

POSTER SESSIONS

Posters should be installed as from Saturday 19th afternoon, and will be displayed throughout the duration of the meeting (i.e., till Tuesday 22nd afternoon). Besides this, the presenting authors should be present at his/her poster at the time of the corresponding session for discussion. Please, refer to the **accompanying picture** to localize posters by their numbers.

POSTER SESSION 1

Glial and Neuronal Metabolism, Mitochondria and Neurotransmitters.

SUNDAY 20th – 14:30-15:00 h

PS1-01

Combination of Metabolic Flux Analysis and ¹³C NMR Spectroscopy to study astrocytic metabolism under hypoglycemic conditions

AI Amaral, A Teixeira, N Carinhas, PM Alves

ITQB/IBET (Instituto de Tecnologia Química e Biológica/Instituto de Biologia Experimental e Tecnológica), Oeiras, Portugal, aamaral@itqb.unl.pt

PS1-02

The stability of 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-3 (Pfkfb3), a master regulator of glycolysis, determines the survival of post-mitotic neurons

A Herrero-Mendez¹, A Almeida^{1,2}, JP Bolaños¹

¹Departamento de Bioquímica y Biología Molecular, Universidad de Salamanca, Spain, ²Unidad de Investigación, Hospital Universitario de Salamanca, Instituto de Estudios de Ciencias de la Salud de Castilla y León, Spain, angelh@usal.es

PS1-03

Use of the antioxidant carnosine in rehabilitation of alcoholic patients

VD Prokopyeva, LG Molkina, VV Safiullina, EG Yarigina, EVPatisheva

Mental Health Research Institute, Russian Academy of Medical Sciences, 634014 Tomsk, Russia, vdprok@yahoo.com

PS1-04

Alcohol abuse as co-morbidity factor for HIV-1 brain infection and associated neurodegeneration

J Haorah¹, R Potula¹, K Schall¹, B Knipe¹, D Heilman¹, Y Persidsky^{1,2}

Departments of ¹Pharmacol/Exp Neurosci and ²Pathol/Microbiol, UNMC, Omaha NE, USA, ypersids@unmc.edu

PS1-05

Ethanol stimulates glutamate secretion through Ca²⁺ mobilization and ROS generation in rat hippocampal astrocytes

M Salazar, JA Pariente, GM Salido, A González

Department of Physiology (Cell Physiology Research Group), University of Extremadura, Cáceres, Spain, agmateos@unex.es

PS1-06

Ethanol mobilizes Ca²⁺ and stimulates ROS generation by mitochondria in rat hippocampal astrocytes

A González, JA Pariente, GM Salido

Department of Physiology (Cell Physiology Research Group), University of Extremadura, Cáceres, Spain, agmateos@unex.es

PS1-07

H₂O₂ releases Ca²⁺ from both agonist- and thapsigargin-sensitive and insensitive intracellular stores and stimulates glutamate secretion in rat hippocampal astrocytes

A González, JA Pariente, GM Salido

Department of Physiology (Cell Physiology Research Group), University of Extremadura, Cáceres – Spain, agmateos@unex.es

PS1-08

Metabolic control analysis of bioenergetic function in synaptosomes

JE Telford¹, MJ Rowan², KF Tipton¹, GP Davey¹

¹School of Biochemistry and Immunology & Trinity College Institute of Neuroscience, ²Department of Pharmacology and Therapeutics, Trinity College Dublin, Dublin 2, Ireland, telforj@tcd.ie

PS1-09

Partial complex I inhibition increases glutamate release from synaptosomes: implications for the role of excitotoxicity in chronic neurodegeneration.

S Kilbride, KF Tipton, GP Davey

School of Biochemistry and Immunology & Trinity College Institute of Neuroscience, Trinity College Dublin, Dublin 2 Ireland, kilbrids@tcd.ie

PS1-10

Mitochondrial Rho GTPase Miro1 regulates mitochondrial morphology in neurons

D Safiulina¹, G Szabadkai², R Rizzuto³

¹Department of Pharmacology, University of Tartu, Estonia, ²INSERM U807, Paris, France, ³Department of Experimental and Diagnostic Medicine, University of Ferrara, Italy, dzamilja.safiulina@ut.ee

PS1-11

Effect of O₂ deprivation in the metabolism of astrocytes cultured in a fully-controlled bioreactor

S Sá Santos¹, D Ferreira¹, MJT Carrondo^{1,2}, PM Alves¹

¹ITQB/IBET (Instituto de Tecnologia Química e Biológica/Instituto de Biologia Experimental e Tecnológica), Oeiras, Portugal and ²Universidade Nova de Lisboa, Monte da Caparica, Portugal, sasantos@itqb.unl.pt

