving mice**
YEHHYUN JO[1], SANG-MOK LEE[1], SEONGYEON KIM[1], HYUNGGUG KIM[1], HYUNJOO LEE*[1]
[1]KAIST, Daejeon, Korea, Republic of

P35.11 **Development of super precise neural recording/stimulation system for functional measurement of brain-nervous system**
HEON-JIN CHOI*[1], YOUNGCHEOL CHAE[1], DOSIK HWANG[1], YEOWOOL HUH[2], JUYOUNG KWON[1], JUKWAN NA[1], HYO-JUNG LEE[1]
[1]Yonsei University, Seoul, Korea, Republic of, [2]Catholic Kwandong University, Seoul, Korea, Republic of

P35.12 **Fiber_distance based unsupervised clustering method of MR tractography data**
SANG-HAN CHOI[1], YOUNG-BO KIM[2], ZANG-HEE CHO*[1]
[1]Suwon university, Hwaseung, Kyounggi, Korea, Republic of, [2]Gachon university, Namdonggu - Inchon, Korea, Republic of

P35.13 **Probabilistic tractography between STN, SN, GPI and GPE using Lead-DBS and FSL**
JAE-HYUK SHIM[1], HYEON-MAN BAEK*[1]
[1]Gachon University, Incheon, Korea, Republic of

P35.14 **AR-based visualization tool for visualizing the high resolution 3D structure of brain cells**
KIPOM KIM*[1], GA-YOUNG LEE[1], KEA JOO LEE[1]
[1]Korea Brain Research Institute, Deagu, Korea, Republic of

P35.15 **Scan time reduction of neuro FDG PET using deep learning**
SANGWON LEE[1], JAEWON KIM[2], SUNGSIK KANG[2], KONSU LEE[2], JIN HO JUNG[2], GARAM KIM[2], HYUN KEONG LIM[2], YONG CHOI[2], MIJIN YUN*[1]
[1]Department of Nuclear Medicine, Yonsei University College of medicine, Seoul, Korea, Republic of, [2]Molecular Imaging Research & Education Laboratory, Department of Electronic Engineering, Sogang University, Seoul, Korea, Republic of

P35.16 **Improved dynamic monitoring of transcriptional activity during longitudinal analysis in the mouse brain**
YOUNGMIN HAN[1], MINSUN KIM[1], SONG HER*[1]
[1]Korea Basic Science Institute, seoul, Korea, Republic of

P35.17 **Optimization of transcranial temporal interference stimulation for targeted modulation of deep brain structures**
SANGJUN LEE[1], CHANG-HWAN IM*[1]
[1]Hanyang University, Seoul, Korea, Republic of

P35.18 **Introducing the HPA brain atlas, a brain-centric sub atlas with regional expression maps of the human, mouse and pig brain**
EVELINA SJÖSTEDT*[1], WEN ZHONG[2], NICHOLAS MITSIOS[1], PER OKSVOLD[2], FERIA HIKMET NORRADIN[3], CECILIA LINDSKOG[3], FREDRIK PONTÉN[3], LINN FAGERBERG[2], TOMAS HÖKFELT[1], YONGLUN LUO[4], MATHIAS ULHÉN[2], JAN MULDER[1]
[1]Department of Neuroscience, Karolinska Institute, Stockholm, Sweden, [2]Science for Life Laboratory, KTH Royal Institute of Technology, Stockholm, Sweden, [3]Department of Immunology, Genetics and Pathology, Uppsala University, Uppsala, Sweden, [4]Center for Regenerative Medicine, BGI, Shenzhen, China

P35.19 **Topography and timing of activity in right inferior frontal cortex and anterior insula for stopping movement**
AMIR HOSSEIN ASHNA*[1], FAEZEH AGHAYAN GOL KASHANI[2], ZAHRA MAJDI[3]
[1]Refah University, Tehran, Iran, [2]Tehran University, Tehran, Iran, [3]kharazmi University, Tehran, Iran

Physiology: neuronal excitability and synapse function

P36.01 **Cortical synaptic plasticity and remote memory require neuronal CCCTC-binding factor (CTCF), a central regulator of 3D chromatin architecture**

JIHAE OH[1], CHIWOO LEE[1], HYUNSU JUNG[1], BONG-KIUN KAANG*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P36.02 **Neuroepigenetic control of gamma oscillations in the pedunculopontine nucleus: From HDACs to F-actin**

FRANCISCO URBANO[1], VERONICA BISAGNO[3], EDGAR GARCIA-RILL*[2]
[1]IFIBYNE-CONICET-University of Buenos Aires, Ciudad de Buenos Aires, Argentina, [2]Center for Translational Neuroscience-University of Arkansas for Medical Sciences, Littel Rock, USA, [3]ININFA-CONICET-University of Buenos Aires, Ciudad de Buenos Aires, Argentina

P36.03 **Quantitative profiling of LAR-RPTP alternative splicing variants in mice**

TAEK HAN YOON[1], JU SEONG LEE[2], KYUNG AH HAN[1], JI WON UM[1], JONG KYOUNG KIM[2], JAEWON KO*[1]
[1]Department of Brain and Cognitive Sciences, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]Department of New Biology, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P36.04 **LRRTM3 deletion causes excitatory synaptic dysfunctions and abnormal social novelty and contextual discriminative behaviors**

SOO-JEONG KIM[1], JUNGSOO SHIN[1], JINHU KIM[1], TAEHUN JEONG[1], TAEK HAN YOON[1], JI WON UM[1], JAEWON KO*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P36.05 **Direct interaction of MDGA1 with amyloid-β precursor protein**

SUNGWON BAE[1], JONGMIN EUN[1], SEUNGJOON KIM[1], JINHU KIM[1], JI WON UM[1], JAEWON KO*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P36.06 **Calsyntenin-3 regulates excitatory synapse formation via direct binding to neurexins**

HYEONHO KIM[1], DONGWOOK KIM[1], JINHU KIM[1], HEEYOON LEE[2], SE-YOUNG CHOI[2], JAEWON KO[1], JI WON UM*[1]
[1]Daegu Gyeongbuk Institute of Science & Technology (DGIST), Daegu, Korea, Republic of, [2]Department of Physiology, Dental Research Institute, Seoul National University School of Dentistry, Seoul, Korea, Republic of

P36.07 **Slitrk2 promotes excitatory synapse development by its C-terminal PDZ domain-binding sequence**

JINHU KIM[1], KYUNG AH HAN[1], DONGSEOK LIM[1], JAEWON KO[1], JI WON UM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P36.08 **Functional crosstalk between Slitrk3 and neuroligin-2 in medial prefrontal cortex of mice**

DONGWOOK KIM[1], TAEKHAN YOON[1], JINHU KIM[1], JIWON UM[1], JAEWON KO*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P36.09 **Control of activity-dependent GABAergic synaptic development and depressive-like behaviors by IQSEC3-ARF complex**

SEUNGJOON KIM[1], DONGSEOK PARK[1], DONGSOO LEE[2], SOOKYUNG HONG[3], ESTHER YANG[4], JONGCHEOL JEON[3], TAKUMA MORI[5], HYEONHO KIM[1], SOO-JEONG KIM[1], KATSUHIKO TABUCHI[5], JAEHOON KIM[3], HYUN KIM[4], EUNJI CHEONG[2], JI WON UM[1], JAEWON KO*[1]
[1]Department of Brain and Cognitive Sciences, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]Department of Biotechnology, College of Life Science and Biotechnology, Yonsei University, Seoul, Korea, Republic of, [3]Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [4]Department of Anatomy, Korea University College of Medicine, Brain Korea 21 plus, Seoul, Korea, Republic of, [5]Department of Molecular and Cellular Physiology, Shinshu University School of Medicine, Matsumoto, Japan

P36.10 **Deletion of IQSEC3 produces manic-like behavior in mice**

HYEJI JUNG[1], SEUNGJOON KIM[1], DONGSEOK PARK[1], JINHU KIM[1], JAEWON KO[1], JI WON UM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of

P36.11 **IQSEC3 maintains hippocampal network activity by interacting with gephyrin and ARF6**

DONGSEOK PARK[1], SEUNGJOON KIM[1], HYEONHO KIM[1], JOO HYEON HONG[2], HYEJI JUNG[1], DONGWOOK KIM[1], EUNJI CHEONG[2], JAEWON KO[1], JI WON UM*[1]
[1]Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea, Republic of, [2]Yonsei University, Seoul, Korea, Republic of

P36.12 **Acute social defeat stress-induced synaptic depression in the ventral subciulum to peri-PVN pathway**

SOONJE LEE[1], CHANGSU WOO[1], CHANGWOO LEE[1], KI SOON SHIN*[1]
[1]Kyung Hee University, Seoul, Korea, Republic of

P36.13 **Mitochondrial fission regulates presynaptic function and axon branching by limiting axonal mitochondrial size**

SEOK-KYU KWON[1], TOMMY LEWIS[3], ANNIE LEE[2], REUBEN SHAW[4], FRANCK POLLEUX*[2]
[1]KIST, Seoul, Korea, Republic of, [2]Columbia University, New York, USA, [3]Oklahoma Medical Research Foundation, Oklahoma City, USA, [4]Salk Institute, La Jolla, USA

P36.14 **High-order thalamus modulates top-down inputs from the primary motor cortex on apical tuft dendrites in somatosensory cortex**

YOUNG-EUN HAN[1], JOON HO CHOI[1], JONG-CHEOL RAH*[1]
[1]Korea Brain Research Institute, Daegu, Korea, Republic of

P36.16 **Epidural electrical brain stimulation have major effect on parvalbumin positive neurons**

SEUNGJUN RYU[1], KYUNGTAI KIM[2], HYUN SEO[3], RA GYUNG KIM[1], JONGWOOK CHO[1], JIYOUNG PARK[1], SUNWOO LEE[1], HANLIM SONG[1], HYOUNG-IHL KIM*[1]
[1]Department of Biomedical and Science and Engineering (BMSE), Institute of Integrated Technology (IIT), Gwangju Institute of Science and Technology (GIST), Gwangju, Korea, Republic of, [2]Korea Institute of Toxicology, Jeongup, Korea, Republic of, [3]School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea, Republic of

P36.17 **Acetylcholinergic modulation of intrinsic neuronal firing in mouse frontal and parietal cortex**

YOON-SIL YANG[1], JOON HO CHOI[1], JONG-CHEOL RAH*[1]
[1]Korea Brain Research Institute, Deagu, Korea, Republic of

P36.18 **Opposite modulation of time course of ACh quantal release by norepinephrine in peripheral synapses of frog and mouse**

ANDREI TSENTSEVITSKY*[1], ELLYA BUKHARAEVA[1]
[1]Kazan Institute of Biochemistry and Biophysics, Federal Research Center "Kazan Scientific Center of RAS", Kazan, Russia

P36.19 **Age-dependent synaptic transmission alterations underlying depressive like behavior following an early life inflammatory challenge**

CARLOS GOMEZ*[1], QUENTIN PITTMAN[1]
[1]Hotchkiss Brain Institute, Department of Physiology and Pharmacology, University of Calgary, Calgary, Canada

P36.20 **Molecular mechanisms underlying functional recovery after spinal cord injury**

NADEZDA LUKACOVA*[1], KATARINA BIMBOVA[2], ANDREA STROPKOVSKA[2], ALEXANDRA KISUCKA[2], MARIA BACOVA[2], JAN GALIK[2]
[1]Institute of Neurobiology of Biomedical Research Center, Slovak Academy of Sciences, Kosice, Slovak Republic, [2]Institute of Neurobiology of Biomedical Research Center, Slovak Academy of Sciences, Kosice, Slovak Republic

P36.21 **Calcium-permeable AMPA receptors mediate the increased unitary conductance during LTP in the hippocampus**

POJEONG PARK[1], KWANG-HEE KO[1], MIN ZHUO[2], BONG-KIUN KAANG[1], GRAHAM COLLINGRIDGE*[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]University of Toronto, Toronto, Canada

P36.22 **N-glycosylation regulates the trafficking, surface mobility and function of GluN3A-containing NMDA receptors N-glycosylation regulates the trafficking, surface mobility and function of GluN3A-containing NMDA receptors**

MARTIN HORAK*[1], KRISTYNA SKRENKOVA[1], MARTIN ZAPOTOCKY[1], MARHARYTA KOLCHEVA[1], KATARINA HEMELIKOVA[1], MARTINA KANIAKOVA[1], SANGHYEON LEE[2], YOUNG HO SUH[2]
[1]Institute of Physiology of the Czech Academy of Sciences, Prague, Czech Republic, [2]Department of Biomedical Sciences, Neuroscience Research Institute, Seoul National University College of Medicine, Seoul, Korea, Republic of

P36.23 **Cortical plasticity induced by conversion of synaptic eligibility traces *in vivo***

SU HONG[1], ALFREDO KIRKWOOD*[1]
[1]Mind brain institute, Johns Hopkins University, Baltimore, USA

P36.24 **Plasticity in adult-born dopaminergic neurons in the olfactory bulb**

CANDIDA TUFO*[1]
[1]King's College London, London, UK

P36.25 **Involvement of TRPV1 channels in synaptic transmission in peripheral synapses**

NIKITA ZHILYAKOV*[1], ARKHIPOV ARSENII[1], EDUARD KHAZIEV[1], DMITRY SAMIGULLIN[1]
[1]Kazan Institute of Biochemistry and Biophysics RAS, Kazan, Russia

P36.26 **Effect of 25-hydroxycholeserol on synaptic transmission in skeletal muscle**

ZAKYRJANOVA GUZALJA*[1], PETROV ALEXEY[1]
[1]Kazan Institute of Biochemistry and Biophysics, FRC Kazan Scientific Center of RAS; Institute of Neurosciences, Kazan State Medical University, Kazan, Russia

P36.27 **Somatostatin-mediated effects on synaptic transmission in the mouse cingulate cortex**

THERESE RIEDEMANN*[1], BERND SUTOR[1]
[1]Ludwig-Maximilians-University/Biomedical Center, Planegg-Martinsried, Germany

Physiology: systems/network functions, computational neuroscience

P37.01 **Genetic properties of hub connectivity in the human brain**

AURINA ARNATKEVICIUTE*[1], BEN FULCHER[2], STUART OLDHAM[1], JEGGAN TIEGO[1], MARK BELLGROVE[3], ALEX FORNITO[1]
[1]Brain and Mental Health Hub, Monash Institute of Cognitive and Clinical Neurosciences, School of Psychological Sciences, Monash University, Melbourne, Australia, [2]School of Physics, Sydney University, Sydney, Australia, [3]Monash Institute of Cognitive and Clinical Neurosciences, School of Psychological Sciences, Monash University, Melbourne, Australia

P37.02 **Interaction between the BDNF Val66Met polymorphism and childhood trauma on cortical functional network in non-clinical adults**

YOURIM KIM[1], DONGIL MIN[1], YONG-WOOK KIM[3], SEUNG-HWAN LEE*[2]
[1]Clinical Emotion and Cognition Research Laboratory, Goyang, Korea, Republic of, [2]Department of Psychiatry, Ilsan Paik Hospital, Inje University College of Medicine, Goyang, Korea, Republic of, [3]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of

P37.03 **Low frequency alpha (8-10 Hz) activity correlated with inhibitory behavior**

YONG-WOOK KIM[1], SUNGKEAN KIM[1], MIN JIN JIN[3], CHANG-HWAN IM[1], SEUNG-HWAN LEE*[2]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Department of Psychiatry, Inje university, Ilsan Paik hospital, Ilsan, Korea, Republic of, [3]Clinical Emotion and Cognition Research Laboratory, Inje University, Goyang, Korea, Republic of

P37.04 **Optogenetic manipulation of mural cells evoked regional brain blood flow changes in the deep brain**

SOOJIN KWON[1], YOSHIFUMI ABE[2], HAJIME MUSHIAKE[3], MIYUKI UNEKAWA[2], KAZUTO MASAMOTO[2], YUTAKA TOMITA[2], KENJI TANAKA*[2]
[1]Tohoku university, Tokyo, Japan, [2]Keio University, Tokyo, Japan, [3]Tohoku University, Sendai, Japan

P37.05 **Machine-learning-based classification between post-traumatic stress disorder and major depressive disorder using P300 features**

MISEON SHIM[1], MIN JIN JIN[3], CHANG-HWAN IM[4], SEUNG-HWAN LEE*[2]
[1]University of Missouri-Kansas City, Kansas City, USA, [2]Psychiatry Department, Ilsan Paik Hospital, Inje University, Goyang, Korea, Republic of, [3]Department of Psychology, Chung-Ang University, Seoul, Korea, Republic of, [4]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of

P37.06 **Interaction of FKBP5 polymorphism and childhood trauma on brain volume in healthy individuals**

AERAN KWON[1], SUNGKEAN KIM[1], HYEONJIN JEON[1], SEUNG-HWAN LEE*[2]
[1]Clinical Emotion and Cognition Research Laboratory, Inje University Ilsan Paik Hospital, Goyang, Korea, Republic of, [2]Department of Psychiatry, Inje University Ilsan Paik Hospital, Goyang, Korea, Republic of

P37.07 **Identification of potential neuromodulatory targets of stigmasterol through reverse docking integrated network pharmacology approach**

RAJU DASH[1], HO JIN CHOI[1], NUSRAT JAHAN SELSI[2], MD. NAZMUL HAQUE[1], MD. ABDUL HANNAN[1], IL SOO MOON*[1]
[1]Department of Anatomy, Dongguk University School of Medicine, Gyeongju, Korea, Republic of, [2]Department of Pharmacy, University of Science & Technology Chittagong, Chittagong, Bangladesh

P37.08 **Serotonin modulates optimal coding of motion envelopes by enhancing neural and behavioral responses**

MARIANA M. MARQUEZ[1], MAURICE J. CHACRON*[1]
[1]Physiology Department, McGill University, Montreal, Canada

P37.09 **Involvement of area 3a in nociception processing investigated by fMRI of anesthetized rhesus monkey**

MIN-JUN HAN[1], CHAN-UNG PARK[1], EUNHA BAEG*[2]
[1]Department of Biomedical Engineering Sungkyunkwan University (SKKU), Suwon, Korea, Republic of, [2]Center for Neuroscience Imaging Research, Institute for Basic Science (IBS), Suwon, Korea, Republic of

P37.10 **Distinct spatiotemporal responses of Dentate granule and mossy cells to local change in a one-dimensional landscape**

DAJUNG JUNG[1], SOYOUN KIM[2], ANVAR SARIEV[2], DAESOO KIM[1], SEBASTIEN ROYER*[2]
[1]KAIST, Daejeon, Korea, Republic of, [2]KIST, Seoul, Korea, Republic of

P37.11 **Cell-type specific role of the ventral pallidum and subthalamic nucleus circuitry in locomotion and behavior**

HYUNJU AHN[1], GYURYANG HEO[1], SIEUN JUNG[1], SEONG-RAE KIM[1], SUNG-YON KIM*[1]
[1]Seoul Natl. Univ., Seoul, Korea, Republic of

P37.12 **Slow spindles are associated with cortical high frequency activity**

MARYAM GHORBANI*[1], NASRIN SADAT HASHEMI[1], FERESHTEH DEHNAVI[1], SAHAR MOGHIMI[1]
[1]Department of Electrical Engineering, Ferdowsi University of Mashhad, Mashhad, Iran

P37.13 **Analysis of structural connectivity network of basal ganglia in mouse brain: MR diffusion-tractography at 9.4 T**

A-YOON KIM*[1,2], HYEON-MAN BAEK[3]
[1]gachon university, Incheon, Korea, Republic of, [2]Department of Health Science & Technology, GAIST, Gachon University, Incheon, Korea, Korea, Republic of, [3]Lee Gil Ya Cancer & Diabetes Institute, Gachon University, Incheon, Korea, Korea, Republic of

P37.14 **Brain-wide neural dynamics during flexible task switching in mice**

DOHOUNG KIM[1], ALBERT LEE*[1]
[1]Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, VA, USA

P37.15 **Structural correlates of modular organization of activity propagation in the primate somatosensory cortex**

MOHD YAQUB MIR*[1], LÁSZLÓ NÉGYESSY[2]
[1]semmelweis university, Budapest, Hungary, [2]Wigner research centre, Budapest, Hungary

P37.16 **Predicting transgenic markers of a neuron by electrophysiological properties using machine learning**

HYUNSU LEE*[1,2], INCHEOL SEO[3]
[1]School of Medicine, Keimyung Univ., Daegu, Korea, Republic of, [2]Department of Anatomy, Keimyung University School of Medicine, Daegu, Korea, Republic of, [3]Department of Microbiology, Keimyung University School of Medicine, Daegu, Korea, Republic of

P37.17 **Characterization of receptive fields of mouse retinal ganglion cells through comparative analysis of spike-triggered average and spike-triggered covariance**

JUNGRYUL AHN[1], YONGSEOK YOO[2], YONG SOOK GOO*[1]
[1]Department of Physiology, Chungbuk National University School of Medicine, Cheongju, Korea, Republic of, [2]Department of Electronics Engineering, Incheon National University, Incheon, Korea, Republic of

P37.18 **Persistent gamma spiking in SI non-sensory fast-spiking cells predicts perceptual success**

HYEYOUNG SHIN*[1], CHRISTOPHER MOORE[1]
[1]Brown University, Providence, Rhode Island, USA

P37.19 **Acute amyloid β (25-35 and 1-40) effects on oscillatory activity and synaptic plasticity in the CA3-CA1 circuit of the hippocampus**

MAURICIO NAVA-MESA*[1], CECILE GAUTHIER-UMAÑA[2], JONHATAN MUÑOZ-CABRERA[3], MARIO VALDERRAMA[4], ALEJANDRO MUNERA[5]
[1]Universidad del Rosario (Bogotá, Col), Bogotá, Colombia, [2]Universidad del Rosario , Bogotá, Colombia, [3]Universidad Nacional de Colombia, Bogotá, Colombia, [4]Universidad de los Andes, Bogotá, Colombia, [5]Universidad Nacional de Colombia, Bogota, Colombia

P37.20 **Information processing in the primary olfactory cortex directly induces hippocampal synaptic plasticity**

DENISE MANAHAN-VAUGHAN*[1], CHRISTINA STRAUCH[1]
[1]Ruhr University Bochum, Medical Faculty, Neurophysiology, Bochum, Germany

P37.21 **Effect of interpopulation spike-timing-dependent plasticity on neuronal synchronized rhythms in clustered small-world networks with inhibitory and excitatory populations**

WOOCHANG LIM*[1], SANG-YOON KIM[1]
[1]Institute for Computational Neuroscience and Daegu National University of Education, Daegu, Korea, Republic of

Sensory and motor systems

P38.01 **Cholinergic effects on the visual responses in the superficial layer of mouse superior colliculus**

KOTA TOKUOKA[1], MASATOSHI KASAI[1], TADASHI ISA*[1]
[1]Department of Physiology and Neurobiology, Graduate School of Medicine, Kyoto University, Kyoto, Japan

P38.02 **Determining the role of NMDARs in retinofugal map formation**

KRISTY JOHNSON*[1], JASON TRIPLETT[2]
[1]The George Washington University, Washington DC, USA, [2]The George Washington University and Childrens National Health Systems, Washington DC, USA

P38.03 **An evolutionary-driven approach to detect critical coding and non-coding regions in deafness**

ANABELLA TRIGILA[1], FRANCISCO PISCIOTTANO[1], LUCIA FRANCHINI*[1]
[1]INGEBI - CONICET, Buenos Aires, Argentina

P38.04 **Peripheral ablation of type 3 adenylyl cyclase contributes to hyperalgesia in mice**

WEN-WEN ZHANG[1], MAN-LI HU[1], HONG CAO[1], YU-QIU ZHANG*[1]
[1]Institutes of Brain Science, State Key Laboratory of Medical Neurobiology and MOE Frontiers Center for Brain Science, Fudan University, Shanghai, China

P38.05 **Lesion of cerebral cortex affects tactile sensitivity and affective motivation behaviors associated with sustained pain**

GUOHONG WANG[1], HAIYAN SHENG[1], WENJING DAI[1], HONG CAO[1], YUQIU ZHANG*[1]
[1]Institutes of Brain Science, State Key Laboratory of Medical Neurobiology and MOE Frontiers Center for Brain Science, Fudan University, Shanghai, China

P38.06 **Changes in the ratio of chondroitin sulfate A and C of perineuronal net components on spinal motoneurons during postnatal development**

MASAHITO TAKIGUCHI*[1], SONOKO MORINOBU[1], RAN KOGANEMARU[1], RISA SAKUYAMA[1], KENGO FUNAKOSHI[1]
[1]Yokohama City University, Yokohama, Japan

P38.07 **Podosome-directed MT1-MMP trafficking and surface insertion regulate AChR clustering & remodeling**

