International Neuroscience Meeting, Budapest 2022

IBRO Workshop

ELTE EÖTVÖS LORÁND UNIVERSITY

MAGYAR IDEGTUDOMÁNYI TÁRSASÁG

27-28 January 2022

Budapest, Hungary

Programme

ANIMA LAB
animal facility and laboratory equipment • animal research models

Neuroscience solutions for *in-vivo* experiments

INSCOPIX

Discover Inscopix systems for calcium imaging during animal free behavior:

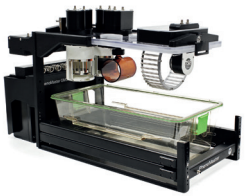
- simultaneous neural activity and blood flow dynamics,
- neurotransmitter dynamics.

TSE systems

Explore TSE Systems portoflio of high-troughput in vivo screenings systems focusing on:

- metabolic and behavioral phenotyping,
- cognitive functions and deficits as well as operant conditioning,
- kinematics and gait analysis.

With a particular consideration of addiction, anxiety, Alzheimer, Parkinson, autism, depression, schizophrenia, mood disorders, strokes, rare and other neurological disorders.



Ask about our equipment offer for animal brain surgery procedures:

- stereotaxy instruments,
- microtomes, vibrotomes,
- surgical instruments.

The Organizing Committee and participants of IBRO Workshop 2022 are grateful for the support of its Sponsors and Exhibitors

MAIN SPONSORS

ELTE EÖTVÖS LORÁND UNIVERSITY

Mecenatúra
NATIONAL RESEARCH, DEVELOPMENT AND INNOVATION OFFICE

RICHTER GEDEON

ZEISS
Seeing beyond

ANIMA LAB
animal facility and laboratory equipment • animal research models

IMAGE SCIENCE
IMAGE IN FOCUS

Main sponsors have separate exhibition rooms nearby the Sphere Hall on the ground floor for hands-on equipment demonstrations (see map on page 59).

Room 0.58	**Image-Science Ltd** contact: Patrícia Varju patricia.varju@imagescience.hu	**LVEM25 Transmission Electron Microscope workshop combined with the demonstration of the RMC Boeckeler Powertome Ultramicrotome**
Room 0.59	**Carl Zeiss Technika Ltd** contact: Gábor Galiba gabor.galiba@zeiss.com	**Discover the ZEISS Lightsheet 7 LIVE in Budapest**
Room 0.60	**AnimaLab Hungary Ltd** contact: Mark Hedberg info@animalab.hu	**A series of introductory and interactive sessions on advanced tools in Brain Research**

For registration and additional information, see the Conference's web page

Exhibitors' stands are located in the Sphere Hall (Gömb aula)
and are available throughout the Conference next to the poster area.

INVITATION

Dear Colleagues,

We cordially invite all neuroscientists to participate in the **International Neuroscience Meeting, Budapest 2022 - IBRO Workshop,** which will take place on 27-28th January 2022 at the Eötvös Loránd University. The **International Neuroscience Meeting, Budapest 2022** is an outstanding international event that provides opportunity for the presentation of high standard research achievements in the forms of *Plenary lectures, Symposia* and *Poster sections.* The reputation of the Hungarian neuroscience research is indicated by the participation of highly recognized international scientists who will also present their novel results to the Hungarian neuroscience community.

The Conference will be preceded by the **5th Hungarian Neuroscience Meeting for Undergraduate Students, Graduate Students and Junior Postdocs (HUNDOC),** which is a satellite meeting for and organized by young Hungarian neuroscientists. We encourage all young researchers to apply for this free and exciting opportunity.

The **Department of Physiology and Neurobiology,** which has long-standing tradition in neuroscience research, is honoured to organize the Conference. We are proud that the **International Neuroscience Meeting, Budapest 2022** will take place under the patronage of the *Rector of the Eötvös Loránd University* and the *Dean of the Faculty of Science.* We invite all members of the Hungarian neuroscience community to contribute to a successful Conference within the campus of Eötvös Loránd University, a leading research university of Hungary and Central Europe.

We are looking forward to a fruitful and successful meeting!

Prof. Dr. Árpád Dobolyi
Chair of the Conference

Dr. Katalin Schlett
Co-Chair of the Conference

Dr. Csaba Fekete
President of the Hungarian Neuroscience Society

	27th January, Thursday	28th January, Friday
9:00	Registration	Opening of the 2nd day
9:15		**Plenary lecture III** Valery Grinevich
9:30		
9:45		
10:00	Opening ceremony	Coffee break
10:15	**György Buzsáki Plenary lecture** Ole Kiehn	
10:30		**Symposium III** Chair: István Adorján *Cellular and transcriptomic investigations of schizophrenia and autism spectrum disorder*
10:45		
11:00	Coffee break	
11:15		
11:30	**Symposium I** Chair: Dóra Zelena *Gut feelings: the interaction between the brain and the gastrointestinal system during stress*	
11:45		
12:00		
12:15		Lunch break **Poster section II** *presentation of even numbers*
12:30		
12:45		
13:00		
13:15	Lunch break **Poster section I** *presentation of odd numbers*	
13:30		
13:45		
14:00		
14:15		
14:30		
14:45		**Symposium IV** Chair: Dániel Hillier *Circuits and computations in preclinical species: the next vista towards understanding the human brain*
15:00		
15:15		
15:30		
15:45	**Symposium II** Chairs: Mária Deli / Zsuzsanna Helyes *New pharmacological targets to inhibit neuroinflammation*	
16:00		
16:15		
16:30		
16:45		Coffee break
17:00		
17:15		**Plenary lecture IV** Olivier Manzoni
17:30	Coffee break	
17:45		
18:00	**Plenary lecture II** Gábor Nyiri	Closing remarks
18:15		
18:30		
18:45		
19:00		
19:15		
19:30	Conference dinner	

International Neuroscience Meeting, Budapest 2022
IBRO Workshop organized by the Hungarian Neuroscience Society
27-28 January 2022, Budapest, Hungary

CHIEF PATRON

László Borhy, *Rector of Eötvös Loránd University*

CONFERENCE PATRON

Imre Kacskovics, *Dean of the Faculty of Science of Eötvös Loránd University*

ORGANIZING COMMITTEE

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PROGRAM COMMITTEE

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Zoltán Nusser, *Institute of Experimental Medicine*
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Katalin Schlett, *Eötvös Loránd University*

ORGANIZING AGENCY

Remedicon Ltd
Address: 1027 Budapest, Ganz u. 16. (Residence 2. Irodaház)
Tel: +36-1-225-0188, Fax: +36-1-225-0189 ♦ E-mail: info@remedicon.hu

REGISTRATION FEES

	until 7 Nov 2021	after 8 Nov 2021
MITT members	38 000 HUF	48 000 HUF
Non members	48 000 HUF	58 000 HUF
PhD students	25 000 HUF	30 000 HUF
University students	15 000 HUF	20 000 HUF
Conference dinner	7 000 HUF	7 000 HUF (all including VAT)

Registration fee includes 17 000 HUF (gross) meal cost.
Registration fee for participants includes the entry to scientific programs, conference materials, coffee breaks and sandwich lunch. Students are kindly asked to email a copy of their student's card or a letter signed officially by the Dean's Office to prove their student status to the organizer: info@remedicon.hu
Certificate of attendance is available upon request.

VENUE OF THE CONFERENCE

ELTE Lágymányosi Campus, Northern Building
Address: **1117 Budapest, Pázmány Péter sétány 1/A**

Conference participants are asked to use the South entrance as indicated on the page 57 of the booklet. Registration will take place on the ground floor, nearby the South entrance. From here, a staircase leads directly to the cloakroom set up on level -1.

APPROACHING THE VENUE

Public Transportation

Tram 4/6: Petőfi Bridge, Buda side (stop "Petőfi híd, budai hídfő")
Tram 1: stop "Infopark"
Bus 212: Petőfi Bridge, Buda side (stop "Petőfi híd, budai hídfő")
Buses 153, 154: University campus (stop "Egyetemváros - A38 hajóállomás")

Parking

Parking is available in the university parking lot free of charge upon prior registration. Entrance is possible only from the direction of Rákóczi Bridge, while there are two exits towards Petőfi and Rákóczi Bridges (see the Conference's website for a detailed map).

REGISTRATION DESK

Eötvös Loránd University, Lágymányosi Campus, South Entrance of Northern Building

Opening Hours:
27 January - 8:00-18:00
28 January - 8:00-12:00

LANGUAGE

The official language of the congress is English.

MEALS

During the coffee breaks coffee, tea, refreshments, and snacks will be served. Sandwich lunch for each day will be provided. The cost of the meals is included in the registration fee. Tickets will be provided in the registration package.

CONFERENCE DINNER

Trófea Grill Restaurant

Address: 1117 Budapest, Hauszmann Alajos u. 6/b.

Conference dinner will start at 19:30 on Thursday, 27 January, 2022. Registration does not include the cost of Conference dinner (7000 HUF), which needs to be paid separately during the registration.

Approaching the restaurant from the Conference (see the map on the page 58)

by foot: The restaurant is 1.7 km from the ELTE building, which is an appr. 15-20 min walk.

by car: Indoor parking is available for 300 HUF/hour with a direct access to the restaurant. Entrance to the underground parking is from Hauszmann Alajos street.

by public transport: Take tram no. 1 from „Infopark" station towards „Kelenföld vasútállomás". Trófea Grill Restaurant is located at the 2nd stop, named as „Hauszmann Alajos utca / Szerémi út".

PANDEMIC RESTRICTIONS

COVID-19 Certificate (Hungarian Vaccination Certificate or EU Vaccination Certificate) is mandatory to attend the meeting. In addition, verification of 3 vaccinations will be needed, which is possible e.g. by showing the plastic COVID-19 card (immunity certificate), or also by a printed or digital vaccination document. The date of the third vaccination cannot be later than 9 January, 2022 unless the second vaccination was given within 4 months. Furthermore, wearing an FFP2 face mask is mandatory on the site of the Conference except for places designated for lunch and coffee breaks. If the pandemic situation requires, coffee breaks will be cancelled.

COVID-19 tests will not be mandatory for attending the meeting but we strongly advise every participant to perform a self COVID-test (PCR of antigen) one day before the meeting for the safety of the community.

LIABILITY AND INSURANCE

The Organisers cannot accept liability for personal accidents or loss of or damage to private property of participants. Participants are advised to organize their own personal travel and health insurance for their trip.

SAFETY AND SECURITY

Please do not leave bags or suitcases unattended at any time, whether inside or outside the session halls. Hotels strongly recommend the use their safety deposit boxes for guests' valuables.

MEETING POLICY ON PHOTOGRAPHY, FILMING AND RECORDING

No photographs, video recording or audio recordings may be permitted in the scientific sessions at this meeting unless otherwise authorised in advance by the Scientific Programme Committee. Attendees consent to their filming and sound recording as members of the audience. By entering this event you agree to being filmed or photographed which may be used for marketing or promotional purposes. The Society encourages the use of social media before, during, and after the annual meeting, so long as it falls within embargo and communications rules. If you do so, please use *#IBRO2022*.

ORAL PRESENTATIONS

For the lecturers, MS Office / Power Point presentation facilities will be provided. Lecturers are kindly asked to give their presentations on USB stick to the technician before the morning or the afternoon session. Any special needs (e.g. the use of own laptop) should be discussed in time with the technician. Lecturers and the symposium organizers should keep the time limits strictly.

Plenary and Symposia lectures will be presented in the **Conference Room** on level -1 (room number: -1.75).

POSTER PRESENTATIONS

Posters will be presented on Thursday and Friday, 27-28 January in two locations
(see the map on the page 59)

poster topics **P1 – P4 Sphere Hall** (Gömb aula), ground floor
poster topics **P5 – P10 Harmony Hall** (Harmónia terem), floor -1

Posters are expected to be mounted on the opening day, before the scientific sessions and can remain displayed for 2 days, until the end of the Conference. Stands are 90x120 cm in portrait format and will be numbered in advance. Tools necessary for mounting the posters will be provided on spot by the organizers.
Posters presented by students as first authors will automatically take part in the poster competition.

Poster presenters are asked to stand by their poster during the following time:
odd numbers: Thursday, 27 January, 14:00 – 15:45
even numbers: Friday, 28 January, 13:00 – 14:45

The presentation and poster abstracts are available on the Conference's website.

EXHIBITION

Exhibitors' stands will be placed in the Sphere Hall (Gömb aula) and will be on display throughout the Conference next to the poster area.

HANDS-ON EQUIPMENT DEMONSTRATIONS

Main sponsors will have separate exhibition rooms for hands-on equipment demonstrations nearby the Sphere Hall on the ground floor, in rooms 0.60 (AnimaLab Ltd), 0.59 (Carl Zeiss Technika Ltd) and 0.58 (Image-Science Ltd). Please see the Conference's website for registration to these demonstrations and additional information.

FREE WIFI

Free wifi is available at the Conference venue.