PS1-12 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 11:00-12:00 h**

Mechanism of glutamate-induced astrocyte death – a proapoptotic role of ERK signaling

K Szydłowska, A Gozdz, B Kaminska

Nencki Institute of Experimental Biology, Warsaw, Poland, k.szydłowska@nencki.gov.pl

PS1-13

Autocrine S100B effects on astrocytes are mediated via RAGE

G Ponath, C Schettler, V Arolt, M Rothermundt

Department of Psychiatry, Molecular Psychiatry Division, University of Muenster, Germany, Gerald.Ponath@ukmuenster.de

PS1-14

Excitatory amino acid transporter densities in brain tissue

KP Lehre, S Holmseth, Y Dehnes, NC Danbolt

Department of Anatomy, Centre for Molecular Biology and Neuroscience, Institute of Basic Medical Sciences, University of Oslo, Oslo, Norway, k.p.d.lehre@medisin.uio.no

PS1-15

Plasma membrane and vesicular glutamate transporter expression in bovine chromaffin cells of adrenal medulla

AM Oliván-Sierra, R Pérez -odríguez, C Arce, MP González-González, MJ Oset-Gasque

Departamento de Bioquímica y Biología Molecular II. Facultad de Farmacia. UCM, anaolivan@yahoo.es

PS1-16 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 11:00-12:00 h**

Development of epitope-tagged EAAT2 for analysis of glutamate transporter subunit interactions and regulation

E Peacey¹, J Dunlop², M Rattray¹

¹King's College London, Wolfson Centre for Age-Related Diseases, Guy's Hospital Campus, London SE1 IUL, UK, ²Wyeth Research, Princeton, USA, marcus.rattray@kcl.ac.uk

PS1-17

Specificity testing of antibodies – The preabsorption test has little value

S Holmseth, KP Lehre, NC Danbolt

Department of Anatomy, Centre for Molecular Biology and Neuroscience, Institute of Basic Medical Sciences, University of Oslo, Oslo, Norway, silvia.holmseth@medisin.uio.no

PS1-18

Effects of tolbutamide in rat and human glioma cell proliferation

T Paño, S Herrero-González, R Sánchez-Álvarez, JM Medina, A Tabernero

Departamento de Bioquímica y Biología Molecular. Instituto de Neurociencias de Castilla y León. Universidad de Salamanca. Salamanca. España, tpaino@usal.es

PS1-19

Role of cardiolipin in palmitate-induced apoptosis of GL-15 glioblastoma cells

M Buratta¹, E Castigli², M Sciacaluga², RM Pellegrino³, L Corazzi¹

Departments of ¹Internal Medicine, ²Cellular and Environmental Biology, and ³Chemistry, University of Perugia, Italy, corazzi@unipg.it

PS1-20

Growth factor-steroid cross-talk on GFAP and vimentin expression in serum-free astroglial cell cultures

V Bramanti¹, D Bronzi², G Raciti³, M Avitabile³, R Avola¹

¹Dept. Chemical Sciences, Sec. Biochemistry and Molecular Biology, University Catania, Italy; ²Dept. Physiological Sciences, University Catania, Italy; ³Dept. Biological Chemistry, Medical Chemistry and Molec. Biology, University Catania, Italy, ravola@unict.it

PS1-21

The effect of isovalerylshikonin on controlling microglial activation

KN Nam, EH Lee

Graduate School of East-West Medical Science, Kyung Hee University, Yongin-si, Republic of Korea, ehwang@khu.ac.kr

PS1-22

Neurofilament derived peptides exert specific effects on astrocytes and oligodendrocytes in vitro

C Fressinaud^{1,2}, R Berges², J Eyer²

¹Neurology Department, ²UPRES EA 3143, University Hospital, 4 rue Larrey, F49933 Angers Cedex 9, France, Catherine.fressinaud@univ-angers.fr

PS1-23

The neuroprotective role of histaminergic subtype 3 receptor and HSP70 in some limbic areas during the different hibernating states of the hamster

G Giusi, T Granata, R Alò, A Di Vito, A Carelli, RM Facciolo, M Canonaco

Comparative Neuroanatomy Lab., Ecology Dept., University of Calabria, Ponte Pietro Bucci 4b, Arcavacata di Rende 87030, Cosenza, Italy, jisly76@yahoo.it