ZORA CHUI KUEN CHAN[1], YIN SHUN WONG[2], ZHI XIN ZHANG[1], ZHONG JUN ZHOU[1], CHI BUN CHAN[2], CHI WAI LEE*[1]
[1]School of Biomedical Sciences, Li Ka Shing Faculty of Medicine ,The University of Hong Kong, Hong Kong, Hong Kong SAR, China, [2]School of Biological Sciences, Faculty of Science, The University of Hong Kong, Hong Kong, Hong Kong SAR, China

P38.08 **Anatomical analysis of branch specific input wiring on tuft dendrites in the neocortex using array tomography**

NARI KIM[1], SANG-KYU BAHN[1], JINSEOP S KIM[1], JOON HO CHOI[1], JONG-CHEOL RAH*[1]
[1]KBRI, Daegu, Korea, Republic of

P38.09 **Why the fidget spinner is popular?: activation of a reward network during habitual motor movement**

MOMOKA NISHIMURA*[1], IBUKI ONO[1], SUZUKA NARUKAWA[1], IZUMI KUZE[1], SHOKO YUKI[1], KOHTA KOBAYASI[1]
[1]Doshisha University, Kyoto, Japan

P38.10 **Infrared laser hearing aid: Encoding method for creating linguistic and paralinguistic information**

HARUKA YAMASATO[1], YUTA TAMAI[1], KAZUYUKI MATSUMOTO[1], SHIZUKO HIRYU[1], KHOTA KOBAYASI*[1]
[1]Doshisha University, Kyoto, Japan

P38.11 **Differential role of spinal progesterone in the induction and maintenance of mechanical allodynia in peripheral neuropathy: involvement of cytochrome P450c17**

SHEU-RAN CHOI[1], SHEU-RAN CHOI[1], HO-JAE HAN[1], JANG-HERN LEE*[1]
[1]Department of Veterinary Physiology, BK21 PLUS Program for Creative Veterinary Science Research, Research Institute for Veterinary Science and College of Veterinary Medicine, Seoul National University, Seoul, Korea, Republic of

P38.12 **Laser stimulation of auditory nerves through a tympanic membrane**

YUTA TAMAI[1], YUKI ITO[1], TAKAFUMI FURUYAMA[1], KENSUKE HORINOUCHI[1], NAGOMI MURASHIMA[1], ISUKI MICHIMOTO[1], SHIZUKO HIRYU[1], KOHTA KOBAYASI*[1]
[1]Doshisha University, Kyoto, Japan

P38.13 **Opioid Impacts Brain Morphology and Intrinsic Functional Network Architecture in Chronic Low Back Pain: A Pilot Structural and Functional MRI Study**

BEHNAZ JARRAHI*[1], SEAN MACKEY[1]
[1]Stanford University School of Medicine, Palo Alto, USA

P38.14 **Vocal rhythm as useful information for social behaviors in the songbird**

MASASHI TANAKA*[1], KENTARO ABE[1]
[1]Tohoku University, Sendai, Japan

P38.15 **Inner ear organoids derived from human pluripotent stem cells using rotary cell culture**

BRYONY NAYAGAM*[1], CRISTIANA MATTEI[1], REBECCA LIM[2], HANNAH DRURY[2], BABAK NASR[1], ZIHUI LI[1], MELISSA TADROS[2], GIOVANNA D'ABACO[1], KATHRYN STOK[1], MIRELLA DOTTORI[3]
[1]The University of Melbourne, Melbourne, Australia, [2]The University of Newcastle, Newcastle, Australia, [3]The University of Wollongong, Wollongong, Australia

P38.16 **Assessment of posterior visual pathway function using diffusion tensor imaging**

EUN JUNG CHOI[1], KOUNG MI KANG[2], WOOJIN JUNG[1], JONGHO LEE[3], SEUNG HONG CHOI[2], YONG HWY KIM[2], YONG HWY KIM*[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, Korea, Republic of, [3]Seoul National University, Seoul, Korea, Republic of

P38.17 **Shining light on an amygdala-brainstem connection relevant for attention processing**

JOSE CANO*[1], KARINE FENELON[2]
[1]The University of Texas at El Paso, El Paso, Texas, USA, [2]University of Massachusetts Amherst, Amherst, Massachusetts, USA

P38.18 **Behavioral evidence for geomagnetic imprinting and transgenerational inheritance in fruit flies**

HYE-JIN KWON[1], IN-TAEK OH[2], SOO-CHAN KIM[3], HYUNG-JUN KIM[4], KENNETH J. LOHMANN[5], KWON-SEOK CHAE*[1, 2]
[1]Department of Nano-science and technology, Kyungpook National University, Daegu 41566, Korea, Republic of, [2]Department of Biology Education, Kyungpook National University, Daegu 41566, Korea, Republic of, [3]Department of Electric and Electrical Engineering, Hankyong National University, Anseong 17579, Korea, Republic of, [4]Neural Development & Disease Department, Korea Brain Research Institute(KBRI), Daegu 41068, Korea, Republic of, [5]Department of Biology, University of North Carolina, Chapel Hill, North Carolina 27599, USA

P38.19 **Optogenetic decoding of a long-range brain circuit for neuropathic pain**

JUNTING HUANG[1], VINICIUS M GADOTTI[2], LINA CHEN[2], IVANA ASSIS SOUZA[2], DECHENG WANG[2], SHUO HUANG[2], ZIZHEN ZHANG[2], GERALD ZAMPONI*[2]
[1]University of Calgary, Calgary, Canada, [2]Department of Physiology and Pharmacology, Cumming School of Medicine, University of Calgary, Calgary, Canada

P38.20 **Structural and molecular properties of insect neuromodulatory, type II, axon terminals**

HANS-JOACHIM PFLÜGER*[1], THOMAS MATHEJCZYK[1], NIRAJA RAMESH[1], CARSTEN DUCH[2], NATALIA BISEROVA[3], STEPHAN SIGRIST[1], JULIEN COLOMB[1], BETTINA STOCKER[1], CHRISTINA BOCHOW[1], CHRISTINE DAMRAU[1], CLAUDIA WEBER[1], HEIKE WOLFENBERG[1]
[1]Freie Universitaet, Berlin, Germany, [2]University of Mainz, Mainz, Germany, [3]Moscow State University, Moscow, Russia

P38.21 **Blue light and an inclination compass dependent human magnetoreception in geomagnetic food orientation**

KWON-SEOK CHAE*[1], IN-TAEK OH[1], SANG-HYUP LEE[1], SOO-CHAN KIM[2], HYE-JIN KWON[1]
[1]Kyungpook National University, Daegu, Korea, Republic of, [2]Hankyong National University, Anseong, Korea, Republic of

P38.22 **Synaptic connectivity of urinary bladder afferents in the rat superficial dorsal horn and spinal parasympathetic nucleus**

YONGCHUL BAE*[1], SOOK KYUNG PARK[1], ANGOM PUSHPARANI DEVI[1], JIN YOUNG BAE[1], YI SUL CHO[1], HYOUNG GON KO[1]
[1]School of Dentistry, Kyungpook National University, Daegu, Korea, Republic of

P38.23 **Autonomous sensory meridian response (ASMR): The time perception approach**

SAHAR SEIFZADEH[1], MOHAMMAD ALI NAZARI*[1]
[1]Division of Cognitive Neuroscience, Faculty of Educational Sciences and Psychology, University of Tabriz, Tabriz, Iran

P38.24 **Primary somatosensory cortex is essential for texture discrimination but not object detection in mice**

JUNG PARK[1], CHRIS RODGERS[1], Y. KATE HONG[1], JACOB DAHAN[1], RANDY BRUNO*[1]
[1]Columbia University, New York, USA

P38.25 **Distribution of excitatory and inhibitory axon terminals on the rat hypoglossal motoneurons**

YI SUL CHO[1], SANG KYOO PAIK[1], HONG IL YOO[2], SEUNG KI CHOI[1], JIN YOUNG BAE[1], SOOK KYUNG PARK[1], JI HYUN LEE[1], YONG CHUL BAE*[1]
[1]School of Dentistry, Kyungpook National University, Daegu, Korea, Republic of, [2]College of Medicine, Eulji University, Daejeon, Korea, Republic of

P38.26 **Roles of a group of tetraspan subtypes in DRG-mediated nociception**

JI YEON LIM[1], PYUNG SUN CHO[1], MINSEOK KIM[1], HAIYAN ZHENG[1], SEUNG-IN CHOI[1], GEUNYEOL CHOI[1], SUN WOOK HWANG*[1]
[1]Korea University, Seoul, Korea, Republic of

P38.27 **The cellular mechanism of Temporomandibular joint and muscle disorder (TMD) pain**

JOHN SHANNONHOUSE[1], JOHN SHANNONHOUSE[1], YU SHIN KIM*[1]
[1]University of Texas Health Science Center San Antonio, San Antonio, USA

P38.28 **Vision-taste cross-modal interaction and the potential brain mechanism**

PEI LIANG*[1], JIAYU JIANG[2]
[1]Hubei University, Wuhan, China, [2]Research Center of Brain and Cognitive Neuroscience, Liaoning Normal University, Dalian, China

Others

P39.01 **Localized difference in blood-brain barrier permeability of rat brain after focused ultrasound induced disruption**

HYUNGKYU HUH[1], BYUNG JIN JUNG[1], MUN HAN[1], JUYOUNG PARK*[1]
[1]DGMIF, Daegu, Korea, Republic of

P39.02 **The biological safety after blood brain barrier disruption by focused ultrasound**

EUN-HEE LEE[1], MUN HAN[1], HYO JIN CHOI[1], JUYOUNG PARK*[1]
[1]Daegu-Gyeongbuk Medical Innovation Foundation, Daegu, Korea, Republic of

P39.03 **Discovery of β-arrestin biased ligands of 5-HT$_7$R**

JIEON LEE[1], YOUNGJAE KIM[2], HYUNJOO LEE[3], HYUNGUK KIM[3], HYUNAH CHOO*[2]
[1]Division of Bio-Medical Science and Technology, KIST school, Korea University of Science and Technology (UST), Seoul, Korea, Republic of, [2]Center of Neuro-Medicine, Brain Science Institute, Korea Institute of Science and Technology, Seoul, Korea, Republic of, [3]School of Electrical Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of

P39.04 **Synthesis and biological activity of biphenyl group derivatives**

DOYOUNG KIM[1], SOYEON LEE[2], HYUNAH CHOO*[2]
[1]Sogang University, Seoul, Korea, Republic of, [2]Korea Institute of Science and Technology (KIST), Seoul, Korea, Republic of

P39.05 **Inhibition of miRNA let7i enhance the progesterone-induced neuroprotection**

SEONGCHEOL KIM*[1], TRINH NGUYEN[2], MEHARVAN SINGH[1]
[1]Loyola University Chicago Stritch School of Medicine, Maywood, USA, [2]UNT Health Science Center, Fort Worth, USA

P39.06 **Protective effects of Nobiletin on Rotenone-induced neuronal dysfunction is mediated with complex 1 regulation**

KHULAN AMARSANAA[1], SUNG-CHERL JUNG*[1]
[1]Department of Physiology, School of Medicine, Jeju National University, Jeju-si, Korea, Republic of

P39.07 **Convolutional neural networks for discrimination of RNA pseudouridine sites**

MUHAMMAD TAHIR[1], HILAL TAYARA[1], KIL TO CHONG*[1]
[1]Chonbuk National University, Jeonju, Korea, Republic of

P39.08 **Identification of promoters and their strength using deep learning**

HILAL TAYARA[1], MHANED OUBOUNYT[1], KIL TO CHONG*[1]
[1]Chonbuk National University, Jeonju, Korea, Republic of

P39.09 **Identification of RNA N6-methyladenosine sites using deep learning**

IMAN NAZARI[1], KIL TO CHONG*[1]
[1]Chonbuk National University, JeonJu, Korea, Republic of

P39.10 **Drp1 controls mitochondrial membrane potential, which is independent to its fission promoting activity**

HYO MIN CHO[1], JAE RYUN RYU[2], JUNE HOAN KIM[3], WOONG SUN*[2]
[1]Korea University College of Medicine, Seoul, Korea, Republic of, [2]Department of Anatomy, Brain Korea 21 Program, Korea University, 126 Anam-Dong, Seungbuk Gu, Seoul, Korea 02841, Seoul, Korea, Republic of, [3]Department of Anatomy, Brain Korea 21 Program, Korea University, 126 Anam-Dong, Seungbuk Gu, Seoul, Korea 02841, Department of Anatomy, Brain Korea 21 Program, Korea University, 126 Anam-Dong, Seungbuk Gu, Seoul, Korea 02841, Korea, Republic of

P39.11 **Reference for developing single unit recording method in behaving animals with 3DnanoIC electrodes**

YEOWOOL HUH*[1], SANGGEON PARK[2]
[1]Catholic Kwandong University, Incheon, Korea, Republic of, [2]Korea Institute of Science and Technology, Seoul, Korea, Republic of

P39.12 **Maternal immune activation adversely affects the offspring's microglia via Type-I interferon signaling**

HILA BEN-YEHUDA*[1], ORIT MATCOVITCH-NATAN[1], ALEXANDER KERTSER[1], AMIT SPINRAD[1], IDO AMIT[1], MICHAL SCHWARTZ[1]
[1]Weizmann Institute of Science, Rehovot, Israel

P39.13 **The prospects of dorsal myelotomy in treating contusive spinal cord injury**

KRITHIKA IYER[1], KHAVIYAA CHANDRAMOHAN[1], PREEJA CHANDRAN[1], FELICIA MARY MICHAEL[1], JONATHAN YESHWANTH DANIEL[1], SANKAR VENKATACHALAM*[1]
[1]Department of Anatomy, University of Madras, Chennai, India

P39.14 **Effect of mucuna pruriens extract in treating contusion spinal cord injury**

PREEJA CHANDRAN[1], KHAVIYAA CHANDRAMOHAN[1], FELICIA MARY MICHAEL[1], KRITHIKA IYER[1], PRAKASH SEPPAN[1], SANKAR VENKATACHALAM*[1]
[1]Department of Anatomy, University of Madras, Chennai, India

P39.15 **Rescue of axotomized motor cortical neurons from death by bone marrow derived stromal cells transplantation after spinal cord injury in rodent model**

KHAVIYAA CHANDRAMOHAN[1], LAVANYA VENKITASAMY[1], KIRUBHANAND CHANDRASHEKARAN[1], FELICIA MARY MICHAEL[1], SANKAR VENKATACHALAM*[1]
[1]Department of Anatomy, University of Madras, Chennai, India

P39.16 **Effect of the extract of Cimicifuga dahurica and its active compound on reducing formation of amyloid beta peptides in HeLa cells transfected with an amyloid precursor protein**

ANSUN PARK[1], SANG-BIN LEE[1], YOON SUN CHUN[1], YOUNG HO KIM[1], HYUN OK YANG*[1]
[1]KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY, gangneung, Korea, Republic of

P39.17 **7-Deoxy-*trans*-dihydronarciclasine Isolated from *Lycoris chejuensis* Inhibits neuroinflammation in Experimental Models**

DONG ZHAO[1], LIJUN ZHANG[2], HYUN OK YANG*[1]
[1]Natural Products Research Center, Korea Institute of Science and Technology, Gangneung 25451, Gangwon-do, Republic of Korea, Gangneung, Korea, Republic of, [2]Natural Products Research Center, Korea Institute of Science and Technology, Gangneung 25451, Gangwon-do, Republic of Korea, Gangneung, Korea, Republic of

P39.18 **High-temperature-processed green tea potentiate neuronal differentiation by enhancing the levels of epimerized catechins that inhibit DNA methyltranferase1**

HYUNG-SU KIM[1], A YOUNG KIM[1], SI-YOUNG CHO[1], WON-SEOK PARK*[1]
[1]Basic Research & Innovation Institute, AMOREPACIFIC R&D Center, Yongin-si, Korea, Republic of

P39.19 **Development of high-resolution and high-sensitivity brain PET insert for 7T MRI scanner**

JAE SUNG LEE*[1], JUN YEON WON[1], HAEWOOK PARK[1], SEUNGEUN LEE[1], JEONG-WHAN SON[2], GUEN BAE KO[2], KYEONG YUN KIM[2], YINA CHUNG[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Brightonix Imaging Inc., Seoul, Korea, Republic of

P39.20 ***DRD2* genotype-based variants modulates D2 receptor distribution in ventral striatum**

MIKAEEL VALLI[1], SANG SOO CHO[2], MARIO MASELLIS[3], ROBERT CHEN[4], PABLO RUSJAN[2], JINHEE KIM[2], YUKO KOSHIMORI[1], ALEXANDER MIHAESCU[1], ANTONIO STRAFELLA*[2]
[1]University of Toronto, Toronto, Canada, [2]Centre for Addiction and Mental Health (CAMH), Toronto, Canada, [3]Sunnybrook Health Sciences Centre, Toronto, Canada, [4]Toronto Western Hospital, Toronto, Canada

P39.21 **Misregulation of mitochondria-lysosome contact sites in glucocerebrosidase (GBA) Parkinson's patient neurons**

SOOJIN KIM[1], YVETTE WONG[1], DIMITRI KRAINC*[1]
[1]Department of Neurology, Northwestern University, Chicago, USA

P39.22 **Ex-vivo Diffusion MRI Tractography : Mouse Basal Ganglia and Thalamic Structural Connectome**

EUN BEE KIM[1], HYEON-MAN BAEK*[2]
[1]Department of Health Sciences and Technology, GAIST, Gachon University, Incheon, Korea, Republic of, [2]Lee Gil Ya Cancer & Diabetes Institute, Gachon University, Incheon, Korea, Republic of

P39.23 **Neuronal protective effects of high-temperature-processed green tea extract (HTP-GTE) on oxidative stress in SH-SY5Y cells**

A YOUNG KIM[1], HYUNG-SU KIM[1], SI-YOUNG CHO[1], WON-SEOK PARK*[1]
[1]Basic Research & Innovation Institute, AMOREPACIFIC R&D Center, Yongin-si, Korea, Republic of

P39.24 **Molecular dynamics study for potential Abl tyrosine kinase inhibitors derived from 2-pyrazolinyl-1-carbothioamide**

BEOM SOO KIM[1], SANG WON JUNG[1], WOOKYUNG YU*[1]
[1]DGIST, Daegu, Korea, Republic of

P39.25 **Effects of early life stress on the development of depression and epigenetic mechanisms of p11 gene**

MI KYOUNG SEO[1], AH JEONG CHOI[1], JUNG GOO LEE[3], SUNG WOO PARK*[2]
[1]Paik Institute for Clinical Research, Inje University, Busan, Korea, Republic of, [2]Paik Institute for Clinical Research, Department of Health Science and Technology, Graduate School, Department of Convergence Biomedical Science, College of Medicine, Inje University, Busan, Korea, Republic of, [3]Paik Institute for Clinical Research, Department of Psychiatry, College of Medicine, Haeundae Paik Hospital, Department of Health Science and Technology, Graduate School, Inje University, Busan, Korea, Republic of

P39.26 **Neuromodulatory effect of exogenous melatonin on central post stroke pain in rodents**

TAVLEEN KAUR[1], BAI-CHUANG SHYU*[2]
[1]National Yang Ming University/Academia Sinica, Taipei, Taiwan, China, [2]Academia Sinica, Taipei, Taiwan, China

P39.27 **Towards personalized image captioning via multimodal memory networks**

BYEONGCHANG KIM[1], CESC CHUNSEONG PARK[2], GUNHEE KIM*[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Lunit Incorporation, Seoul, Korea, Republic of

P39.28 **Fast and robust quantification of myelin water fraction in deep learning**

JIEUN LEE[1], DOOHEE LEE[1], JOON YUL CHOI[1], JONGHO LEE*[1]
[1]Seoul National University, Seoul, Korea, Republic of

P39.29 **A monitoring system for axonal growth dynamics using micropatterns of permissive and Semaphorin 3F chemorepulsive signals**

JAE RYUN RYU[1], JUNE HOAN KIM[1], HYO MIN CHO[1], YOUHWA JO[2], BORAM LEE[2], WOONG SUN*[1]
[1]Department of Anatomy College of Medicine Korea University, Seoul, Korea, Republic of, [2]Depatrment of Anatomy College of Medicine Korea University, Seoul, Korea, Republic of

P39.30 **Reconstruction of cultured neural circuits, using micropatterns of permissive and repulsive signals**

JUNE HOAN KIM[1], JAE RYUN RYU[1], WOONG SUN*[1]
[1]Department of Anatomy, College of Medicine, Korea University, Seoul, Korea, Republic of

P39.31 **Expression and function of bitter taste receptors in the human blood-cerebrospinal fluid Barrier**
ANA CATARINA DUARTE[1], ISABEL GONÇALVES[1], JOSÉ SANTOS[1], ANA RAQUEL COSTA[1], TELMA QUINTELA[1], CECÍLIA SANTOS*[1]
[1]Universidade da Beira Interior, Covilhã, Portugal

P39.32 **Chronotype in remitted bipolar disorder: Clinical correlates and treatment impact**
ABIR TOUNSI*[1], FATEN ELLOUZE[2], MEHDI KAROUI[2]
[1]University Paris Diderot-Faculty of Medicine, Paris, France, [2]Razi Hospital, mannouba, Tunisia

P39.33 **Evaluation of the action of Salvia sp. in the neural differentiation of isolated mesenchymal stem cells of mouse bone marrow**
LILIANA FRANCIS TURNER[1], DIANA KATHERINE GARZON PERDOMO[2], LINA MARIA DE LOS REYES[3], FRANCIS TURNER LILIANA*[1]
[1]University of Tolima, Ibague, Colombia, [2]Universiy of Tolima, Ibagué, Colombia, [3]University of Tolima, Ibagué, Colombia

P39.34 **Stem cell therapy modulates neuronal calcineurin expression in a rodent model of ischemic stroke**
HARPREET KAUR[1], DEEPANEETA SARMAH[1], JACKSON SARAF[1], KIRAN KALIA[1], DILEEP R. YAVAGAL[2], PALLAB BHATTACHARYA*[1]
[1]Department of Pharmacology and Toxicology, National Institute of Pharmaceutical Education and Research, Ahmedabad (NIPER-A), Gandhinagar, Gujarat, India, Gandhinagar, India, [2]Department of Neurology and Neurosurgery, University of Miami Miller School of Medicine, Miami, USA

P39.35 **NLRP1 inflammasome expression is regulated by ASIC1a following intra-arterial mesenchymal stem cell therapy**
DEEPANEETA SARMAH[1], HARPREET KAUR[1], KANCHAN VATS[1], KIRAN KALIA[1], DILEEP R. YAVAGAL[2], PALLAB BHATTACHARYA*[1]
[1]National Institute of Pharmaceutical Education and Research-Ahmedabad (NIPER-A), Gandhinagar, India, [2]Department of Neurology and Neurosurgery, University of Miami Miller School of Medicine, Miami, USA

P39.36 **The Efficacy Of Involuntary Outpatient Commitment In Preventing Offense Recidivism In Patients With Schizophrenia**
BILEL OUESLATI*[1], IMEN GASSARA[1], RYM RIDHA[1]
[1]Razi Hospital, Faculty of Medecine of Tunis, La Manouba, Tunisia

P39.37 **TrainingSpace: neuroeducation without borders**
MATHEW ABRAMS*[1], PRADEEP GEORGE[1], EVA-LOTTA JOHANSSON[1], MALIN SANDSTRÖM[1]
[1]INCF, Stockholm, Sweden

P39.38 **What role sex hormones play in the hippocampus of Amazon rodent submitted to lithium-pilocarpine?**
VIVIAM SANABRIA*[1], SANDRA PEROSA[1], SIMONE BITTENCOURT[1], TOMÁS DE LA ROSA[1], CARLA SCORZA[1], MARIA G. NAFFAH-MAZZACORATTI[1], ESPER CAVALHEIRO[1], DÉBORA AMADO[1]
[1]Universidade Federal de São Paulo, São Paulo, Brazil

P39.39 **Medical and neuroethical check points before human applications of the brain-machine interface technique**
YOUNG-JOON RYU*[1]
[1]Kangwon National University, Chun-Cheon, Korea, Republic of

P39.40 **Relevance of parvalbumin-positive inhibitory neurons for functional recovery in chronic subcortical capsular infarct model**
RA GYUNG KIM[1], JONGWOOK CHO[1], JI-YOUNG PARK[1], EULGI LEE[1], HYOUNG-IHL KIM*[1]
[1]Department of Biomedical Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of

Presidential Highlighted Sessions

The Global Gender Equality Imperative in STEM Education

Chair Young Sook Yoo (Former Korean Minister of Environment)

Featured Speakers Hyeyeon Ahn (President of WISET)

Mmantsetsa Marope (Director, UNESCO International Bureau of Education(IBE), Geneva, Switzerland)

Andrew Meltzoff (Job and Gertrud Tamaki Endowed Chair and Co-Director, Institute for Learning & Brain Sciences, University of Washington, United States)

Place Room 324, 3F, EXCO

Day/Time Sat. (Sept. 21), 12:00 - 13:30

WISET, KBRI & IBE-UNESCO will hold a luncheon session on Saturday, 21 September 2019, on the importance of gender equality in STEM education. Challenges and opportunities on how to reduce current imbalances and underrepresentation of women and girls will be presented and critically discussed.

