P1 - BEHAVIOUR

P1.1 Postpartum enhancement of spatial learning and cognitive flexibility: an IntelliCage study

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P1.2 Cortico-thalamic and cortico-preoptic projections from the medial prefrontal cortex differently affect the social behaviour in rats

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P1.3 Thalamic control of aggression

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P1.4 Intermale aggression is regulated by oxytocin receptor expressing neurons in the medial preoptic area

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P1.5 **Oxytocin receptor-expressing neurons in the medial preoptic area control social behavior in rats**

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P1.6 **Caskin scaffold proteins regulate repetitive and anxiety-like behaviour in an isoform-specific manner**

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P1.7 **The influence of antibiotic cocktails on posttraumatic stress disorder like behaviour in male mice**

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P1.8 **Investigation of behavioural changes after acute dehydroepiandrosterone treatment for the therapy of Alzheimer's disease in mice**

Erika Eliza Kvak[1], Szidónia Farkas[1], Adrienn Szabó[1], Réka Varga[1], Dóra Zelena[1]

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P1.9 **THE INVOLVEMENT OF CHOLINERGIC LATERAL SEPTUM NEURONS IN ANXIETY AND THEIR ROLE IN PROCESSING OLFACTORY CUES IN MALE AND FEMALE MICE**

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P1.10 **Thalamic input of the medial preoptic area promotes maternal care in rats**

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P1.11 Functional characterisation of the lateral septal calbindin neurons

Vivien Szendi[1], Miklós Márton Takács[1], Ágnes Fanni Seres[1], Máté Egyed[1], Gina Puska[2,1], Szilvia Bartók[1], Júlia Puskás[3], Petra Varró[3], Attila Szűcs[3,4], Arpád Dobolyi[1]

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P1.12 AI-based analysis of direct social interactions in rodents: development of a new software tool, Emerenka, to identify behavioural elements from the output matrix of DeepLabCut

Szilvia Bartók[1], Vivien Szendi[1], Attila Bartók[2], Tamara Hajdu[3], Tamás Láng[3], Arpád Dobolyi[1]

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P1.13 A distinct population of neurons in the mouse pretectum projects to subcortical motor centers to shape behavior

Csenge Tóth-Kőrösi[1,2], Gergely Zachar[1], János Hanics[1,2], Tibor Harkany[3,4], Alán Alpár[1,2]

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P2 - COGNITIVE NEUROSCIENCE

P2.1 Positive valence regulated by pontine inhibitory cells: fiber photometry evidence

Boldizsár Zsolt Balog[1,2], Krisztián Zichó[1,3], Réka Z. Sebestény[1], Áron Orosz[1,3], Hunor Sebők[1], Gábor Nyiri[1]

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P2.2 Exploring the time course of visual letter processing: an RSA approach

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P2.3 Effects of chronic 5G exposure on well-being and cognitive performance of adolescent rats

Nóra Bruszt[1,2], Zsolt Kristóf Bali[1,2], Zsóka Ábel[1,2], Fruzsina Kovács[1,2], Angelika Bodó[1,2], Zsófia Hernádi[1,2], György Nagyéri[1,2,3], Zsuzsanna Vecsei[4], György Thuróczy[4], István Hernádi[1,2,3]

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P2.4 Chronic treatment with estrogen-like compound shows antidepressive and neuroprotective potential in a triple transgenic mouse model of Alzheimer's disorder

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P2.5 Effect of Amblyopia on Visual Prediction Computations

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P2.6 Influence of Semantic Content and Verbalizability of Visual Stimuli on Audiovisual Equivalence Learning in Migraine Patients

Noémi Harcsa-Pintér[1], Gabriella Eördegh[2], Adél Papp[1], Kálmán Tót[1], Anett Csáti[3], János Tajti[3], Attila Nagy[1]

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P2.7 Behavioral consequences of astrocyte overstimulation in the pedunculopontine nuclei of mice

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P2.8 Reduced visual stimuli elicit no altered associative learning performances in migraine patients compared to those of healthy controls

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P2.9 Development of Edinger-Westphal area(EWcp) specific conditional TRPA1 KO mice