PS1-24

Brain localisation and stress induced nuclear transport of CHORD containing protein-1 (CHP-1) a novel zinc binding protein

W Michowski^{1,2}, M Winiewska,¹ J Jaworski,¹ R Ferretti,³ K Skieterska,¹ M Brancaccio,³ G Tarone,³ J Kuznicki^{1,2}

¹*International Institute of Molecular and Cell Biology, Warsaw, Poland;* ²*Nencki Institute of Experimental Biology, Warsaw, Poland;* ³*Department of Biology, University of Turin, Turin, Italy,*
wmichows@nencki.gov.pl

PS1-25

Acute effects of zinc on cholinergic SN56 neuroblastoma cells

A Ronowska, H Bielarczyk, S Gul-Hinc, A Jankowska-Kulawy, A Szutowicz.

Chair of Clinical Biochemistry, Department of Laboratory Medicine, Medical University of Gdansk, Poland, aszut@amg.gda.pl

PS1-26

Chronic suppressive and cytotoxic effects of zinc in SN56 cholinergic cells

A Szutowicz, A Ronowska, S Gul-Hinc, A Jankowska-Kulawy, H Bielarczyk

Chair of Clinical Biochemistry, Department of Laboratory Medicine Medical University of Gdansk, Poland, aszut@amg.gda.pl

PS1-27

The presence of aluminium affects brain oxidative stress and enzyme activity of the most important free radical scavengers in different ways

S Sánchez-Iglesias¹, E Méndez-Álvarez¹, J Iglesias-González¹, I Sánchez-Sellero², R Soto-Otero¹

¹Univ. of Santiago de Compostela, Fac. of Medicine, Dept. of Biochem. & Molec. Biol., Santiago de Compostela, Spain; ²Univ. of Santiago de Compostela, Fac. of Veterinary Medicine, Dept. of Pathol. Anat. and Foren. Sci., Lugo, Spain, bnsafia@usc.es

POSTER SESSION 2

Oxygen and Nitrogen-derived Free Radicals in Neuroprotection and Neurodegeneration.

SUNDAY 20th – 15:00-15:30 h

PS2-01

Poly(ADP-ribose) polymerase-1 protects neurons against apoptosis induced by oxidative stress

JL Diaz-Hernandez^{1,2}, S Moncada³, JP Bolaños², A Almeida^{1,2}

¹*Unidad de Investigación, Hospital Universitario de Salamanca-Instituto de Estudios Ciencias de la Salud de Castilla y León, Salamanca, Spain;* ²*Departamento de Bioquímica y Biología Molecular, Instituto de Neurociencias de Castilla y León, Universidad de Salamanca, Salamanca, Spain;* ³*Wolfson Institute for Biomedical Research, UCL, London WC1E 6BT, UK, a8068@usal.es*

PS2-02

Differential effects of neurotransmitters on topo I activity in mouse cerebellar sections

E Zehorai¹, M Hershinkel², I Sekler³, E Priel¹

¹*Depts. of Microbiology & Immunology,* ²*Morphology &* ³*Physiology, Ben-Gurion University of the Negev, Beer-Sheva, Israel, eldar@bgu.ac.il*

PS2-03

Role of poly(ADP-ribose) polimerase-1 in excitotoxicity

C Maestre^{1,2}, JP Bolaños², A Almeida^{1,2}

¹*Unidad de Investigación, Hospital Universitario Salamanca, Instituto de Estudios de Ciencias de la Salud de Castilla y León, España;* ²*Departamento de Bioquímica y Biología Molecular, Universidad de Salamanca, Instituto de Neurociencias de Castilla y León, Salamanca, España, camafe@usal.es*

PS2-04

Protein nitration and tyrosine hydroxylase activity in organotypic mesencephalic cultures treated with 1-methyl-4-phenylpyridinium or the peroxyxynitrite donor SIN-1

JB Gramsbergen¹, TR Larsen^{1,2}, S Rossen¹, P Roepstorff²

¹Anatomy and Neurobiology, Institute of Medical Biology and ²Department of Biochemistry and Molecular Biology, University of Southern Denmark, Odense, Denmark, jbgramsbergen@health.sdu.dk

PS2-05

Involvement of aralar and early ROS production in lactate-mediated neuroprotection against excitotoxicity

I Llorente¹, A del Arco², J Satrústegui¹, B Pardo¹

¹Dept. Biología Molecular, Centro de Biología Molecular Severo Ochoa, Universidad Autónoma de Madrid, Madrid, Spain, and ²Facultad de Ciencias del Medio Ambiente, Universidad de Castilla-La Mancha, Toledo, Spain, illorente@cbm.uam.es