* Pre-registration is recommended: www.wiset.or.kr/event/20190826/index.jsp

High Level Dialogue on Neuroscience and the Future of Education & Learning

Chair Pierre Magistretti (President of IBRO), Mmantsetsa Marope (Director of IBE-UNESCO)

Place Hotel Inter-Burgo DAEGU

Day/Time Mon. (Sept. 23), 08:00 - 18:00

IBE-UNESCO and IBRO will co-convene a high level dialogue on the role of credible neuroscientific knowledge in the future of education and learning, and its potential to intensify the impact of efforts to address the current global learning crisis. The dialogue will be held on Monday, 23 September 2019. It will bring together renown neuroscience researchers and high level education policymakers and their senior experts who focus specifically on teaching and learning as indispensable curriculum implementation processes.

Special Programs

2019 International Brain Bee (IBB) Championship

Organizer Name	Julianne McCall
Organizer Affiliation	International Brain Bee
Organizer E-mail	2019ibb@thebrainbee.org
Host Organization	International Brain Bee, Korea Brain Research Institute (KBRI), Korean Brain Education Society
Topic	2019 International Brain Bee (IBB) Championship
Day/Time	Thu. (Sept. 19) - Mon. (Sept. 23)
Place	Korea Brain Research Institute, Kyungpook National University, EXCO
How to attend	Applicants only
Description	The International Brain Bee was founded over twenty years ago to promote engagement with neuroscience through competitions that test high school students' knowledge of the brain. Over thirty nations and regions will be represented this year, spanning all six continents. Over four days, 31 national student champions will demonstrate their advanced understanding of neuroanatomy, histology, neurological diseases, patient diagnosis, genetics, neurochemistry, and much more. The final section of the competition on September 21 entails a live judging panel of world-class experts. This section is open to IBRO Congress attendees for glimpse of the next generation of top neuroscientists and medical professionals. In addition to the competition, the students will be granted a special tour of the city, an elegant award ceremony, and many opportunities for cross-cultural exchange to develop a global community of young scientists who are fascinated by neuroscience. More information can be found on the website, www.thebrainbee.org. The International Brain Bee is made possible by a joint governance body representing IBRO, the American Psychological Association, the Society for Neuroscience, The Dana Foundation, and the Federation of European Neuroscience Societies.

* IBB Test 3(open) will be opened to the publics and conducted on Sept. 21 at 314, 3F in EXCO.

International Brain Initiative (IBI) Session

Organizer	Neural Network Research Project, Korea Brain Research Institute
Day/Time	Sat. (Sept. 21), 10:00 - 12:00
Place	Room 325, 3F, EXCO
Chairs	Mu-ming Poo, Jong Cheol Rah
Speakers	Mu-ming Poo (Institute of Neuroscience, Chinese Academy of Sciences, China) Hideyuki Okano (Keio University School of Medicine, Tokyo, Japan) Jinseop S. Kim (Neural Circuits Research Group &, Korea Brain Research Institute, Daegu, Korea, / Present Address: Department of Life Sciences, Sungkyunkwan University, Suwon, Korea) Jan G. Bjaalie (Institute of Basic Medical Sciences, University of Oslo, Norway)

* Lunch will be provided and pre-registration is recommended: https://forms.gle/HmH8tVkjV9fFGDko9

KAOS-KBRI Brain Show

Host Organization	KAOS Foundation / Korea Brain Research Institute
Topic	Inside Brain
Day/Time	Tue. (Sept. 24), 19:00 - 21:00
Place	Hotel Inter-Burgo EXCO, Iris Hall, B1
How to attend	Public Lecture
Speakers / Title	1. Ion Channels: Their Discovery, their Function and their Role in Medicine and Pharmacology / Erwin Neher 2. The thin line between insanity and ingenuity: the perspective from the neuroscience / Jun Soo Kwon

* Pre-registration is recommended: https://www.kbri.re.kr/new/pages_mobile/sub/page.html?mc=2747&no=AN4EzN&mode=view&bbs_id=board_1

Workshops

Exploring multimodal mammalian neuronal data using the Allen Brain Atlas tools and resources
(hosted by Allen Institute for Brain Science)

Organizer Name	Kaitlyn Casimo
Organizer Affiliation	Allen Institute for Brain Science
Organizer E-mail	workkaitlync@alleninstitute.org
Host Organization	Allen Institute for Brain Science
Day/Time	Sun. (Sept. 22), 09:00 - 12:00
Place	Room 314, EXCO
How to attend	Open, registration required (alleninstitute.org/ibro19)

Brain Organoids Researchers Meeting
(hosted by Brain Organoids Research Group)

Organizer Name	Mi-Ryoung Song
Organizer Affiliation	Gwangju Institute of Science and Technology
Organizer E-mail	msong@gist.ac.kr
Host Organization	Brain Organoids Research Group
Day/Time	Mon. (Sept. 23), 16:30 - 18:30
Place	Room 320A, EXCO
How to attend	Closed (Applicants only)

Socials

IBRO

INTERNATIONAL
BRAIN RESEARCH
ORGANIZATION

Round-table discussion “Diversity: Regions specific challenges and solutions”
(hosted by Young IBRO Committee and ALBA Network)

Organizer Name	Zeljka Krsnik, Young IBRO Committee, Chair and ALBA Network, Steering Committee Member
Organizer Affiliation	Chair of the Young IBRO Committee & Member of the ALBA Steering Committee
Organizer E-mail	info@alba.network
Host Organization	Young IBRO Committee and ALBA Network
Day/Time	Sun. (Sept. 22), 15:00 - 17:00
Place	Room 322, EXCO
How to attend	Open, registration recommended: www.alba.network/registration-form

Global engagement and outreach in support of basic research in the brain sciences
(hosted by IBRO and the International Basic Sciences Programme at UNESCO)

Organizer Name	Tasia Asakawa
Organizer Affiliation	IBRO
Organizer E-mail	tasakawa@ibro.org
Host Organization	IBRO and the International Basic Sciences Programme at UNESCO
Topic	Global engagement and outreach in support of basic research in the brain sciences
Day/Time	Sun. (Sept. 22), 12:40 - 14:50
Place	Room 321, EXCO
How to attend	Open to the public

Socials

IBRO

19th IBRO Budget Committee Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Thu. (Sept. 19), 09:00 - 17:00

Finance committee Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Fri. (Sept. 20), 10:00 - 12:00

IBRO Executive Committee Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Fri. (Sept. 20), 13:00 - 18:00

Governing Council Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Sat. (Sept. 21), 09:00 - 12:00

Young IBRO Committee Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Sat. (Sept. 21), 13:00 - 14:30

IBRO APRC Committee Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Sun. (Sept. 22), 09:00 - 10:30

IBRO LARC Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Sun. (Sept. 22), 15:00 - 16:30

IBRO USCRC Meeting

Venue
Inter-Burgo EXCO, Laon Hall, 3F

Date & Time
Mon. (Sept. 23), 09:00 - 10:30

FAONS

FAONS Council Meeting

Organizer Name	Sung-Oh Huh
Organizer Affiliation	The President of The Korean Society for Brain and Neural Sciences
Organizer E-mail	hrjung@kbri.re.kr
Host Organization	FAONS
Topic	FAONS Council Meeting
Day/Time	Mon. (Sept. 23), 10:00 - 12:00
Place	Room 322, EXCO
How to attend	Applicants only (Council members only)

Socials

KSBNS

CJK Young Investigator Night
(hosted by The Korean Society for Brain and Neural Sciences)

Organizer Name	Sung-Oh Huh
Organizer Affiliation	The President of The Korean Society for Brain and Neural Sciences
Organizer E-mail	neuro@ksbns.org
Host Organization	The Korean Society for Brain and Neural Sciences
Topic	CJK Young Investigator Night
Day/Time	Sat. (Sept. 21), 18:00 - 21:30
Place	Hotel Inter-Burgo EXCO, Grand Ballroom B, B1
How to attend	Applicants only

KSBNS Council Meeting
(hosted by The Korean Society for Brain and Neural Sciences)

Organizer Name	The Korean Society for Brain and Neural Sciences (KSBNS) Committee
Organizer Affiliation	The Korean Society for Brain and Neural Sciences (KSBNS)
Organizer E-mail	neuro@ksbns.org
Host Organization	The Korean Society for Brain and Neural Sciences
Topic	KSBNS Council Meeting
Day/Time	Mon. (Sept. 23), 08:00 - 09:00
Place	Room 320, EXCO
How to attend	Applicants only

The Glia Social Meeting
(hosted by The Glia Section meeting of the Korean Society for Brain and Neural Sciences)

Organizer Name	Won-Suk Chung
Organizer Affiliation	KAIST, Dept of Biological Sciences
Organizer E-mail	Wonsuk.chung@kaist.ac.kr
Host Organization	The Glia Section meeting of the Korean Society for Brain and Neural Science
Topic	Neuron-Glia interactions
Day/Time	Tue. (Sept. 24), 18:00 - 20:00
Place	Room 322, EXCO
How to attend	Closed Meeting

General Assembly for Korean Society
(hosted by The Korean Society for Brain and Neural Sciences)

Organizer Name	The Korean Society for Brain and Neural Sciences (KSBNS) Committee
Organizer Affiliation	The Korean Society for Brain and Neural Sciences (KSBNS)
Organizer E-mail	neuro@ksbns.org
Host Organization	The Korean Society for Brain and Neural Sciences (KSBNS)
Topic	Joseph Jin Chang Research Award and KSBNS General Assembly
Day/Time	Mon. (Sept. 23), 14:50 - 16:30
Place	Room 324, EXCO
How to attend	Open to public

* Joseph Jin Chang Research Award will be held during the General Assembly. For more details, please refer to pg. 266~267.

Joseph Jin Chang Award

Dr. Seog Bae OH's work has focused on understanding of molecular and cellular mechanisms of physiological nociception, and how their changes transit to chronic pain in pathological conditions. He has been studying these topics through multidisciplinary approaches- from gene to behavior, and from molecular level to systemic level, and recently extending to the cognitive level. More specifically, his research goal is to better understand role of neuro-immune interaction in the peripheral neuropathy and the pathophysiology of trigeminal pain, and thereby to find a novel and mechanism-oriented therapeutics for targeting intractable chronic pain conditions.

He demonstrated direct activation of peripheral sensory neurons by chemokines and glycoprotein 120, outer coat protein of human immunodeficiency virus (HIV) (J Neurosci, 2001), and found that activation of neuroglia and microglial p38 MAPK contributes to tactile hypersensitivity after trigeminal nerve injury (Pain, 2006), and presented neuropathic pain gene-expression signatures in spinal microglia following nerve injury through single-cell transcriptome analysis (Pain, 2016). From works on the response and function of natural killer (NK) cells after peripheral nerve injury, he discovered a novel role of NK cells in axonal degeneration, and proposed NK cells as a therapeutic target for neuropathic pain (Cell, 2019). He elucidated distinctive role of TRPV1 expressed by central terminals of primary sensory afferents (J Neurosci, 2009) and GABAergic interneurons in the spinal dorsal horn neurons (Neuron, 2012). As a dentist, he has been also trying to understand molecular and cellular mechanism underlying three hypotheses which explain tooth pain hypersensitivity: neural theory, hydrodynamic theory and odontoblast transducer theory (JBC, 2006; JDR, 2003, 2010, 2011, 2013, 2017, 2018). His additional recent research interest is how the feeding behavior such as fasting and satiety is associated with pain behavior in the acute nociceptive pain (Pain, 2019) and also under chronic pain conditions.

Seog Bae Oh, DDS/PhD

Professor,
Department of Neurobiology and Physiology School of Dentistry,
Department of Brain and Cognitive Sciences School of Natural Sciences,
Seoul National University,
Seoul, Republic of Korea

Email
odolbae@snu.ac.kr

Yong-Seok Lee, PhD

Associate Professor
Department of Physiology
Department of Biomedical Sciences
Seoul National University
College of Medicine
Seoul, Republic of Korea

Email
yongseok7@snu.ac.kr

Education

2000-2002	Research Associate in Dept. Mol. Pharm. & Biol. Chem. Northwestern University Medical School, USA (Advisor: Dr. Richard Miller)
1998-2000	Postdoctoral fellow in Dept. Neurobiology, Pharm. & Physiol. Sci. University of Chicago, USA (Advisor: Dr. Richard Miller)
1990-1997	MS (1992), PhD (1997), Graduate School, Seoul National University, Seoul, Korea
1984-1990	DDS, College of Dentistry, Seoul National University, Seoul, Korea

Academic Appointments

2002-Present	Professor in Dept. of Neurobiology and Physiology, School of Dentistry Seoul National University, Assistant professor (2002), Tenured Associate Professor (2006) and Professor (2011)
2013-Present	Professor in Dept. of Brain and Cognitive Sciences College of Natural Sciences, Seoul National University
2007-2010	Honorary Visiting professor, University of Manchester, UK
2008-2009	Visiting professor, Dept. of Neurobiology Harvard Medical School, USA

Scitech Korea Young Scientist Award

Yong-Seok Lee obtained his PhD in Dr. Bong-Kiun Kaang's laboratory at Seoul National University, South Korea in 2006. During PhD, he studied the molecular mechanism of long-term synaptic plasticity in *Aplysia*. He established the first EST database for *Aplysia kurodai* (Lee et al., PNAS 2008) and cloned the 5-HT receptor which is a key molecule in synaptic plasticity and memory in *Aplysia* (Lee et al., PNAS 2009). He was also a visiting student in Dr. Min Zhuo's lab in University of Toronto, where he studied the distinct role of NMDA receptor subtypes in plasticity and memory (Zhao, Toyoda, Lee et al., Neuron 2005). As a postdoctoral fellow in Dr. Alcino J. Silva's laboratory at UCLA, he investigated the mechanism and treatment for cognitive deficits associated with neurodevelopmental disorders using mouse models and published several highly cited papers in the field of molecular cellular cognition (Lee and Silva, Nat Rev Neurosci 2009). In his own laboratory at Seoul National University College of Medicine, he is interested in understanding biological mechanism underlying cognitive function such as learning and memory and social behavior in healthy and diseased brains by using mouse models. In particular, a series of papers from his group contribute to the understanding the contribution of cell type-specific RAS signaling networks to brain functions (Lee et al., Nat Neurosci 2014; Ryu et al., Sci Signal 2019). He has published 72 papers in peer-reviewed journals including Nature Neuroscience, Neuron, PNAS, and J Neuroscience. He is an active member of local and international neuroscience societies including Korean Society for Brain and Neural Sciences, Molecular and Cellular Cognition Society and SfN.

1994-1998	BS, Seoul National University, South Korea
1998-2000	MS, Seoul National University, South Korea
2000-2006	PhD, Seoul National University, South Korea
2007-2013	Postdoctoral fellow, University of California Los Angeles, USA
2013-2016	Assistant professor, Chung-Ang University, South Korea
2016-Present	Associate professor, Seoul National University College of Medicine, South Korea

Socials

Journals

How a journal handles your paper
(hosted by Neuroscience, the IBRO Journal)

Organizer Name	Juan Lerma
Organizer Affiliation	Instituto de Neurociencias CSIC-UMH
Organizer E-mail	jlerma@umh.es
Host Organization	Neuroscience, the IBRO Journal.
Day/Time	Sun. (Sept. 22), 12:00 - 14:00
Place	Room 320, EXCO
How to attend	Open to all delegates

EN Side meeting
(hosted by EN (Experimental Neurobiology) Journal)

Organizer Name	C. Justin Lee
Organizer Affiliation	IBS (Institute for Basic Science)
Organizer E-mail	cjl@ibs.re.kr
Host Organization	EN (Experimental Neurobiology) Journal
Topic	Experimental Neurobiology Editor's Social
Day/Time	Mon. (Sept. 23), 20:00 - 22:00
Place	Room 320B, EXCO
How to attend	Applicants only

Institute

INCF: A standards organization for open and FAIR neuroscience
(hosted by International Neuroinformatics Coordination Facility)

Organizer Name	Helena Ledmyr
Organizer Affiliation	Ineternational Neuroinformatics Coordination Facility
Organizer E-mail	helena@incf.org
Host Organization	Ineternational Neuroinformatics Coordination Facility
Topic	Collaborative neuroscience
Day/Time	Sat. (Sept. 21), 17:00 - 19:00
Place	Room 323A, EXCO
How to attend	Guests need to register at this link: https://www.eventbrite.com/e/ibro-2019-meeting-incf-a-standards-organization-for-fair-neuroscience-tickets-67007040863

Satellite Meetings & Events

IBRO Satellite for International Sport Neuroscience Conference
(hosted by Japan Sport Neuroscience Meeting / JSPFSM)

Organizer Name	Hideaki Soya
Organizer Affiliation	Department of Sports Neuroscience, Advanced Research Initiative for Human High Performance (ARIHHP), Faculty of Health and Sport Sciences, University of Tsukuba, Japan
Organizer E-mail	soya.hideaki.gt@u.tsukuba.ac.jp
Host Organization	Japan sport neuroscience meeting / JSPFSM
Topic	Sport neuroscience
Day/Time	Wed. (Sept. 18) - Thu. (Sept. 19)
Place	Tsukuba City, Japan / International Congress Center EPOCHAL TSUKUBA

IBRO Satellite meeting for 'Synaptic Function and Neural Circuitry'
(hosted by Institute for Basic Science/KAIST and Leibniz Institute for Neurobiology)

Organizer Name	Eunjoon Kim and Michael R. Kreutz
Organizer Affiliation	Institute for Basic Science/KAIST and Leibniz Institute for Neurobiology, Korea and Germany
Organizer E-mail	kime@kaist.ac.kr, kreutz@lin-magdeburg.de
Host Organization	Institute for Basic Science/KAIST and Leibniz Institute for Neurobiology
Website	www.ibro2019-satellite.org
Topic	Synaptic Function and Neural Circuitry
Day/Time	Wed. (Sept. 18) - Fri. (Sept. 20)
Place	Shilla Stay, Haeundae, Busan, Korea

Molecular and Cellular Cognition Society-Asia 2019 meeting
(hosted by MCCS, Synapse Section of the KSBNS, Seoul National University)

Organizer Name	Bong-Kiun Kaang, Satoshi Kida, Yong-Seok Lee, Jin-Hee Han
Organizer Affiliation	Seoul National University, University of Tokyo, KAIST
Organizer E-mail	kaang@snu.ac.kr, kida@nodai.ac.jp, yongseok7@snu.ac.kr, han.jinhee@kaist.ac.kr
Host Organization	Molecular and Cellular Cognition Society (MCCS), Synapse Section of the KSBNS, Seoul National University
Topic	Advances in Molecular and Cellular Cognition Research
Day/Time	Thu. (Sept. 19) - Fri. (Sept. 20)
Place	Seoul National University Gwanak Campus, Mok-Am Hall (Bldg 500)

International Symposium on Neurogenesis, Regeneration and Pain
(hosted by Neurospine, ASIA SPINE)

Organizer Name	Yoon Ha and Inbo Han
Organizer Affiliation	The Korean Spinal Neurosurgery Society, Korea
Organizer E-mail	hanib@cha.ac.kr, HAYOON@yuhs.ac
Host Organization	Neurospine, ASIA SPINE
Topic	Neurogenesis, Regeneration and Pain
Day/Time	Fri. (Sept. 20), 13:30 - 17:30
Place	Seoul Dragon City

International Brain Initiative(IBI) Meeting

Host Organization	International Brain Initiative (IBI)
Topic	International Brain Initiative (IBI) Meeting
Day/Time	Mon. (Sept. 23) - Tue. (Sept. 24)
Place	Hotel Inter-Burgo EXCO
How to attend	By invitation only

Global Neuroethics Summit (GNS) 2019

Host Organization	Global Neuroethics Summit (GNS)
Topic	Global Neuroethics Summit (GNS) 2019
Day/Time	Wed. (Sept. 25) - Fri. (Sept. 27)
Place	Hotel Inter-Burgo EXCO
How to attend	By invitation only

Luncheon Seminars

Sat. (Sept. 21)

INTERNATIONAL
BRAIN RESEARCH
ORGANIZATION

LS 00

ORGANIZER **GNT Pharma**
ROOM 325, 3F TIME 12:00-13:30

Breakthroughs in Stroke and Alzheimer's Disease Treatment

BYOUNGJOO GWAG (CEO, GNT Pharma)

Sponsored by GNT Pharma

GNT Pharma is pleased to share breakthrough translational challenge for the development of stroke and Alzheimer's disease treatment.

Part I : Nelonmedaz: a breakthrough therapy for stroke

Nelonemdaz (Neu2000) is a multi-target neuroprotectant preventing both the NMDA receptor and free radicals, two major routes of brain cell death following stroke attack. Nelonemdaz shows excellent efficacy in 4 different animal models of stroke. The efficacy and safety of nelonemdaz are superior to conventional NMDS receptor antagonists and antioxidants. Its safety has been proven through Human phase I clinical test in the US (95 healthy subjects) and also in China (70 healthy subjects) with treatment index = 30-800 times depending on the stroke type.
Two Phase II Clinical trials for stroke patients have been conducted in China (ENIS II trial) and South Korea (SONIC II trial). The ENIS II trial has been successfully completed for 238 patients in July 2019. The SONIC II trial is the first clinical trial for acute ischemic stroke patients receiving endovascular treatment and has successfully enrolled 164 patients.

Part II : Crisdesalazine: a new hope for Alzheimer's disease

Crisdesalazine (AAD-2004) prevents both free radicals and PGE2-(microsomal prostaglandin E synthase-1) mediated inflammation, which are the key pathological mediators of neuronal death in Alzheimer's disease (AD).

Nearly all AD drug candidates show beneficial effects in transgenic mouse models of AD but sad to say have failed in clinical trials over the decades. To overcome the limit of the mouse models, we explored a new translational road to connect canine cognitive dysfunction syndrome (CCDS) that is accompanied by histopathological features of amyloid plaques, neuronal loss, and neurofibrillary tangles very similar to AD. We conducted a pilot clinical study to examine if crisdesalazine would show beneficial effects in dogs with severe CDS. Oral administration of crisdesalazine for 8 weeks remarkably improved cognitive function and daily activity in companion dogs with severe CDS, also showing disease-modifying effect. A phase III study (SMART trial) of crisdesalazine for CCDS is ongoing and expected to complete by the end of 2019. CCDS as well as mouse models will pave a new way for better translation of AD drugs.

Sun. (Sept. 22)

LS 01

ORGANIZER **Korea Non-clinical Technology Solution Center**
ROOM 211, 2F TIME 12:40-14:30

Innovative Animal Model Generation and Application with Highly Efficient Gene Editing Technologies

CHAOSHE GUO (Vice President, Beijing Biocytogen Co., LTD; Biocytogen Boston Corp.)

Gene Edited animal models have been widely used and play crucial roles in biomedical research and drug discovery. Thanks to the development of new gene editing tools such as CRISPR/Cas9, generation of gene modified animal models of different species and strains practically not only is possible but also becomes cost and time effective. Furthermore gene therapy using gene editing technologies has very promising potentials. To improve knockin efficiency of CRISPR/Cas9 technology, Biocytogen develops a CRISPR-based Extreme Gene Editing System (EGETM). Compared with standard CRISPR/Cas9, EGE system can enhance knockin efficiency by 10-20 folds. Meanwhile we found CRISPR/Cas9 technology may cause more random integration than traditional mouse ESC/HR method. To ensure the quality of animal models, random integration has to be eliminated by strict quality control step such as southern blot. Recently we extend our knockin capability to magabase (Mb) level using chromosome engineering technology and successfully developed fully human antibody mice (RenMab) in which variable regions of mouse heavy chain and kappa light chain are completely replaced by human counterpart. In the past 10 years, Biocytogen has become one of the global leaders in gene edited animal model production with its highly reliable and efficient technology platforms and served 1500+ clients from academic institutes and biopharmaceutical companies around the world. In 2018, we delivered over 1500 gene modified mouse/rat models/cell lines for our clients. Working together with our academic partners, Biocytogen has created a series of gene modified rat models to facilitate the research of neuroscience including AD study. Furthermore, our unique models which range from single and double humanized immune checkpoint mouse models (e.g. B-hPD-1 mice), to human immune system reconstituted immune-deficient mice (B-NDG mice), are extremely useful for in vivo efficacy studies as they are excellent tools to evaluate antibody and compound candidates targeting specific human immune checkpoints at various stages of drug development.