Network: IBRO2022
Password: mitt2022

Wednesday, 26 January 2022

5th HUNDOC, Budapest 2022, Satellite Conference

Thursday, 27 January 2022

10:00 – 10:05	**Opening Ceremony**
10:05 – 10:15	**In Memoriam Prof. Dr. István Miklós Ábrahám**
10:15 – 11:00	**György Buzsáki Plenary lecture** BRAINSTEM CIRCUITS THAT CONTROL LOCOMOTION IN THE HEALTHY AND DISEASED BRAIN **Prof. Ole Kiehn** (University of Copenhagen, Copenhagen, Denmark; Karolinska Institute, Stockholm, Sweden)
11:00 – 11:30	*Coffee break*
11:30 – 13:15	**Symposium I** GUT FEELINGS: THE INTERACTION BETWEEN THE BRAIN AND THE GASTROINTESTINAL SYSTEM DURING STRESS **Chair: Dóra Zelena** (Institute of Experimental Medicine, Budapest, Hungary; University of Pécs, Pécs, Hungary)
	THE REALIZATION OF THE BRAIN-GUT INTERACTIONS WITH CORTICOTROPIN-RELEASING FACTOR AND GLUCOCORTICOIDS **Ludmila Filaretova** (Pavlov Institute of Physiology, Russia)
	CHRONIC STRESS-INDUCED CHANGES IN COLON MICROBIOME AND ITS EFFECT ON BEHAVIOR **Dániel Kuti** (Institute of Experimental Medicine, Budapest, Hungary)
	MULTI-SYSTEM METABOLIC REPROGRAMMING AS A CANDIDATE DRIVER FOR INCREASED VULNERABILITY TO PSYCHOPATHOLOGIES IN MALE MICE **Tamás Kozicz** (Mayo Clinic, Rochester, Minnesota, United States)
	POSTTRAUMATIC STRESS DISORDER AND METABOLIC DYSFUNCTION **Dóra Zelena** (Institute of Experimental Medicine, Budapest, Hungary; University of Pécs, Pécs, Hungary)
13:15 – 15:45	**Lunch; Poster session I** *(presentation of odd numbers)*

15:45 – 17:30	**Symposium II** NEW PHARMACOLOGICAL TARGETS TO INHIBIT NEUROINFLAMMATION **Chairs: Mária Deli** (Biological Research Centre, Szeged, Hungary) and **Zsuzsanna Helyes** (University of Pécs, Pécs, Hungary)
	ATTENUATED CSF-1R SIGNALLING DRIVES CEREBROVASCULAR PATHOLOGY **Matthew Campbell** (Trinity College Dublin, Ireland)
	ROLE OF NEUROINFLAMMATION AND CYTOKINE SIGNALLING IN A TRANSLATIONAL MOUSE MODEL OF COMPLEX REGIONAL PAIN SYNDROME **Zsuzsanna Helyes** (University of Pécs, Pécs, Hungary)
	MODULATION OF NEURONAL AND VASCULAR RESPONSES BY MICROGLIA **Ádám Dénes** (Institute of Experimental Medicine, Budapest, Hungary)
	BLOOD-BRAIN BARRIER PROTECTION AS A PHARMACOLOGICAL TARGET IN SYSTEMIC AND NEUROINFLAMMATION **Fruzsina Walter, Mária Deli** (Biological Research Centre, Szeged, Hungary)
17:30 – 18:00	*Coffee break*
18:00 – 18:45	**Plenary lecture II** BRAINSTEM CONTROL OF FEAR MEMORIES **Dr. Gábor Nyiri** (Institute of Experimental Medicine, Budapest, Hungary)
19:30 –	Conference dinner

Friday, 28 January 2022

9:00 – 9:15	**Opening of the second day**
9:15 – 10:00	**Plenary lecture III** WHAT WE NEED TO KNOW ABOUT PEPTIDERGIC SIGNALING IN THE BRAIN. OXYTOCIN AS AN EXAMPLE **Prof. Valery Grinevich** (University of Heidelberg, Germany)
10:00 – 10:30	*Coffee break*
10:30 – 12:15	**Symposium III** CELLULAR AND TRANSCRIPTOMIC INVESTIGATIONS OF SCHIZOPHRENIA AND AUTISM SPECTRUM DISORDER **Chair: István Adorján** (Semmelweis University, Budapest, Hungary)
	CELLULAR BIOMARKERS OF AUTISM SPECTRUM DISORDER AND SCHIZOPHRENIA **István Adorján** (Semmelweis University, Budapest, Hungary)
	NOVEL BIOINFORMATICS APPROACHES AND TRANSCRIPTOMIC INVESTIGATIONS OF SCHIZOPHRENIA AT SINGLE NUCLEUS RESOLUTION **Konstantin Khodosevich** (University of Copenhagen, Denmark)
	DIVERSITY IN ORIGIN AND MIGRATION OF INTERNEURONS AND THEIR CONTRIBUTION TO DISEASE PATHOLOGY **Zdravko Petanjek** (University of Zagreb, Zagreb, Croatia)
	INVESTIGATION OF DE NOVO MUTATIONS IN SCHIZOPHRENIA BY INDUCED PLURIPOTENT STEM CELL BASED DISEASE MODELING AND CRISPR GENOME EDITING **János Réthelyi** (Semmelweis University, Budapest, Hungary)
12:15 – 14:45	**Lunch; Poster session II (***presentation of even numbers)*

14:45 – 16:45	**Symposium IV** CIRCUITS AND COMPUTATIONS IN PRECLINICAL SPECIES: THE NEXT VISTA TOWARDS UNDERSTANDING THE HUMAN BRAIN **Chair: Dániel Hillier** (Research Centre for Natural Sciences, Budapest, Hungary)
	DRIVING ADULT CORTICAL PLASTICITY AND PERCEPTUAL LEARNING IN PRIMATES **Wim Vanduffel** (Laboratory for Neuro- and Psychophysiology, K.U. Leuven, Leuven, Belgium)
	MESOSCOPIC DEEP-BRAIN MAPPING OF MULTIMODAL STIMULUS SELECTIVITIES IN CATS **Domonkos Horváth** (Visual Systems Neuroscience Group, Institute of Cognitive Neuroscience and Psychology, Research Centre for Natural Sciences, Budapest)
	HIDDEN TOPOGRAPHIES OF HORIZONTAL CONNECTIONS IN THE VISUAL CORTEX **Mohit Srivastava** (University of Debrecen, Debrecen, Hungary)
	COMPARATIVE BRAIN IMAGING REVEALS ANALOGOUS AND DIVERGENT PATTERNS OF SPECIES- AND FACE-SENSITIVITY IN HUMANS AND DOGS **Nóra Bunford** (Research Centre for Natural Sciences, Budapest, Hungary)
	PROBING CHOLINERGIC MECHANISMS OF ALERTNESS, TEMPORAL ATTENTION, AND VISUAL SHORT-TERM MEMORY IN A PRIMATE PHARMACOLOGICAL MODEL OF COGNITIVE DECLINE **István Hernádi** (University of Pécs, Pécs, Hungary)
16:45 – 17:15	*Coffee break*
17:15 – 18:00	**Plenary lecture IV** SHAPING OF BRAIN MICROCIRCUITS – THE ROLE OF ENDOCANNABINOIDS **Prof. Olivier Manzoni** (Inmed Inserm, Marseille, France)
18:00 –	**Closing remarks, announcement of poster prize winners**

P1 - STEM CELLS AND DEVELOPMENT

P1.01 **Progenitor cells in the adult human retina**

Barbara Asbóth; Lili Gerendás; Dániel Magda; Ferenc Kilin; Sándor Lovas; Zoltán Zsolt Nagy; Arnold Szabó

Semmelweis University, Department of Anatomy, Histology and Embryology, Retina laboratory, Budapest, Hungary

P1.02 **Dual role of P2X7 receptor in dendritic outgrowth during physiological and pathological brain development**

Paula Mut-Arbona; Lumei Huang; Maria Baranyi; Francesco Calzaferri; Antonio G. Garcia; Beáta Sperlágh

Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Molecular Pharmacology, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School, Budapest, Hungary

P1.03 **Purinergic receptor agonists activated Ca^{2+} signalling in the Deiters' cells in the organ of Corti during development and in mature state – experimental and theoretical approaches**

Eszter Berekméri; Louise Moysan; Ann-Kathrin Lutz; János Farkas; Ádám Fekete; László Köles; Beáta Sperlágh; Tibor Zelles

University of Veterinary Medicine Budapest, Department of Ecology, Budapest, Hungary

P1.04 **Secretagogin-expressing cells in the developing human cortex**

János Hanics; Gábor G. Kovács; Tibor Harkány; Alán Alpár

Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary; National Brain Research Program (NAP 2.0 2017-1.2.1-NKP-2017-00002), Budapest, Hungary

P1.05 **The impact of environmental exposures on the neuronal differentiation of pluripotent stem cells**

Alex Horánszky; Melinda Zana; András Dinnyés

Hungarian University of Agriculture and Life Sciences, Department of Physiology and Animal Health, Gödöllő, Hungary; BioTalentum Ltd., Gödöllő, Hungary

P1.06 **In vitro neurotoxicological studies using hiPSCs and SH-SY5Y cells**

Viktória Király; Melinda Zana; András Dinnyés

BioTalentum Ltd., Gödöllő, Hungary

P1.07 **Effects of depolarization patterns on neuronal development and maturation**

Krisztina Bauer; Zsófia Csótai; Attila Szűcs; Katalin Schlett; Krisztián Tárnok

Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Budapest, Hungary

P1.08 Morphological and electrophysiological maturation of human neurons derived from induced pluripotent stem cells

Maissa Ben Mahmoud; Anikó Rátkai; Krisztina Bauer; Attila Szűcs; Katalin Schlett; Krisztián Tárnok

Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Budapest, Hungary

P2 - REPAIR AND REGENERATION

P2.01 Application of neuroectodermal stem cells supports functional and morphological recovery after chronic spinal cord contusion injury

Tamás Bellák; Krisztián Pajer; Zoltán Fekécs; Máté Ignácz; Annamária Marton; László Gál; Dénes Török; Csaba Vizler; Antal Nógrádi

University of Szeged, Department of Anatomy, Histology and Embryology, Laboratory of Neural Regeneration, Szeged, Hungary

P2.02 Inflammasome activation in motoneurons initiates excessive neuroinflammation and impedes regeneration after sciatic nerve injury

Kinga Molnár; Bernát Nógrádi; Rebeka Kristóf; Ádám Mészáros; Krisztián Pajer; László Siklós; Antal Nógrádi; Imola Wilhelm; István A. Krizbai

Eötvös Loránd Research Network, Institute of Biophysics, Biological Research Centre, Szeged, Hungary

P2.03 Exploring the mechanism of action of intravenous stem cell therapy following traumatic spinal cord injury

Krisztián Pajer; Tamás Bellák; Rebeka Kristóf; Alexandra Hegmann; László Gál; Zoltán Fekécs; Dénes Török; Antal Nógrádi

University of Szeged, Department of Anatomy, Histology and Embryology, Szeged, Hungary

P2.04 Determination of the essential number of motoneurons required to produce functionally useful limb locomotion

Dénes Török; Zoltán Fekécs; László Gál; Krisztián Pajer; Antal Nógrádi

University of Szeged, Albert Szent-Györgyi Medical School, Department of Anatomy, Histology and Embryology, Laboratory of Neural Regeneration, Szeged, Hungary

P2.05 Modified brevican expression resulted by unilateral labyrinth lesion in the superior vestibular nucleus of the rat

Agnes Magyar; Eva Racz; Klára Matesz; Ervin Wolf; Peter Kiss; Botond Gaál

University of Debrecen, Faculty of Medicine, Department of Anatomy, Histology and Embryology, Debrecen, Hungary

P2.06 **Transcribed messenger RNA – A potential therapeutic platform for spinal cord injury**
László Gál; Tamás Bellák; Annamária Marton; Zoltán Fekécs; Drew Weissman; Dénes Török; Rachana Biju; Csaba Vizler; Paulo J.C. Lin; Ying K. Tam; Norbert Pardi; Antal Nógrádi; Krisztián Pajer
University of Szeged, Department of Anatomy, Histology and Embryology, Laboratory of Neural Regeneration, Szeged, Hungary

P3 - DISORDERS, DISEASE MODELS

P3.01 **Oscillatory pattern analysis in a multiple hit schizophrenia rat model (Wisket)**
Leatitia Gabriella Adlan; Mátyás Csordás-Nagy; Balázs Bodosi; György Kalmár; László G. Nyúl; Attila Nagy; Gabriella Kekesi; Alexandra Büki; Gyöngyi Horváth
University of Szeged, Albert Szent-Györgyi Medical School, Department of Physiology, Szeged, Hungary

P3.02 **Transient Receptor Potential Ankyrin 1 cation channel-expressing cells of the Edinger-Westphal nucleus are activated in a mouse migraine model**
Ammar Al-omari; Balázs Gaszner; Zsuzsanna Helyes; Viktória Kormos
University of Pécs, Department of Pharmacology and Pharmacotherapy, Pecs, Hungary

P3.03 **Cognitive enhancer effects of memantine and alpha7 nicotinic acetylcholine receptor agonist PHA-543613 in a rat model of repetitive mild traumatic brain injury during acute and subchronic treatment regimes**
Zsolt Kristóf Bali; Nóra Bruszt; Áron Kolozsvári; Bálint Fazekas; Lili Veronika Nagy; Sai Ambika Tadepalli; Krisztina Amrein; Endre Czeiter; András Büki; István Hernádi
University of Pécs, Grastyán Endre Translational Research Centre, Pécs, Hungary; University of Pécs, Szentágothai Research Centre, Centre for Neuroscience, Translational Neuroscience Research Group, Pécs, Hungary

P3.04 **Comparison of anxiety tests presenting different amounts of novelty: The introduction of the elevated circular-maze**
Violetta Bartos; Diána Pejtsik; Máté Dr. Tóth; Éva Dr. Mikics; Zoltán Kristóf Dr. Varga; Kornél Dr. Demeter
Eötvös Loránd Research Network, Institute of Experimental Medicine, Translational behavioural neuroscience, Budapest, Hungary

P3.05 **The somatostatin 4 receptor agonist heptapeptide TT-232 inhibits pain in mouse models of arthritis and neuropathy**
Éva Borbély; Boglárka Kántás; Ádám Horváth; Erika Pintér; Zsuzsanna Helyes
University of Pécs, Medical School, Department of Pharmacology and Pharmacotherapy, Pécs, Hungary; University of Pécs, Szentágothai János Research Center, Pécs, Hungary

P3.06 **A1 adenosine receptors have a modulatory role in exogenous ketogenic supplements-evoked beneficial effect on lipopolysaccharide-generated increase in absence epileptic activity in WAG/Rij rats**
Brigitta Brunner; Csilla Ari; Dominic P. D'Agostino; Zsolt Kovács
University of Pécs, Faculty of Sciences, Institute of Biology Pécs, Hungary; Eötvös Loránd University, Savaria University Centre, Department of Biology, Szombathely, Hungary

P3.07 **Serotonergic anxiolysis in zebrafish requires novel or previously aversive experience**
Tímea Csorvási; Diána Pejtski; Máté Varga; Éva Mikics; Zoltán Kristóf Varga
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Translational Behavioural Neuroscience, Budapest