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P2.10 Single versus multi-task measurement of non-human primate short-term memory

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P2.11 The modulation effect of art painting content on saccade-evoked perceptual processes: A high-density EEG Study

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P2.12 Cortical coding of sex information in case of unfamiliar faces

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P2.13 The effect of the applied visual stimuli with reduced semantic content in associative learning among migraine patients

Kálmán Tót[1], Gabriella Eördegh[2], Noémi Harcsa-Pintér[1], Adél Papp[1], Zénó Prisztavok[1], Anett Csáti[3], János Tajti[3], Attila Nagy[1]

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P2.14 Fronto-Temporal Causal Network of Phase-Amplitude Coupling in Working Memory

Bálint Varga[1,2], Marcell Stippinger[1], Fülöp Bazsó[1], Attila Bencze[1,3], Zoltán Somogyvári[1], Tamás Kiss[1], Hisashi Tanigawa[4,5], László Négyessy[1]

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P2.15 Revealing a novel pontine reward center in mammals

Krisztián Zichó[1,2], Boldizsár Balog[1,3], Réka Z. Sebestény[1], János Brunner[4], Charlotte Seng[5], Áron Orosz[1,2], Manó Aliczki[6], Eva Mikics[6], Csaba Földy[5], János Szabadics[4], Gábor Nyiri[1]

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P3 - DISORDERS, DISEASE MODELS

P3.1 Studying the effect of Cariprazine in induced neurons directly reprogrammed from Huntington's disease's patient's fibroblasts

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P3.2 Induction of transient neurocognitive impairment by chemogenetic silencing of subcortical brain areas in rats: implications for potential preclinical disease models

Angelika Bodó[1,2,3], Zsolt Kristóf Bali[1,2], Nóra Bruszt[1,2], Zsóka Ábel[1,2], Fruzsina Kovács[1,2], István Hernádi[1,2,4]

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P3.3 Molecular basis of Sindbis virus replication and pathogeneis in human neuoroblastoma cell line

Kornélia Bodó[1], Viktória Nyári[1], Zoltán Kopasz[1], Péter Engelmann[2], Krisztina Leiner[1], Mónika Madai[1], Brigitta Zana[1], Zita Potzné-Árvai[1], Gábor Kemenesi[1,3], Anett Kuczmog[1,3]

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P3.4 Investigation of oxygen deficiency in the retina with an optimal ischemic retinopathy mouse model

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P3.5 A plant hormone as a potential therapeutic option in the treatment of ischemic retinopathy

Inez Bosnyak[1], Agnes Nagy[1], Edina Szabo[1], Dorottya Molitor[1], Balazs Meresz[1], Lina Li[1], Tamas Atlasz[1,2], Dora Reglodi[1], Alexandra Vaczy[1]

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P3.6 The effect of cholinergic cell manipulation on learning and memory consolidation in female triple transgenic Alzheimer model mice

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P3.7 Effect of the histone deacetylase inhibitor SAHA on the gene expression of brain endothelial cells after ischemic injury

Zuhao Cui[1,2], Anikó Szecskó[1,2], Koppány Párdi[1], László Dér[3], Krisztina Nagy[3], Mária A. Deli[1], Szilvia Veszelka[1]

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P3.8 MiR-146a-5p and TGF-β Collectively Regulate Brain Endothelial Paqr5 and Angiogenesis in Response to Tumour-derived Extracellular Vesicles

Csilla Fazakas[1], Kinga Mészáros-Molnár[1], Ádám Mészáros[1], Tamás Dudás[1], Attila E. Farkas[1], István Krizbai[1], Imola Wilhelm[1]

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P3.9 Phase-locked transcranial Intersectional Short Pulse (ISP) stimulation in terminating epileptic seizures

Nóra Kata Forgó[1,2,3], Lívia Barcsai[1,2,3], Márton Görög[3], Dániel Fabó[4], Loránd G. Erőss[4], Orrin Devinsky[5], Zoltán Chadaide[1,2,3], Antal Berényi[1,2,3]