PS2-06

Effect of the oxidative stress on the mitochondrial proteins and lipids

E Babusikova, J Hatok, P Kaplan, D Dobrota

Comenius University in Bratislava, Jessenius Faculty of Medicine in Martin, Department of Medical Biochemistry, Martin, Slovak Republic, Eva.Babusikova@jfmed.uniba.sk

PS2-07

Inhibition of PTEN by peroxyxynitrite activates the phosphoinositide-3-kinase/Akt neuroprotective signaling pathway

M Delgado-Esteban¹, D Martin-Zanca², L Andres-Martin², A Almeida^{1,3}, JP Bolaños¹

¹Departamento de Bioquímica y Biología Molecular, Instituto de Neurociencias de Castilla y León, Universidad de Salamanca; ²Instituto de Microbiología-Bioquímica, C.S.I.C./Universidad de Salamanca; ³Unidad de Investigación, Hospital Universitario de Salamanca, Instituto de Estudios de Ciencias de la Salud de Castilla y León, Salamanca, Spain, mdesteban@usal.es

PS2-08

Atrial natriuretic peptide induces a phagocytic phenotype in microglial cells via the cGMP-protein kinase G pathway.

M Borán, J Prado, MA Baltrons, A García

Institute of Biotechnology and Biomedicine and Department of Biochemistry and Molecular Biology, Universidad Autónoma de Barcelona, Spain, marielaboran@yahoo.es

PS2-09

Involvement of different nitric oxide synthase (nos) isoforms in cytokine-induced apoptosis on chromaffin cells

R Pérez-Rodríguez, AM Oliván-Sierra, C Roncero, MP González, MJ Oset-Gasque

Departamento de Bioquímica y Biología Molecular II, UCM, Facultad de Farmacia, Madrid, Spain, rociobiochem@gmail.com

PS2-10 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 11:00-12:00 h**

Carbon monoxide as a new protector against neuronal apoptosis

HLA Vieira^{1,2}, C Queiroga², PM Alves^{1,2}

¹Instituto de Biologia Experimental e Tecnológica (IBET), Oeiras, Portugal, ²Instituto de Tecnologia Química e Biológica (ITQB), Universidade Nova de Lisboa, Oeiras, Portugal, hvieira@itqb.unl.pt

PS2-11

Cells protection against oxidative stress by carnosine interaction with nitric oxide in primary rat astroglial cell cultures

VG Nicoletti¹, AM. Santoro², G Grasso², LI Vagliasindi¹, ML Giuffrida¹, C Cuppari¹, V Spina-Purrello¹, E Rizzarelli¹, AM Giuffrida-Stella¹

¹Dipartimento di Scienze Chimiche, Università degli Studi di Catania; ²Istituto Biostrutture e Bioimmagini, CNR Catania, Viale A. Doria 6, 95125 Catania Italy, spinavit@unict.it

PS2-12

Interference of methionine sulfoximine with ammonia-induced activation of the NO-cGMP pathway in the rat striatum *in vivo*

MW Grzynowicz¹, W Hilgier¹, M Mczewski², A Bersewicz², SS Oja³, P Saransaari³, J Albrecht¹

¹Medical Research Centre, Polish Academy of Sciences, ²Medical Center of Postgraduate Education, Warsaw, Poland, ³University of Tampere Medical School, Tampere, Finland, whilgier@cmdik.pan.pl

PS2-13

Raising of extracellular glutamine attenuates ammonia-induced generation of cGMP in rat striatum *in vivo*

W Hilgier¹, M Wgrzynowicz¹, SS Oja^{2,3}, P Saransaari², J Albrecht¹

¹Department of Neurotoxicology, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland, ²The Centre for Laboratory Medicine, Tampere University Hospital, Tampere, Finland, ³Brain Research Center, University of Tampere Medical School, Finland, whilgier@cmdik.pan.pl

PS2-14

Nicotinamide and methyl nicotinamide: neuroprotective agents in excitotoxicity

M Slomka, E Zieminska, E Salinska, A Stafiej, JW Lazarewicz

Department of Neurochemistry, Medical Research Centre Polish Academy of Sciences, elas@cmdik.pan.pl

PS2-15

Calpain/cdk5 pathway is involved in the neuroprotection by lithium in two different models of toxicity *in vitro*

N Crespo-Biel, A Camins, M Pallàs, AM Canudas

Instituto de Biomedicina. Unitat de Farmacologia i Farmacognòsia Facultat de Farmàcia. Universitat de Barcelona. Nucli Universitari de Pedralbes. E-08028 Barcelona. Spain, nataliabel@hotmail.com

PS2-16

Chromatographic analysis of neurochemical changes in the rat striatum after chronic diclofenac treatment

M Baranyi, E Milusheva, B Sperlág

Institute of Experimental Medicine, Hungarian Academy of Sciences, H-1450 Budapest, PO.Box 67, Hungary, sperlagh@koki.hu

PS2-17 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 11:00-12:00 h**

Iron compartmentalisation in the rat brain: Do perineuronal net-ensheathed neurons play a special role?