P3.08 **Single-cell level characterization of the chemotherapy induced cellular senescence in the neurovascular unit**
Boglárka Csík; Zoltán Ungvári; Stefano Tarantini; Ádám Nyúl-Tóth; Zoltán Benyó; Blanka Borbála Vályi; Mónika Szűcs; Anna Csiszár; Tamás Kiss
University of Oklahoma, Health Sciences Center, Department of Biochemistry and Molecular Biology, Vascular Cognitive Impairment and Neurodegeneration Program, Oklahoma City, United States

P3.09 **Comparative transcriptome analysis of the dorsomedial prefrontal cortex associated with suicidal behavior**
Fanni Dóra; Rashmi Kumari; Éva Renner; Miklós Palkovits; Árpád Dobolyi
Semmelweis University, Human Brain Tissue Bank, Budapest, Hungary; Semmelweis University, Department of Anatomy, Histology and Embryology, Laboratory of Neuromorphology, Budapest, Hungary

P3.10 **Age-related degeneration in the motor endplates and axons of mice leaves the motoneuron soma unaffected**
Zoltán Fekécs; Krisztián Pajer; Bernát Nógrádi; Roland Patai; László Siklós; Antal Nógrádi
University of Szeged, Albert Szent-Györgyi Medical School, Department of Anatomy, Histology and Embryology, Laboratory of Neural Regeneration, Szeged, Hungary

P3.11 **Terminating human epileptic seizures by closed-loop transcranial brain stimulation – a first-in-patient study**
Tamás Földi; Dániel Fabó; Tamás Gyurkovics; Anita Kamondi; Loránd Erőss; Antal Berényi
University of Szeged, Department of Physiology, MTA-SZTE 'Momentum' Oscillatory Neuronal Networks Research Group, Szeged, Hungary; University of Szeged, HCEMM-USZ Magnetotherapeutics Research Group, Szeged, Hungary; Neunos Ltd., Szeged, Hungary

P3.12 **Extracellular circulating miRNAs as potential biomarkers in multiple sclerosis and epilepsy**
Lili Geiger; Réka Horváth; Miklós Kecskés; Gergely Orsi; Márton Tóth; Attila Miseta; Zsolt Illés; Katalin Gombos; Boldizsár Czéh
University of Pécs, Department of Laboratory Medicine, Pécs, Hungary

P3.13 **Effects of intracerebroventricularly injected streptozotocin treatment on the cognitive performance of aged, experienced rats**
Attila Gáspár; Aliz Judit Ernyey; Barbara Hutka; Brigitta Tekla Tajti; Bence Tamás Varga; Zoltán Sándor Zádori; István Gyertyán
Semmelweis University, Department of Pharmacology and Pharmacotherapy, Cognitive Translational Behavioural Pharmacology Group, Budapest, Hungary

P3.14 **The dualistic role of the purinergic P2Y12 receptor in MPTP induced Parkinsonism in mice**
András Iring; Adrian Toth; Maria Baranyi; Lilla Otrokocsi; Laszlo V. Modis; Flora Goloncser; Bernadett Varga; Tibor Hortobagyi; Daniel Bereczki; Ádám Dénes; Beata Sperlagh
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Molecular Pharmacology, Budapest, Hungary

P3.15 **Parallel investigations on behavioural changes and ex vivo entorhinal cortical network excitability in a rat model of autism**
Viktor Kelemen; Tímea Májer; Sándor Borbély; Attila Szűcs; Petra Varró; Ildikó Világi
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Budapest, Hungary

P3.16 **Investigation of the glutamate transmitter receptor system in a rat model of autism**
Zsuzsanna Faragó; Tímea Májer; Veronika Bódi; Ildikó Világi; Attila Szűcs; Petra Varró
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Budapest, Hungary

P3.17 **Excitability changes in prefrontal cortical networks in a rat model of autism**
Júlia Puskás; Viktor Kelemen; Veronika Bódi; Ildikó Világi; Attila Szűcs; Petra Varró
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Budapest, Hungary

P3.18 **Peptidergic neurons of the Edinger-Westphal nucleus express TRPA1 ion channel that is downregulated both upon chronic variable mild stress in mice and in human suicide victims**
Viktória Kormos; Angéla Kecskés; József Farkas; Tamás Gaszner; Valér Csernus; Dániel Hegedüs; Éva Renner; Miklós Palkovits; Dóra Zelena; Zsuzsanna Helyes; Erika Pintér; Balázs Gaszner
University of Pécs, Department of Pharmacology and Pharmacotherapy, Pécs, Hungary

P3.19 **Creating cholinergic neuron specific knock-out mice by combining three (CRISPR-Cas9, Cre/loxP and AAV) genome editing technologies**
Tamás Kovács; Szidónia Farkas
University of Pécs, Department of Physiology, Pécs, Hungary; Szentágothai János Research Center, Pécs, Hungary

P3.20 **Elevated serum purine levels in schizophrenia: a reverse translational study to identify novel inflammatory biomarkers**
Zsüliet Kristóf; Mária Baranyi; Pál Tod; Paula Mut-Arbona; Kornél Demeter; István Bitter; Beáta Sperlágh
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Molecular Pharmacology, Budapest, Hungary; Semmelweis University, Doctoral School of Mental Health Sciences, Budapest, Hungary

P3.21 **Reinstating olfactory bulb derived limbic gamma oscillations alleviates depression**
Qun Li; Yuichi Takeuchi; Jiale Wang; Lívia Barcsai; Lizeth K Pedraza; Gábor Kozák; Shinya Nakai; Shigeki Kato; Kazuto Kobayashi; Masahiro Ohsawa; Magor L Lőrincz; Antal Berényi
University of Szeged, Department of Physiology, Berenyi Lab, Szeged, Hungary

P3.22 **Role of the phosphodiesterase GDE1 in an ER-mediated pathway preventing anxiety**
Zsófia I. László; László Bíró; Christina Miskolczi; Zoltán K. Varga; Huba Szebik; Máté Tóth; Csaba Cserép; Fruzsina Mógor; Flóra Gölöncsér; Mária Baranyi; Kata Nagy; Imre Kacskovics; Gabriel Simon; Benjamin Cravatt; Beáta Sperlágh; Ádám Dénes; Éva Mikics; Zsolt Lele; István Katona
Eötvös Loránd Research Network, Institute of Experimental Medicine, Momentum Laboratory of Molecular Neurobiology, Budapest, Hungary

P3.23 **Peripherally induced acute neuroinflammation leads to functional changes in the prefrontal cortex at the molecular, cellular, and network levels**
Dániel Mittli; Vanda Tukacs; Lilla Ravasz; Katalin Adrienna Kékesi; Gábor Juhász
Eötvös Loránd University, Institute of Biology, Department of Biochemistry, ELTE NAP Neuroimmunology Research Group, Budapest, Hungary; Eötvös Loránd University, Institute of Biology, Laboratory of Proteomics, Budapest, Hungary

P3.24 **Deep plasma proteomics reveal age-related molecular pathways modulated by GRF6019 treatment in Alzheimer's disease patients**
Tibor Nánási; Mia Feng; Steven Braithwaite; Benoit Lehallier
Alkahest Inc., San Carlos, CA, United States; Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary

P3.25 **TDP-43 pathology includes inflammatory changes around NMJs in a mouse model of ALS**
Bernát Nógrádi; Kinga Molnár; Rebeka Kristóf; Thomas H. Gillingwater; Helena Chaytow; Antal Nógrádi; László Siklós; Roland Patai
Eötvös Loránd Research Network, Biological Research Centre, Institute of Biophysics, Szeged, Hungary; University of Szeged, Department of Neurology, Szeged, Hungary

P3.26 **Cannabinoid receptor type 1 expression in the fetal cortex and its alterations in Down syndrome**
Ágoston Patthy; Tibor Harkány; Gábor G. Kovács; Alán Alpár
Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P3.27 **A mouse model of comorbid anxiety and depression**
Diána Pejtsik; Zoltán Kristóf Varga; Olga Wronikowska; Manó Aliczki; Máté Tóth; Éva Mikics
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Translational Behavioural Neuroscience, Budapest, Hungary

P3.28 **Examination of the PAC1 receptor colocalization with Ca^{2+}-binding proteins and cochlea-efferent markers in the auditory pathway of pituitary adenylate cyclase-activating polypeptide - knock out (PACAP KO) and wild type (WT) mice**
Daniel Pham; Balazs Daniel Fulop; Gergo Gyurok; Balázs Gaszner; Dóra Reglődi; Andrea Tamás
University of Pécs, Medical School, Department of Anatomy, MTA-PTE PACAP Research Group, Pécs, Hungary

P3.29 **Protection against vincristine-induced peripheral neuropathy in WLDS and SARM1$^{-/-}$ mice**
Erzsébet Pór; Laura Körmöczy; Michael Coleman; Róbert Adalbert
University of Szeged, Faculty of Medicine, Department of Anatomy, Histology and Embryology, Szeged, Hungary; University of Cambridge, John van Geest Centre for Brain Repair, Cambridge, United Kingdom

P3.30 **Infrared thermal modulation of optogenetically induced epileptic activity**
Alibek Sartayev; Éva Gulyás; Anna Zalatnai; Sándor Borbély; Ágoston Cs. Horváth; Zoltán Fekete; Péter Barthó
Eötvös Loránd Research Network, Research Center for Natural Sciences, Sleep Oscillations Research Group, Budapest, Hungary

P3.31 **Inoculation with blood sera from ALS patients with identified mutations eventuates elevated calcium levels and loss of lumbar motor neurons in mice**
Krisztina Spisák; Tamás F. Polgár; Valéria Meszlényi; Bernát Nógrádi; Kornélia Tripolszki; Márta Széll; Izabella Obál; Laura Körmöczy; József I. Engelhardt; László Siklós; Roland Patai
Eötvös Loránd Research Network, Biological Research Centre, Biophysics, Neuronal plasticity research group, Szeged, Hungary; University of Szeged, Theoretical Medicine Doctoral School, Szeged, Hungary

P3.32 **Maternal P2X7 receptor inhibition prevents autism-like phenotype in male mouse offspring through the NLRP3-IL-1β pathway**
Dorottya Szabo; Pál Tod; Flóra Gölöncsér; Viktor Román; Balázs Lendvai; Beáta Sperlágh
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Molecular Pharmacology, Budapest, Hungary

P3.33 Perisomatic inhibition and its relation to epilepsy and to synchrony generation in the human neocortex

Estilla Zsófia Tóth; Felicia Gyöngyvér Szabó; Ágnes Kandrács; Noémi Orsolya Molnár; Gábor Nagy; Attila G. Bagó; Dániel Fabó; Boglárka Hajnal; Bence Rácz; Lucia Wittner; István Ulbert; Kinga Tóth
Eötvös Loránd Research Network, Research Center for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Semmelweis University, Szentágothai János Doctoral School, Budapest, Hungary

P3.34 The role of spreading depolarization in the insufficiency of reperfusion after cerebrovascular occlusion

Anna Törteli; Réka Tóth; Sarah Samardzic; Sarah Berger; Ferenc Bari; Ákos Menyhárt; Eszter Farkas
University of Szeged, Albert Szent-Györgyi School of Medicine and Faculty of Science and Informatics, Department of Cell Biology and Molecular Medicine, HCEMM USZ- Cerebral Blood Flow and Metabolism Research Group, Szeged, Hungary

P3.35 Neurodegeneration in the centrally-projecting Edinger-Westphal nucleus contributes to the non-motor symptoms of Parkinson's disease in the rat

Balázs Ujvári; Bence Pytel; Zsombor Márton; Máté Bognár; László Ákos Kovács; József Farkas; Tamás Gaszner; Angéla Kecskés; Viktória Kormos; Boglárka Farkas; Nóra Füredi; Balázs Gaszner
University of Pécs, Medical School, Department of Anatomy, Pécs, Hungary

P3.36 The role of astrocytic insulin-like growth factor 1 receptor in the development of vascular cognitive impairment

Blanka Borbála Vályi; Stefano Tarantini; Zoltán Ungvári; Anna Csiszár; Andriy Yabluchanskiy; Ádám Nyúl-Tóth; Zoltán Benyó; Priya Balasubramanian; Boglárka Csík; Mónika Szűcs; Tamás Kiss
University of Szeged, Albert Szent-Györgyi Medical School, Department of Medical Physics and Informatics, Szeged, Hungary

P3.37 Attempt to transfer a pharmacological neurovascular uncoupling model from mice to rats

Bence Tamás Varga; Attila Gáspár; Aliz Judit Ernyey; Barbara Hutka; Brigitta Tekla Tajti; Zoltán Sándor Zádori; István Gyertyán
Semmelweis University, Department of Pharmacology and Pharmacotherapy, Cognitive Translational Behavioural Pharmacology Group, Budapest, Hungary

P3.38 A novel approach to measure trait-dependent behaviour reveals a plasticity-focused genetic profile of anxiety

Zoltán K Varga; Diána Pejtsik; László Szente; Zoltán Balogh; Manó Aliczki; Violetta Bartos; Máté Tóth; Éva Mikics
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Translational Behavioral Neuroscience, Budapest, Hungary

P3.39 Effect of aging on the antidepressant role of extracellular zinc and P2X7 deficiency in mice
Bernadett Varga; Mária Baranyi; Beáta Sperlágh
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Molecular Pharmacology, Budapest, Hungary; Semmelweis University, School of PhD Studies, János Szentágothai School of Neurosciences, Budapest, Hungary

P3.40 Age-related changes in the activity of basal forebrain cholinergic neurons during Pavlovian conditioning
Anna Velencei; Sergio Martínez-Bellver; Panna Hegedűs; Bálint Király; Nicola Solari; Balázs Hangya
Eötvös Loránd Research Network, Institute of Experimental Medicine, Systems Neuroscience, Lendület Laboratory, Budapest, Hungary

P3.41 Alzheimer's disease modelling by hiPSC-derived neurons and microglia like cells
Kinga Vörös; Linda Francistiova; Melinda Zana; András Dinnyés
Hungarian University of Agriculture and Life Sciences, Department of Physiology and Animal Health, Gödöllő, Hungary; BioTalentum Ltd., Gödöllő, Hungary

P3.42 Effects of dorsal root avulsion injury on the spinal ganglia and spinal cord
Máté Vass; Dénes Török; Krisztián Pajer; Antal Nógrádi
University of Szeged, Albert Szent-Györgyi Medical School, Department of Anatomy, Histology and Embryology, Laboratory of Neural Regeneration, Szeged, Hungary