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P3.10 Changes of midbrain tyrosine hydroxylase immunoreactive elements in the valproate-induced autism model

Katalin Fusz[1], Ildikó Telkes[1], Levente Rácz[2], Tibor Zoltán Jánosi[3], Péter Kóbor[1], Kristóf László[1], Péter Buzás[1]

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P3.11 Stress-induced mechanical and thermal pain sensitisation mediated through NLRP3 inflammasome activation

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P3.12 Investigating the effects of 3.5 GHz 5G electromagnetic field exposure on heart rate and heart rate variability in healthy young adults

Szabrina Győri[1], Balázs Knakker[1], Anna Padányi[1], Zsuzsanna Vecsei[2], György Thuróczy[2], István Hernádi[1]

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P3.13 Hippocampal and amygdala volumes show altered associations with emotion regulation in depressed patients with childhood maltreatment

Mónika Gálber[1], Szilvia Anett Nagy[1,3,4,5], Gergely Orsi[3,4,5], Gábor Perlaki[3,4,5,6], Tamás Tényi[7], Boldizsár Czéh[1,2], Mária Simon[1,7]

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P3.14 Gene expression analysis in the parahippocampal cortex of individuals who died by suicide

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P3.15 Comparison of different "delayed non-matching to sample" learning paradigms as models of working memory in rats

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P3.16 Kynurenic acid shifts astrocyte activation

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P3.17 The nonsteroidal anti-inflammatory drug meclofenamate mitigates kainic acid induced seizures via TRPM4 inhibition

Laura Mundrucz[1], Erzsébet Kövesdi[1], Attila Gyéresi[1], Máté Deák[1], Balázs Gaszner[2], Cecilia Szekeres-Paraczky[3], Zsófia Maglóczky[3], Rudi Vennekens[4], Viktória Kormos[5], Miklós Kecskés[1]

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P3.18 Functional and electrophysiological analysis of aging in induced neurons reprogrammed from adult human dermal fibroblasts

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P3.19 Investigating the effects of 5G mobile phone technology on human resting state EEG activitys

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P3.20 Mouse functional-neuromorphological evidence in line with human fMRI data support the involvement of peptidergic Edinger-Westphal nucleus in migraine

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P3.21 Age-dependent FOS, FOSB/ΔFOSB responsiveness of medial prefrontal cortex in acute and chronic stress male rat models

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P3.22 Expressional changes of claudin-5 and PDGFRbeta, two key blood brain barrier proteins, in a culture model of ischemic stroke

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P3.23 Investigating the blood-brain barrier in acute pancreatitis: a clinical and cell-culture study

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P3.24 Morphological investigation of meningeal macrophages (BAMs) and mast cells in inflammatory reactions following experimental subarachnoid hemorrhage

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P3.25 Effects of maternal smoking on retinopathy of prematurity

Dorottya Molitor[1], Alexandra Vaczy[1], Edina Szabo[1], Evelin Patko[1], Inez Bosnyak[1], Balazs Meresz[1], Dora Reglodi[1], Tamas Atlasz[1,2]

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P3.26 PAC1 Receptor Activation by a PACAP Fragment Alleviates Anterior Segment Inflammation in Endopthalmitis

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P3.27 Gamma-aminobutyric-acid and glutamine/glutamate concentration differences in the hippocampus of febrile seizure subjects with and without epilepsy

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P3.28 The histone deacetylase inhibitor SAHA protects the blood-brain barrier against ischemic injury

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P3.29 Statistical determination of major factors determining RNA quality of postmortem microdissected human brain samples collected in the SE Human Brain Tissue Bank

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P3.30 The sex-dependent effect of short- and long-term training on cognitive functions and the gene expression pattern of the brain-muscle axis

Zsófia Ruppert[1,2], Brigitta Dukay[1], Zsófia Koltai[1], Kitti Szabó[3], Ákos Menyhárt[4], László Vígh[1], Miklós Sántha[1], Anikó Keller-Pintér[3], Zsolt Török[1], Melinda E. Tóth[1]

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P3.31 Excessive fructose intake aggravates inflammation and may lead to brain damage in mice with obesity