LS 02

ORGANIZER **DONG-A ST** CHAIR Taeyoung Yoon, PhD (Dong-A ST, SVP)
ROOM 306, 3F TIME 12:40-14:30

iPSCs: A Bridge from Discovery to Clinic

TAEYOUNG YOON (PhD, Dong-A ST, SVP), JANGHWAN KIM (PhD, KRIBB), JINJU HAN (PhD, KAIST), JINSOO SEO (PhD, DGIST), YE HWANG CHEONG (PhD, Dong-A ST)

Chair Taeyoung Yoon, PhD (Dong-A ST, SVP)

Induced pluripotent stem cell (iPSC) technology has provided unique opportunities for disease modeling, regenerative medicine and new drug discovery. In particular, the technology can shed new light on the cellular mechanism underlying brain disorders, for which human tissue samples are difficult to obtain. Here, we discuss how iPSC-based approaches can help expand our knowledge on brain disorders and enable targeted drug discovery.

[1] Janghwan Kim, PhD (KRIBB, Reprogramming with pluripotency factors and disease modeling)
[2] Jinju Han, PhD (KAIST, microRNAs regulating neurodevelopment and their associated diseases)
[3] Jinsoo Seo, PhD (DGIST, The use of human iPSC in Alzheimer's disease research)
[4] Ye Hwang Cheong, PhD (Dong-A ST, Drug discovery using iPSC platforms)

LS 03

ORGANIZER **DNA Link**
ROOM 324, 3F TIME 12:40-14:30

[1] Gain a Multidimensional View of Complex Biology
[2] Dissecting cellular heterogeneity using single-cell RNA-seq
[3] Visium Spatial Gene Expression Solution: Discover the Genes that Matter While Preserving Spatial Information.

[1] KEN OSAKI (10x Genomics), [2] JONGKYOUNG KIM (Department of New biology, DGIST), [3] NIKHIL RAO (10x Genomics)

[1] Whether you want to generate more complete cost-effective genomes, study complex biological systems at a single cell resolution, or investigate the adaptive immune system, 10x Genomics offers solutions to accelerate your research. 10x provides innovative tools to allow you to characterize single cells, single spatial regions, and other cellular features to help you gain a multi-dimensional view of biology. Learn how 10x Genomics can help you gain novel insights using our genomics, epigenomics and transcriptomics products.

[2] Cell-to-cell variability in gene expression exists even in a homogeneous population of cells. Dissecting such cellular heterogeneity within a biological system is a prerequisite for understanding how a biological system is developed, homeostatically regulated, and responds to external perturbations. Single-cell RNA sequencing (scRNA-seq) allows the quantitative and unbiased characterization of cellular heterogeneity by providing genome-wide molecular profiles from tens of thousands of individual cells. In this talk, I present an overview of scRNA-seq protocols and apply this approach to dissect cellular heterogeneity in hippocampus, stomach and adipose tissues.

[3] The relationship between cells and their relative locations within a tissue sample can be critical to understanding disease pathology. Spatial transcriptomics is a groundbreaking technology that allows scientists to measure all the gene activity in a tissue section and map where the activity is occurring. Already, this technology is leading to new discoveries that will prove instrumental in helping scientists gain a better understanding of biological processes and disease. Here we show how 10x Visium's technology can achieve mRNA whole transcriptome gene signatures with high resolution in tissue sections. The technology provides an entire end-to-end section to library workflow that can be done in under one day. Visualization tools provide ways of analyzing the data paired with a standard H&E image to trace gene expression and identifies cell cluster populations in the context of the image. We show how this technology provides a much clearer picture in applications such as oncology, neuroscience, immunology, and cardiovascular science in a way that has never been done before.

LS 04

ORGANIZER **Bio-Techne**

ROOM 325, 3F TIME 12:40-14:30

In situ validation and spatial mapping of diverse striatal cells identified by scRNA-seq in the mouse brain at single-cell resolution

YEOMPYO LEE (MDxK , Field Application Manager)

Characterizing the transcriptomic profiles of individual cells by single-cell RNA sequencing (scRNA-seq) has become a universal tool to identify both known and novel cell types and to understand tissue structure and function, ushering in a new era of single cell biology. This has proven to be especially true in complex organs with high cellular heterogeneity, such as the mammalian brain. However, scRNA-seq utilizes dissociated cells and results in the loss of spatial organization of the cell population being analyzed. Validation and spatial mapping of scRNA-seq results can be obtained using assays that retain spatial organization, such as RNA in situ hybridization (ISH). We validated the major gene signatures identified by scRNAseq, including discrete D1 and D2 medium spiny neuron (MSN) subtypes: Drd1a/Foxp1, Drd1a/Pcdh8, Drd2/Htr7, and Drd2/Synpr. Further cellular heterogeneity within the MSN subpopulations was marked by a transcriptional gradient, which we could spatially resolve with RNA ISH, revealing that cells highly expressing one end of the gradient were located in a region adjacent to cells highly expressing the other end of the gradient, with a small overlapping region containing co-expressing cells. Lastly, we validated heterogeneity within non-neuronal striatal cell types, including vascular smooth muscle cells, endothelial cells, microglia, macrophages, and oligodendrocytes.

LS 05

ORGANIZER **Logos Biosystems**

ROOM 211, 2F TIME 12:40-14:30

Deeplabel immuno-staining technology and advanced tissue clearing system for high-resolution 3D imaging: Application in Alzheimer's disease research

YOUNGSHIK CHOE

Neurons are functional units as a form of three dimensional network. The connection at synapses is critical for the normal neural functions such as cognition, memory, learning and emotion and deterioration of the connectivity is the cause of brain diseases such as Alzheimer's disease. Amyloid plaques, accumulation of the vicious proteins including amyloid in the brain, has been the hallmark of Alzheimer's disease, however, the circuit level understanding of the amyloid plaques is limited. In this presentation, I will talk about the utilization of Deeplabel immune-staining coupled with tissue clearing system to unveil the three dimensional aspect of neural circuit damages of brain diseases such as Alzheimer's disease

LS 06

ORGANIZER **HYUNDAI Mortor Company**

ROOM 306, 3F TIME 12:40-14:30

Human Phenome: Why Digital Phenotyping will be a topic of the Future

DONG-SEON CHANG (Hyundai Motor Group, Head of Future Technology Strategy Team), CHEIL MOON (DGIST)

Open Panel Discussion

LS 07

ORGANIZER **EN (Experimental Neurobiology) Journal**

ROOM 324, 3F TIME 12:40-14:30

Experimental Neurobiology Lunchen Seminar

C. JUSTIN LEE (Institute for Basic Science), MIN CHO (Neuroscience Next at Wiley Inc)

This event combines introductory presentations by the editors from major scientific journals and an open panel discussion. The aim is to have an open exchange about the evolving landscape of neuroscience research and scientific publishing. Topics of discussion will include

How Editors Define Novelty and Advance

Scientific journals and preprint archive
Peer review process
Common mistakes frequently encountered in submission
Future of neuroscience
Career path for neuroscientists

Attendees are welcomed to participate by asking questions to the panelists.

Organizer

Min Cho (Neuroscience Next)

Co-organizers

C. Justin Lee (Institute for Basic Science)
Bong-Kiun Kaang (Seoul National University)

Speakers

Lisa Chong (Science)
Sarah Geisler (Cell)
Marina Picciotto (Journal of Neuroscience/Yale University)
Jerome Staal (Nature Communications)

Panelists

Min Cho (Editor-in-Chief, Neuroscience Next)
Lisa Chong (Editor - Insights, Science)
Sarah Geisler (Scientific Editor, Cell)
C. Justin Lee (Editor-in-Chief, Experimental Neurobiology)
Marina Picciotto (Editor-in-Chief, Journal of Neuroscience/Yale University)
Jerome Staal (Associate Editor, Nature Communications)

LS 08

ORGANIZERS **Women in World Neuroscience (WWN), Korea Brain Research Institute (KBRI), Korea Federation of Women's Science and Technology/Associations (KFWST)**

ROOM 325, 3F TIME 12:40-14:30

Women World Neuroscience Science Policy Forum: Is there a Leaky Pipeline in Asia?

EMMELINE EDWARDS, MARTHA DAVILA-GARCIA, SUNG-JIN JEONG

The Women in World Neuroscience (WWN) group, the Korea Brain Research Institute (KBRI) and the Korea Federation of Women's Science and Technology/Associations (KFWST) proposes to address potential challenges encountered by women neuroscientists across Asia in advancing their careers in basic, translational and clinical neuroscience. In fulfilling this mission, the WWN Group seeks to develop a roadmap for regional and international networking, collaboration and partnerships for women neuroscientists. This science policy forum is in conjunction with the 2019 IBRO World Congress in Daegu, South Korea. Our goal is to direct attention on efforts that promote sustainability and mentoring of Asian women in basic, clinical and translational neuroscience research. The forum will also highlight strategies for improving participation of female neuroscientists in basic, clinical and translational neuroscience research. Our speakers' roster includes an international pool of neuroscientists from universities across Asia including South Korea, China, and Japan, providing the audience with more regional information and from Israel and the USA. Our invited speakers also represent the basic, translational and clinical neuroscience research community, and the academic, industry and governmental perspective. The anticipated outcome is to provide insight into specific strategies around: Retention, Promotion, Tenure, and Mentoring. We also intend to discuss with the audience and gather information that can be developed and disseminated through Web conference presentations from experts, collaborative workgroup projects, and create a repository of best practices, resources and project materials.

Speakers

Dr. Mun Miock (The 1st Vice Minister of Ministry of Science and ICT)

Dr. Xiaohong Xu (Principal Investigator, Institute of Neuroscience, Chinese Academy of Sciences)
"Running on heels: a personal perspective of a Chinese female neuroscientist"

Dr. Noriko Osumi (Vice President, Tohoku University School of Medicine, Japan)
"Remind a gap and unconscious bias"

Dr. Hae Young Suh (Ajou University, South Korea)
"Woman neuroscientists in Korea"

Dr. Orly Weinreb (Senior lecturer, Technion-Israel Institute of Technology, Israel)
"Women neuroscientists in the middle east- past, present and future"

Dr. So Young Kim (Head of the Graduate School of Science & Technology Policy at KAIST)
"Still Fixing Numbers: Why Is the Pipeline Still Leaking?"

Mentoring Table Session

* Pre-registration is recommended: https://forms.gle/ZSMaA2TV9csq8KpG9

Tue. (Sept. 24)

LS 09

ORGANIZER **Merck Ltd. Korea**
ROOM 211, 2F TIME 12:40-14:30

Quantification of Low Abundant Neurodegenerative Biomarkers in Blood using MILLIPLEX® and SMC™ High Sensitivity Immunoassays

MICHAEL GODENY (Head of MILLIPLEX Reagent Portfolio)

Neurodegenerative disorders such as Alzheimer's Disease (AD) have become more prevalent worldwide as the population ages. Quantification of protein biomarkers in patients with AD and Parkinson's Disease (PD) is important for monitoring disease progression. Monitoring neurodegenerative biomarkers in cerebrospinal fluid (CSF) has led to much of our current understanding of AD. However, due to the invasive nature of collecting CSF samples, new blood biomarkers are needed. Here we report our results from screening biomarkers most commonly associated with neurodegenerative diseases using both MILLIPLEX® multiplex immunoassays for CSF screening and Single Molecule Counting (SMC™) high sensitivity immunoassays for serum and plasma screening. CSF samples from normal versus AD patients displayed significant differences in Aβ42, phosphorylated Tau, GFAP, NSE, PRNP and NRGN levels. However, many of these neurodegenerative disease biomarkers are not detectable in some blood samples due to low abundance and thus require higher sensitivity immunoassays. For example, our MILLIPLEX assays for Aβ42 detect these peptides in CSF but lack the sensitivity for measurement in blood. To this end, we developed SMCTM Aβ40 and Aβ42 immunoassay kits that can accurately quantitate Aβ40 and Aβ42 levels in human, mouse, and rat blood samples. Using this high sensitivity technology, Aβ 40, but not Aβ42, was shown to have significant correlation to AD plasma samples. In summary, SMC™ high sensitivity immunoassay kits can provide a powerful less invasive biomarker tool in studying the pathogenesis of neurodegenerative diseases such as Alzheimer's disease.

LS 10

ORGANIZER **JSK Biomed Inc.**
ROOM 306, 3F TIME 12:40-14:30

Every step of the way: Development, optimization, and validation of stem cell neurons

MIKE CLEMENTS (Axion BioSystems, Inc., Atlanta, GA, United States)

Producing a new neural stem cell model requires stages of development, optimization, and validation. For excitable cells, such as neurons, each of these stages requires functional assessment of the cellular electrical activity. Specifically, detection of functional electrical activity defines the development of an iPSC-derived neuronal model and provides a signal on which to optimize the model, ultimately leading to precise electrical phenotypes of human biology. Here, we present a series of case studies demonstrating the use of the Maestro multiwell microelectrode array (MEA) platform as a simple and label-free approach to quantification and optimization of functional electrical activity for human iPSC-derived neuronal models. A planar grid of microelectrodes embedded in the substrate of each well interfaces with cultured networks, such that the electrodes detect the raw electrical activity from the cells. For Neurons, MEA capture unit-level action potentials and quantify comprehensive measures of neural network activity, including synchrony and oscillations. The highlighted case studies will include characterization and optimization of neural network activity, application of iPSC-derived neurons for safety assessment, and validation of neural disease-in-a-dish phenotypes. These results support the continued use of the Maestro multiwell MEA platform for the development, optimization, and validation of iPSC-derived neuronal models to recreate human biology in vitro.

LS 11

ORGANIZER **Allen Institute for Brain Science**
ROOM 324, 3F TIME 12:40-14:30

Exploring the landscape of the brain with the Allen Cell Types Database

JEREMY MILLER

The Allen Institute for Brain Science is contributing to a broad effort to develop a census of cell types in the human and mouse brains. The Allen Cell Types Database provides comprehensive, standardized transcriptomic, electrophysiological, and morphological data from individual cells, open for the broad research community. This seminar will provide an overview of the scientific rationale for this work, the methodologies used for large-scale data collection, and highlight findings from early analysis of the data. For more information, please visit alleninstitute.org/ibro19.

LS 12

ORGANIZERS **Global Neuroethics Summit (GNS), Korea Brain Research Institute (KBRI)**

ROOM 325, 3F TIME 12:40-14:30

No longer Unthinkable: Why the 21st Century Neuroscientist needs Neuroethics

SUNG-JIN JEONG (Korea Brain Research Institute), KAREN ROMMELFANGER (Emory University)

The Global Neuroethics Summit is the annual product of the Neuroethics Workgroup (WG) of the International Brain Initiative (IBI). The Summit pursues varying strategies for addressing the societal and ethical implications of emerging neuroscience and neurotechnologies. As neuroscience is now a global endeavor, neuroethics must be equally prepared to address global value.

What keeps you up at night when you think about the brain?

The International Brain Initiative (IBI) is a consortium of 7 large-scale brain research projects around the globe. The global neuroethics workgroup of the IBI wants to know what the distinguished community of the IBRO thinks are important neuroethical topics to address. They also are exploring how to engage with scientists and the general public on neuroethical issues.

Schedule

Time	Agenda
12: 40 - 12:50	Karen Rommelfanger (moderator) Introduction to IBI / Global Neuroethics and live polling on neuroethics questions
12:50 - 15:50	Panelists describe neuroethics issues and relate them to the Neuroethics Questions for Neuroscientists〈https://www.cell.com/neuron/pdf/S0896-6273(18)30823-7.pdf〉(NeQN)
15:50 - 14:00	Live polling on neuroethics awareness and issues that most resonated with them of the issues raised
14:00 - 14:30	Q&A

Speakers

[1]Mu-ming Poo (Chinese Academy of Science, China Brain Project)
Why frontier neuroscience needs frontier neuroethics: nonhuman primate and intelligence genes as example (NeQN 2)

[2]Khara Ramos (NIH BRAIN Initiative)
Issues around proxies for human brain research, e.g. organoids, and post-mortem restoration of activity (NeQN 3)

[3]Norihiro Sadato (Japan Brain/MINDS)
Understanding the neural basis of psychiatric disease and implications for stigma (NeQN 1)

[4]Arleen Salles (Human Brain Project)
Discuss one of the recent HBP ethics reports: dual use/consciousness/data privacy (NeQN 5, 3, or 2)

[5]Sung-Jin Jeong (Korea Brain Research Institute)
Korea public awareness and priorities in neuroethics - live polling to see how IBRO compares to Korean public (NeQN 1-5, highlights many of the issues above)

* Pre-registration is recommended: https://forms.gle/1sxt7LJEqtBapssW7

LS 13

ORGANIZER **National Research Foundation of Korea**

ROOM 211, 2F TIME 12:40-14:30

Public hearing for Korean neuroscience advancement program: Korean neuroscientists only

LS 14

ORGANIZER **National Research Center for Dementia in Chosun University(NRCD)**

ROOM 306, 3F TIME 12:40-14:30

[1]Incorporation of Novel Biomarkers to transform AD from a diagnosis of exclusion to a diagnosis of inclusion
[2]Distinctive roles of Ataxin-1 in Alzheimer's disease and spinocerebellar ataxia type 1
[3]Genome-wide association analyses of multimodal biomarkers for AD

[1]MARWAN N. SABBAGH (Lou Ruvo Center for Brain Health, Cleveland Clinic Nevada), [2]JAE HONG SUH (Harvard Medical School, Massachusetts General Hospital), [3]KUN HO LEE (National Research Center for Dementia)

[1]Historical medical evaluation of dementia due to AD is inaccurate 27% of the time even with the most expert evaluation. AD has been historically a diagnosis of exclusion. Technology is becoming available that greatly improves AD diagnostic accuracy. Here we propose a novel algorithm that incorporates: a structured history; an aggregate risk assessment; a cognitive screening measure; a thorough neurological examination incorporation of biomarkers such as ApoE and MagQu IMR. This approach has the potential to improve the accuracy of a diagnosis of dementia due to AD to >90% without escalation of costs.

[2]Expansion of CAG trinucleotide repeat in Ataxin-1 gene (ATXN1) is known to cause spinocerebellar ataxia type 1 (SCA1), a neurodegenerative disease that impairs coordinated movement. Recent genetic studies showed that ATXN1 is also associated with Alzheimer's disease (AD). In the present study, we demonstrated that loss of Ataxin-1 function increases BACE1 transcription in AD-vulnerable brain region, and produces AD-related phenoyptes in the brain. In SCA1 mice, we discovered that polyglutamine-expanded mutant Ataxin-1 causes deficits in axonal targeting and selective neurodegeneration in hippocampal CA2 region.

[3]Alzheimer's disease (AD) is a genetically complex disease and the most common form of dementia among elderly, accounting for 60-80% of dementia cases. The prevalence of AD is estimated to be approximately 13% among persons over age 65 and rapidly increases to 45% among those over age 85. For early identification of subjects without clinical symptoms at elevated risk, we have collected multimodal biomedical big-data including genomic variants, structural Magnetic Resonance Images (sMRI), amyloid-Positron Emission Tomography (A-PET), neuropsychological test result, and clinical diagnosis from the Korean participants aged 60 or above since 2014 (the total number of participants is about 12,000). Based on these multimodal datasets, we have focused our attention to reveal genetic risk factors responsible for AD development. We showed that the ethnic variability in AD/ Apolipoprotein E (APOE) ε4 allele association results from the difference in APOE promoter polymorphism. In addition, We performed genome wide association study (GWAS) with multi-dimensional endophenotypes, i.e., sMRI and PET images to identify genetic risk factors for AD carrying no APOE ε4 allele. The most potent candidate we identified is a genetic variant in PRDM gene, strongly associated with brain cortical atrophy and amyloid burden. Additional integrative translational and reverse-translational approaches revealed that the role of PRDM in AD development promising.

LS 15

ORGANIZER **ZEISS Korea**

ROOM 324, 3F TIME 12:40-14:30

Advanced Neuroscience Imaging Trend

XIANKE SHI

ZEISS will introduce the latest advanced Neuroscience Imaging analysis from Confocal to Electron Microscopy.

LS 16

ORGANIZER **NIKON**

ROOM 325, 3F TIME 12:40-14:30

Nikon MP Products for Neuroscience Research

YOSHIRO OIKAWA (Visiting Professor, Kyoto University)

Introduction of Multi photon Confocal Microscope

Optional Tour Program

INTERNATIONAL BRAIN RESEARCH ORGANIZATION

Located at the center of an area rich in tradition and culture, Daegu offers a myriad of attractions for all to enjoy. Exciting tour programs will offer 2019 IBRO Congress delegates a glimpse of authentic Korean culture. Explore the wonders of Daegu, Korea and make unforgettable memories!

- Tour schedule could be changed depending on local conditions.
- For detailed information, please visit on-site tour desk.
- Tour program website : ibro-tour2019.com

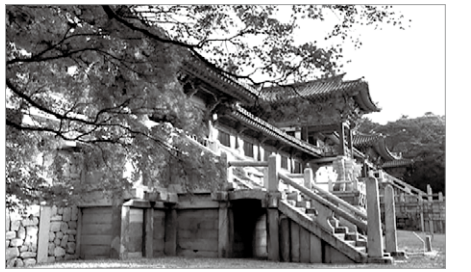
Official Tour – Mon. (Sept. 23)

UNESCO World Heritage Tour

Hapcheon

($10 / Departure Time | 13:30)

Tripitaka Koreana Record Culture Theme Park – Haeinsa Temple – Dinner



UNESCO World Heritage Tour

Gyeongju A

($10 / Departure Time | 13:30)

Bulguksa Temple – Gyochon Traditional Village – Dinner

UNESCO World Heritage Tour

Gyeongju B

($10 / Departure Time | 15:00)

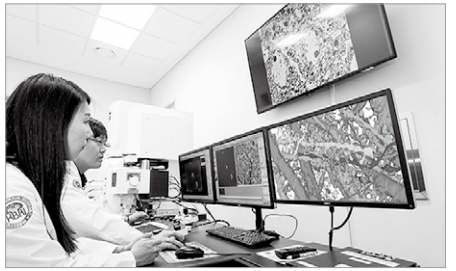
Bulguksa Temple – Dinner – Donggung Palace & Wolji Pond

UNESCO World Heritage Tour

Andong

($10 / Departure Time | 13:30)

Hanji (Korean paper) workshop – Hahoe Folk Village – Buyongdae Cliff – Dinner



Technical Tour

($10 / **Departure Time** | 13:30)

Korea Brain Research Institute – Laboratory Animal Center – New Drug Development Center – Donghwasa Temple – Dinner

Donghwasa Temple Tour

($10 / **Departure Time** | 13:30)

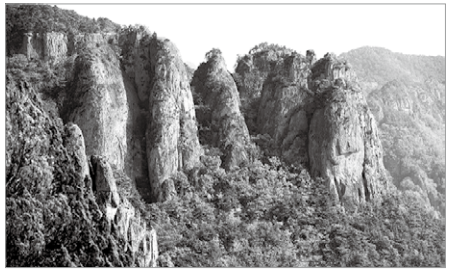
Palgongsan Mountain Cable Car – Donghwasa Temple – Dinner

Modern History Tour

($10 / **Departure Time** | 15:00)

Hyangchon Cultural Center – Daegu Modern History Street – Dinner – Seomun Night Market

Optional Tour



UNESCO Global Geopark Tour

Cheongsong

($10 / **Departure Time** | Sun. (Sept. 22), 09:00)

Cheongsong Folk Arts Village – Cheongsong Suiseki & Flower Stone Museum – Lunch – Yongchu Falls

UNESCO World Heritage Tour

Hapcheon

($10 / **Departure Time** | Tue. (Sept. 24), 09:00)

Tripitaka Koreana Record Culture Theme Park – Lunch–Haeinsa Temple

Daegu Night Tour

Apsan Observatory

($5 / **Departure Time** | Sat. (Sept. 21), 18:00)

Daegu Night Tour

Downtown Walking Tour

(Free Tour / **Departure Time** | Sun. (Sept. 22), 18:00)

Temple Cuisine Experience

($20 / **Departure Time** | Wed. (Sept. 25), 09:00)

Donghwasa Temple Stay – Daegu Textile Museum – Bullodong Ancient Tomb Park

*Tour programs are sponsored by Korea Tourism Organization and Daegu Convention & Visitors Bureau.

Author Index

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

Note

Note

Note

Special Thanks to Our Sponsors!

Acknowledgements: Sponsors & Exhibitors

Platinum

MERCK

Silver

UNESCO | THE KAVLI FOUNDATION | THE DANA FOUNDATION

Bronze

Advanced Targeting Systems | INSCOPIX | KIST Brain Science Institute

Symposium

The Journal of Physiology

Exhibition

MERCK | INSCOPIX | Advanced Targeting Systems

KIST Brain Science Institute | (주)킴앤프렌즈 A Company of Life Science | BINAREE make visible

ABclonal Technology | CSNpharm — Cell, Science & Nature — | RayBiotech The protein array pioneer.