P3.43 Ectopic neurons in the dentate gyrus in human temporal lobe epilepsy
Abigél Molnár; József Janszky; Tamás Dóczi; László Seress; Hajnalka Ábrahám
University of Pécs Medical School, Department of Medical Biology and Central Electron Microscopic Laboratory, Pécs, Hungary

P3.44 Effect of Urocortin 2 on the maturation of parvalbumin-immunoreactive neurons in organotypic hippocampal slice culture
Alexandra Stayer-Harci; Katalin Götzer; Bálint Balogh; Mónika Vecsernyé; Noémi Sóki; Abigél Molnár; György Sétáló Jr.; László Seress; Hajnalka Ábrahám
University of Pécs, Medical School, Department of Medical Biology and Central Electron Microscopic Laboratory, Pécs, Hungary

P3.45 Long-term effects of regular exercise training on the muscle-brain axis in healthy and hyperlipidemic mice
Brigitta Dukay; Zsófia Bódai; Alexandra Csefová; Petra Hajdu; Zsófia Ruppert; Kitti Szabó; Anikó Keller-Pintér; László Dux; Botond Penke; Lívia Fülöp; Miklós Sántha; Melinda E. Tóth
Eötvös Loránd Research Network, Biological Research Centre, Institute of Biochemistry, Szeged, Hungary

P3.46 **Role of PACAP in age-related systemic amyloidosis**
Jason Sparks; Dóra Reglődi
University of Pecs, Medical School, Department of Anatomy, MTA-PTE PACAP Research Team, Pécs, Hungary

P3.47 **Generation and characterization of neural progenitor cell lines and neural cultures from monozygotic twins with type 2 diabetes**
Katalin Vincze; Eszter Szabó; Dóra Reé; Bálint Jezsó; Csongor Tordai; Gábor Földes; Andrea Á. Molnár; János M. Réthelyi; Ágota Apáti
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Enzymology, Budapest, Hungary; Hungarian Academy of Sciences and Semmelweis University, National Brain Research Program (NAP), Molecular Psychiatry Research Group, Budapest, Hungary

P4 - CELLULAR NEUROSCIENCE

P4.01 **Morphological and neurochemical characterization of glycinergic neurons in laminae I to IV of the mouse spinal dorsal horn**
Camila Miranda; Krisztina Hegedüs; Hendrik Wildner; Hanns Ulrich Zeilhofer; Miklós Antal
University of Debrecen, Department of Anatomy, Histology and Embryology, Faculty of Medicine, Debrecen, Hungary

P4.02 **Nanoscale distibution of Munc13-1 and Cav2.1 in identified hippocampal synapses**
Andrea Lőrincz; Tünde Benedek; Zoltán Nusser
Eötvös Loránd Research Network, Institute of Experimental Medicine, Cellular Neurophysiology, Budapest, Hungary

P4.03 **Target cell type-dependent enrichment of Munc13-2 in presynaptic active zones of hippocampal pyramidal cells**
Noémi Holderith; Mohammad Aldahabi; Zoltán Nusser
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Cellular Neurophysiology, Budapest, Hungary

P4.04 **P2X7Rs modulate excitatory neurotransmission in mouse dentate gyrus**
Lumei Huang; Paula Mut Arbona; Bernadett Varga; János Brunner; Máté Kisfali; E. Sylvester Vizi; Beáta Sperlágh
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Molecular Pharmacology, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School, Budapest, Hungary

P4.05 **Investigation of astroglial heterogeneity in the human cortex and caudate nucleus**
Paulina Hoppa; Teadora Tyler; Erzsébet Frank; Lilla Roszik; Kornél Szmetana; István Adorján
Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P4.06 **Optical recording of unitary synaptic connections using Voltron**
Ádám Szatai; Bálint Tamás; Eszter Sipos; Antónia Arszovszki; János Brunner; János Szabadics
Eötvös Loránd Research Network, Institute of Experimental Medicine, Department of Cellular Neuropharmacology, Budapest, Hungary

P4.07 **Relations between the kynurenergic and GABAergic systems in the mouse brain - A neuroanatomical study**
Gyula Jenei; Zsolt Kis; József Toldi
University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary

P4.08 **Inflammasome-dependent communication between cerebral endothelial cells and pericytes**
Ádám Mészáros; Mihály Kozma; Ádám Nyúl-Tóth; Kinga Molnár; Laura Costea; Zsófia Hernádi; Csilla Fazakas; Attila E. Farkas; Imola Wilhelm; István A. Krizbai
Eötvös Loránd Research Network, Institute of Biophysics, Biological Research Centre, Szeged, Hungary; University of Szeged, Doctoral School of Biology, Szeged, Hungary

P4.09 **Ill-priming of docked vesicles contributes to low release probability at hippocampal glutamatergic synapses**
Mohammad Aldahabi; Flora Balint; Noémi Holderith; Zoltán Nusser
Eötvös Loránd Research Network, Institute of Experimental Medicine, Budapest, Hungary; Semmelweis University, János Szentágothai School of Neurosciences, Budapest, Hungary

P4.10 **Prefrontal calretinin interneurons are impaired in schizophrenia**
Teadora Tyler; Virginia Fehér; Erzsébet Frank; Eszter Somogyi; Krisztina Sáfár; Lilla Roszík; István Adorján
Semmelweis University, Department of Anatomy, Histology and Embryology, Neuropsychiatry Workgroup, Budapest, Hungary

P4.11 **A new pathway from basal forebrain somatostatin neurons to cortical areas**
Áron Orosz; Péter Papp; Krisztián Zichó; Zsuzsanna Hajós; Márton I. Mayer; Zsuzsanna Bardóczi; Gábor Nyiri
Eötvös Loránd Research Network, Institute of Experimental Medicine, Cerebral Cortex Research, Workgroup of neuronal networks, Budapest, Hungary

P4.12 **Spreading depolarization-induced astrocytic Ca^{2+} waves and subsequent non-synchronized Ca^{2+} oscillations coincide with arteriole diameter changes in the mouse cerebral cortex**
Réka Tóth; Attila E. Farkas; István A. Krizbai; Péter Makra; Ferenc Bari; Eszter Farkas; Ákos Menyhárt
University of Szeged, Albert Szent-Györgyi Medical School, Department of Cell Biology and Molecular Medicine, HCEMM-USZ Cerebral Blood Flow and Metabolism Research Group, Szeged, Hungary

P4.13 **Examination of the role of nesfatin-1 in the supraoptic nucleus of rats**
Klaudia Sípos; Rege S. Papp; Máté Durst; Miklós Geiszt; Zsuzsanna E. Tóth
Semmelweis University, Department of Anatomy, Histology and Embryology, Laboratory of Neuroendocrinology and In Situ Hybridization, Budapest, Hungary

P4.14 **Dendritic synaptome of GABAergic interneurons in the mouse visual cortex**
Petra Talapka; Nóra Gargya; Zsolt Kocsis; Vera Etelka Szarvas; Zoltán Kisvárday
University of Debrecen and Hungarian Academy of Sciences, Neuroscience Research Group, Debrecen, Hungary

P4.15 **Organization of extracellular matrix in the hindbrain of mouse embryo**
Ildikó Wéber; Adél Dakos; Zoltán Mészár; Klára Matesz; András Birinyi
University of Debrecen, Department of Anatomy, Histology and Embryology, Debrecen, Hungary

P4.16 **Sema3 is essential in the differentiation of neuroprogenitor cells and the regulation of cell cycle in chicken embryo's spinal cord**
Rita Varga; Kirsten Roberts; Péter Szücs; Zoltán Mészár
University of Debrecen, Department of Anatomy, Histology and Embryology, Debrecen, Hungary

P4.17 **Unique properties of dendritic Ca^{2+} spikes in hippocampal CA3 pyramidal neurons**
Noémi Kis; Ádám Magó; Balázs Lükő; Judit Makara
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Neuronal Signaling, Budapest, Hungary

P4.18 **Comparison of popular fluorescent actin markers to measure actin dynamics in dendritic spines**
Domonkos Nagy-Herczeg; Attila Ignácz; Katalin Schlett
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Neural Cell Biology Research Group, Budapest, Hungary

P4.19 **Investigating the function of septin-3 in cortical neurons**
Vilmos Tóth; Balázs András Györffy; Henrietta Vadászi; Lilla Ravasz; Dániel Mittli; Dominik Mátyás; András Micsonai; Tamás Szaniszló; Réka Kovács; Tünde Juhász; Péter Lőrincz; Gábor Juhász; Katalin Adrienna Kékesi; József Kardos
Eötvös Loránd University, Institute of Biology, Department of Biochemistry, ELTE NAP Neuroimmunology Research Group, Budapest, Hungary

P4.20 **Fast astrocytic calcium signals are revealed by high-frequency imaging during epileptiform activity**
Zsolt Szabó; Julianna Kardos; László Héja
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Organic Chemistry, Functional Pharmacology Research Group, Budapest, Hungary

P4.21 **Cell-type specific features of serotonergic modulation in the anterior piriform cortex**
Ildikó Piszár; Magor L. Lőrincz
University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary

P4.22 Cortical and subcortical neuronal dynamics during absence seizures in awake animals

Péter Sere; Nikolett Zsigri; Zoe Atherton; Timea Raffai; Szabina Furdan; Fanni Győri; Antal Berényi; Vincenzo Crunelli; Magor L. Lőrincz
University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary

P4.23 Cellular and molecular mechanisms of age-related changes in a defined neuronal network encoding associative memory

István Fodor; Bence Gálik; Péter Urbán; Réka Svigruha; György Kemenes; Ildikó Kemenes; Zsolt Pirger
Eötvös Loránd Research Network, Balaton Limnological Research Institute, Ecophysiological and Environmental Toxicological Research Group, NAP Adaptive Neuroethology, Tihany, Hungary

P4.24 The age-dependence and roles of the astrocyte-dependent, NMDA-receptor mediated cortical slow inward currents in human and mouse neocortical samples

Andrea Csemer; Adrienn Kovács; Baneen Maamrah; Krisztina Deák-Pocsai; Tsogbadrakh Bayasgalan; Álmos Klekner; Péter Szücs; Balázs Pál
University of Debrecen, Department of Physiology, Debrecen, Hungary

P4.25 Chemogenetic investigation of brainstem neuromodulatory actions on locomotor regulation

Baneen Maamrah; Andrea Csemer; Krisztina Deák-Pocsai; Péter Szentesi; Balázs Pál
University of Debrecen, Department of Physiology, Debrecen, Hungary

P4.26 Astaxanthin exerts anabolic actions via pleiotropic modulation of the excitable tissue

Krisztina Deák-Pocsai; Mónika Gönczi; Andrea Csemer; László Szabó; Mónika Sztretye; János Fodor; Kálmán Szenthe; Anikó Keller-Pintér; Zoltán Márton Köhler; Péter Nánási; Norbert Szentandrássy; Balázs Pál; László Csernoch
University of Debrecen, Department of Physiology, Neurophysiology, Debrecen, Hungary

P4.27 Photobleaching alters morphometric parameters of different cell types during immunofluorescent imaging of spinal cord

Tamás Ferenc Polgár; Krisztina Spisák; Roland Patai; László Siklós
Eötvös Loránd Research Network, Biological Research Centre, Institute of Biophysics, Szeged, Hungary; University of Szeged, Theoretical Medicine Doctorate School, Szeged, Hungary

P4.28 Structure-based short peptides designed to disrupt the STEP-GluA2 complex enhance cognitive performance in rats

Dominik Mátyás; Horea Stefan Szedlacsek; Dávid Bajusz; Rodica Aura Badea; Andreea Pop; Lilla Ravasz; Dániel Mittli; Georgina Necula - Petrareanu; Ildikó Papp; Gábor Juhász; Lucian Hritcu; György Miklós Keserű; Stefan Eugen Szedlacsek
CRU Hungary Ltd., Göd, Hungary

P4.29 **Modelling of neuronal responses to rotating extracellular electric field gradients**
Kristóf Furuglyás; Zoltán Somogyvári; Antal Berényi
Eötvös Loránd Research Network, Wigner Research Centre for Physics, Budapest, Hungary; University of Szeged, Department of Physiology, MTA-SZTE 'Momentum' Oscillatory Neuronal Networks Research Group, Szeged, Hungary; Neunos Zrt., Szeged, Hungary

P4.30 **Altered H-current in cortical interneurons of drug-resistant epileptic patients**
Marton Toth; Szilárd Szőcs; Nóra Henn-Mike; Ágnes Agócs-Laboda; Tamas Doczi; Zsolt Horvath; Jozsef Janszky; Csaba Varga
University of Pécs, Medical School, Deparment of Neurology, Pécs, Hungary

P4.31 **Feedback inhibition in the entorhinal cortex mediated by neurogliaform cells**
Szilárd Szőcs; Nóra Henn-Mike; Ágnes Agócs-Laboda; Zoltan Petyko; Csaba Varga
University of Pécs, Medical School, Szentágothai Research Centre, Department of Physiology, Neuronal Microcircuits Group, Pécs, Hungary

P4.32 **Comparison of CCK+ perisomatic inhibition throughout multiple layers of the entorhinal cortex**
Nóra Henn-Mike; Munkh-ulzii Munkhlkhagva; Szilárd Szőcs; Zoltán Máté; Ferenc Erdélyi; Ágnes Agócs-Laboda; Csaba Varga
University of Pécs, Medical School, Szentágothai Research Centre, Department of Physiology, Neuronal Microcircuits Group, Pécs, Hungary

P4.33 **Down-top inhibition of neurogliaform cells by somatostatin positive interneurons**
Szilárd Szőcs; Nóra Henn-Mike; Ágnes Agócs-Laboda; Csaba Varga
University of Pécs, Medical School, Szentágothai Research Centre, Department of Physiology, Neuronal Microcircuits Group, Pécs, Hungary

P4.34 **Comparison of action potentials in small and large mossy fiber axons using direct patch-clamp recording and voltage imaging**
János Brunner; Antónia Arszovszki; Gergely Tarcsay; János Szabadics
Eötvös Loránd Research Network, Institute of Experimental Medicine, Cellular Neuropharmacology Lab, Budapest, Hungary