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P3.32 Protective effects of dehydroepiandrosterone on glia cells and the cholinergic sytem in a neurotoxic Alzheimer's disorder mouse model

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P3.33 Age-related changes in dopaminergic areas of the mesencephalon in wild-type and PACAP gene knockout mice

Marcell Schmidt[1], Dániel Pham[1], Balázs Dániel Fülöp[1], Balázs Gaszner[1], Tünde Tóth[1], Adél Jüngling[1], Dóra Reglődi[1], Andrea Tamás[1]

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P3.34 Thermoregulatory Impairments in Alzheimer's Disease: Comparative Effects of Senktide and Rolipram in 3xTg-AD Male Mice

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P3.35 Felodipine efficiency analysis on induced neurons derived from Huntington's disease FELL-HD clinical trial patients

Kinga Vörös[1], Dimitris Apostolopoulos[2], Souha Klibi[3], Lea Danics[1], Ágnes Varga[1], Roland Zsoldos[1], Anna Abbas[1], Shaline Fazal[1], Csaba Kerepesi[3], Roger Barker[2], Karolina Pircs[1]

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P4 - NEUROENDOCRINOLOGY

P4.1 **Increased firing activity, decreased presynaptic neurotransmission and altered transcriptome profile of GnRH neurons in middle-aged female mice of menopause model**

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P4.2 **Age-dependent expression of cocaine- and amphetamine-regulated transcript and urocortin 1 in the centrally projecting Edinger-Westphal nucleus of male rats**

Zsófia Havasi[1], Erika Pétervári[2], Márta Balaskó[2], László Ákos Kovács[1], Viktória Kormos[3], Balázs Gaszner[1]

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P4.3 **Prokineticin receptors are expressed in GnRH neurons and mediate excitatory effects in adult female mice**

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P4.4 **Perinatal BPA exposure alters body weight and composition in male offspring**

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P4.5 **The central effects of PACAP on the hypothalamic-pituitary-gonadal (HPG) axis in male mice**

Péter Faludi[1], Ferenc Lengyel[1], Klaudia Barabás[1], Ildikó Udvarácz[1], Dániel Pham[2], Zsuzsanna Nagy[1], Dóra Reglődi[2], Gergely Kovács[1]

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P4.6 Hypothalamic orexigenic and anorexigenic neuropeptides in the rotenone model of Parkinson's disease, in the rat

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P4.7 Characterization of pheromone-responsive ventral premammillary neurons in male rats

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P4.8 The role of uncoupling protein 2 (UCP2) in adaptation to stress

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P4.9 NUCB2 is involved in the control of AVP neurons in the supraoptic nucleus of rats

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P5 – CELLULAR NEUROSCIENCE

P5.1 Modeling approaches ATP induced Ca2+ transients in different types of cochlear supporting cells

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P5.2 Distinct Signaling Properties of Lateral and Medial Entorhinal Cortical Axons Terminating in the Hippocampus

János Brunner[1], Árpád Mike[1], Eszter Sipos[1], Antónia Arszovszki[1], Charlotte Seng[2], Csaba Földy[2], János Szabadics[1]

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P5.3 Examination of mRNA-loaded solid lipid nanoparticles in human cell cultures

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P5.4 Species-Specific T-Type Calcium Channel Contributions to Spike Precision in Human Parvalbumin Interneurons

Abdennour Douida[1], Viktor Szegedi[1,2], Attila Szucs[3], Emőke Bakos[1,2], Ádám Tiszlavicz[1], Daphne Welter[4], Jonathan Landry[4], Szabina Furdan[1], Pal Barzo[5], Gabor Tamas[6], Karri Lamsa[1,2]

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P5.5 Single-nucleus transcriptome analysis of the human arcuate nucleus

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P5.6 DETERMINATION OF VISUAL INPUTS OF THE POSTERIOR INTRALAMINARY NUCLEI

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P5.7 Network activity alterations by common antipsychotics in cultures of mouse primary hippocampal neurons

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P5.8 TRPM3 regulates fear memory encoding and seizure susceptibility in the lateral amygdala