M Morawski^{1,3}, A Fiedler^{1,2}, T Reinert², G Brückner¹, T Arendt¹

¹Paul Flechsig Institute of Brain Research, University of Leipzig, Jahnallee 59, 04109 Leipzig, Germany;

²Institute for Experimental Physics II, University of Leipzig, Linnéstr. 5, 04103 Leipzig, Germany;

³Interdisciplinary Center of Clinical Research (IZKF), Faculty of Medicine, University of Leipzig, Germany, morm@medizin.uni-leipzig.de

PS2-18

Action of DNS acetone fraction against chemical induced neuronal hyperexcitability

ML Raza, M Zeeshan, F Shaheen, SU Simjee

HEJ International Center for Chemical & Biological Sciences, Pharmacology Unit, University of Karachi-75270 Pakistan, liaquathej@yahoo.com

PS2-19

Imprinting of the cerebral cytochrome P450s and developmental neurotoxicity of deltamethrin

A Johri¹, A Dhawan¹, RL Singh², D Parmar¹

¹Developmental Toxicology Division, Industrial Toxicology Research Centre, P.O. Box 80, M.G. Marg, Lucknow-226 001, U.P, INDIA; ²Department of Biochemistry, Dr. R.M.L. Awadh University, Faizabad, U.P, India, ashuchandra@gmail.com

PS2-20

Molecular basis of schizophrenia: functional investigation of human D-amino acid oxidase-pLG72 interaction

S Sacchi¹, L Pollegioni¹, MG Bernasconi¹, M Pilone¹, JP Mothet², G Molla¹

¹Department of Biotechnology and Molecular Sciences, University of Insubria, Varese, Italy, ²CRI U862, University of Bordeaux 2, Bordeaux, France, silvia.sacchi@uninsubria.it

PS2-21

Grik3 polymorphism supporting glutamatergic dysfunction in schizophrenic patients and their first degree relatives

I Kara¹, CI Kucukali², N Orhan¹, A Zengin¹, E Ozkok¹, G Kilic³, M Aydin¹

¹Department of Neuroscience, Istanbul University Institute for Experimental Medicine, Istanbul, Turkey; ²Istanbul Erenkoy Psychiatric and Neurological Disorders Hospital Istanbul, Turkey; ³St Jude Children's Research Hospital, Tumor Cell Biology and Genetics, Memphis, USA, aydinm@istanbul.edu.tr

PS2-22

Association of Paraoxonase1 55/192 gene variants with bipolar disorders

E Ozkok¹, N Orhan¹, A Zengin¹, CI Kucukali², M Aydin¹, Z Ozbek³, I Kara¹

¹Department of Neuroscience, Istanbul University Institute for Experimental Medicine, ²Istanbul Erenkoy Psychiatric and Neurological Disorders Hospital, ³Department of Biochemistry, Eyup State Hospital, Istanbul, Turkey, aydinm@istanbul.edu.tr

PS2-23

NMDA receptors as possible targets of antidepressants: Direct inhibitory effect of fluoxetine on NMDA currents in rat cortical cell cultures

BK Szasz¹, A Mike¹, R Karoly¹, Z Gerevich², P Illes², ES Vizi¹, JP Kiss¹

¹Department of Pharmacology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary, ²Rudolf-Boehm-Institute of Pharmacology and Toxicology, University of Leipzig, Leipzig, Germany, kiss-j@koki.hu

PS2-24

Cloning and characterization of new epilepsy-related genes

K Lukasiuk, M Stefaniuk

The Nencki Institute of Experimental Biology, Pasteur 3, 02-093 Warsaw, Poland, k.lukasiuk@nencki.gov.pl

PS2-25

Anticonvulsant and neuroprotective effects of the novel calcium antagonist NP04634 on kainic acid-induced seizures in rats