P4.35 **Modulation of firing activity of CA1 hippocampal pyramidal neurons by systemically applied alpha7 nicotinic acetylcholine receptor selective compounds and memantine in the anesthetized rat, in vivo**
Lili Veronika Nagy; Zsolt Kristóf Bali; István Hernádi
University of Pécs, Grastyán Endre Translational Research Centre, Pécs, Hungary; University of Pécs, Centre for Neuroscience and Szentágothai Research Center, Translational Neuroscience Research Group, Pécs, Hungary

P4.36 Ecdysteroids protect the viability and barrier integrity of cultured human brain endothelial cells under oxidative stress

Judit P. Vigh; Ana Raquel Santa-Maria; Daniel S. Galvis Montes; Ibolya Herke; Gábor Tóth; Fruzsina R. Walter; Attila Hunyadi; Mária A. Deli

Eötvös Loránd Research Network, Biological Research Centre, Institute of Biophysics, Biological Barriers Research Group, Szeged, Hungary; University of Szeged, Doctoral School of Biology, Szeged, Hungary

P4.37 Information flow between the dentate gyrus and CA3 regions during sharp wave-ripple complexes in rat hippocampal slices

Ágnes Kandrács; Csilla Szabó; Hédi Maczelka; Veronika Kardos; Piroska Teleki; Zsófia Lánczi; Katharina T. Hofer; Estilla Zs. Tóth; Kinga Tóth; István Ulbert; Lucia Wittner

Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Integrative Neuroscience Group, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Integrative Neuroscience Group, Budapest, Hungary

P4.38 Postnatal developmental change in the expression of ChAT, NKCC1, and KCC2 mRNAs in the mouse basal forebrain

Angela Dizon; Andrea Csemer; Balázs Pál; Imre Kalló

Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Endocrine Neurobiology, Budapest, Hungary

P4.39 Resolvins inhibit transient receptor potential vanilloid 1 and ankyrin 1 ion channel activity via lipid raft modification

Ádám Horváth; Maja Payrits; János Erostyák; Géza Makkai; Zsuzsanna Helyes; Éva Szőke

University of Pécs, Department of Pharmacology and Pharmacotherapy, Szentágothai Research Center, Pécs, Hungary

P4.40 Induced pluripotent stem cell derived long-term in vitro neuronal culture on a microelectrode array

Csongor Tordai; Katalin Vincze; Máté Baradits; Ágota Apáti; János Réthelyi

Semmelweis University, Psychiatry and Psychotherapy Clinic, Molecular Psychiatry Research Group, Budapest, Hungary; Eötvös Loránd Research Network, Center for Natural Sciences, Enzymology Institute, Human Stem Cell Laboratory, Budapest, Hungary

P4.41 Robust somatic HCN channel-mediated facilitation of GABAergic basket cell input-output function in human compared to mouse supragranular neocortex

Viktor Szegedi; Emőke Bakos; Szabina Furdan; Dániel Varga; Miklós Erdélyi; Pál Barzó; Attila Szűcs; Gábor Tamás; Karri Lamsa

University of Szeged, Department of Physiology, Anatomy and Neuroscience, NAP Research Group for Inhibitory Interneurons and Plasticity, Szeged, Hungary

P4.42 **Persistent inflammatory pain induced upregulation of P2X4 receptor in rat spinal dorsal horn and lumbar dorsal root ganglia**
László Ducza; Andrea Gajtkó; Krisztina Hegedűs; Erzsébet Bakk; Botond Gaál; Roland Takács; Péter Szücs; Krisztina Holló
University of Debrecen, Department of Anatomy, Molecular and Cellular Neuroscience, Debrecen, Hungary

P4.43 **Prox1 immunoreactive amacrine cells and their relationship to electrical synapses in the mammalian inner retina**
Katalin Fusz; Varna Gomes da Silveira; Péter Kóbor; Tamás Kovács-Öller; Béla Völgyi; Edina Szabó-Meleg; Péter Buzás; Ildikó Telkes
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary; University of Pécs, Centre for Neuroscience, Pécs, Hungary

P4.44 **Inflammasome activation in primary astrocyte cultures**
Ghada Mahdi; Ali Dabberha; Andrea Gajtkó; Krisztina Hegedűs; Erzsébet Bakk; Krisztina Holló
University of Debrecen, Anatomy, Histology and Embryology, Debrecen, Hungary

P4.45 **Testing the sensitivity of virus injected ASAP and glutamate sensors with two-photon imaging in mouse cortical neurons in vitro**
Anna Mihály; Gábor Juhász; Balázs Chiovini; Balázs Rózsa
Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Two-Photon Laboratory, Budapest, Hungary

P4.46 **In vitro examination of the effect of lipid raft disruptors on different cell properties**
Ádám Horváth; Anita Steib; János Erostyák; Zsuzsanna Helyes; Éva Szőke
University of Pécs, Medical School, Department of Pharmacology and Pharmacotherapy, Pécs, Hungary; University of Pécs, János Szentágothai Research Centre and Centre of Neuroscience, Pécs, Hungary

P4.47 **RetaiN: Neuroimmunology and stress resistance in human ageing**
Lea Danics; Dorina Jamniczky; Kinga Sándor-Bajusz; Ádám Lakos; Karolina Pircs
Semmelweis University, Institute of Translational Medicine, HCEMM-SU Neurobiology and Neurodegenerative Deseases Research Group, Budapest, Hungary

P4.48 **Investigation of a pentapeptide carrier on culture models of the blood-brain and epithelial barriers**
Ilona Gróf; Alexandra Bocsik; Enikő Szabó; Norbert Imre; Anna Hegyi; Éva Monostori; Tamás Martinek; Mária A. Deli
Eötvös Loránd Research Network, Biological Research Centre, Institute of Biophysics, Szeged, Hungary

P5 - SYSTEMS NEUROSCIENCE

P5.01 **Sampling motion trajectories during hippocampal theta sequences**
Balázs B Ujfalussy; Gergő Orbán
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Biological Computation, Budapest, Hungary

P5.02 **Contribution of top-down interactions to texture processing in the visual cortex**
Ferenc Csikor; Balázs Meszéna; Gergő Orbán
Eötvös Loránd Research Network, Wigner Research Centre for Physics, Department of Computational Sciences, Computational Systems Neuroscience Lab, Budapest, Hungary

P5.03 **Relevance of stimuli is represented in anterior cingulate cortex during a context-shifting task**
Márton Hajnal; Zsombor Szabó; Andrea Albert; Eszter Juharos; Michael Einstein; Duy Tran; Mauricio Vallejo; Karen Safaryan; Pierre-Olivier Polack; Gergő Orbán; Peyman Golshani
Eötvös Loránd Research Network, Wigner Research Centre for Physics, Department of Computational Sciences, Computational and Systems Neuroscience Lab, Budapest, Hungary

P5.04 **Travelling slow waves in the thalamus of anesthetized rodents**
Csaba Horváth; Mária Steinbach; István Ulbert; Richárd Fiáth
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P5.05 **Functional interactions within the thalamus**
Ágnes Antal-Schnell; Éva Gulyás; István Ulbert; Péter Barthó
Eötvös Loránd Research Network, Research Center for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Sleep Oscillations Research Group, Budapest, Hungary

P5.06 **Putative inhibitory projection neurons in the spinal dorsal horn of mice**
Éva Kókai; Lídia Gömöri; Miklós Sivadó; Péter Szücs
University of Debrecen, Department of Anatomy, Histology and Embryology, Debrecen, Hungary; University of Debrecen and Hungarian Academy of Sciences, Neuroscience Research Group, Debrecen, Hungary

P5.07 **Dissecting the amygdalar microcircuitry**
Ákos Babiczky; Kinga Kocsis; Judit Berczik; Lilla Dénes; Gyula Balka; Ferenc Mátyás
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Neuronal Network and Behavior, Budapest, Hungary; Eötvös Loránd Research Network, Institute of Experimental Medicine, Neuronal Network and Behavior Research Group, Budapest, Hungary; Budapest University of Technology and Economics, Doctoral School of Psychology/Cognitive Science, Budapest, Hungary

P5.08 **The cellular and synaptic connectivity of the colliculo-thalamic network**

Anna Virág Bakacsi; Kinga Kocsis; Ferenc Mátyás
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Neuronal Network and Behavior Research Group, Budapest, Hungary; Eötvös Loránd University, Budapest, Hungary

P5.09 **The dorsal midline thalamus effect over prefrontal cortex by different parallel pathway**

Aletta Magyar; Sándor Borbély; Judit Berczik; Kinga Kocsis; Ofer Yizhar; Ferenc Mátyás
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Neuronal Network and Behavior Res. Group, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P5.10 **Age-dependent role of midline thalamus in learning**

Judit Berczik; Aletta Magyar; Boglárka Barsy; Sándor Borbély; Anita Kurilla; Bálint Szeder; Virág Vas; László Buday; László Szilák; Ferenc Mátyás
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P5.11 **Analysis of ultrasonic vocalizations (USV) in mice**

Roland Zsoldos; Kinga Kocsis; Boglárka Barsy; Félix Jártó; Sándor Zsebők; Aletta Magyar; Sándor Borbély; Ferenc Mátyás
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Neuronal Network and Behavior Research Group, Budapest, Hungary; Eötvös Loránd University, Budapest, Hungary

P5.12 **Adeno-associated virus infection patterns in the brain with different delivery methods in cats**

Fanni Veres; Zsófia Harmati; Klaudia Spitzer; Domonkos Horváth; Beatrix Kovács; Attila B. Dobos; Lucia Wittner; Dániel Hillier
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P5.13 **Functional ultrasound imaging of deep visual cortex and beyond in awake cats**

Ábel Petik; Klaudia Csikós; Domonkos Horváth; Théo Lambert; Klaudia Spitzer; Attila B. Dobos; Alan Urban; Dániel Hillier
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P5.14 **Brainstem can recall fear memory via hippocampal somatostatin interneurons**
Krisztián Zichó; Katalin E. Sos; Péter Papp; Áron Orosz; Márton I. Mayer; Réka Z. Sebestény; Gábor Nyiri
Eötvös Loránd Research Network, Institute of Experimental Medicine, Department of Cellular and Network Neurobiology, Laboratory of Cerebral Cortex Research, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P5.15 **An alternative cholinergic innervation of the hippocampus**
Hunor Sebők; Márton Mayer; Virág T. Takács; Gábor Nyiri
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Cerebral Cortex Research, Budapest, Hungary; University of Veterinary Medicine, Budapest, Hungary

P5.16 **Cholinergic neuron firing patterns in the Lateral Septum during a probabilistic Pavlovian learning task**
Konstantinos Lygdas; Dániel Schlingloff; Panna Hegedűs; Sergio Martínez Bellver; Bálint Király; Balázs Hangya
Eötvös Loránd Research Network, Institute of Experimental Medicine, Lendület Laboratory of Systems Neuroscience, Budapest, Hungary

P5.17 **Simultaneous examination of neuromodulatory systems by fiber photometry and electrophysiology**
Vivien Pillár; Bálint Király; Balázs Hangya
Eötvös Loránd Research Network, Institute of Experimental Medicine, Lendület Laboratory of Systems Neuroscience, Budapest, Hungary

P5.18 **Synaptic communication within the microcircuits of pyramidal neurons and basket cells in the mouse prefrontal cortex**
Zsuzsanna Fekete; Filippo Weisz; Rita Karlócai; Judit Veres; Norbert Hájos
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Network Neurophysiology, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neuroscience, Budapest, Hungary

P5.19 **Anatomical and in vivo electrophysiological characterization of neurons responding to noxious stimuli in the basolateral amygdala**
Zsófia Reéb; Dániel Magyar; Cecília Pardo-Bellver; Éva Krizsán; Judit M. Veres; Norbert Hájos
Eötvös Loránd Research Network, Institute of Experimental Medicine, 'Lendület' Laboratory of Network Neurophysiology, Budapest, Hungary; Eötvös Loránd University, Insitute of Biology, Doctoral School of Biology, Budapest, Hungary

P5.20 **The role of calretinin positive midline thalamic neurons in stress induced behavioural changes**
Zsolt Buday; László Bíró; Anna Jász; Gergely Komlósi; Robert Bodizs; Orsolya Szalardy; Krisztina Kovacs; Dániel Kuti; Laszlo Acsady
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Thalamus Research, Budapest, Hungary

P5.22 **Sleep effect of bromocriptine-evoked prolactin release suppression during the reproductive cycle**
Dóra Keserű; Tünde Hajnik; Máté Pethő; László Détári; Árpád Dobolyi; Attila Tóth
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, In vivo Electrophysiology Research Group, Budapest, Hungary

P5.23 **Effects of arctigenin and trachelogenin on the hippocampus and rat ileum ex vivo**
Peter Kiplang'at Koech; Imre Boldizsár; Árpád Dobolyi; Petra Varró
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Eötvös Loránd University, Budapest, Hungary

P5.24 **Effect of Fusarium mycotoxins on glutamate receptor density and neuronal network activity after subchronic exposure in rat**
Martina Forgács; Veronika Bódi; Petra Varró; Ildikó Világi
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Budapest, Hungary

P5.25 **Lateral septum affects maternal adaptation via a parathyroid hormone 2 neuropeptide-containing pathway arising from the thalamus**
Vivien Szendi; Gina Puska; Melinda Cservenák; Diána Dimén; Árpád Dobolyi
Eötvös Loránd Research Network and Eötvös Loránd University, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P5.26 **Inhibitory calbindin neurons of the lateral septum are involved in maternal care**
Gina Puska; Vivien Szendi; Anna Gálfalvi; Szilvia Oláh; Diána Dimén; Dóra Zelena; Árpád Dobolyi
Hungarian Academy of Sciences and Eötvös Loránd University, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary; University of Veterinary Medicine Budapest, Department of Ecology, Budapest, Hungary

P5.27 **The localisation and potential functions of the parathyroid hormone 2 receptor in mice brain**
Bence Máté Haller; Vivien Szendi; Gina Puska; Szilvia Oláh; Árpád Dobolyi
Eötvös Lóránd University and Eötvös Loránd Research Network, Department of Physiology and Neurobiology, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P5.28 **Controlling pathological fear expression through closed-loop brain stimulation**
Lívia Barcsai; Rodrigo Sierra; Lizeth Pedraza; Barnabás Lakos; Andrea Pejin; Gábor Kozák; Yuichi Takeuchi; Tamás Földi; Magor Lőrincz; Antal Berényi
University of Szeged, Department of Phisiology, MTA-SZTE ‚Momentum' Oscillatory Neuronal Networks Research Group, Szeged, Hungary; University of Szeged, HCEMM-USZ Magnetotherapeutics Research Group, Szeged, Hungary