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P5.9 CHARACTERIZING TAC4 EXPRESSION PATTERNS IN CNS REGIONS ASSOCIATED WITH MOTOR CONTROL

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P5.10 Glutamatergic neurons of the precuneiform nucleus form a transitional group among the neighboring areas of the mesencephalic locomotor system

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P5.11 Ectopic neurons in the cerebral cortex in human temporal lobe epilepsy

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P5.12 NEUROCHEMICAL CHARACTERIZATION OF THE LATE BORN NEURONS IN THE SPINAL DORSAL HORN OF MICE

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P5.13 High frequency astrocytic calcium signals influence slow wave activity and memory consolidation

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P5.14 Novel astrocytic targets in epilepsy utilizing the Glu/GABA exchange mechanisms

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P5.15 Group I mGluR mediated changes in neuronal excitability and synaptic strength show cell-type specificity

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P5.16 Properties and activity-dependent plasticity of excitability of neurons in a learning and memory circuit of octopus

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P5.17 Aging-associated weakening of the action potential in fast-spiking interneurons in the human neocortex

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P5.18 Electrophysiology and Morphology of Human Cortical Supragranular Pyramidal Cells in a Wide Age Range

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P5.19 Epigenetic Regulation and Molecular Mechanisms of Burn Injury-Induced Nociception in the Spinal Cord of Mice

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P5.20 Studying neuronal autophagy in human ageing using induced neurons directly reprogrammed from adult human fibroblasts

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P5.21 Cellular and molecular footprint of aging in a defined neuronal network encoding associative memory

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P6 - MODELLING

P6.1 Modelling of ATP induced intracellular Ca2+ concentration changes in Deiters cells

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P6.2 Improving real-time epileptic seizure detection using light-weight deeplearning

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P6.3 Characterization of a new human stem cell based blood-brain barrier and brain organoid lab-on-a-chip model

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P6.4 CAMKIIα-GFP MOUSE LINE PROVIDES A NEW TOOL FOR MICROSCOPIC AND ELECTROPHYSIOLOGICAL ANALYSIS OF HIPPOCAMPAL NEURONS

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P6.5 Gap junction formation is governed by redox-sensitive residues

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P6.6 Modifying effects of testing conditions in metabolic stress studies

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P7 - NOVEL TECHNIQUES

P7.1 Cell- and Layer-Specific Roles of TRPV1 Ion Channels in Infrared Neurostimulation: Insights from High-Density Laminar Recordings in the Mouse Neocortex

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P7.2 A multistep analysis workflow for the classification of cortical LFP events.

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P7.3 **Investigating Beta Band and Surface Laplacian For Motor Imagery Brain Computer Interfacing**

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P7.4 **Current Source Density calculation for stereo EEG data**

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P7.5 **Longitudinal Multimodal Access to Neuronal Activity in Large Animal Brains with Functional Ultrasound Imaging**

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P7.6 **Demonstration of the safe operation and long-term in vivo use of a custom-designed infrared optrode and headstage system in freely behaving rats**

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P7.7 Investigating the Neurophysiological Effects of Low-Intensity Ultrasound: Development, Simulation and Experimentation

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P7.8 Microcircuits in the marmoset prefrontal cortex with a large volume electron microscopy, ATUM-Blade-TEM

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P7.9 A flexible, implantable, bioelectronic electroporation device for targeted ablation of seizure foci in the mouse brain

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P7.10 Targeting Large Brains with Gene Therapy Vectors: The Role of Systemic Immune Profiling in Preclinical and Clinical Contexts

Beatrix Kovács[1,2], Viktória Szabó[3], Zoltán Zsolt Nagy[3], István Hernádi[4], Balázs Rózsa[5,6,7], Áron Szepesi[5,6], Dániel Hillier[1,7]

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P7.11 Spatiotemporal backpropagation patterns of human single unit waveforms revealed by intraoperative high-density Neuropixels recordings

Domokos Meszena[1,2], Angelique Paulk[1], William Munoz[3], Irene Caprara[3], Mohsen Jamali[3], Brian Coughlin[1], Charlie Windolf[4], Erdem Varol[4], Ziv Williams[3], Sydney Cash[1], István Ulbert[2,5,6]

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P7.12 Effect of electrical microstimulation parameters on in vivo neuronal calcium responses in the visual cortex of mice

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P7.13 Physiological assessment of the psychological flow state using wearable devices

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P7.14 A novel technique for classification of neurons

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P7.15 Genetically targeted, long-term stable and low-immunogenic modulation of brain function: promise or reality?