SY Synaptic Systems | FD NEUROTECHNOLOGIES, INC. | absolute antibody

CellBiologics A CELL ABOVE THE REST | NORGEN BIOTEK CORP. | Stoelting SINCE 1886

MIGHTEX | neuracle 博睿康 | Motic MORE THAN MICROSCOPY

PLEXON | SCREEN | 3i Intelligent Imaging Innovations

Scientifica | Striatech | BioActs

益迪 Yidi® | logos biosystems | SK

JSK BIOMED | bio-techne | Leica MICROSYSTEMS

CRYSTE KOREA | 한국비임상기술지원센터 Korea Non-Clinical Technology Solution Center | GeneTex

SANGCHUNG 상정상사(주) | PeopleBio | (주)이우과학교역 IWOO Scientific Corporation

Global Neuroscience Company NeuroVIS | GNT PHARMA TOWARDS BETTER QUALITY OF LIFE | Nikon

OLYMPUS | ThermoFisher SCIENTIFIC | ELSEVIER

Teleopto Wireless Optogenetic Stimulator | inper | EG Technology

cyagen | KOMABIOTECH biotechnology | 항체제작 전문기업 AbClon 랩글론(주)

MAGIC TREE | Bio-Signal Technologies | sercrim LABTECH

Special Thanks to Our Sponsors!

Crayon
sartorius
maxwell BIOSYSTEMS
DGMIF
LCI
NEURACLE SCIENCE
바이오테크 Bio-Tech
FEMTONICS
BACHEM PIONEERING PARTNER FOR PEPTIDES
TecSco
DSHitech
SLB
oriBiO The Bridge of Life Science
GnS International
KBSI
Medical Capital of Korea MEDI·CITY DAEGU
B2? 비투바이오(주) From Biotechnology to What?
NEWDOON
BRAIN PRODUCTS Solutions for neurophysiological research
g.tec
MACS Miltenyi Biotec
RWD
(주)이츠바이오 ITSBiO
BioLegend
ybrain
MRSTC (주)미래에스티씨
DAON BIOSCIENCES
PhileKorea
PEPROTECH OUR SUPPORT, YOUR DISCOVERY
Humanizing Genomics macrogen
SOMETECH SINCE 1989
Leica BIOSYSTEMS
ALLEN INSTITUTE for BRAIN SCIENCE
FENS Federation of European Neuroscience Societies
CAJAL
EBC European Brain Council
KHGB Korea Human Gene Bank 한국인간유전자은행
THE ROYAL SOCIETY PUBLISHING
PanMun 범문에듀케이션
INTERNATIONAL BRAIN IBRO RESEARCH ORGANIZATION
Korea Brain Research Institute

Experimental Neurobiology en
UNESCO
KOREA TOURISM ORGANIZATION
HFSP
European Commission
erc European Research Council

Luncheon Seminar

MERCK
HYUNDAI
logos biosystems
JSK BIOMED
bio-techne
한국비임상기술지원센터
ALLEN INSTITUTE for BRAIN SCIENCE
DONG-A ST
DNA Link Your Link to Precision Genomics
ZEISS
GLOBAL NEUROETHICS SUMMIT | 2019
KOFST Korea Federation of Women's Science & Technology Associations
Women in World Neuroscience
Korea Brain Research Institute
UNESCO
WISET Center for Women In Science, Engineering and Technology
Nikon
National Research Center for Dementia
NRF National Research Foundation of Korea
Experimental Neurobiology en
GNT PHARMA

Advertisement

MERCK
HYUNDAI
illumina
SYSOFT
IVIM TECHNOLOGY
KDDF 법부처신약개발사업단 Korea Drug Development Fund
Theragen
NeuroNexus

Sponsor & Exhibitor Index

AbClon Inc.

항체제작 전문기업 AbClon 엡글론(주)

Contact Name : Ki Dong Lee (Korea, Republic of)

a 285, Digital-ro, Guro-gu, Seoul 08381, Republic of Korea

t +82 2 2109 1269 **m** +82 10 5281 1898 **f** +82 2 2109 1296

e kdlee@abclon.com **w** www.addscro.com / www.abclon.com

Exhibit Items : Disease prevention / Medicine & Drugs

AbClon is the therapeutic antibody company established in Seoul, Korea in 2010 by a group of antibody experts from Korea and Sweden. We are also involved in the CRO project related to antibody development. From protein expression purification to antibody production and antibody engineering, we are providing overall antibody-related services. Protein Expression Purification can be done both in E. coli and mammal, and if the antibody variable region sequence is known, it will be produced in IgG form. Antibody sequencing, humanization and affinity maturation are possible, and the most popular service is monoclonal antibody preparation using MANI protocol. The Monoclonal Antibody Next Innovation (MANI) protocol, developed independently by AbClon, is a dramatic increase in the number of positive clones that respond to antigens compared to SOP.

Advanced Targeting Systems

Advanced Targeting Systems www.ATSbio.com

Contact Name : Denise Higgins (San Diego, CA, USA)

a 10451 Roselle St, Ste 300

t +1 858 642 1988 **m** +1 619 889 2287 **f** +1 858 642 1989

e admin@atsbio.com **w** www.ATSbio.com

Exhibit Items : Others (research supplies)

Advanced Targeting Systems, "the Saporin people," provides products and services based on an innovative targeting technology. Specifically deliver payloads to cells using receptor-mediated internalization of a targeting agent. Purify populations in cell culture or eliminate cells in vivo. Create your own specific targeting tools—perfect for antibody screening for internalization.

Allen Institute for Brain Science

ALLEN INSTITUTE for BRAIN SCIENCE

Contact Name : Kaitlyn Casimo (USA)

a 615 Westlake Ave N

t +1 206 548 8455 **m** +1 206 618 2786

e events@alleninstitute.org **w** alleninstitute.org

Exhibit Items : Non-profit Organization

The Allen Institute for Brain Science is a division of the Allen Institute, an independent, 501(c)(3) nonprofit medical research organization, and is dedicated to accelerating the understanding of how the human brain works. The Allen Institute generates resources used by researchers around the globe, drives technological and analytical advances, and discovers fundamental brain properties through integration of experiments, modeling, and theory. Launched in 2003 by founder Paul G. Allen, the Allen Institute is supported by government, foundation, and private funds to enable its projects. The Allen Institute for Brain Science's data and tools are publicly available online at brain-map.org.

Aribio Co. Ltd., & Intek Bio

aribio The Bridge of Life Science

Contact Name : Boseung Seo (Korea, Republic of)

a 5F, 17, Pangyo-ro 228beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do 13487, Republic of Korea

t +82 70 7462 9491 **m** +82 10 3454 4561 **f** +82 70 7462 9485

e bsseo@aribio.com **w** www.aribio.com / www.intekbio.com

Exhibit Items : Medical devices & equipment / Medicine & Drugs

Aribio is committed to becoming the global leader in elevating the quality of life through development of innovative drugs to give hope to patients who suffer from incurable diseases. Our aim is to deliver highly functional products with excellent results that promotes health and prevention. Intekbio will be with you all the time. With us, begin a new era of In-vitro Diagnosis. Intekbio is going to take part in the AACC2019 exhibition in Anaheim.

B2bio, Inc

B2 비투바이오(주) From Biotechnology to What?

Contact Name : Woong Chan Lee (Korea, Republic of)

a 209, Woorim E-Biz Center, 35, Gwangnaru-ro 6-gil, Seongdong-gu, Seoul, Republic of Korea

t +82 2 6409 9338 **m** +82 10 4554 1203 **f** +82 2 995 9008

e chann17@b2bio.co.kr **w** www.b2bio-kr.com

Exhibit Items : Reagent

B2bio,Inc. is an import and distribution company supplying life science research-related reagents, consumables and laboratory equipment to universities, public institutions, hospitals and companies. We also supply bioprocess products related to laboratory basic consumables and biopharmaceutical production. Partner : Corning Lifesecience, Sorenson, Truline, Chromotek, Lifesensors, Biolamina, BioLifeSolutions, Promab, Lumigen, Advanced BioMatrix, VOLO

Bachem AG

BACHEM PIONEERING PARTNER FOR PEPTIDES

Contact Name : Rebekka Ranft (Korea, Republic of)

a Hauptstrasse 144 **t** +41 58 595 2267

e rebekka.ranft@bachem.com **w** www.bachem.com

Exhibit Items : Others (Peptides)

Bachem provides a comprehensive catalog of biochemicals available from stock and exclusive custom syntheses for research labs. A full range of services to the pharma and biotech industries complete the service portfolio.

Binaree, Inc.

BINAREE make visible

Contact Name : Youngil Park (Korea, Republic of)

a 608, 47, Gyeongdae-ro 17-gil, Buk-gu, Daegu 41566, Republic of Korea

t +82 53 291 5021

e hyun-jung.park@merckgroup.com **w** www.binaree.com

Exhibit Items : Medical devices & equipment (3D imaging)

Binaree, Inc. is researching and commercializing innovative tools and enables three-dimensional investigation of a tissue's molecular and structural information through simple, intact, high reproducibility clearing and immunostaining of tissue with penetrating deeply. Binaree also has experienced for zebrafish tissue clearing. And now the contract research services (CRS) for zebrafish available from tissue clearing to 3d imaging.

Bioclone Corp.

BioLegend

Contact Name : Sun-ae Choi (Korea, Republic of)

a 903, 551-17, Yangcheon-ro, Gangseo-gu, Seoul 07532, Republic of Korea

t +82 2 2690 58 **m** +82 10 2083 0179 **f** +82 2 2690 0397

e bioclone@bioclone.co.kr **w** www.bioclone.co.kr

Exhibit Items : Others (Biological Reagents)

BioClone Corp., is a privately held comapany that was founded in 2000, has built long- lasting customer relationships over the years that advance company' s quality product availability and service efforts leading to the introduction of antibody products that accelerate scientific discovery to improves human capacity in research, guiding our customers in everlasting and selecting the right products. Bioclone Corp's main related product supply services includes; Immunology, Molecular biology, Cell biology, Biochemical reagents and Instruments. Bioclone Corp., has been investing much in Biotechnology and continue to invest and provide services to all our valuable clients and scientists who dedicate there life to support research institutions carry out there work successfully.

Bio-Signal Technologies

Bio-Signal Technologies

Contact Name : Meifang Ma (McKinney, Texas, USA)

a 5201 Collin McKinney Parkway, Suite 1311

t +1 214 405 524 **m** +1 214 405 0524 **f** +1 214 405 0524

e mma@bio-signal.com **w** www.bio-signal.com

Exhibit Items : Medical devices & equipment

Bio-Signal Technologies is an extraordinary provider of intuitive, high-performance, multi-channel neurophysiology systems (recording/modulation) for studying the brain, spinal cord and peripheral nervous system during behavior. We are also a sought-after partner for developing new products and applications of neuroprosthetics and brain-machine interfaces (BMIs). Our product development process has user experience as its core which ensures instinctive product designs that can be operated efficiently with little to no training.

Bio-Techne

Contact Name : Amy Eunkyung Choi (Korea, Republic of)
a 4F, 117, Bundangnaegok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13529, Republic of Korea
t +82 10 4118 6878 **m** +82 10 4118 6878 **f** +82 504 446 4657
e amy.choi@bio-techne.com **w** www.bio-techne.com

Exhibit Items : Disease prevention / Medical devices & equipment / Medicine & Drugs

Bio-Techne empowers researchers in Life Sciences and Clinical Diagnostics by providing high-quality reagents, instruments, custom manufacturing, and testing services. Our family of brands creates a unique portfolio of products and services. Science is our passion; it drives us to collaborate, develop, and manufacture award-winning tools that help researchers achieve reproducible and consistent results. Whether researchers are at the cutting edge of academic research, translating basic discoveries to therapeutic leads, or at a facility that requires the highest level of diagnostic testing, our innovative products and services provide the solutions they need to achieve success.

Bio-Tech

Contact Name : Chang-sup KIM (Korea, Republic of)
a 77, Doandong-ro, Seo-gu, Daejeon 35367, Republic of Korea
t +82 42 544 2148 **m** +82 10 2374 2149 **f** +82 42 544 2147
e kcsub1382@hanmail.net **w** bioteck.co.kr

Exhibit Items : Medical devices & equipment

This is BiotecK, the Korean distributor of CGX in the U.S. Introduce dry and wet wireless EEG equipment. It provides very high signal quality with research equipment. Bioteck supports quoting, experimental support, and data analysis.

Brain Products GmbH

Contact Name : Liam Scannell (Gilching, Bayern, Germany)
a Zeppelinstr. 7
t +49 8105 7338 4574 **m** +49 160 9294 3052 **f** +49 810 5733 84505
e events@brainproducts.com **w** www.brainproducts.com

Exhibit Items : Others (Neuroscience Research Equipment)

Dedicated to the research and understanding of the human brain and nervous system since 1997. Our focus on positively impacting neuroscience made Brain Products the worldwide leading manufacturer of hard and software solutions for neurophysiological research. Our solutions cover a wide range of fields of ERP, BCI, EEG/fMRI, EEG/TMS, MoBI (Mobile Brain/Body Imaging), as well as infant, sports, sleep, behavioural sciences and similar disciplines. Since, for us, a solution is only a solution if it covers all the researcher's needs, we also offer a variety of psychophysiological sensors, easily integrated stimulation and analysis software, alongside free technical and scientific support.

Changchun New Industries Optoelectronics Tech. CO., LTD.

Contact Name : Ohmin Kwon (Korea, Republic of)
a 402, 40, Sosa-ro 160beon-gil, Bucheon-si, Gyeonggi-do 14766, Republic of Korea
t +82 10 3933 6744 **m** +82 10 3933 6744 **f** +82 32 341 4266
e ohmin@egtechnology.co.kr **w** www.egtechnology.co.kr

Exhibit Items : Others (LASER for optogenetics)

Based on our 30 years experience in electrochemical & optical field, We are supplying electrochemical analyzer, spectrometer and laser for optogenetics in economical way in S.Korea.

CRAyON technologies Inc.

Contact Name : Seunghyun Lim (Korea, Republic of)

a 603, 19, Sanmaru-ro, Guri-si, Gyeonggi-do 11901, Republic of Korea

t +82 31 575 7320 **m** +82 10 5005 6393 **f** +82 31 995 5994

e ls@crayontech.com **w** www.crayontech.com

Exhibit Items : Medical devices & equipment / Others (life science research equipment)

CRAyON technologies Inc. is founded by researchers at the Seoul National University College of Medicine. We develop and provide innovative imaging solutions that enable scientists to study detailed molecular and structural information of the biological samples in three-dimension.

CRYSTE KOREA Inc.

Contact Name : HyunA Lee (Korea, Republic of)

a 2404, 28, Gwangmyeongyeok-ro, Gwangmyeong-si, Gyeonggi-do 14349, Republic of Korea

t +82 2 335 2989 **m** +82 10 9344 2989 **f** +82 2 334 2989

e crystekorea@naver.com **w** www.cryste.co.kr

Exhibit Items : Medical devices & equipment / Others (Centrifuges, BSC, Tubes, etc)

CRYSTE KOREA specializes in domestic centfigue specialist brand CRYSTE and German representative plactis ware Sarstedt.

Cyagen US Inc.

Contact Name : Vanna Li (Santa Clara, CA, USA)

a 2255 Martin Avenue, Suite E, Santa Clara, CA 95050-2709, US

t +86 3160 2206 **m** +86 186 6482 5717

e vannali@cyagen.com **w** www.cyagen.com

Exhibit Items : Others (product brochures, small give-aways)

Founded in 2006, Cyagen US Inc. is a 400-employee contract research organization that has been providing both academic and non-academic laboratories with the highest quality custom-made models for over 10 years, while also serving as a cell culture product manufacturer. Headquartered in Santa Clara, CA, with branches in China and Japan. Our services range from DNA vector construction to embryonic stem cell manipulation and microinjection. Cyagen specializes in the production of custom-made genetically modified mouse and rat models, offering a "one-stop shop" tailored to your research needs. During the past decade, Cyagen has developed animal models using either proprietary ES cell-based gene targeting approach or engineered nuclease technology, allowing significant time and cost savings for our clients. We offer an industry best, 100% money back guarantee, free consultation and quotations, top tier customer support, and price matching for all major competitors. To date, Cyagen has generated hundreds of custom transgenic rodent lines while working with over 500 universities and companies worldwide, contributing to the publication of over 2400 research papers.

Daegu Wellness Tour

Contact Name : Bit Na Kwon (Korea, Republic of)

a 28, Gyeongsanggamyeong-gil, Jung-gu, Daegu 41919, Republic of Korea

t +82 53 601 5232 **m** +82 10 3980 9401 **f** +82 53 601 5099

e medical@exco.co.kr **w** www.medicitydaegu.com

Exhibit Items : Others

Daegu Wellness Tour is a program that represents the highest quality of Medicity Daegu. Daegu Wellness Tour organizes international programs for those who come over to participate for IBRO 2019. Our program can offer you medical services including Korean Traditional Medicine, Dermatology, Dental Care and more. We can provide you the best medical service while your time in Korea, and IBRO2019, by providing free transportation to the hospital and free medical care. If you are interested, or have any questions with our program, please leave us a mail to medical@exco.co.kr

Daegu-Gyeongbuk Medical Innovation Foundation

Contact Name : Jiyoung Yoon (Korea, Republic of)
a 88, Dongnae-ro, Dong-gu, Daegu 41061, Republic of Korea
t +82 53 790 5171 **m** +82 10 3904 5028 **f** +82 53 790 5199
e jyyoon@dgmif.re.kr **w** dgmif.re.kr

Exhibit Items : Non-profit Organization

DGMIF(Daegu-Gyeongbuk Medical Innovation Foundation) has invested KRW 4.6 trillion in Medivalley to build its core research facilities (the New Drug Development Center, Medical Device Development Center, Laboratory Animal Center, and Drug Manufacturing Center) in an area of 103 square meters within the Innovative City of Sinseo-dong, Dong-gu, Daegu City (4.22 million square meters). This investment has also been used to establish the Communication Center, run by local governments, and attract government-sponsored research institutes and research institutes operated by pharmaceutical companies.
Medivalley offers a superior infrastructure complete with advanced hospitals, ample human resources, superb educational facilities, and high-quality residential facilities. The DGMIF strives to become the No. 1 R&D hub for the healthcare and pharmaceutical industries by firmly establishing the identity and direction of Medivalley and conducting successful, world-class research activities.

DGIST Brain and Cognitive Sciences

Contact Name : BoGyu Jang (Korea, Republic of)
a DGIST E4, 333, Techno jungang-daero, Hyeonpung-eup, Dalseong-gun, Daegu 42988, Republic of Korea
t +82 53 785 6101 **m** +82 10 3873 2991 **f** +82 53 785 6109
e jangbk87@dgist.ac.kr **w** brain.dgist.ac.kr

Exhibit Items : Others (Brain and Cognitive Sciences)

Specialized education for Brain & Cognitive Sciences by performing cutting-edge research on the structure and function of the brain as a common theme without interdisciplinary barriers
Specialized Research Fields
- Neurodegeneration and Metabolism
- Sensory Biology and Circadian Rhythm
- Synapse Neuroscience
- Neural Circuits and Behaviors
- Computational Neuroscience, Biophysics and Quantum Biology
- High-level Cognitive Neuroscience

DAON BioSciences

Contact Name : Juyoung Park (Korea, Republic of)
a 1010, 165, Magokjungang-ro, Gangseo-gu, Seoul 07788, Republic of Korea
t +82 2 575 6227 **m** +82 10 2680 6989 **f** +82 2 575 6228
e juyoung.park@daonbs.com **w** www.daonbs.com

Exhibit Items : Others (Bioscience equipment & reagents)

DAON BioSciences is a company that introduces and supplies research equipment, reagents and services to Korean researchers that incorporate the latest biotechnologies. The technologies for single-cell genomic analysis which are widely used in research on precision medicine and genomics, are the main business area. DAON BioSciences is Korea distributor of 10x Genomics (single cell genomics).

DNA Link

Contact Name : Byungkwon Bae (Korea, Republic of)
a 2F, 150, Bugahyeon-ro, Seodaemun-gu, Seoul, Republic of Korea
t +82 2 3153 1535 **m** +82 10 3552 1574
e baebk@dnalink.com **w** dnalink.com

Exhibit Items : Others (NGS services)

DNA Link has been one of the most prominent genomic analysis institute in Korea. With its high capability in NGS technology, DNA Link was selected as a Korean participant for the Earth Biogenome Project, which is the largest genomic analysis consortium after the human genome project, and will be processing numerous genomic analysis projects in the globe throughout the upcoming years.

DONG-A ST

a 64, Cheonho-daero, Dongdaemun-gu, Seoul, Republic of Korea
t +82 31 280 0048 **m** +82 31 280 0048
e june.hahn@donga.co.kr **w** www.donga-st.com

Exhibit Items : Others (Luncheon Symposium)

Dong-A ST Co., Ltd. was founded in 1932 and is headquartered in Seoul, South Korea. Dong-A ST is built on a spirit of innovation and a commitment to help people around the world live healthy lives. Dong-A ST therefore set its new goal of becoming a 'global pharmaceutical company that is respected for R&D efforts focused on innovative new drugs' in 2017, based on which the company accelerated its pace of innovation by investing in R&D, while expanding its presence in the global market.

DS Hitech

Contact Name : Heegeun Kim (Korea, Republic of)
a 3F, 20, Olympic-ro 48-gil, Gangdong-gu, Seoul 05398, Republic of Korea
t +82 2 474 5351 **m** +82 10 5295 2638 **f** +82 2 487 5733
e dshitech@dshitech.net **w** www.dshitech.net

Exhibit Items : Medical devices & equipment

DS Hitech was established in 1987 to introduce and introduce advanced medical technology and information to the domestic medical field, and has supplied state-of-the-art medical equipments to the university hospital. We are researching and developing instruments especially in neurosurgery.

ELSEVIER

Contact Name : Alicia So-So (OXFORD, OXFORD, UK)
a ELSEVIER Ltd, The Boulevard, Langford Lane
t +44 18 6584 3670 **m** +44 186 584 3670
e a.so-so@elsevier.com **w** www.elsevier.com

Exhibit Items : Others (Journals)

Elsevier is a global information analytics business that helps scientists and clinicians to find new answers, reshape human knowledge, and tackle the most urgent human crises.

EUROPEAN BRAIN COUNCIL

Contact Name : STEPHANIE KRAMER (Belgium)
a Rue D'egmont 11, Brussels, Belgium
t +32 2 513 27 57 **m** +32 4 664 656 01
e projects@braincouncil.eu **w** www.braincouncil.eu

Exhibit Items : Organization / School

A non-profit organisation based in Brussels, its main mission is to promote brain research with the ultimate goal of improving the lives of the estimated 179 million Europeans living with brain conditions, mental and neurological alike.

Experimental Neurobiology

Contact Name : Jeeyoon Lee (Korea, Republic of)
a 8, Hangang-daero 43-gil, Yongsan-gu, Seoul 04376, Republic of Korea
t +82 2 871 1863 **m** +82 10 5176 0736 **f** +82 2 790 1862
e neuro@ksbns.org **w** www.enjournal.org

Exhibit Items : Others (Journals)

Experimental Neurobiology is an international forum for interdisciplinary investigations of the nervous system. The journal aims to publish papers that present novel observations in all fields of neuroscience, encompassing cellular & molecular neuroscience, development/differentiation/plasticity, neurobiology of disease, systems/cognitive/behavioral neuroscience, drug development & industrial application, brain-machine interface, methodologies/tools, and clinical neuroscience. It should be of interest to a broad scientific audience working on the biochemical, molecular biological, cell biological, pharmacological, physiological, psychophysical, clinical, anatomical, cognitive, and biotechnological aspects of neuroscience. The journal publishes both original research articles and review articles. Experimental Neurobiology is an open access, peer-reviewed online journal. The journal is published jointly by The Korean Society for Brain and Neural Sciences & The Korean Society for Neurodegenerative Disease.
Experimental Neurobiology is indexed/tracked/covered by Science Citation Index Expanded (SCIE), PubMed, PubMed Central (PMC), KoreaMed, Synapse, KoMCI, Google Scholar and Scopus.
This journal was supported by the National Research Foundation of Korea Grant funded by the Korean Government(MOE).

Federation of European Neuroscience Societies (FENS)

Contact Name : Michela Pichereddu (Brussels, Belgium)
a Rue d'Egmont 11
t +32 2 545 04 06 **e** michela.pichereddu@fens.org **w** www.fens.org

Exhibit Items : Non-profit Organization

Founded in 1998 at the first Forum of European Neuroscience, the Federation of European Neuroscience Societies (FENS) is the main organisation for neuroscience in Europe. FENS currently represents 43 European national and single discipline neuroscience societies with close to 22,000 member scientists from 33 European countries. FENS promotes excellence in neuroscience research and facilitates the exchange and networking between neuroscientists within the European Research Area and beyond.