P5.29 **Closed-loop stimulation of infralimbic cortex reduces anxiety and prevents fear generalization during memory consolidation and reconsolidation**
Andrea Pejin; Lizeth Pedraza; Rodrigo Sierra; Lívia Barcsai; Gábor Kozák; Qun Li; Levente Gellért; Magor Lőrincz; Antal Berényi
University of Szeged, Department of Physiology, MTA-SZTE 'Momentum' Oscillatory Neuronal Networks Research Group, Szeged, Hungary; University of Szeged, Department of Psychiatry, Szeged, Hungary; University of Szeged, HCEMM-USZ Magnetotherapeutics Research Group, Szeged, Hungary

P5.30 **Role of higher order thalamic nuclei in the cortical generalisation of spike and wave discharges**
Zoe Atherton; Péter Sere; Tamás Földi; Gábor Kozák; Antal Berényi; Vincenzo Crunelli; Magor L. Lőrincz
University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary

P5.31 **Gap junction mediated ganglion cell population code serves equalization of response kinetics and corresponding visually guided behavior in the retina**
Gergely Szarka; Béla Völgyi
János Szentágothai Research Centre, Retinal Electrical Synapses Research Group, Pécs, Hungary; University of Pécs, General Zoology and Developmental Biology, Pécs, Hungary

P6 - COGNITIVE NEUROSCIENCE

P6.01 **Resting-state delta- and theta-band EEG functional connectivity in schizophrenia**
Melinda Becske; Csilla Marosi; Hajnalka Molnár; Zsuzsanna Fodor; Kinga Farkas; Gábor Csukly
Semmelweis University, Department of Psychiatry and Psychotherapy, Budapest, Hungary

P6.02 **Unique and shared neural codes in familiar face perception**
Alexia Dalski; Gyula Kovács; Holger Wiese; Géza Gergely Ambrus
Bournemouth University, Department of Psychology, Poole, United Kingdom

P6.03 **Multisensory information improves the performances in associative learning in healthy children**
Gabriella Eördegh; Kálmán Tót; Ádám Kiss; András Kelemen; Attila Nagy
University of Szeged, Faculty of Health Sciences and Social Studies, Szeged, Hungary

P6.04 **Age-related functional disconnection between the anterior and posterior regions: evidence from cross-frequency coupling and directed connectivity measures**
Bálint File; Brigitta Tóth; Zsófia Kardos; Roland Boha; István Ulbert; Zoltán Somogyvári; Márk Molnár
University of Szeged, Wigner Research Centre for Physics, Budapest, Hungary

P6.05 **Functional connectivity mapping of sensory pathways using flavoprotein imaging**
Éva Gulyás; Fanni Gál; Péter Barthó; Sándor Borbély
University of Szeged, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Sleep Oscillations Research Group, Budapest, Hungary

P6.06 **Development of mental fatigue detection headset**
Bálint Hargitai; János Csipor; István Harmati; István Ulbert; Gergely Márton
Budapest University of Technology and Economics, Control Engineering and Information Technology, Budapest, Hungary; Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary

P6.07 **Visually guided associative learning and related memory processes in pediatric and adult migraine patients**
András Hegedűs; Kálmán Tót; Ádám Kiss; Attila Nagy; Gabriella Eördegh; Gábor Braunitzer
University of Szeged, Department of Physiology, Sensomotory Research Lab, Szeged, Hungary

P6.08 **Novel experimental paradigm for testing palatability-driven intertemporal food choice of nonhuman primates**
Judit Inkeller; Péter Kovács; Balázs Knakker; István Hernádi
University of Pécs, Grastyán Endre Translational Research Centre, Pécs, Hungary

P6.09 **Characterizing the multifaceted interference phenomena in non-human primate object-location working memory**
Balázs Knakker; Anna Padányi; Viktória Pál; Evelin Kiefer; István Hernádi
University of Pécs, Grastyán Endre Translational Research Centre, Pécs, Hungary

P6.10 **History of early-life stress influence face emotion recognition in depressed patients: A functional magnetic resonance imaging study**
Szilvia Anett Nagy; Zsófia Kürtös; Gábor Perlaki; Eszter Csernela; Flóra Elza Lakner; Tamás Dóczi; Mária Simon; Boldizsár Czéh
University of Pécs, Szentágothai János Research Centre, Neurobiology of Stress Research Group, Pécs, Hungary; University of Pécs, Medical School, Department of Laboratory Medicine, Pécs, Hungary

P6.11 **Validation of non-invasive pharmaco-electroencephalography in rhesus macaques performing a simple fixation task**
Anna Padányi; Balázs Knakker; Evelin Kiefer; István Hernádi
University of Pécs, Grastyán Endre Translational Research Centre, Pécs, Hungary; University of Pécs, Medical School, Department of Physiology, Pécs, Hungary

P6.12 **ELVISort: Encoding Latent Variables for Instant Sorting**
János Rokai; Melinda Rácz; Richárd Fiáth; István Ulbert; Gergely Márton
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Integrative Neuroscience Research Group, Budapest, Hungary; Semmelweis University, Károly Rácz School of PhD Studies, Budapest, Hungary

P6.13 **Saliency-map-based feature selection for electrocorticography-based brain–computer interfaces**
Melinda Rácz; Dániel Fabó; István Ulbert; Gergely Márton
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary; Semmelweis University, János Selye Doctoral College for Advanced Studies, Budapest, Hungary

P6.14 **Impaired multisensory integration in pediatric OCD patients in association learning at behavior level**
Viktória Rácz; Kálmán Tót; Attila Nagy; Gabriella Eördegh
University of Szeged, Faculty of Health Sciences and Social Studies, Szeged, Hungary

P6.15 **Familial risk factors of amblyopia and amblyogenic conditions**
István Szabó; Eszter Mikó-Baráth; Kitti Szabó-Guth; Zsófia Csizek; Anna Budai; David P. Piñero; Jandó Gábor
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary

P6.16 **Beta activity during implicit, visual statistical learning**
Szabolcs Séringer; Ágnes Fehér; Péter Kaposvári
University of Szeged, Albert Szent-Györgyi Medical School, Department of Physiology, Szeged, Hungary

P6.17 **The effect of stimulus complexity on acquired equivalence learning**
Kálmán Tót; Gabriella Eördegh; Ádám Kiss; András Hegedűs; András Kelemen; Szabolcs Kéri; Attila Nagy
University of Szeged, Albert Szent-Györgyi Medical School, Department of Physiology, Sensorimotor Research Group, Szeged, Hungary

P6.18 **Neuropeptide QRFP improves memory in rats**
Olga Zagorácz; Tamás Ollmann; Kristóf László; László Péczely; Anita Kovács; Beáta Berta; Veronika Kállai; Erika Kertes; László Lénárd
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary

P6.19 **Interactions between external and internal attention processes during working memory task**
András Puszta; Szabolcs Séringer; Péter Kaposvári; Venke Arntsberg Grane
University of Oslo, Department of Psychology, Oslo, Norway; Helgeland Hospital, Deprartment of Neuropszchology, Mosjøen, Norway

P6.20 **Combined application of memantine and alpha7 nicotinic acetylcholine receptor agonist PHA-543613 improves novel object recognition memory in aged rats**
Nóra Bruszt; Zsolt Kristóf Bali; Ambika Sai Tadepalli; Lili Veronika Nagy; István Hernádi
University of Pécs, Centre for Neuroscience and Szentágothai Research Center, Translational Neuroscience Research Group, Pécs, Hungary; University of Pécs, Medical School, Department of Physiology, Pécs, Hungary

P6.21 **Evidence for a general neural signature of face familiarity**
Alexia Dalski; Géza Gergely Ambrus; Gyula Kovács
Phillips-University Marburg, Department of Psychology, Educational Neuroscience, Marburg, Germany

P6.22 **Secretagogin marks amygdaloid PKCδ interneurons and modulates NMDA receptor availability**
Zsófia Hevesi; Dóra Zelena; János Hanics; Katalin Schlett; Tibor Harkany; Alán Alpár
Medical University of Vienna, Center for Brain Research, Department of Molecular Neurosciences, Vienna, Austria; Hungarian Academy of Sciences, SE-NAP Research Group of Experimental Neuroanatomy and Developmental Biology, Budapest, Hungary; Semmelweis University, Department of Anatomy, Budapest, Hungary

P7 - BEHAVIOUR

P7.01 **Modifications of the gastrointestinal microbiome are intimately involved in the control of behavioural processes**
Kitti Mintál; Attila Tóth; Edina Hormay; Anita Kovács; Adorján Varga; Béla Kocsis; Anita Bufa; Tamás Marosvölgyi; László Lénárd; Zoltán Karádi
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary; University of Pécs, Szentágothai Research Centre, Cellular Bioimpedance Research Group, Pécs, Hungary

P7.02 **Post-stress activity of calretinin positive cells in the paraventricular thalamic nucleus is required for long term, stress induced disturbance of sleep behavior**
Anna Jász; László Bíró; Zsolt Buday; Bálint Király; Gergely Komlósi; Balázs Hangya; Laszlo Acsady
Eötvös Loránd Research Network, Institute of Experimental Medicine, Budapest, Hungary

P7.03 **Behavioural effects of intraamygdaloid oxytocin in valproate induced autism rat model**
Kristóf Laszló; Orsolya Kiss; David Voros; Kitti Mintál; Tamas Ollmann; Laszlo Peczely; Anita Kovacs; Olga Zagorácz; Erika Kertes; Veronika Kallai; Bettina László; Beata Berta; Attila Toth; Zoltan Karadi; Laszlo Lenard
University of Pécs, Medical School, Institute of Physiology, Neuroscience Center, Pécs, Hungary

P7.04 **Resilience to generalization of fear correlates with better spatial learning performance in Intellicage**
Zsolt Borhegyi; Kornél Demeter; Máté Tóth; Zoltán K. Varga; Éva Mikics
Eötvös Loránd Research Network, Institute of Experimental Medicine, Translational Behavioural Neuroscience, Budapest, Hungary

P7.05 **Regulatory role of hemokinin-1 in chronic restraint stress model of mice**
Éva Borbély; Angéla Kecskés; Zsuzsanna Helyes
University of Pécs, Medical School, Department of Pharmacology and Pharmacotherapy, Pécs, Hungary; University of Pécs, János Szentágothai Research Center, Pécs, Hungary

P7.06 **Median raphe region serotonergic neurons regulate depressive-like behaviour related changes in body temperature during forced swim test**
Csilla Lea Fazekas; Manon Bellardie; Bibiána Török; Adrienn Szabó; Tiago Chaves; Pedro Correia; Eszter Sipos; Elodie Chaillou; Dóra Zelena
Eötvös Loránd Research Network, Institute of Experimental Medicine, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P7.07 **Median raphe region regulates stress and anxiety through CRHergic neurons**
Flóra Pomogyi; Bibiána Török; Krisztina Horváth; Erika Szabó; Csilla Fazekas; Pedro Correia; Tiago Chaves; Eszter Sipos; Krisztina Kovács; Dóra Zelena
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Behavioural and Stress Studies, Budapest, Hungary

P7.09 **Using appetitive motivation to train mice for spatial learning in the Barnes maze**
Brigitta Tekla Tajti; Aliz Judit Ernyei; Attila Gáspár; Bence Tamás Varga; István Gyertyán
Semmelweis University, Department of Pharmacology and Pharmacotherapy, Cognitive Translational Behavioural Pharmacology Group, Budapest, Hungary

P7.10 **Sirt1 in AgRP neurons is necessary for exploratory behavior during calorie restriction**
Matyas Kapiller; Ferenc Mátyás; Lilla Dénes; Tamas Horvath; Bence Rácz
University of Veterinary Medicine Budapest, Department of Anatomy and Histology, Budapest, Hungary

P7.11 **Can locomotor impairments and anxiety-like behaviour alter the measurable memory-decline in the triple transgenic mouse model of Alzheimer's disease?**
Dorottya Várkonyi; Adrienn Szabó; Csilla Fazekas; Pedro Correia; Tiago Chaves; Bibiána Török; Dóra Zelena
Eötvös Loránd Research Network, Institute of Experimental Medicine, Department of Behavioural Neurobiology, Laboratory of Behavioural and Stress Studies, Budapest, Hungary; Eötvös Loránd University, Faculty of Science, Budapest, Hungary

P7.12 Activation of the social decision-making network in valproate-treated, autism-model mice

Róbert Gergely Kemecsei; Szilvia Márta Papp; Ágota Ádám; András Csillag; Gergely Zachar
Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P7.13 Pre-trauma behavioural risk factors of trauma vulnerability

László Szente; Manó Aliczki; Christina Miskolczi; Gyula Balla; Zsolt Borhegyi; László Bíró; Zoltán Balogh; Anett Szilvásy-Szabó; Róbert Maróthy; Huba Szebik; Zoltán Kristóf Varga; Máté Tóth; Éva Mikics
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Translational Behavioural Neuroscience, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P7.14 Median raphe region GABAergic neurons contribute to social interest in mouse

Tiago Chaves; Bibiána Török; Csilla Fazekas; Pedro Correia; Eszter Sipos; Dorottya Várkonyi; Ákos Hellinger; Dogu Erk; Dóra Zelena
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Behavioural and Stress Studies, Budapest, Hungary; Semmelweis University, János Szentágothai School of Neurosciences, Budapest, Hungary

P7.15 Effectiveness, temporal considerations and brain mechanisms of extinction training in male rats

Pedro Correia; Kornél Demete; János Varga; Eszter Urbán; Bibiána Török; Diána Balázsfi; Nikolett Bakos; József Haller; Dóra Zelena
Eötvös Loránd Research Network, Institute of Experimental Medicine, Department of Behavioral Neurobiology, Budapest, Hungary; Semmelweis University, Janos Szentagothai School of Neurosciences, Budapest, Hungary