R Luna-Medina¹, JA Morales-Garcia¹, A Martinez², A Santos³, A Perez-Castillo¹

¹Instituto de Investigaciones Biomédicas, CSIC-UAM. ²Neuropharma, S.A. ³Facultad de Medicina, UCM, Madrid, Spain, aperez@iib.uam.es

PS2-26

The novel mechanism of valproic acid: intracellular Ca²⁺ mobilization from reticulum endoplasmic

A Ruiz-Nuño, I Herrera Peco, N Díaz-Prieto, MF Cano-Abad

Pharmacology, Hospital Universitario de la Princesa, Universidad Autónoma de Madrid (UAM), Madrid, Spain, anaruiznuno@yahoo.es

PS2-27

An erythropoietin-derived synthetic peptide, eptris, inhibits kainic acid-induced seizures in mice

K Sonn¹, S Pankratova², A Zharkovsky¹, E Bock², V Berezin²

¹Department of Pharmacology, University of Tartu, Estonia; ²The Protein Laboratory, Department of Neuroscience and Pharmacology, Copenhagen University; Denmark, katrin.sonn@gmail.com

PS2-28

Reduced susceptibility to kainic acid-induced seizures and neuronal death in mice null for thyroid hormone β -receptor

E Porlan^{1,4}, M Sobrado^{1,4}, JK Christensen², J Lerma^{2,3}, A Rodríguez-Peña¹

¹Instituto de Investigaciones Biomédicas "Alberto Sols" CSIC-UAM Madrid, Spain; ²Instituto Cajal CSIC Madrid, Spain; ³Instituto de Neurociencias de Alicante CSIC-UMH San Juan de Alicante, Spain; ⁴These authors contributed equally to this work, eporlan@iib.uam.es

POSTER SESSION 3

Hypoxia, Ischemia and Stroke: Mechanisms of Neurotoxicity and Novel Neuroprotective Strategies.

MONDAY 21st – 14:30-15:00 h

PS3-01 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 11:00-12:00 h**

Protein SUMOylation: Investigation in *in vivo* models of brain ischemia

H Cimarosti¹, S Bomholt², C Lindberg², L Rønn², J Henley¹

¹Department of Anatomy, School of Medical Sciences, University of Bristol, Bristol BS8 1TD, UK;

²Department of Functional Neuroanatomy and Biomarkers, Neurosearch A/S, Pederstrupvej 93, 2750 Ballerup, Denmark, anhic@bristol.ac.uk

PS3-02

The effect of ischemia and reoxygenation on cysteine proteases release from neuroglial cells in culture

MV Onufriev¹, AA Lyzhin², LG Chaspekov², NV Gulyaeva¹

¹Institute of Higher Nervous activity and Neurophysiology Rus. Acad. Sci., Moscow, Russia, ²Institute of Neurology Rus. Acad. Med. Sci., Moscow, Russia, mikeonuf1@rambler.ru

PS3-03

Effect of ischemia and reperfusion on processing of the amyloid precursor protein

D Dobrota¹, E Babusikova¹, NN Nalivaeva², AJ Turner²

¹Department of Medical Biochemistry, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia, ²Institute of Molecular and Cellular Biology, University of Leeds, Leeds, United Kingdom, dobrota@ifmed.uniba.sk

PS3-04

Catalytic properties of membrane-associated enzymes in brain acute ischemia

EI Yerlykina, NV Sedunova, TF Sergeeva

State Medical Academy, Nizhny Novgorod, Russia, e_erlyk@hotmail.ru

PS3-05

The influence of ischemia/reperfusion on nNOS-immunoreactivity and NADPH-diaphorase activity in the superficial dorsal horns of spinal cord lumbosacral segments in rabbits

A Schreiberová, M Lacková, D Kolesár, S Jergová, A Dávidová, N Lukášová, J Marsala

Institute of Neurobiology, Centre of Excellence, Slovak Academy of Sciences, Oltésovej 4-6, 040 01, Kosice, Slovak Republic, schreiberova@saske.sk

PS3-06

Effects of severe and mild hypobaric hypoxia on the expression of superoxide dismutases and thioredoxins in rat hippocampus

SA Stroev, EI Tjulkova, TS Gluschenko, MO Samoilov, M Peltto-Huikko

Tampere University Medical School, Tampere, Finland; I.P. Pavlov Institute of Physiology RAS, St.Petersburg, Russia, s_stroev@hotmail.com

PS3-07

Neuroprotective action of taurine in hypothalamic nuclei in ischemia-induced apoptosis