Femtonics

Contact Name : Peter Csikota (Budapest, Non-U.S., Hungary)
a Tűzoltó utca 59.
t +36 3 0223 0540 **m** +36 3 0223 0540 **f** +36 1 797 2348
e pcsikota@femtonics.eu **w** femtonics.eu

Exhibit Items : Others (Multiphoton microscopes)

Femtonics focuses on the research and development of two-photon laser scanning microscopes for the booming area of cutting-edge brain research and pharmaceutical development. Our specialty is represented by the acousto-optical scanner-based Femto3D Atlas microscope which takes the ability to scan the three-dimensional sample with astonished speed and thereby it is unique on the market. On the field of traditional galvanometric and resonant scanner-based systems, we present our customers the flexibility and freedom to customize their own products according to their vision and objective. The high-valuable measurement and analysis solutions of our MES control software enables scientist to perform a wide variety of experiments. A well-selected microscope working together with the appropriate software modules shapes the customer's idea into the remarkable product.

FRONTIER RESEARCH OPPORTUNITIES THROUGH EU & INTERNATIONAL GRANTS & FELLOWSHIPS

[1]The Human Frontier Science Program (HFSP)
[2]The European Research Council (ERC)
[3]Marie Skłodowska-Curie Actions (MSCA)

Contact Name : Hyong-Ha KIM (Korea, Republic of)
t +82 42 868 5369 **m** +82 42 868 5369 **e** Hyongha.kim@gmail.com
w www.hfsp.org I erc.europa.eu I ec.europa.eu/research/mariecurieactions

Exhibit Items : Organization / School, Others **Others** : Research Policy & Info

[1]The HFSP promotes international collaboration in basic research focused on the elucidation of mechanisms of living organisms. It is a 30-year-old program implemented by the Human Frontier Science Program Organization (HFSPO), an International Organization supported with contributions of 15 countries including the Republic of Korea. HFSP includes grants and fellowship tracks selected based on high-risk, novel ideas.

[2]The ERC, which is slightly over 10 years old, is a flagship component of Horizon 2020, to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, on the basis of scientific excellence. ERC grants are for individual researchers with any nationality, hosted in Europe or Associated countries. However, Synergy Grant, which is a team research grant for collaboration of 2-4 PIs, can include one PI from a non-member state like Republic of Korea.

[3]The MCSA fellowships, operated by the European Commission Directorate General- Education, Youth & Culture, offer attractive career development opportunities in prestigious research teams in Europe for researchers, any scientific domain or nationality. There are 4 different tracks for various career stages, including ITN, IIF, RISE, COFUND.

- ITN I Innovative Training Network
- IIF I Individual Fellowships
- RISE I Research & Innovation Staff Exchange
- COFUND I Co=funding of regional, national & international programmes

GeneTex International Corporation

Contact Name : Kyenam Lee (Korea, Republic of)
a 42, Jangmi-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13496, Republic of Korea
t +82 31 707 1544 **m** +82 10 9418 8495 **f** +82 31 707 1999
e klee@essencemedical.com **w** www.genetex.com

Exhibit Items : Others (Research reagents such as antibodies)

GeneTex was founded in 1997 by three scientists with expertise in cancer research and infectious disease. Based on their experience and research interests, the original focus was breast cancer biology, many of the well-know clones for DNA repair studies are our founding products, such as ATM, ATR, rad51...etc. Our office was in Texas, that's why the company is named GeneTex. 10 years later, we opened a new manufacturing facility in Taiwan and then moved our office to California Irvine. Started from a small lab, now GeneTex is an internationally recognized antibody manufacturer. Currently, GeneTex provides more than 55,000 products and the primary antibody is the major product type. Founded by scientist, we understand that antibodies are an important tool for life science research, as a manufacturer, quality is always the important thing we care and we committed to the highest standards of product performance through our stringent quality control process.

GnS International

a 77, Techno 3-ro, Yuseong-gu, Daejeon, Republic of Korea
t +82 42 861 8613 **m** +82 10 9460 8617
e gnsinter@daum.net **w** www.gnsinter.com

Exhibit Items : Others (Dry type EEG)

A company that provides a bio-signal solution based on brain waves. (Dry type EEG, High Quality and Wireless EEG)

GNTPHARMA

Contact Name : Kim, Changgun (Korea, Republic of)
a 23, Yonggu-daero 1855beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do 17096, Republic of Korea
t +82 31 8005 9910 **m** +82 10 2491 8745 **f** +82 31 8005 9916
e cgkim@gntpharma.com **w** www.gntpharma.com

Exhibit Items : Medicine & Drugs

GNT Pharma was founded by 8 professors with research backgrounds in neuroscience, mental health, pharmacology, ophthalmology, and cell biology in 1998 to develop new medicines for better treatment of neurological disease which remain unmet medical needs and thus become tremendous social economic burden. Our vision is to develop innovative drugs and technology for treating patients with stroke, traumatic brain and spinal cord injury, neurodegenerative diseases, and pain, which will substantially improve the quality of life of patients around the world.

Guger Technologies OG

Contact Name : Francisco Fernandes (Schiedlberg, Upper Austria, Austria)
a Sierningstrasse 14
t +43 7251 222 40 21 **m** +43 660 111 4148 **f** +43 725 1222 4039
e fernandes@gtec.at / jay@uki114.com **w** www.gtec.at

Exhibit Items : Medical devices & equipment / Others (Research devices)

g.tec developed the first commercially available BCI system in 1999 and now sells this system in more than 60 countries worldwide. g.tec is a growing enterprise with two branches in Austria (Graz and Schiedlberg), one branch in Spain (Barcelona), one branch in the US (Albany, New York), one branch in Hong Kong and distribution partners all over the world. All hardware and software developments are done in-house by researchers, engineers and developers, and work with all major BCI approaches (motor imagery, P300, SSVEP and slow cortical potentials). g.tec is an active member in a number of national and international research projects and scientific publishing. g.tec's BCI technologies have been tested on more than 500 subjects internationally to guarantee a perfect working system.

Hangzhou Newdoon Technology Co.,Ltd

NEWDOON

Contact Name : Si Heng Li (Hangzhou, Zhejiang, China)

a 6f-d building 1001 west road

t +86 188 5605 8517 **m** +86 188 5605 8517 **f** +86 0571 8862 1570

e lisiheng@newdoon.com **w** www.newdoon.com

Exhibit Items : Medical devices & equipment / Medical supplies / Others (Optogenetics.)

Optogenetics.

HYUNDAI Motor Company

HYUNDAI

a 12, Heolleung-ro, Seocho-gu, Seoul, Republic of Korea

t +82 10 2086 9435 **m** +82 10 2086 9435

e dr.chang@hyundai.com **w** www.hyundai.com

Exhibit Items : Others (Automobile)

The Hyundai Motor Company, commonly known as Hyundai Motors is a South Korean multinational automaker headquartered in Seoul. The company and its own luxury brand Genesis, along with its subsidiary Kia motors altogether comprise Hyundai Motor Group, and it ranked 5th biggest automaker in the world.

IBE-UNESCO

UNESCO

Contact Name : Simona Popa (Geneva, Switzerland)

e s.popa@unesco.org **w** www.ibe.unesco.org

Exhibit Items : Organization / School

IBE-UNESCO is the global centre of excellence in curriculum and related matters. As a leading UNESCO Institute, it is recognized and valued for the specialist knowledge and expertise that it brings to Member States, promoting new shared global understanding of curriculum issues.

Illumina Korea

illumina

Contact Name : Jessica Kwon (Korea, Republic of)

a 14F KTB Bldg. 66 Yeoidaero

t +82 2 740 5300 **m** +82 10 2875 3132 **f** +82 2 786 8368

e jkwon@illumina.com **w** www.illumina.com

Exhibit Items : Disease prevention / Medical devices & equipment / Medical supplies

At Illumina, our goal is to apply innovative technologies to the analysis of genetic variation and function, making studies possible that were not even imaginable just a few years ago. It is mission critical for us to deliver innovative, flexible, and scalable solutions to meet the needs of our customers. As a global company that places high value on collaborative interactions, rapid delivery of solutions, and providing the highest level of quality, we strive to meet this challenge. Illumina innovative sequencing and array technologies are fueling groundbreaking advancements in life science research, translational and consumer genomics, and molecular diagnostics.

inper

inper

Contact Name : Cihang Yang(Hangzhou, Zhejiang, China)

a Room 1904, Building No.14, South Lake East Road, 311121, Yuhang District

t +86 0571 8603 5376 **m** +86 177 6451 9915 **f** +86 0571 8603 5309

e yang@inper.com **w** www.inper.com

Exhibit Items : Others (Neuroscience instruments and equipment)

inper is a high-tech company founded by neuroscientists who are dedicated to providing scientists with the best products. It has a self-developed Wireless Optogenetics System, Intelligent Optogenetics System, Fiber Photometry System. Each of the inper products has been carefully designed and developed, and has a very good reputation and brand image in the market.

Inscopix

Contact Name : Jacqueline DeRose (Palo Alto, California, USA)
a 2462 Embarcadero Way
t +1 650 785 2845 **m** +1 650 785 2845 **f** +1 650 517 7161
e jderose@inscopix.com **w** www.inscopix.com

Exhibit Items : Others (preclinical imaging devices & consumables)

Inscopix is a discovery phase neurotechnology company in Palo Alto developing a platform for real-time brain mapping. Our team brings together expertise in neuroscience, engineering, software, and data science and is enabling radically new approaches to understanding the brain in health and disease. nVista and nVoke, our flagship products, are used in research institutions worldwide, resulting in top-tier publications on brain circuits implicated in learning, memory, cognition, and disease.

International Brain Research Organization (IBRO)

Contact Name : Rebecca Hadid (Paris, Ile de France, France)
a 255 rue Saint Honoré
t +33 14 647 9292 **e** rhadid@ibro.org **w** www.ibro.org

Exhibit Items : Non-profit Organization

IBRO is the global federation of neuroscience organizations that aims to promote and support neuroscience around the world through training, teaching, collaborative research, outreach and advocacy. More than 90 international, national and regional scientific organisations constitute IBRO's Governing Council which, together with the five IBRO Regional Committees, address the needs and advance the work of individual scientists and research communities everywhere. In addition, IBRO has partnerships with like-minded scientific societies and organisations to identify priorities and help bridge gaps in knowledge, investment and resources in the field of brain research.

ITSBIO

Contact Name : Jihong Kim (Korea, Republic of)
a 812, 551-17, Yangcheon-ro, Gangseo-gu, Seoul 07532, Republic of Korea
t +82 2 3462 8658 **m** +82 10 9191 4474 **f** +82 2 3462 8659
e jhkim@itsbio.co.kr **w** www.itsbio.co.kr

Exhibit Items : Others (Animal experiment equipment & experimental research reagents)

Production and supplier of research reagents and experimental animal equipment for biotechnology

IVIM Technology

Contact Name : Sujin Park (Korea, Republic of)
a 193, Munji-ro, Yuseong-gu, Daejeon 34051, Republic of Korea
t +82 42 825 7450 **m** +82 10 2345 4077 **f** +82 42 825 7451
e Sujin.park@ivimtech.com **w** www.ivimtech.com

Exhibit Items : Others (IntraVital Microscopy)

IVIM Technology was founded based on the innovative technology of IntraVital Microscopy (IVM). IntraVital Microscopy is a technique that enables you to directly observe the movement of live cells that make up living tissue in vivo. The world's first All-in-One microscopy (IVM) platform developed by IVIM Technology explores the interactions among numerous cells inside the living organisms and will be the next generation high-tech imaging equipment to elucidate the complex processes of human diseases.

IWOO Scientific Corporation

Contact Name : YongSeok JO (Korea, Republic of)
a 5F, 30, Banpo-daero 23-gil, Seocho-gu, Seoul 12345, Republic of Korea
t +82 2 3473 2332 **m** +82 10 6368 8536 **f** +82 2 579 8873
e yscho@iwoo.co.kr **w** www.iwoo.co.kr

Exhibit Items : Others (Electrophysiology Research(Neuralynx,USA) Physiologic Monitoring System(DSI, USA), behavioral research(Panlab, spain))

We are a leading importer for high technology scientific instruments in Korea for more than 25 years. IWOO's focus on the scientific instruments for research & development of drug discovery and pre-clinical testing together with technically advanced staff, and experience in instruments sales for brain research, pharmacology market. And wide range of relationship with foreign supplier in worldwide under the exclusive distributorship.

JSK Biomed Inc.

Contact Name : Taeho Ko (Korea, Republic of)
a 403, 160, Techno 2-ro, Yuseong-gu, Daejeon 34028, Republic of Korea
t +82 42 369 1188 **m** +82 10 7363 3139 **f** +82 42 369 1187
e kth@jskbiomed.co.kr **w** www.jskbiomedls.co.kr

Exhibit Items : Medical devices & equipment

Real-time Cell Metabolism Analyzer(XF Analyzer/Agilent Seahorse), Micro-electrode Array-MEA Systems(Maestro/Axion Biosystems), Live Cell Holo-tomography Microscope(3D Cell Explorer/Nanolive)

KBRI

Korea Brain Research Institute

Contact Name : HaeRyung Jung (Korea, Republic of)

a 61, Cheomdan-ro, Dong-gu, Daegu 41068, Republic of Korea

t +82 53 980 8233 **e** lol1116@naver.com **w** www.kbri.re.kr

KBRI is the national brain research institute in Korea, aiming to become a global-leading brain research organization. The current era is not one defined by research conducted in isolation. To that end, KBRI is making concerted efforts to implement a Hub – and – Spoke research model that promotes collaboration across multiple sectors, including industry, academia, research, and medicine. As part of its goal to ensure the provision of across – the – board support for brain research within Korea, KBRI's resources are geared toward establishing research infrastructure, such as brain banks that compile and distribute resources dedicated to brain research, and the collection and utilization of brain – related big data.

KDDF

KDDF 재단법인 범부처신약개발사업단 Korea Drug Development Fund

Contact Name : Juree Lee (Korea, Republic of)

a 137, Mapo-daero, Mapo-gu, Seoul, Republic of Korea **t** +82 2 6379 3068

m +82 2 6379 3068 **e** juree@kddf.org **w** eng.kddf.org

Exhibit Items : Non-profit Organization

The Trans-Governmental, Full Cycle Novel Drug Development Project has been launched as a national R&D project. It is operated jointly by the ministries which have been supporting the area of novel drug development- The Ministry of Science and ICT, Ministry of Trade, Industry and Energy and Ministry of Health and Welfare.
For the project duration of 9 years between 2011 and 2020, annual investments of 30 -75 billion won will be made and 200 projects will be sponsored in total, based on the total project budget of 1.06 trillion won (0.53 trillion won from the government funding and 0.53 trillion won from the private funding).

Kim & Friends

(주)킴앤프렌즈 A Company of Life Science

Contact Name : Boyoul Kim (Korea, Republic of)

a 1401, 233, Gasan digital 1-ro, Geumcheon-gu, Seoul 08501, Republic of Korea

t +82 2 2647 6611

e kimnfriends@hanmail.net **w** www.kimnfriends.co.kr

Exhibit Items : Others (In vitro / In vivo Instruments and Reagents)

Kim & Friends, Inc. is the leading distributor based on integrity and sincerity to customers and market of Neuro Science in Korea. We have supplied wide spectrum of products for CNS studies including consumable items for in vitro works and equipment for in vivo behavior monitoring and recordings since 2006. Please tell us what you need. We can find and suggest the most suitable solutions.

KIST Brain Science Institute

KIST Brain Science Institute

Contact Name : Moran(Vanessa) Kang (Korea, Republic of)

a 5, Hwarang-ro 14-gil, Seongbuk-gu, Seoul 02792, Republic of Korea

t +82 2 958 7033 **m** +82 10 9870 4780 **f** +82 2 858 7034

e vanessak@kist.re.kr **w** bsi.kist.re.kr

Exhibit Items : Disease prevention / Medicine & Drugs

KIST Brain Science Institute. Through its focus on interdisciplinary studies, the Brain Science Institute is producing the creativity and expertise necessary for unlocking the mysteries of the human mind in order to revolutionize society through advances in science and medicine.

KOMA BIOTECH

KOMA biotechnology KOMABIOTECH

Contact Name : KJ SOHN (Korea, Republic of)

a 19F, 26, Yangpyeong-ro 21-gil, Yeongdeungpo-gu, Seoul 07207, Republic of Korea

t +82 2 2660 5670 **m** +82 10 3354 5012 **f** +82 2 578 7042

e kjsohn@komabiotech.co.kr **w** www.komabiotech.co.kr

Exhibit Items : Medical devices & equipment / Others (Custom production service (virus, gene, protein, antibody))

KOMA BIOTECH provides reagents and customer service for life science research including neuroscience, cell & gene therapy, immunology, cancer research and stem cell / regenerative study.

KOREA BASIC SCIENCE INSTITUTE (KBSI)

Contact Name : Daiha Shin (Korea, Republic of)
a 169-148, Gwahak-ro, Yuseong-gu, Daejeon 34133, Republic of Korea
t +82 42 865 3500 **m** +82 2 6908 6247
e shin0619@kbsi.re.kr **w** www.kbsi.re.kr

Exhibit Items : Organization/School

Research support and joint research for the promotion of basic science at national level

Korea Non-clinical Technology Solution Center

Contact Name : DoYeon Kim (Korea, Republic of)
a 79, Gwangmyeong-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do 13356, Republic of Korea
t +82 31 759 9934 **m** +82 10 3524 1077 **f** +82 31 758 9934
e info@kntsc.kr **w** www.kntsc.kr

Exhibit Items : Others (Nonclinical Services)

We are supporting the facilities such as the Pharmaceutical company, Bio venture company, university / Institute for the hospital planning or performing a non-clinical test that needed veterinary technology, and the health and well-being of all the experimental animals that the organization uses through an experienced clinical veterinarian.
Reliable and Highly Efficient Gene Editing System
- ES/HR technology(Embryonic Stem cell based Homologous Recombination)
- CRISPR-based EGE technology(Extreme Genome Editing)

Humanized Mouse Models for Immune Checkpoints and Other Immune modulators
Human Immune System Reconstitution in B-NDG Mice

Korea Research Institute of Bioscience and Biotechnology (KRIBB) Korea Human Gene Bank

Contact Name : Jeong-Ju Lee (Korea, Republic of)
a 125, Gwahak-ro, Yuseong-gu, Daejeon 34141, Republic of Korea
t +82 42 879 8123 **m** +82 42 879 8123 **f** +82 42 879 8119
e vanessak@kist.re.kr **w** genbank.kribb.re.kr / www.kribb.re.kr

Exhibit Items : Others (Human/Mouse cDNA clone)

Distribution of human/mouse cDNA clones

KOREA TOURISM ORGANIZATION

Contact Name : Heejin Kim (Korea, Republic of)
a 10, Segye-ro, Wonju-si, Gangwon-do 26464, Republic of Korea
t +82 33 738 3000 **m** +82 10 7363 3139 **f** +82 42 369 1187
e hjkim56@knto.or.kr **w** www.koreaconvention.org

Exhibit Items : Organization / School

Korea Tourism Organization(KTO) aims to develop Korea's tourism industry by promoting international tourism and tourism within Korea, developing the nation's tourism resources, conducting R&D. We have worked together with companies, academies and the government to further strengthen and develop tourism of Korea. KTO has contributed immensely to the stunning growth of Korea's tourism industry over the past fifty years.

Leica Biosystems Ltd. Korea

—

Contact Name : Annie Shim (Switzerland)

a Hauptstrasse 144

t +82 2 3416 4560

e annie.shim@leicabiosystems.com **w** www.leicabiosystems.com

Exhibit Items : Medical devices & equipment

Leica Biosystems is a cancer diagnostics company and a global leader in workflow solutions. Only Leica Biosystems offers the most comprehensive portfolio that spans the entire workflow from biopsy to diagnosis. With unique expertise, we are dedicated to driving innovations that connect people across radiology, pathology, surgery and oncology. Our experts are committed to delivering Improved Quality, Integrated Solutions, and Optimized Efficiencies leading to breakthrough advances in diagnostic confidence. Our mission of "Advancing Cancer Diagnostics, Improving Lives" is at the heart of our corporate culture. The company is headquartered in Germany and operates in over 100 countries with manufacturing facilities in 9 countries. Visit LeicaBiosystems.com for more information.

Leica Microsystems Ltd. Korea

—

Contact Name : Julie An (Korea, Republic of)

a 6F, 741, Yeongdong-daero, Gangnam-gu, Seoul 06071, Republic of Korea

t +82 2 3416 4430 **m** +82 10 8795 5564 **f** +82 2 514 6548

e karen.lee@leica-microsystems.com **w** www.leica-microsystems.com

Exhibit Items : Others (Research equipment-Confocal, Microscopy)

Leica Microsystems develops and manufactures microscopes and scientific instruments for the analysis of microstructures and nanostructures. Widely recognized for optical precision and innovative technology, the company is one of the market leaders in compound and stereo microscopy, digital microscopy, confocal laser scanning and super-resolution microscopy with related imaging systems, electron microscopy sample preparation, and surgical microscopy.

Live Cell Instrument

—

Contact Name : KyungTae Kim (Korea, Republic of)

a B 403, 10, Nowon-ro 15-gil, Nowon-gu, Seoul 01788, Republic of Korea

t +82 2 3391 0596 **m** +82 10 3002 9174 **f** +82 2 903 0597

e ktkim@lcibio.com **w** www.livecellinstrument.com

Exhibit Items : Medical devices & equipment / Others (Live cell imaging incubator system)

Live Cell Instrument(LCI) aims to provide a total solution for live cell imaging on a microscope. LCI is mainly manufacturing stage-top live-cell incubator system, cage-incubator for microscope, heating-stage, a specialized live-cell imaging chamber. Also, LCI able to happily provide any customizing service for live-cell or in-vivo imaging system. Furthermore, LCI is dealing with a commercial microscope system like widefield, confocal, HCS to satisfy a user who is interesting in a customized experiment related to live cell imaging.

Logos Biosystems

—

Contact Name : Jaepil Park (Korea, Republic of)

a 3F, 28, Simin-daero 327beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

t +82 70 5208 6699 **m** +82 10 6678 0646 **f** +82 2 355 5962

e jaepil.park@logosbio.com **w** www.logosbio.com

Exhibit Items : scientific instrument

Logos Biosystems specializes in life science tools and technologies for a wide spectrum of applications including basic research, quality control, and drug discovery. The X-CLARITY systems and reagents make tissue clearing rapid, efficient, and reproducible for a wide range of applications from tracing neural circuitry to high throughput drug screening. High content image acquisition and analysis is simplified with the new CELENA X High Content Imaging System. Automated cell counters equipped with high quality optics and sophisticated software bring you cell concentration and viability data with speed, accuracy, and reliability.

MACROGEN

Contact Name : ChangGeun Oh (Korea, Republic of)
a 10F, 254, Beotkkot-ro, Geumcheon-gu, Seoul 08511, Republic of Korea
t +82 2 2180 7183 **m** +82 10 5241 9863 **f** +82 2 2180 7100
e cgoh@macrogen.com **w** www.macrogen.com

Exhibit Items : Others (Sequencing Service)

Macrogen, a leading company in precision medicine and biotechnology, was established on June 5, 1997 based on the Genomic Medicine Institute of the Seoul National University College of Medicine. In February 2000, Macrogen became the first ever bio venture in Korea to be listed on the KOSDAQ. Since then, Macrogen has continued to be actively engaged in R&D fields of genetic and genomic analyses. Today, Macrogen has become a global expert in genomic analysis and a leader in Korean biotechnology, working closely with over 18,000 research clients across 153 countries worldwide. In addition to providing services to clients all over the world, Macrogen contributes to the advancement of bioindustries through a wide range of R&D and CSR activities.

MAGICTREE

Contact Name : Hyoyeon Ahn (Korea, Republic of)
a F315, 45, Jojeong-daero, Hanam-si, Gyeonggi-do 12918, Republic of Korea
t +82 2 355 5963 **m** +82 10 5648 9825 **f** +82 2 355 5962
e ebiz@magictree.kr **w** www.magictree.kr

Exhibit Items : Medicine & Drugs

MagicTree is a distributor of LUXENDO in Korea based in Germany. LUXENDO's patented SPIM technology allowed the fast development of robust product solutions. Now part of Bruker Corporation, LUXENDO offers light-sheet microscopes enabling new research approaches in embryology, live-cell imaging, brain development, cleared sample studies, and optogenetics applications.

MaxWell Biosystems

Contact Name : Marie Engelene Obien (Basel, Basel-Stadt, Switzerland)
a Mattenstrasse 24
t +41 4 4244 2419 **m** +41 6 1551 1077 **f** +41 6 1551 1071
e marie.obien@mxwbio.com **w** www.mxwbio.com

Exhibit Items : Medical devices & equipment

MaxWell Biosystems provides advanced high-resolution electrophysiology platforms to facilitate detailed investigation of excitable cells in vitro, such as iPSC-derived neuron cultures, dissociated cell cultures, brain slices, retina, etc. MaxOne and MaxTwo allow stimulation and recording of every active cell on a dish at unprecedented spatio-temporal resolution. Every cell has a story to tell. MaxWell Biosystems aims to equip everyone with tools to easily access, track, and discover cells' functionality and maturity.