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P7.16 INFERRING HIGHER-ORDER HIDDEN DRIVERS FROM fMRI DATA

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P7.17 Changes in low-frequency cortical activity in response to thermal neuromodulation induced by an intracortical infrared light source

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P7.18 Cleaning of autofluorescence in large preclinical mammalian brain samples with quantitative efficacy analysis

Lucia Wittner[1,2], Dorka Nagy[1,3], Fanni Somogyi[1,4], Beatrix Kovács[1,4], Réka Bod[1,4], Domonkos Horváth[1,3], Attila B. Dobos[1], Wim Vanduffel[5], Estilla Zs. Tóth[1], Kinga Tóth[1], Gábor Nagy[2], Attila G. Bagó[2], Dániel Fabó[2], István Ulbert[1,2,3], Daniel Hillier[1,3]

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P7.19 In vivo assessment of gamma-aminobutyric acid and glutamine/glutamate concentrations in the brain using modern MR spectroscopy

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P8 - REPAIR AND REGENERATION

P8.1 Senolysis potentiates endothelial progenitor cell adhesion to and integration into the brain vasculature

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P9 – STEM CELLS AND DEVELOPMENT

P9.1 Functional characterization of human iPSC neurons of Kleefstra syndrome origin

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P9.2 Dynamics of neuropeptide expression in the developing mouse Edinger-Westphal nucleus

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P9.3 Semaphorin receptor neuropilins are critical for metabolic balance in early postmitotic neuron transcription and translation processes in the chick spinal cord

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P10 - SYSTEMS NEUROSCIENCE

P10.1 Cortical and subcortical neuromodulatory dynamics in variable learning environments

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P10.2 Anatomically heterogeneous pyramidal cells in supragranular layers of the dorsal cortex show the surface-to-deep firing frequency increase during natural sleep

Boglárka Bozsó[1], Robert G. Averkin[1], János Horváth[1], Sándor Bordé[1], Gábor Tamás[1]

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P10.3 How Global and Local Image Features are Encoded in the Architecture of Visual Cortex

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P10.4 The role of microglia in modulating neurovascular processes and functional connectivity

Eszter Császár[1], Diána Balázsfi[1], Nikolett Lénárt[1], Csaba Cserép[1], Balázs Pósfai[1], Ádám Dénes[1]

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P10.5 Integrated Electrophysiology and Fiber Photometry Examination of the Prefrontal Cortex in the Mouse Model of Implicit Learning

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P10.6 Investigating connectivity of enkephalinergic interneurons in the rodent spinal dorsal horn

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P10.7 From simple tasks to complex challenges: exploring implicit learning in mice through advanced sequential protocols

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P10.8 Dendritic synaptome of calcium-binding protein containing GABAergic neurons in the cortex

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P10.9 Medio-lateral H-current gradient in the medial entorhinal cortex

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P10.10 Age-Dependent Changes in the Regulation of Extrasynaptic Glutamate Concentration in Human and Mouse Neocortex

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P10.11 GABA-ergic modulation of cortical excitability in awake non-human primates

Anna Padányi[1,2], Balázs Knakker[1], Rafaella Mínea Riszt[1,2], Szuhád Khalil[1], Evelin Kiefer[1], Judit Inkeller[1], Antonietta Vitális-Kovács[1], István Hernádi[1,3,4]

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P10.12 Seeing the Whole: Fine-Grained 3D Reconstruction of Functional Mesoscale Domains in Cat Visual Cortex

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P10.13 Exploring the Role of Multiple Neuromodulators in Associative Learning and Reward Prediction Error

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P10.14 Characterisation of the CCK-positive inhibitory cells in the medial entorhinal cortex

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