A Taranukhin^{1,2}, E Taranukhina³, P Saransaari¹, I Djatchkova¹, M Pelto-Huikko⁴, SS Oja¹

¹Brain Research Center, University of Tampere Medical School, Tampere, Finland; ²Laboratory of Comparative Somnology and Neuroendocrinology, Sechenov Institute of Evolutionary Physiology and Biochemistry, St.-Petersburg, Russia; ³University of Tampere, School of Public Health, Tampere, Finland; ⁴Department of Developmental Biology, University of Tampere Medical School and Department of Pathology, Tampere University Hospital, Tampere, Finland, andrey.taranukhin@uta.fi

PS3-08

Novel mechanism of action of rosiglitazone: 5- lipoxygenase induction by rosiglitazone promotes synthesis of lipoxin A₄, a potent anti-inflammatory compound and PPAR γ activator.

MP Pereira, D Fernández-López, IG Yébenes, J Castillo, MA Moro, I Lizasoain

Departamento de Farmacología, Facultad de Medicina. Universidad Complutense de Madrid, Spain, mppereira@med.ucm.es

PS3-09

t-PA treatment induces an increment of circulating endothelial progenitor cells in human ischemic stroke

D Brea, M Rodríguez-Yáñez, R Leira, R Rodríguez-González, O Moldes, T Sobrino, J Castillo

Clinical Neuroscience Research Laboratory, Department of Neurology. Hospital Clínico Universitario. University of Santiago de Compostela, Santiago de Compostela, Spain, mecasti@usc.es

PS3-10

Protective role of LXR receptor in experimental stroke

JR Morales¹, O Hurtado¹, J Vivancos¹, F Nombela¹, A Castrillo², I Lizasoain¹, MA Moro¹

¹Dept. Pharmacology, School of Medicine, Universidad Complutense Madrid (UCM), and ²School of Medicine, Universidad Las Palmas de Gran Canaria (ULPGC), Spain, chechu_aguilas@hotmail.com

PS3-11

High serum levels of endothelin-1 are associated with cerebral edema in patients with acute ischemic stroke treated with t-PA

O Moldes, M Blanco, J Agulla, M Rodríguez-Yáñez, I Cristobo, P Ramos, J Castillo

Clinical Neuroscience Research Laboratory, Department of Neurology. Hospital Clínico Universitario. University of Santiago de Compostela, Santiago de Compostela, Spain, omodes1@yahoo.es

PS3-12 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 11:00-12:00 h**

High serum levels of VEGF, SDF-1 α and active MMP-9 are associated with proliferation of endothelial progenitor cells in human ischemic stroke

P Ramos, R Leira, I Cristobo, J Agulla, M Blanco, T Sobrino, J Castillo

Clinical Neuroscience Research Laboratory, Department of Neurology. Hospital Clínico Universitario. University of Santiago de Compostela, Santiago de Compostela, Spain, mecasti@usc.es

PS3-13

CDP-choline treatment improves functional recovery by an increment of circulating endothelial progenitor cells in human acute ischemic stroke

T Sobrino, S Arias, X Rodríguez-Ororio, D Brea, R Rodríguez-González, P Ramos, J Castillo

Clinical Neuroscience Research Laboratory, Department of Neurology. Hospital Clínico Universitario. University of Santiago de Compostela, Santiago de Compostela, Spain, tomas.sobrino.moreiras@sergas.es

PS3-14

Spatio-temporal distribution of M1/M2 muscarinic cholinergic receptors in rat cerebral cortex after focal photothrombotic stroke

K Rogozinska, M Aleksy, J Skangiel-Kramska

Nencki Institute of Experimental Biology, Warsaw, Poland, k.rogozinska@nencki.gov.pl

PS3-15

IL-1 β is involved in cerebral ischaemia worsening after acute immobilisation stress in rats

JR Caso, JM Pradillo, JC Leza, P Lorenzo, MA Moro, I Lizasoain

Departamento de Farmacología, Facultad de Medicina, Universidad Complutense de Madrid. Madrid, Spain, jrcaso@gmail.com

PS3-16

The beneficial effects of post-ischemia exercise; the role of smad7

E Yap¹, ET Ang¹, PTH Wong², YK Ng¹

Departments of ¹Anatomy & ²Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, elginyap@nus.edu.sg

PS3-17

Effect of ischemic preconditioning on ischemia-induced mitochondrial dysfunction and protein modification

P Racay, Z Tatarkova, A Drgova, P Kaplan, D Dobrota

Institute of Biochemistry, Jessenius Medical Faculty, Comenius University, Martin, Slovak Republic, racay@jffmed.uniba.sk

PS3-18

Potential role of 4E-binding proteins 1 and 2 in translation inhibition induced by ischemia stress

MI Ayuso¹, L Garcia-Bonilla¹, S Sacristán², M Salinas¹.