P7.16 Stress prediction for field technical specialists

Alexandra Andreko
Mobile Engine Ltd., Budapest, Hungary

P7.17 Computerized socio-behavioral analysis in color coded rodents

Madhansai Narisetty; Árpád Dobolyi; Gábor Vásárhelyi; Máté Nagy
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Molecular and Systemic Neurobiology Research Group, Budapest, Hungary

P7.18 Chemogenetic study of posterior thalamic neurons related to anxiety-and depression-like behaviors

Szilvia Oláh; Dániel Zahemszky; Péter Lőw; Árpád Dobolyi
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary; Eötvös Loránd University, Institute of Biology, Doctoral School of Biology, Budapest, Hungary

P7.19 **Sex-specific parenting and depression evoked by preoptic inhibitory neurons**
Diána Dimén; Gina Puska; Vivien Szendi; Eszter Sipos; Dóra Zelena; Árpád Dobolyi
Eötvös Loránd Research Network, and Eötvös Loránd University, Department of Physiology and Neurobiology, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P7.20 **Automatically monitored home-cage behavior of female mice throughout the reproductive cycle**
Melinda Cservenák; Janka Schiller; Vanda Junó; László Détári; Árpád Dobolyi
Eötvös Loránd Research Network and Eötvös Loránd University, Department of Physiology and Neurobiology, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P7.21 **Chemogenetic evidence that posterior intralaminar thalamic neurons stimulate maternal behavior in rats**
Tamás Láng; Dávid Keller; Árpád Dobolyi
Semmelweis University, Department of Anatomy, Histology and Embryology, Laboratory of Neuromorphology, Budapest, Hungary

P7.22 **A new brain mechanism promoting physical contact in social behaviour**
Dávid Keller; Tamás Láng; Melinda Cservenák; Gina Puska; János Barna; Árpád Dobolyi
Semmelweis University, Department of Anatomy, Histology and Embryology, Laboratory of Neuromorphology, Budapest, Hungary; Eötvös Loránd Research Network and Eötvös Loránd University, Department of Physiology and Neurobiology, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P7.23 **The role of PTH2 neuropeptide in social function – a study using PTH2 receptor KO mice**
Nikolett Arrasz; Árpád Dobolyi
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P7.24 **Effect of embrional valproinic acid and deltamethrin treatment on social behavior and in domestic chicks (Gallus gallus)**
Dávid Barnabás Balázs; Dorina Rebeka Kiss; Gergely Zachar
Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P7.25 **Memory consolidation is governed by signaling through gap junctions in the astrocytic network**
Péter Márton, Zsolt Szabó, László Héja
Research Centre for Natural Sciences, Institute of Organic Chemistry, Functional Pharmacology Research Group, Budapest, Hungary

P8 - NEUROENDOCRINOLOGY

P8.01 **The role of microglia in the regulation of prolactin release**
Vivien Csikós; Árpád Dobolyi
Eötvös Loránd Research Network, MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary; Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Laboratory of Molecular and Systems Neurobiology, Budapest, Hungary

P8.02 **Comparison of endocrine disruptor-modulated nuclear receptor (ERs, TRs and PPARgamma) mRNA expression and simultaneous mitochondrial respiration rates in mouse hypothalamic tissue homogenates**
Dávid Sándor Kiss; Csaba Szabo; Zsuzsanna Toth; Gergely Jocsak; Tamas L. Horvath; Attila Zsarnovszky
University of Veterinary Medicine, Department of Physiology and Biochemistry, Budapest, Hungary

P8.03 **Investigating the effect of female hormone depletion on the progression of Alzheimer's disease**
Szidónia Farkas; Adrienn Szabó; Bibiána Török; Csilla Lea Fazekas; Krisztina Bánrévi; Pedro Correia; Tiago Chaves; Dóra Zelena
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary; Szentágothai János Research Center, Centre for Neuroscience, Molecular Neuroendocrinology Research Group, Pécs, Hungary

P8.04 **Insulin-like growth factor binding protein 3 in the human hypothalamus**
Erzsébet Oszwald; János Barna; Éva Renner; Miklós Palkovits; Árpád Dobolyi
Semmelweis University, Department of Anatomy, Histology and Embryology, Laboratory of Neuromorphology, Budapest, Hungary

P8.05 **Expression of glucagon like peptide 1 receptor in neuropeptide Y neurons of the arcuate nucleus in mice**
Yvette Ruska; Anett Szilvásy-Szabó; Dóra Kővári; Andrea Kádár; Lilla Mácsai; Richárd Sinkó; Erik Hrabovszky; Balázs Gereben; Csaba Fekete
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Integrative Neuroendocrinology, Budapest, Hungary

P8.06 **Age-dependent dynamics in acute and chronic stress-induced FOSB/ΔFOSB content in the extended amygdala, hypothalamic paraventricular, habenular, centrally-projecting Edinger-Westphal and dorsal raphe nuclei in male rats**
László Ákos Kovács; Nóra Füredi; Balázs Ujvári; Golgol Abolfazl; Balázs Gaszner
University of Pécs, Medical School, Department of Anatomy, Research Group for Mood Disorders, Pécs, Hungary; Center for Neuroscience and Szentagothai Research Center, Pécs, Hungary

P8.07 **Role of nesfatin-1 neuropeptide in metabolic changes following intrauterine undernutrition**

Máté Durst; Katalin Könczöl; Klementina Ocskay; Klaudia Sípos; Anett Szilvásy-Szabó; Csaba Fekete; Zsuzsanna E. Tóth

Semmelweis University, Department of Anatomy, Histology and Embryology, Laboratory of Neuroendocrinology and In Situ Hybridization, Budapest, Hungary

P8.08 **Abnormal hypothalamic–pituitary–thyroid axis might influence the outcome of food-motivated learning tests in the triple transgenic Alzheimer's disease model mice**

Adrienn Szabó; Szidónia Farkas; Bibiána Török; Tamás Kovács; Csilla Lea Fazekas; Krisztina Bánrévi; Pedro Correia; Tiago Chaves; Veronika Penksza; Csaba Fekete; Dóra Zelena

University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary; Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Behavioural and Stress Studies, Budapest, Hungary; Semmelweis University, János Szentágothai School of Neurosciences, Budapest, Hungary

P8.09 **Effects of interleukin-1b microinjection in the anterior cingulate cortex of the rat**

Bettina Réka László; Edina Hormay; István Szabó; Kitti Mintál; Kristóf László; László Péczely; Tamás Ollmann; László Lénárd; Zoltán Karádi

University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary; University of Pécs, Szentágothai Research Centre, Centre for Neuroscience, Pécs, Hungary

P8.10 **Estrogen converted from testosterone by aromatase neurons in hypothalamic arcuate nucleus decreases firing rate of arcuate kisspeptin neurons in neonatal male mice**

Imre Farkas; Veronika Csillag; William Colledge; Philipp Wartenberg; Ulrich Boehm; Erik Hrabovszky

Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Reproductive Neurobiology, Budapest, Hungary

P8.11 **Increased expression level of glucagon-like peptide-1 receptor in the human hypothalamic paraventricular nucleus in type 2 diabetic subjects**

Éva Renner; Fanni Dóra; Erzsébet Oszwald; Árpád Dobolyi; Miklós Palkovits

Semmelweis University, Human Brain Tissue Bank, Budapest, Hungary; Semmelweis University, SE-NAP Human Brain Tissue Bank Microdissection Laboratory, Budapest, Hungary

P9 - MODELLING

P9.01 Impaired brain metabolism in schizophrenia-like Wisket rats

Gyöngyi Horváth; György Trencsényi; Leatitia Adlan; Gabriella Kékesi; Alexandra Büki; István Kertész

University of Szeged, Albert Szent-Györgyi Medical School, Department of Physiology, Translational Behavioral Neuroscience Group, Szeged, Hungary

P9.02 Network path convergence shapes low-level processing in the visual cortex

Bálint Varga; Bettina Soós; Balázs Jákli; Eszter Bálint; Zoltán Somogyvári; László Négyessy

Eötvös Loránd Research Network, Wigner Research Centre for Physics, Department of Computational Sciences, Computational Neuroscience and Complex Systems Research Group, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P9.03 Triple ligand-targeted nanoparticles cross the blood-brain barrier in vitro and enter human midbrain organoids

Gergő Porkoláb; Mária Mészáros; Anikó Szecskó; Nóra Kondor; Györgyi Ferenc; Zoltán Kóta; Tibor Páli; Judit P. Vigh; Fruzsina R. Walter; Silvia Bolognin; Jens C. Schwamborn; Jeng-Shiung Jan; Mária A. Deli; Szilvia Veszelka

Biological Research Centre, Institute of Biophysics, Szeged, Hungary; University of Szeged, Doctoral School of Biology, Szeged, Hungary

P9.04 Structural determinants of gap junction channel formation from hemichannels

Ágnes Simon; László Héja; Julianna Kardos

Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Organic Chemistry, Functional Pharmacology Research Group, Budapest, Hungary

P10 - NOVEL TECHNIQUES

P10.01 Sensitivity study of two-photon laser scanning in mouse retina samples ex vivo

Balázs Barkóczi; Dániel Magda; Arnold Szabós; Pál Maák; Ákos Kusnyerik

Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Two-Photon Microscopy Laboratory, Budapest, Hungary

P10.02 Development and preclinical validation of a modular multimodal read-write neural interface

Klaudia Csikós; Domonkos Horváth; István Homolya; Dries Kil; Julio Loera; Alan Urban; Ábel Petik; Klaudia Spitzer; Attila B. Dobos; Zoltán Vidnyánszky; Dániel Hillier

Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P10.03 Development of machine learning tools for the reconstruction of muscle movements from electrophysiological data
Nikomidisz Eftimiu; Enikő Oszlács; István Ulbert; Gergely Márton
Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary; Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Integrative Neuroscience Research Group, Budapest, Hungary

P10.04 Flexible polymer-based neural probes designed for human intracortical laminar recordings
Richárd Fiáth; Borbála Árkossy; Eric Klein; Patrick Ruther; István Ulbert
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Integrative Neuroscience Group, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P10.05 Autofluorescence reducing in cat brain slices
Zsófia Harmati; Fanni Veres; Klaudia Spitzer; Domonkos Horváth; Attila Balázs Dobos; Lucia Wittner; Dániel Hillier
Eötvös Loránd Research Network, Research Center for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P10.06 Demonstration of safe operation of a sharp-tip multimodal optrode in infrared neuromodulation of the rat somatosensory cortex: findings of the histological and electrophysiological evaluation
Ágoston Csaba Horváth; Sándor Borbély; Fanni Mihók; Péter Fürjes; Péter Barthó; Zoltán Fekete
Pázmány Péter Catholic University, Faculty of Information Technology & Bionics, Research Group of Implantable Microsystems, Budapest, Hungary

P10.07 Use of expansion microscopy to reveal sub-synaptic protein organization
Attila Ignácz; Domonkos Nagy-Herczeg; Katalin Schlett
Eötvös Loránd University, Institute of Biology, Department of Physiology and Neurobiology, Neural cell biology research group, Budapest, Hungary

P10.08 Organ-specific tropism profiles of synthetic AAV capsids in preclinical species
Beatrix Kovács; Áron Szepesi; Domonkos Horváth; Klaudia Spitzer; Attila Balázs Dobos; Balázs Rózsa; Dániel Hillier
Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary; Eötvös Loránd Research Network, Research Centre for Natural Science, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary

P10.09 Realization of a wireless optogenetics brain stimulator

Julio Loera; Dániel Hillier
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Pázmany Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P10.10 Assessment of neutralizing factors against engineered serotypes of Adeno-associated virus in preclinical species

Anett Matuscsak; Beatrix Kovács; Aron Szepesi; Balazs Rozsa; Dániel Hillier
Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary; Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary

P10.11 Spatio-temporal membrane potential and resistive current reconstruction from parallel multielectrode array and intracellular measurements in single neurons

Domokos Meszéna; Anna Barlay; Dorottya Cserpán; Kinga Tóth; Lucia Wittner; István Ulbert; Zoltán Somogyvári
Eötvös Loránd Research Network, Research Center for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Integrative Neuroscience Group, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P10.12 Alignment of functional and anatomical layout of cortical map

Edina Mucsi; Beatrix Kovács; Domonkos Horváth; Klaudia Spitzer; Attila Balázs Dobos; Dániel Hillier
Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary; Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary

P10.13 PharmacoSTORM nanoscale pharmacology reveals cariprazine binding on Islands of Calleja granule cells

Susanne Prokop; Péter Ábrányi-Balogh; Benjámin Barti; Márton Vámosi; Miklós Zöldi; László Barna; Gabriella M. Urbán; Barna Dudok; Attila Egyed; Hui Deng; Gian Marco Leggio; László Hunyady; Mario van der Stelt; György M. Keserű; István Katona
Eötvös Loránd Research Network, Institute of Experimental Medicine, Molecular Neurobiology, Budapest, Hungary

P10.14 Segmentation of the human anterior thalamus based on excitatory inputs and neurochemical markers

András Salma; Csaba Dávid; László Acsády
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Thalamus Research, Budapest, Hungary; Semmelweis University, János Szentágothai Doctoral School of Neurosciences, Budapest, Hungary

P10.15 Thalamic nuclear segmentation based on quantitative, automated detection of excitatory afferents in the human thalamus

Csaba Dávid; András Salma; László Acsády
Eötvös Loránd Research Network, Institute of Experimental Medicine, Laboratory of Thalamus Research, Budapest, Hungary; Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P10.16 Viral capsid-like RNA transfer in the brain: structural biochemistry of molecular tools and functional perspectives

Vanda Tukacs; Pál Stráner; Dániel Mittli; Paola Leidy Suárez Quintero; József Kardos; Gábor Juhász; László Szilágyi; András Perczel; Katalin Adrienna Kékesi
Eötvös Loránd University, Institute of Biology, Department of Biochemistry, ELTE NAP Neuroimmunology Research Group, Budapest, Hungary; Eötvös Loránd University, Institute of Biology, Laboratory of Proteomics, Budapest, Hungary; Eötvös Loránd University, Institute of Biology, Department of Biochemistry, Budapest, Hungary

P10.17 Electromyography-based application development for stroke rehabilitation

Anna Tóbiás; János Csipor; Ferenc Ender; István Ulbert; Gergely Márton
Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary; Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary; Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Budapest, Hungary