Merck Ltd. Korea

Contact Name : Hyun-Jung Park (Korea, Republic of)
a 4F, 508, Teheran-ro, Gangnam-gu, Seoul 06178, Republic of Korea
t +82 2 2185 3849 **m** +82 10 5494 5964 **f** +82 2 2185 3870
e hyun-jung.park@merckgroup.com **w** www.merckgroup.com

Exhibit Items : Others (Reagents and equipment for Research)

Merck is a leading supplier to the global Life Science industry: solutions and services for research, development and production of biotechnology and pharmaceutical drug therapies.

Miltenyi Biotec

—

Contact Name : Carola Kluefer (Bergisch Gladbach, NRW, Germany)

a Friedrich-Ebert-Strasse 68

t +49 2204 8306 6619 **m** +49 2204 8306 6619 **f** +49 22 048 5197

e carolak@miltenyibiotec.de / bettinar@miltenyibiotec.de

w www.miltenyibiotec.com

Exhibit Items : Others (global provider of products and services that advance biomedical research and cellular therapy)

Miltenyi Biotec is a global provider of products and services that advance biomedical research and cellular therapy. Our innovative tools support research at every level, from basic research to translational research to clinical application. This integrated portfolio enables scientists and clinicians to obtain, analyze, and utilize the cell. Our technologies cover techniques of sample preparation, cell isolation, cell sorting, flow cytometry, cell culture, molecular analysis, and preclinical imaging. Our more than 25 years of expertise spans research areas including immunology, stem cell biology, neuroscience, and cancer, and clinical research areas like hematology, graft engineering, and apheresis. In our commitment to the scientific community, we also offer comprehensive scientific support, consultation, and expert training. Today, Miltenyi Biotec has more than 2,500 employees in 28 countries – all dedicated to helping researchers and clinicians around the world make a greater impact on science and health.

MIRAE STC

—

Contact Name : HyugJu Kwon (Korea, Republic of)

a 803, 303, Bugyuseong-daero, Yuseong-gu, Daejeon 34068, Republic of Korea

t +82 42 822 9801 **m** +82 10 4411 0213 **f** +82 42 822 9803

e info@miraestc.co.kr **w** miraestc.co.kr

Exhibit Items : Medicine & Drugs / Others (neuroscience)

MIRAE STC provide solution for neuroscience, animal behavior and animal sleep research. We aim to create true value for customers who research challenging issues in the advanced life science.

National Research Center for Dementia in Chosun University (NRCD)

—

Contact Name : Sang Kyu Chung (Korea, Republic of)

a 309, Pilmun-daero, Dong-gu, Gwangju, Republic of Korea

t +82 62 230 7790 **m** +82 10 5800 8348

e skc@chosun.ac.kr **w** www.nrcd.re.kr

Exhibit Items : Disease prevention

We, NRCD improves the objectivity and accuracy of early prediction and diagnosis of dementia by comparing brain images of demented patients with standard brain maps of each of Korean age groups
In the future, we expect to develop technology for predicting dementia that is optimized for East Asian people including Korea, cooperation with Asian countries including China, and technology export.

National Research Foundation of Korea

—

Contact Name : Seung Hyuk Kim (Korea, Republic of)

a 201, Gajeong-ro, Yuseong-gu, Daejeon, Republic of Korea

t 1544-6118 **w** www.nrf.re.kr

Exhibit Items : Organization / School

Organization set the direction of the nation's basic and applied research across all academic disciplines

NEURACLE SCIENCE CO., LTD

Contact Name : Jason Song (Korea, Republic of)
a sanhak-gwan 606-3, 145, Anam-ro, Seongbuk-gu, Seoul 02841, Republic of Korea
t +82 70 4861 6697 **m** +82 10 5137 9809 **f** +82 70 8233 0426
e jason6954@neuracles.com **w** www.neuracles.com

Exhibit Items : Medicine & Drugs

Neurodegenerative diseases like Alzheimer's disease, neuropathic pain, ALS and Schizophrenia are among some of the hardest diseases to cure. To provide a breakthrough in such an arduous field, we are trying new and innovative approaches to find new solutions.

NeuroVIS

Contact Name : Gukhwa Jung (Korea, Republic of)
a 601, 110, Jiksan-ro, Jiksan-eup, Seobuk-gu, Cheonan-si, Chungcheongnam-do 31035, Republic of Korea
t +82 41 552 1789 **m** +82 10 6708 1789 **f** +82 504 369 1789
e ghjung@neurovis.kr **w** www.neurovis.kr

Exhibit Items : Others (Neuroscience CRO)

NeuroVIS Co. is a Bio-technology Company established in 2018 based out of Cheonan, Republic of Korea. NeuroVIS is becoming a premier global innovation company, providing central nervous system research services to a variety of neuroscience research centers, global pharmaceutical institutions, and Biotech companies.
NeuroVIS offers a wide selection of technical expertise in neuroscience related fields, specializing in the sector of Freely Moving Animal Microdialysis Technology with simultaneous analysis of neurotransmitters and metabolites by triple quadrupole mass spectrometer (LC-MS/MS).
The list of neurotransmitters (metabolites) quantified simultaneously with interested compounds include: Acetylcholine (Choline), Norepinephrine (MHPG, MHPG sulfate), Dopamine (DOPAC, HVA), Serotonin (5-HIAA), GABA, Glutamate, Aspartate, Taurine etc.

NIKON INSTRUMENTS KOREA

Contact Name : Changhoon Song (Korea, Republic of)
a 6F, 17, Yeongdong-daero 86-gil, Gangnam-gu, Seoul 06174, Republic of Korea
t +82 2 2186 8419 **m** +82 10 5507 0515 **f** +82 2 555 4415
e Changhoon.song@nikon.com **w** www.nikon-inst.co.kr

Exhibit Items : Medical devices & equipment / Others (Biological microscopy)

Improving the quality of life for people everywhere, super-resolution microscopes, cell solutions for regenerative medicine/drug discovery support, and inspection/diagnostic solutions in the field of retinal imaging are provided.

OLYMPUS

Contact Name : Junsung Kim (Korea, Republic of)
a 12, Seocho-daero 38-gil, Seocho-gu, Seoul 06655, Republic of Korea
t +82 2 6255 3307
e junsung.kimg@olympus-ap.com **w** www.olyumpus.co.kr

Exhibit Items : Others (MICROSCOPE, CONFOCAL MICROSCOPE)

Olympus is dedicated to your work, your vision, your science. Whether you need simple brightfield or darkfield imaging, fluorescence, or elaborate 4D analysis for your research, we offer a variety of upright, inverted, stereo, confocal, multiphoton, and super resolution solutions built with the proven optical and application expertise your research depends on.

PanMun Education

Contact Name : Tae-soo Han (Korea, Republic of)
a 211, Mokdongseo-ro, Yangcheon-gu, Seoul 07995, Republic of Korea
t +82 2 2653 5131 **e** Tshan@epublic.co.kr **w** www.medicalplus.co.kr

Exhibit Items : Others (Book)

Medical, Natural Science, Health Textbooks, General Books

PeopleBio

Contact Name : David Seungwon Seo (Korea, Republic of)
a 242 Pangyo-ro, 6fl. PDC C-dong, Bundang-gu, Seongnam-si, Gyeonggi-do 13487, Korea
t +82 70 5133 5193 **m** +82 10 6320 3760 **f** +82 31 526 7826
e seo.david@peoplebio.net **w** www.peoplebio.net

Exhibit Items : Medical devices & equipment

Founded in 2002, PeopleBio is an innovative biotechnology company that specializes in developing diagnostics for protein misfolding diseases, with an initial focus on neurodegenerative diseases. Our proprietary platform technology, Multimer Detection System (MDS) has a multitude of potential applications for protein misfolding diseases.

PEPROTECH KOREA

Contact Name : DongHyun Kang (Korea, Republic of)
a 10F, 76, Sangamsan-ro, Mapo-gu, Seoul 03926, Republic of Korea
t +82 2 3210 2808 **m** +82 10 4693 7508 **f** +82 2 3210 2835
e sebastian@peprotech.co.kr **w** www.peprotech.com

Exhibit Items : Medical supplies / Others (Recombinant protein)

PeproTech was started in 1988 with a vision to create high-quality, affordable cytokine products for the research market. We are the Korean branch of PeproTech. We sell recombinant protein and ELISA KIT, FACS Ab, and small molecule. Our products are used by excellent researchers from various fields all over the world.

Philekorea Technology

Contact Name : Taejin Yang (Korea, Republic of)
a A-606B, 168, Gasan digital 1-ro, Geumcheon-gu, Seoul 08507, Republic of Korea
t +82 70 4820 3988 **m** +82 10 9461 9650 **f** +82 2 2105 7025
e tjyang@philekorea.co.kr **w** www.philekorea.co.kr

Exhibit Items : Others (Equipment & drug for biological experiment)

PhileKorea Technology is a company that sells equipment and reagents for biological experiments. Our major brands include NEB, Azure, bms, Denovix, GeneReach, and Biosearch technologies.

Royal Society Publishing

Contact Name : Felicity Davie (LONDON, UK)
a 6-9 Carlton House Terrace
t +44 20 7451 2647
e felicity.davie@royalsociety.org **w** royalsociety.org/journals

Exhibit Items : Non-profit Organization / Others (Journals)

Neuroscience from the Royal Society
The Royal Society is a charitable organisation that recognises, promotes, and supports excellence in science. Its journals – Open Biology, Proceedings B, Biology Letters, Royal Society Open Science and Philosophical Transactions B - offer publishing options for research, reviews and theme issues within neuroscience. Reasons to choose our journals include: articles handled by active, expert neuroscientists; efficient and rapid processing; rigorous, constructive peer review; high production standards; and open access, open data and Registered Reports available. To find out more, visit our exhibition booth or our website at royalsociety.org/journals.

RWD Life Science

Contact Name : Genuine Zheng (Shenzhen, China)
a 2nd Floor, ROBETA Building, No.11 Hi Tech North Rd., Science & Industry Park North, Nanshan District
t +86 75 6111286(8280) **m** +86 136 3169 9593
e genuine.zheng@rwdstco.com **w** www.rwdstco.com

Exhibit Items : Medical devices & equipment

Since 2002, RWD Life Science has been the world leading manufacturer for pre-clinical research laboratory instruments in animal model, we specialize in producing Inhalation Anesthesia Machines, Active Gas Scavenger, Stereotaxic Instruments, Cannula Implantation System, MCAO Sutures, Stainless Steel Mouse and Rat Brain Matrix, Optogenetic Stimulation Solutions, Animal Ventilator and Temperature Controller, and more than 1,000 kinds of Surgical Tools. For more information about our products, please check our website:www.rwdstco.com or e-mail us: sales@rwdstco.com.

SANG CHUNG COMMERCIAL Co., Ltd. & GAONBIO Co., Ltd.

Contact Name : Sung-Ho Park (Korea, Republic of)

a 128, Beobwon-Ro, Songpa-Gu Munjeong SKV1 GL Metrocity Bldg., B-306 Seoul 05854, Korea

t +82 2 564 8766 **m** +82 10 6349 5050 **f** +82 2 561 1603

e info@sang-chung.co.kr **w** www.sang-chung.co.kr / www.gaonbio.co.kr

Exhibit Items : Others (BIO-SCIENCE)

SangChung established Fy 1958.
SangChung have long business history and good marketing experience on Bio-science relative marketing from the established timing and keep wire range customer groups due to our long company history experience.

- Harvard Apparatus
- HEKA
- Warner Instruments
- ADINSTRUMENTS
- Panlab
- Alphamed

Sartorius

Contact Name : Lily Min (Korea, Republic of)

a 8F, 220, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13493, Republic of Korea

t +82 31 622 5757 **m** +82 10 3176 0650 **f** +82 31 622 5799

e lily.min@sartorius.co.kr **w** www.sartorius.co.kr

Exhibit Items : Others (Live cell imaging analyzer)

Sartorius is a leading international pharmaceutical and laboratory equipment supplier.
With our innovative products and services, we are helping our customers across the entire globe to implement their complex and quality-critical bio manufacturing and laboratory processes reliably and economically.

SCITECHKOREA INC.

Contact Name : ByungHah Lee (Korea, Republic of)

a 801, 74, Deongneung-ro 40-gil, Gangbuk-gu, Seoul 01138, Republic of Korea

t +82 2 986 4413 **e** info@scitechkorea.com **w** www.scitechkorea.com

Exhibit Items : Medical supplies

Scitechkorea established in 1986 and we've supplied solid lab-instruments and software related to physiology, pharmacology and neuroscience to the prominent scientists in Korea. Scitech's 30 staff are working hard to offer the best customer service to be destined lifetime free service to the valued customers in local, under the exclusive contracts with globally eminent like Noldus, TDT, Harvard, Inscopix, WPI, Sutter, makers OROBOROS, etc

SeouLin Bioscience

Contact Name : Min-Ho Cho (Korea, Republic of)

a A-4F, 700, Daewangpangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13488, Republic of Korea

t +82 31 628 3066 **m** +82 10 3751 5911 **f** +82 31 628 3006

e minho.cho@seoulin.co.kr **w** www.seoulin.co.kr

Exhibit Items : Medical devices & equipment

SeouLin Bioscience
'Leading Total Solutions in Life Sciences'
- Aims to grow as a global leading bio company that provides differentiated service with the mission of "customer success"

Sercrim Labtech Co., Ltd.

Contact Name : Kangyeon Cho (Korea, Republic of)

a 795-6, Bugaksan-ro, Seongbuk-gu, Seoul 02820, Republic of Korea

t +82 2 911 4114 **m** +82 10 2758 2664 **f** +82 2 911 4111

e kycho@sercrim.com **w** www.sercrim.com

Exhibit Items : Medical devices & equipment

Sercrim Labtech Co.,Ltd. Which has been supplying the most trustworthy products, is the leading company in Korea lab, scientific & safety solutions market. Our competitiveness comes from the professinalism built over the last quarter of a century, our cles relationships with globla top companies, and the complete trust of our customers. Standing upon those foundations, our business mission is to spur on research and development to be the most reliable solutions partner for customers.

SOMETECH

Contact Name : Hoi Ung Lee (Korea, Republic of)

a 1201, 61, Digital-ro 26-gil, Guro-gu, Seoul 08389, Republic of Korea
t +82 2 2025 6614 **m** +82 10 4707 4285 **f** +82 2 869 1005
e hbair18@sometech.com **w** www.sometech.com

Exhibit Items : Medical devices & equipment

Sometch has tirelessly invested in R&D to introduce world class surgical equipment. We invented the worl's fist concept of a 3D digital video microscope system and released it on the medical market. Realmicro with its unique patented technologies, offers a comfortable, safe, and precise surgical environment. Come and discover the world of perfect full 3D image in high definition.

SYSOFT

Contact Name : Byeongsoo Kang (Korea, Republic of)

a 404-A,333, Techno jungang-daero, Hyeonpung-eup, Dalseong-gun, Daegu, Republic of Korea
t +82 10 5531 4810 **m** +82 10 5531 4810
e shoo99@gmail.com **w** www.sysofti.com

Exhibit Items : Medicine & Drugs / Bioinformatics & System Biology Platform

SYSOFT is specialized bioinformatics company developing innovative analysis tools and new paradigm using the systems biology and bioinformatics technologies.

Tecsco Korea Co., Ltd.

Contact Name : Huosook Ahn (Korea, Republic of)

a 5, Seongsuil-ro 8-gil, Seongdong-gu, Seoul 04793, Republic of Korea
t +82 2 6239 3660 **e** ahn@tecsco.co.kr **w** www.tecscokorea.com

Exhibit Items : Others (AFM STED / RAMAN)

Tecsco Korea(previously Tecsco) has been supporting technically of SPM and research equipment for 30 years since we have introduced SPM(AFM & SPM) in Korea at the first in 1989. We are providing not only Bruker AFM but also Abberior's Super-resolution Microscope, Renishaw's Raman Spectroscope to universities, industrial companies and research institutes in Korea.

Teleopto / Bio Research Center

Contact Name : Mitsuhiro Edamura (Nagoya, Aichi, Japan)

a Bio Research Center Co., Ltd / Towatakaoka bldg 4F, 2-28-24 Izumi, Higashi-ku
t +81 815 2932 6421 **m** +81 90 3484 1846 **f** +81 52 932 6755
e edamura@brck.co.jp **w** www.teleopto.com

Exhibit Items : Medical devices & equipment

Supplier for Optogenetics related devices

The CAJAL Advanced Neuroscience Training Programme

Contact Name : Mathilde Maughan (Brussels, Belgium)

a Rue d'Egmont 11
t +32 2 545 04 06
e info@cajal-training.org **w** www.cajal-training.org

Exhibit Items : Non-profit Organization

The CAJAL Advanced Neuroscience Training Programme represents commitment by the five partner institutions FENS, IBRO, the Gatsby Charitable Foundation, University of Bordeaux and the Champalimaud Foundation to establish a dedicated neuroscience training facility in Europe. The courses combine lectures by renowned scientists with methodological training sessions, by guiding the students through hands-on experiments within the frame of short scientific projects.

The Journal of Physiology

Contact Name : Sally Howells (London, UK)

a The Physiological Society Hodgkin Huxley House 30 Farringdon Lane
t +44 20 7269 5719 **e** showells@physoc.org / jphysiol@physoc.org
w jp.physoc.org

The Journal of Physiology publishes original Research Papers in all areas of physiology and pathophysiology illustrating new physiological principles or mechanisms. Papers on work at the molecular level, cell membrane, single cells, tissues or organs and on systems physiology are all encouraged. We are particularly keen to publish papers that have a clinical or translational focus, to help further our understanding of the role physiology plays in health and disease.

TheragenEtex Bio Institute

Theragen

Contact Name : Yang Bo kyoung (Korea, Republic of)

a 4F, A-dong, 145, Gwanggyo-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16229, Republic of Korea
t +82 31 888 9444 **m** +82 10 9554 9009
e bokyoung.yang@therabio.kr **w** bio.theragenetex.com

Exhibit Items : Genomics

Theragen Etex is the parent company of the Bio/Pharmaceutical group with four subsidiaries which includes Bio Institute and Pharmaceutical division

YBRAIN

ybrain

Contact Name : Semin Kwak (Korea, Republic of)

a 815, Daewangpangyo-ro, Sujeong-gu, Seongnam-si, Gyeonggi-do 13449, Republic of Korea
t +82 10 2950 4320 **m** +82 10 2950 4320 **f** +82 303 0948 2879
e semin.kwak@ybrain.com **w** www.ybrain.com

Exhibit Items : Medical devices & equipment

Providing innovative brain science solution service. YBRAIN creates values through brain science. We have contributed to the world by developing innovative solutions to analyze, manage and advance the brain based on brain science, material engineering, electronic and computer engineering. We have achieved our targets by advancing through cooperation.

Thermo Fisher Scientific

ThermoFisher SCIENTIFIC

Contact Name : Seoyeon Yun (Korea, Republic of)

a 12F, 281, Gwangpyeong-ro, Gangnam-gu, Seoul 06349, Republic of Korea
t +82 10 8552 4205 **m** +82 10 8552 4205
e seoyeon.yun@thermofisher.com **w** www.thermofisher.com

Exhibit Items : Disease prevention / Medical devices & equipment / Medicine & Drugs

Thermo Fisher Scientific is the world leader in serving science, with revenues of more than $24 billion and approximately 70,000 employees globally. Our mission is to enable our customers to make the world healthier, cleaner and safer. We help our customers accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics, deliver medicines to market and increase laboratory productivity. Through our premier brands – Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific and Unity Lab Services – we offer an unmatched combination of innovative technologies, purchasing convenience and comprehensive services.

ZEISS Korea

ZEISS

Contact Name : Kang, Hyolim (Korea, Republic of)

a 2F, 101, Dongmak-ro, Mapo-gu, Seoul, Republic of Korea
t +82 2 3140 2729 **m** +82 10 2979 3130 **f** +82 303 0948 2879
e hyolim.kang@zeiss.com **w** www.zeiss.co.kr/microscopy

Exhibit Items : Medical devices & equipment

As a leading manufacturer of microscopes ZEISS offers inspiring solutions and services for your life sciences and materials research, education and clinical routine.
Reliable ZEISS systems are used for manufacturing and assembly in high tech industries as well as exploration and processing of raw materials worldwide. Choose the ideal solution for your tasks and applications from a broad spectrum of light, confocal, electron and X-ray microscopes. Highly skilled and well trained application specialists support your work and make sure you get the most out of your investment.

illumina

Discover more in neuroscience.

It is only recently through next-generation sequencing (NGS) studies that the full genomic complexity of neurological diseases is being revealed. The interplay between heritable and nonheritable mutations, epigenetics, and other factors requires genomic analyses to increase our understanding. Illumina has the array and NGS tools needed to make genomic neuroscience research possible.

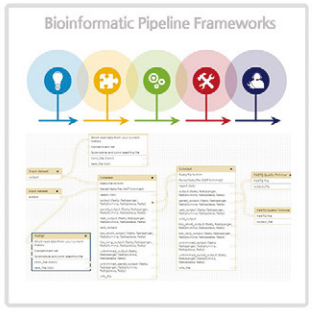
Would you like to gain greater insight in your research using next-generation sequencing (NGS) + arrays to reveal the full complexity of neurological diseases?

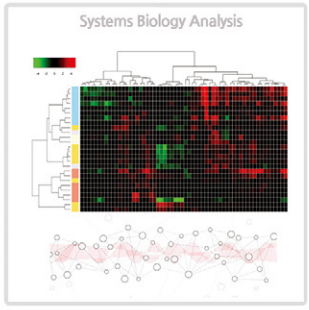
Professor Isabelle Mansuy, is Professor in Neuroepigenetics at the Medical Faculty of the University Zürich (UZH), and the Department of Health Science and Technology of the Swiss Federal Institute of Technology Zürich (ETHZ).
Register now to hear Professor Mansuy review multi-omic approaches and discuss the tools that enable this research. http://bit.ly/neurogenomics

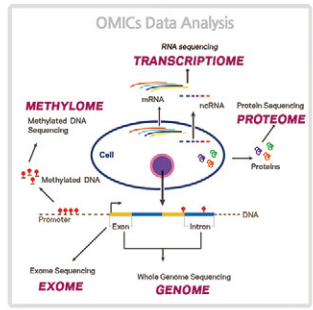
Next Generation Sequencing Services

Whole Genome Sequencing/
Transcriptome Sequencing/
RNA Sequencing/
Single-cell Sequencing/
Exome Sequencing (Exome-Seq)

SYSOFT is specialized bioinformatics company developing innovative analysis tools and new paradigm using the systems biology and bioinformatics technologies.

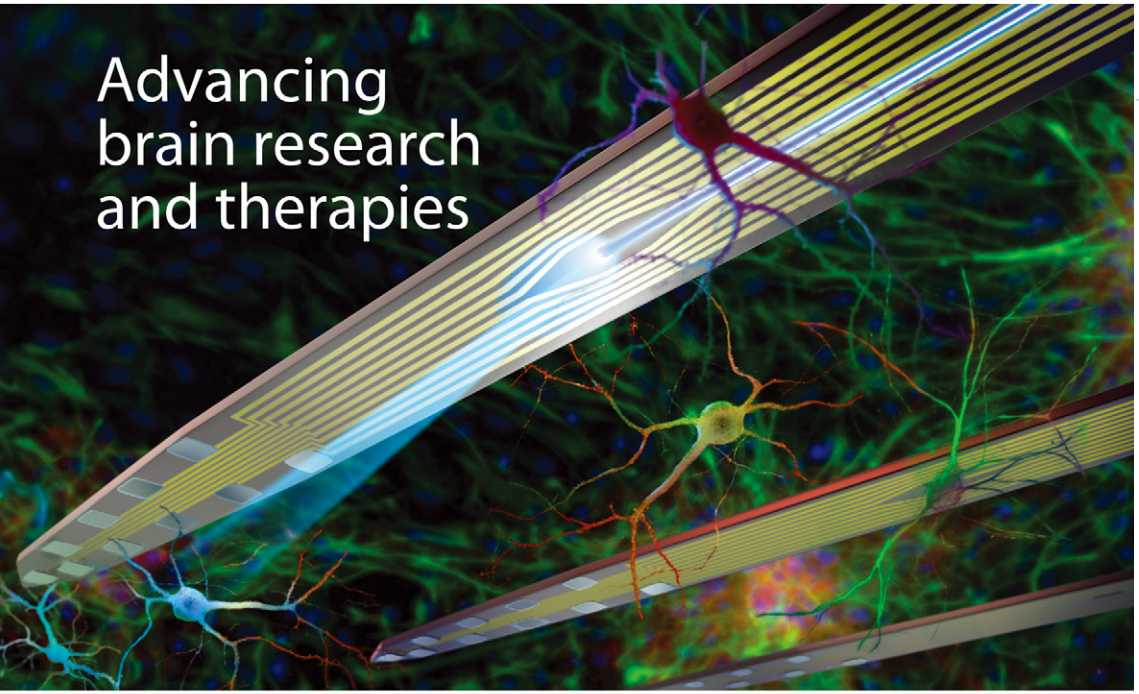






SYSOFT

42988 대구광역시 달성군 현풍면 테크노중앙대로 333
대구경북과학기술원 산학협력관(R7) 404-A호
TEL. 070-8943-0020 |홈페이지 http://www.sysofti.com
M 010-5531-4810 | shoo99@gmail.com



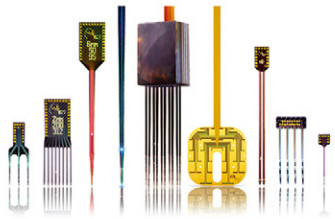
SOLUTIONS PROVIDER

NeuroNexus powers neuroscience research through innovative neural probes, systems, and data analytics software. NeuroNexus systems provide integrated plug-and-play solutions to support diverse neurophysiology experiments and workflows. The NeuroNexus data analytics software platform provides powerful, scalable, cross-platform analytical and visualization tools for managing and analyzing neurophysiological data.

SmartBox Pro *is capable of acquiring 512 channels of neural data, measuring impedance spectroscopy & cyclic voltammetry and performing electroplating of various metals*

ELECTRODE ARRAYS

NeuroNexus electrode arrays include a full line of high-quality, customizable microelectrode arrays for electrophysiology and optogenetics research. If your groundbreaking experiment requires creative solutions to accurately interface with your specific tissue target, let the NeuroNexus design team work with you to design a unique solution to fit your needs.



NeuroNexus electrode arrays *can be designed to interface with specific neural targets, conform to the surface of the brain or peripheral nerves, deliver electrical and/or optical stimulation and deliver precise doses of fluids, all while being tailored to meet specific experimental needs*

NeuroNexus

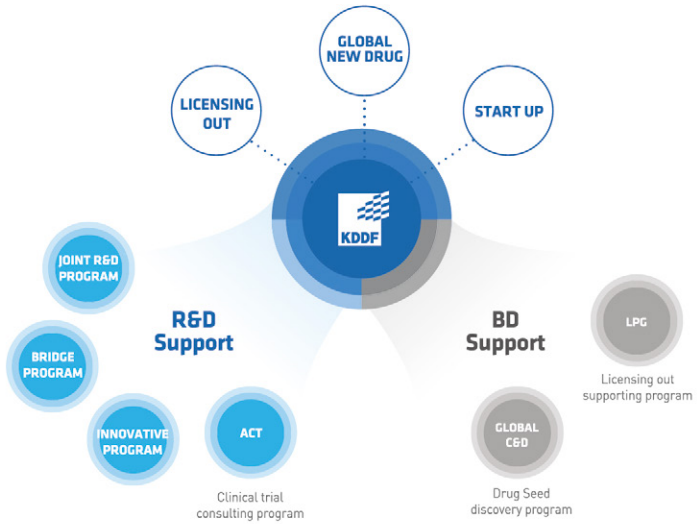
655 Fairfield Ct., Ste. 100
Ann Arbor, MI 48108, USA
sales@neuronexus.com
+1.734.913.8858

IBRO Discount

KDDF
Korea Drug Development Fund

ABOUT KDDF

Korea Drug Development Fund (KDDF) is a government funded organization with one billion USD budget over nine years period of time to accelerate innovation activities in Korean pharmaceutical R&D communities.



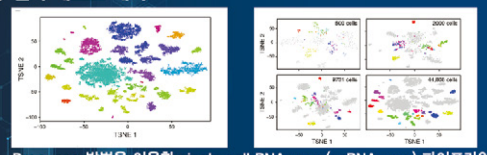
Single Cell RNA-Sequencing

Theragen
Theragen Etex Bio Institute

Single Cell RNA-Seq이란?

Single Cell RNA sequencing (scRNA-seq)은 같은 조직 유래의 세포라도 크기, 단백질 및 RNA 발현 양상이 크게 다를 수 있기 때문에
이 같은 세포 별 이질성을 확인하는 기술입니다.
종양 조직의 경우, 암이 진행하는 동안 암세포들이 clonal evolution이 일어나므로 single cell RNA 해독을 통해 세포 별 특성을 분석할 수 있습니다.

결과 레포트 예시



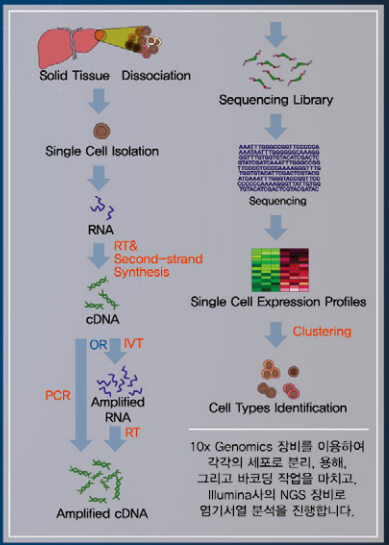
Drop-seq 방법을 이용한 single cell RNA-seq (scRNA-seq) 파이프라인을 셋업하여,
수천~수만개 세포의 패턴분석을 통하여, 잠재적으로 무궁무진한 실험적, 임상적 가능성을 높입니다.

서비스 요약

1. 가능한 샘플	2. 플랫폼	3. Turnaround time
Cell line, tissue PBMC (Human, mouse)	싱글셀 캡처 Chromium(10X genomics) 시퀀싱 HiSeq4000, NovaSeq(Illumina)	4~6 weeks

Theragen
Theragen Etex Bio Institute
경기도 수원시 영통구 광교로 145 차세대융합기술연구원 A동 4층
전화: (031) 888-9444 팩스: (031) 888-9440
Mobile : 010-4559-9597 / 010-9988-3125
Mail : thkim@theragenetex.com / seungyoun.lee@theragenetex.com

Single Cell RNA-Seq의 프로세스



10x Genomics 장비를 이용하여 각각의 세포로 분리, 용해, 그리고 바코딩 작업을 마치고, Illumina사의 NGS 장비로 염기서열 분석을 진행합니다.

Brain & Neuro Science

미래를 여는 생명과학 기업
(주)킴앤프렌즈
A Company of Life Science

Stoelting

www.stoelting.com

Stereotaxic Instruments and Tools

Digital New Standard Sterotaxic

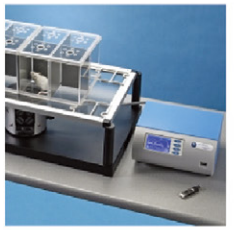
Quintessential Stereotaxic Injector (QSI)

Drill and Microinjector Robot

ugo basile

TRANSFORMING IDEAS INTO INSTRUMENTS

Pain, Motory Coordination and Behavior Monitoring System



The original Plantar Test for thermal stimulation

The 1st, original RotaRod for motory coordination studies

Rodent Treadmill with interchangeable lane for rats or mice

Motic

MORE THAN MICROSCOPY

Microscopy & Digital Pathology Solutions

Digital Tissue Slide Scanner

Inverted/Stereo Microscope

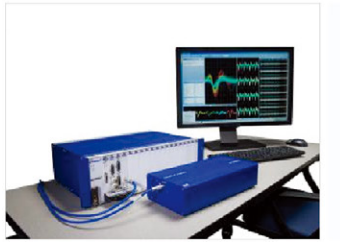
AE30 Binocular

SMZ171 Series

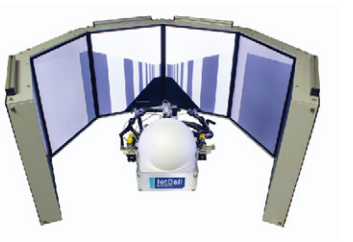
http://www.kimnfriends.co.kr

PLEXON

Neural Data Recording & Stimulation System



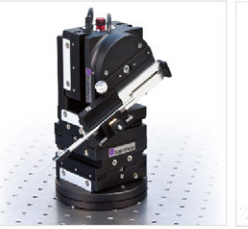
OmniPlex Neural Recording Data Acquisition System



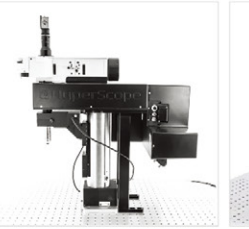
JetBall–TFT Virtual Reality (VR) systems

Scientifica

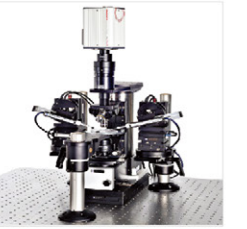
Electrophysiology & Multiphoton Imaging Systems



PatchStar Micromanipulator



HyperScope (Multiphoton Imaging)

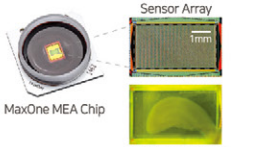


SliceScope Pro 1000 (Electrophysiology Rigs)

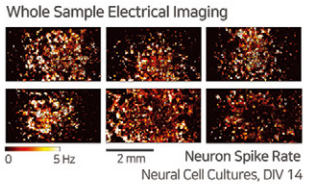
maxwell BIOSYSTEMS

High-Density Micro Electrode Array (HD-MEA) System

MaxOne

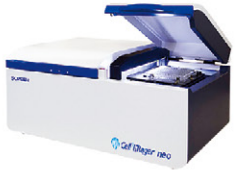


MaxTwo

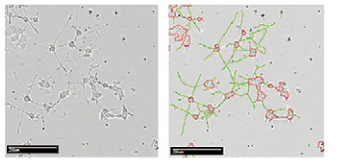


SCREEN

High-throughput 3D morphological analyses for cell/ cultures/internal structures



Quantification and analysis for organoids, spheroids, 2D/3D cultured cells and tissue section

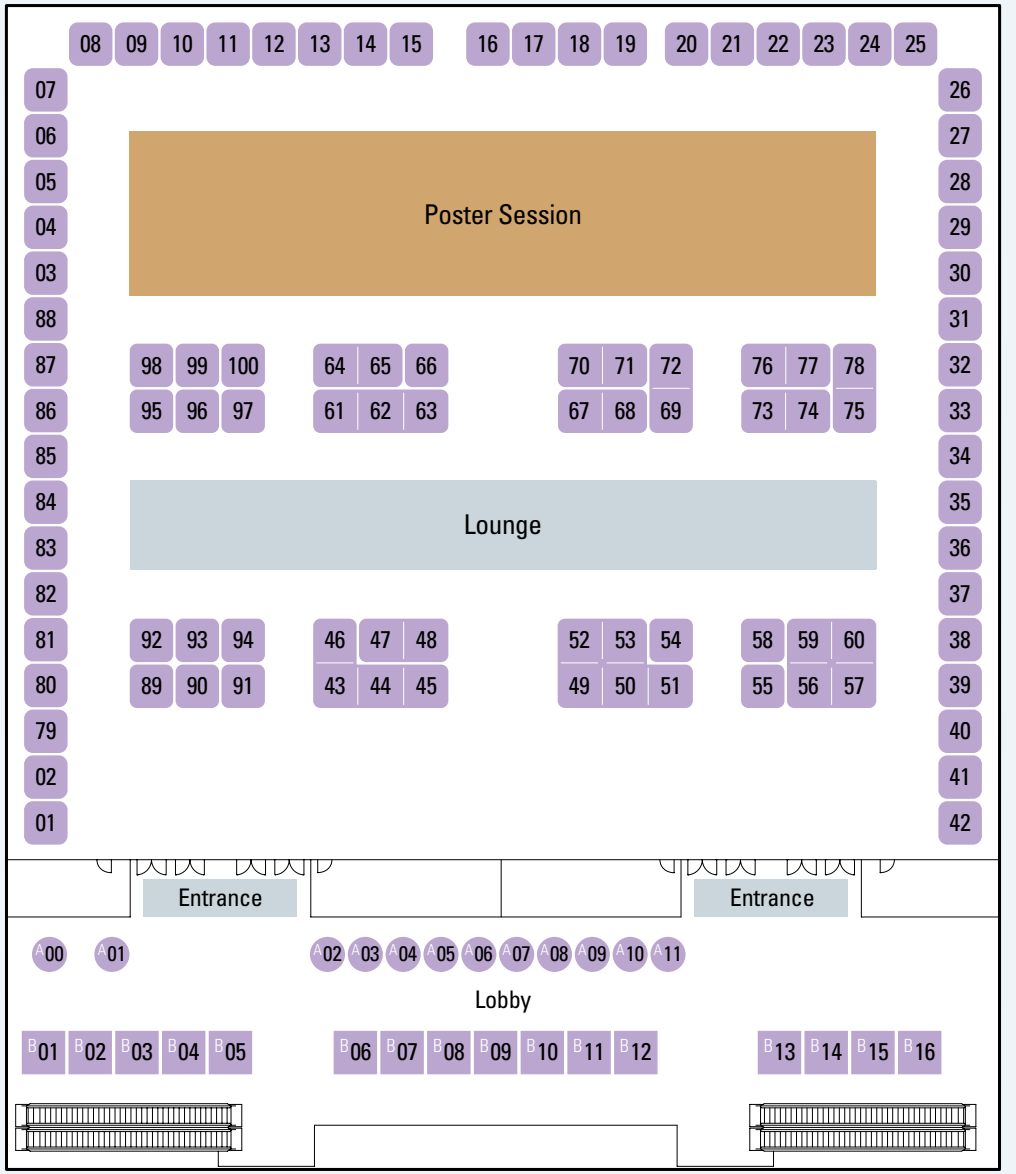


Neurite Elongation Analysis

미래를 여는 생명과학 기업
(주)킴앤프렌즈
A Company of Life Science

TEL. 02) 2647-6611
E-mail. kimnfriends@hanmail.net (유저)
knfsales@hanail.net (업체)

Grand Ballroom, 3F

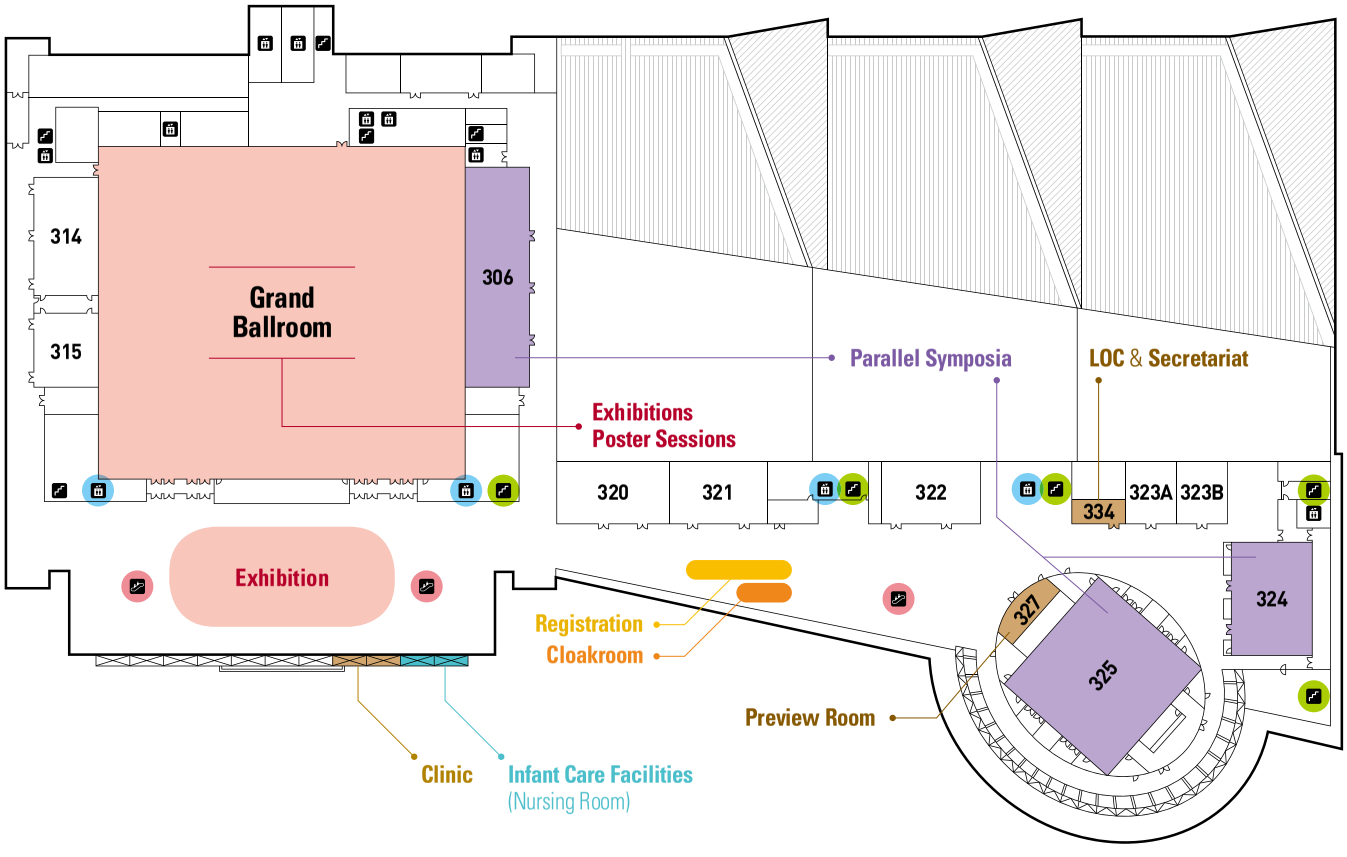


Booth No	Exhibitor
G - 01 02	OLYMPUS
G - 03	YBRAIN
G - 04	PEPROTECH KOREA
G - 05	Bio-Teck
G - 06	SOMETECH
G - 07	Sercrim Labtech Co.,Ltd.
G - 08	Changchun New Industries Optoelectronics Tech.CO., LTD.
G - 09	SeouLin Bioscience
G - 10	DS Hitech
G - 11	Tecsco Korea Co., Ltd.
G - 12	B2bio, Inc.
G - 13	Sartorius
G - 14	Brain Products GmbH
G - 15	RWD Life Science Co., Ltd
G - 16	ITSBIO
G - 17	MAGICTREE
G - 18	Bio-Signal Technologies
G - 19	inper
G - 20	MaxWell Biosystems
G - 21	CRAyON technologies Inc.
G - 22	Bachem AG
G - 23	Aribio Co. Ltd., & Intek Bio
G - 24	NEURACLE SCIENCE CO., LTD
G - 25	MIRAE STC
G - 26	Live Cell Instrument
G - 27	Femtonics
G - 28	MACROGEN
G - 29	DAON BioSciences
G - 30	AbClon Inc.
G - 31	Hangzhou Newdoon Technology Co., Ltd
G - 32	Guger Technologies OG
G - 33 34	GNTPHARMA
G - 35	Korea Non-clinical Technology Solution Center
G - 36	Bio-Techne
G - 37	Miltenyi Biotec
G - 38	KOMA BIOTECH
G - 39	Philekorea Technology
G - 40	Cyagen US Inc.
G - 41	Bioclone Corp / BioLegend Inc
G - 42	Teleopto / Bio Research Center

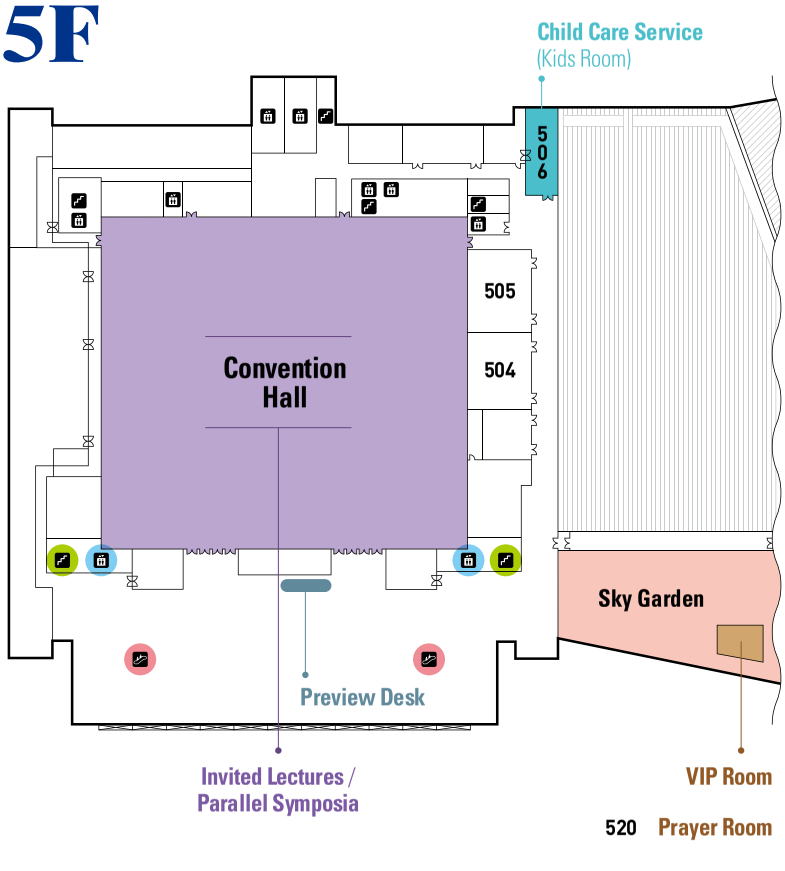
Booth No	Exhibitor
G - 43 44 45	Leica Microsystems Ltd. Korea
G - 46	Leica Biosystems Ltd. Korea
G - 47 48	Logos Biosystems
G - 49 50 51 52 53	Merck Ltd. Korea
G - 54	GnS International
G - 55	Inscopix
G - 56 57 59 60	Scitech Korea
G - 58	JSK Biomed Inc.
G - 61 62 63	CRYSTE KOREA Inc.
G - 64	SANG CHUNG COMMERCIAL CO.,LTD.
G - 65	GAONBIO CO.,LTD.
G - 66	Advanced Targeting Systems
G - 67 68	NIKON INSTRUMENTS KOREA
G - 70 71	GeneTex International Corporation
G - 69 72	PeopleBio
G - 73 74	Thermo Fisher Scientific
G - 75 78	NeuroVIS
G - 76 77	IWOO Scientific Corporation
G - 79 ~ 100	Binary & Kim & Friends
A - 00	PanMun Education
A - 01	European Brain Council
A - 02 03 04	Daegu-Gyeongbuk Medical Innovation Foundation
A - 05	Korea Research Institute of Bioscience and Biotechnology (KRIBB) Korea Human Gene Bank
A - 06	FRONTIER RESEARCH OPPORTUNITIES THROUGH EU & INTERNATIONAL GRANTS & FELLOWSHIPS
A - 07	Experimental Neurobiology / en
A - 08	Royal Society Publishing
A - 09	CAJAL Programme
A - 10	Federation of European Neuroscience Societies (FENS)
A - 11	IBE-UNESCO
B - 01 02	Daegu Wellness Tour
B - 03 04 05	Korea Tourism Organization
B - 06 07 08 09	Korea Brain Research Institute
B - 10 11	International Brain Research Organization (IBRO)
B - 12	ELSEVIER
B - 13	KOREA BASIC SCIENCE INSTITUTE (KBSI)
B - 14	DGIST Brain and Cognitive Sciences
B - 15	KIST Brain Science Institute
B - 16	Allen Institute for Brain Science

3F

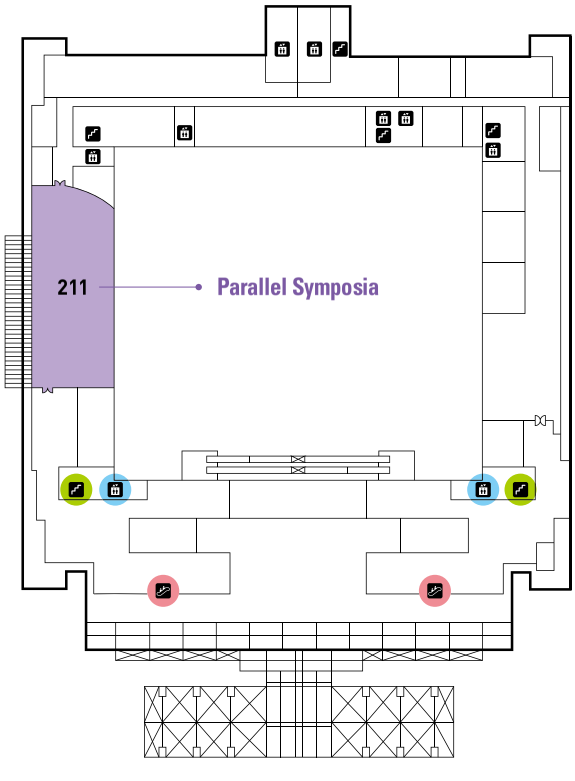
elevator escalator exit



5F



2F




IBRO
The 10th IBRO World
Congress of Neuroscience
2019