P10.18 Acousto-optics based simultaneous 3D imaging and photostimulation with temporal laser intensity modulation for precise temporal control of activity patterns at the level of individual neurons

Katalin Ócsai; Gergely Szalay; Csaba Csupernyák; Adrius Plauska; Áron Szepesi; Gergely Katona; Balázs Rózsa
Budapest University of Technology and Economics, Faculty of Natural Sciences, Mathematics and Computer Science, Budapest, Hungary

P10.19 Automated patch-clamp with automated analysis: Extracting compound-specific, concentration-independent biophysical properties of inhibition for sodium channel inhibitors

Árpád Mike; Krisztina Pesti; Mátyás C Földi; Adam V Toth; Katalin Zboray; Peter Lukacs
Eötvös Loránd University, Department of Biochemistry, Budapest, Hungary

P10.20 Integrated data analysis of LFP and two-photon imaging recordings

Benedek Szmola; Balázs Chiovini; Balázs Rózsa; Gábor Juhász
Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Two-Photon Laboratory, Budapest, Hungary

P10.21 Validation of the dimensional causality analysis method on evoked epileptic activity in vitro

Marcell Stippinger; Zsigmond Benkő; Ádám Zlatniczki; Attila Bencze; Kinga Moldován; Katalin Szádeczky-Kardoss; Sándor Borbély; Ildikó Világi; András Telcs; Zoltán Somogyvári
Eötvös Loránd Research Network, Wigner Research Centre for Physics, Department of Computational Sciences, Theoretical Neuroscience and Complex Systems Research Group, Budapest, Hungary

P10.22 Imaginary movement classification for brain computer interface systems using 3D and 2D convolutional neural networks

András Adolf; Csaba Köllőd; Gergely Márton; István Ulbert
Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

P10.23 Surface laplacian based motor imagery images classification using deep learning

Ward Fadel; Istvan Ulbert
Pazmany Peter Catholic University, Faculty of Information Technology and Bionics, Brain Computer Interface Lab, Budapest, Hungary; Eötvös Loránd Research Network, Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Ulbertlab, Budapest, Hungary

P10.24 Shape memory polymer based transparent electrode array for long-term multimodal neuroimaging

Zsófia Lantos, Ágnes Szabó, Flóra Zsófia Fedor, Anita Zátonyi, Miklós Madarász, Lőrincz Tibor, Zoltán Fekete
Pázmány Péter Catholic University, Faculty of Information Technology & Bionics, Research Group for Implantable Microsystems, Budapest, Hungary; Pázmány Péter Catholic University, Roska Tamás Doctoral School of Sciences and Technology, Budapest, Hungary

List of registered participants was prepared according to data available on 15 January, 2022.
Presenters' poster or lecture numbers are in bold.

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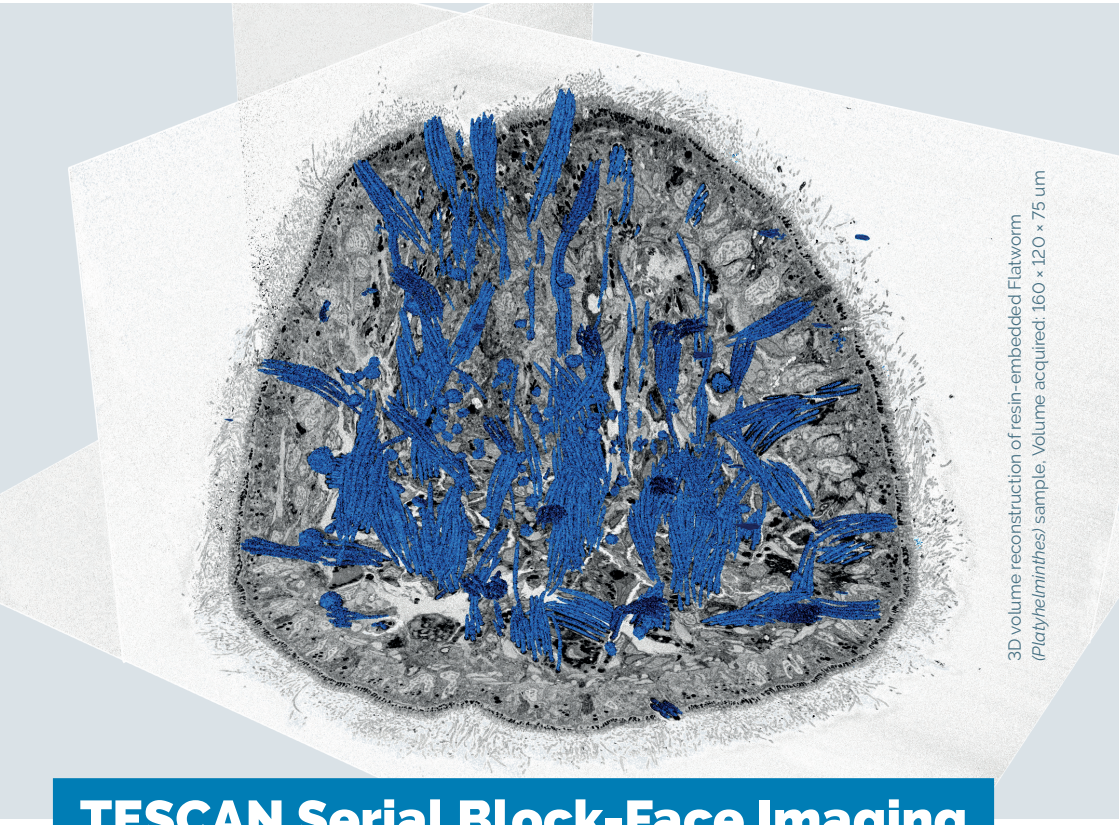

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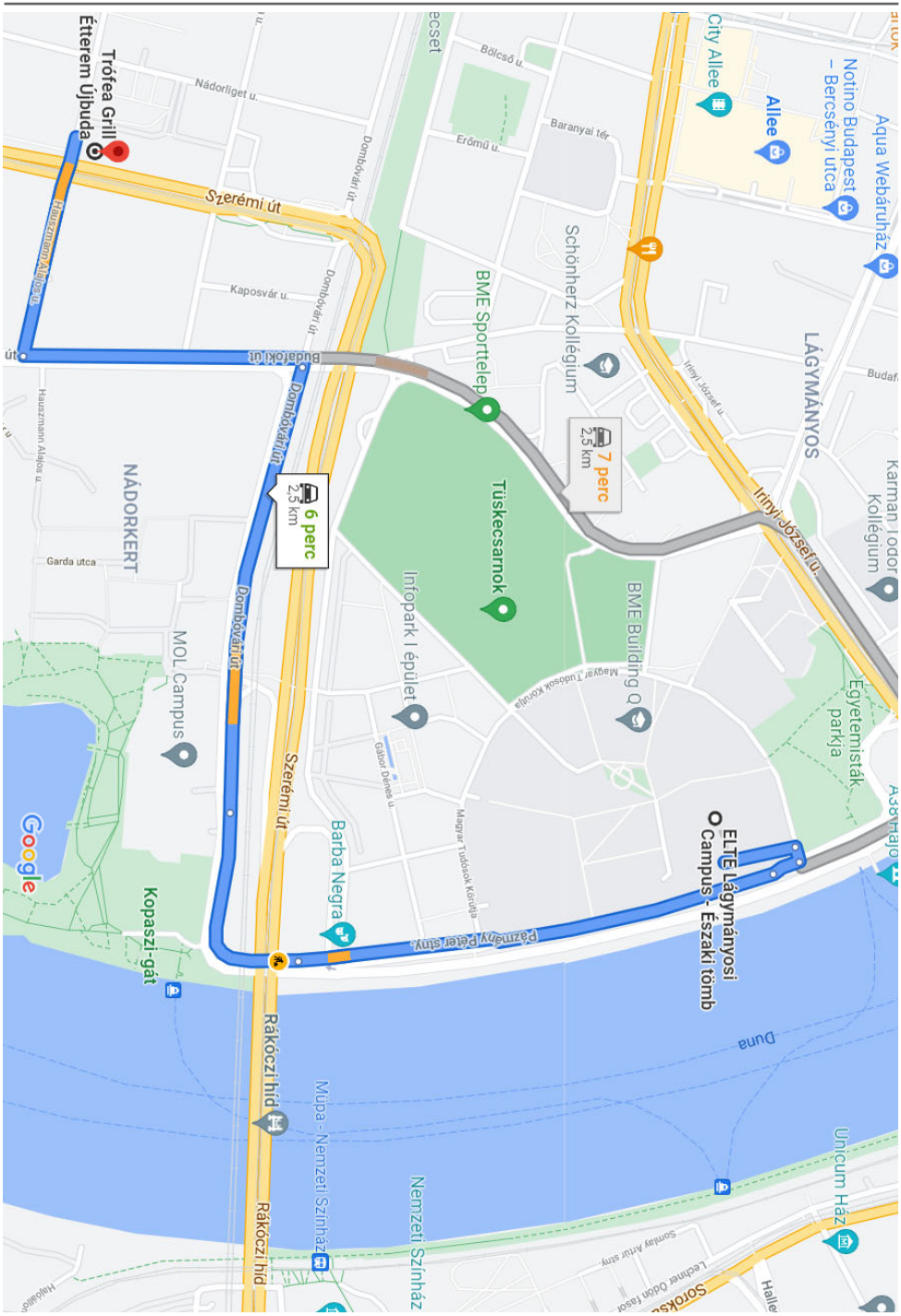

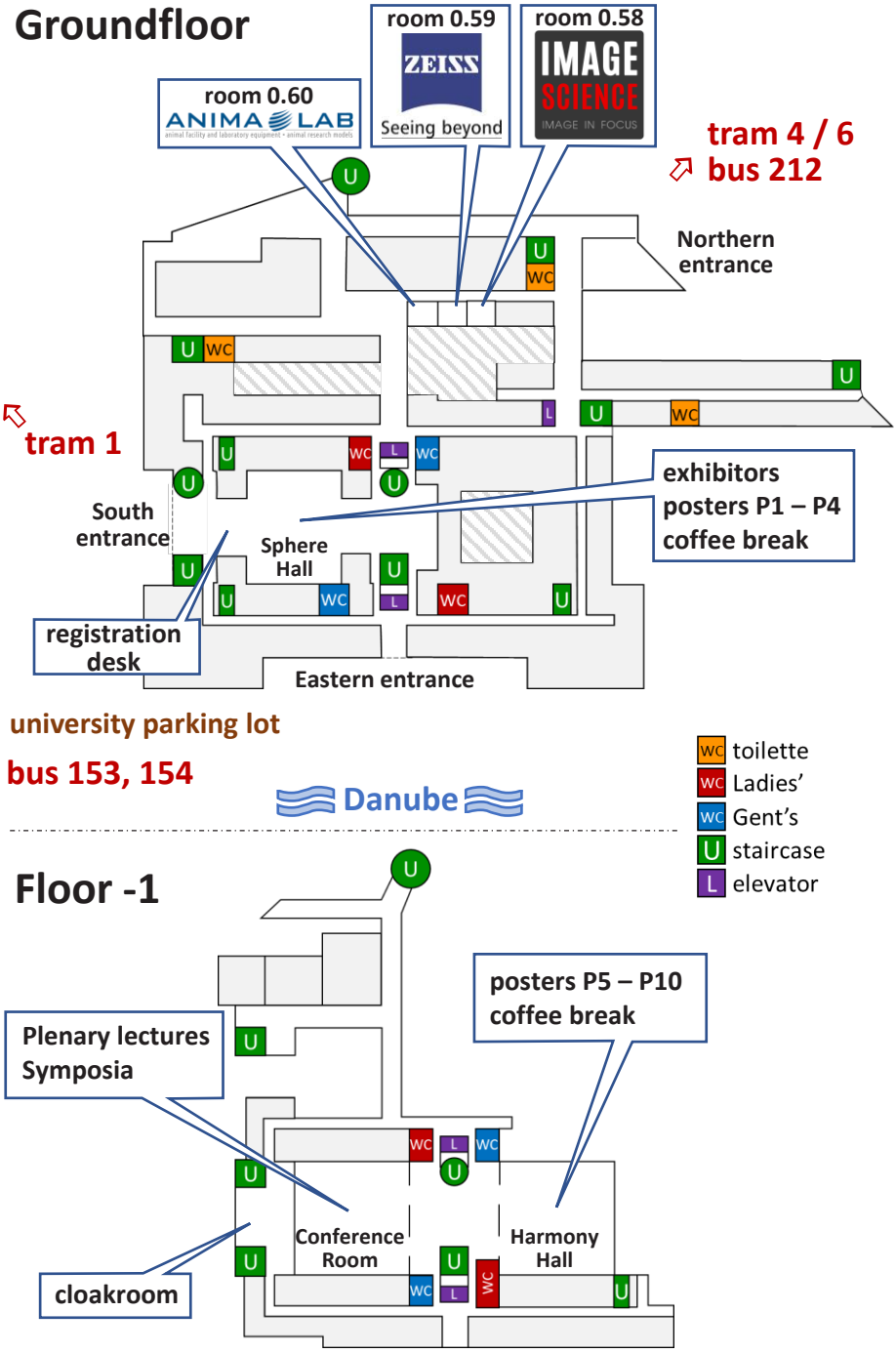
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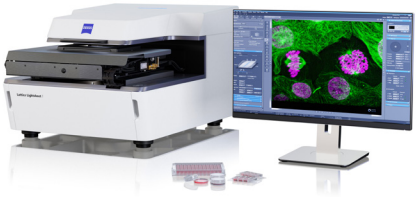

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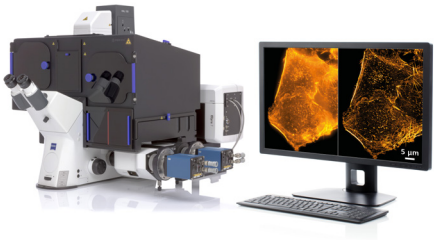

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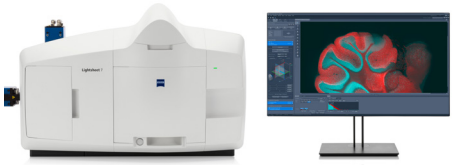

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