¹Servicio de Bioquímica-Investigación ²Servicio de Neurobiología, Hospital Ramón y Cajal, Madrid Spain, irene.ayuso@hrc.es

PS3-19

Expression of neuropeptide Y in hippocampus of gerbils tolerant to ischemia

M Duszarczyk, A Ziembowicz, R Gadamski, JW Lazarewicz

Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland, elas@cmdik.pan.pl

PS3-20

Ca²⁺ homeostasis dysregulation is associated with TMT-induced degeneration in cultured rat hippocampal neurons. CR-containing neurons are resistant

C Gangitano¹, C Grassi², R Piacentini², GB Azzena², S Ceccariglia¹, A Del Fà¹, F Michetti¹

¹Inst. Anatomy and Cell. Biology, ²Inst. Human Physiology Catholic University, Rome, Italy, fabrizio.michetti@rm.unicatt.it

PS3-21

Effects of homocysteine and its derivatives on SN56 cholinergic neuroblastoma cells of septal origin

H Bielarczyk, D Bizon-Zygmanska, A Szutowicz

Chair of Clinical Biochemistry, Department of Laboratory Medicine, Medical University of Gdansk, Poland, aszut@amg.gda.pl

PS3-22

Effect of glutamate analogs homocysteine and homocysteic acid on blood cells

EA Vladychenskay, OV Tulina

Department of Biochemistry, M.V. Lomonosov Moscow State University, 119192 Moscow, Russia, eavlad@list.ru

PS3-23

α -Tocopherol-mediated long-lasting protection against oxidative damage involves an attenuation of

calcium entry through TRP-like channels in cultured hippocampal neurons

N Crouzin, MC de Jesus Ferreira, C Cohen-Solal, RF Aimar, G Barbanel, M Vignes, J Guiramand.
Max Mousseron Institute of biomolecules UMR 5247 CNRS "Oxidative Stress and Neuroprotection"
research team, Montpellier, France, ncrouzin@univ-montp2.fr

PS3-24

Receptors specificity of glutamate-induced transport of calcium ions into synaptosomes

SO Bachurin, LN Petrova

Institute of Physiologically Active Compounds, Chernogolovka, Russia, bachurin@ipac.ac.ru

PS3-25

Development and Characterization of GluR5 Kainate Receptor Antagonists.

MB Mayo-Martin¹, NP Dolman¹, JCA More¹, A Alt², JL Knauss², OT Pentikainen¹, CR Glasser³, D Bleakman², ML Mayer³, GL Collingridge¹, DE Jane¹

¹MRC Centre for Synaptic Plasticity, University of Bristol; ²Neurosciences Research, Eli Lilly & Company, Indianapolis, USA; ³Department of Health and Human Services, Bethesda, Maryland, USA, Belen.Mayo-Martin@bristol.ac.uk

PS3-26

Expression of Na,K-ATPase isoforms in the retina of the lizard *Gallotia galloti* during optic nerve regeneration

MV Machargo¹, R Gutierrez², L Díaz-Flores², J Ávila¹, P Martín-Vasallo¹

¹Laboratorio de Biología del Desarrollo. Departament of Bioquímica y Biología Molecular. Universidad de La Laguna, Tenerife, Spain; ²Departament of Anatomía Patológica, Universidad de La Laguna, Tenerife, Spain, marivallemo@hotmail.com

PS3-27

Increase of incubation medium osmolarity leads to rise of free sodium concentration in neuronal isolated presynaptic endings

S Fedorovich, T Waseem, V Kolos, L Lapatsina

Institute of Biophysics and Cell Engineering, Minsk, Belarus, ipb@biobel.bas-net.by

PS3-28

Excitotoxicity and focal cerebral ischemia induce truncation of the NR2A and NR2B subunits of the NMDA receptor and cleavage of the scaffolding protein PSD-95

S Gascón¹, M Sobrado¹, JM Roda², A Rodríguez-Peña¹, M Díaz-Guerra¹

¹Instituto de Investigaciones Biomédicas "Alberto Sols", CSIC-UAM, ²Unidad de Investigación Cerebrovascular, Hospital La Paz, Madrid, Spain, mdiazguerra@iib.uam.es

PS3-29

Retention of GluR1 receptors by ARMS/Kidins220 protein results in changes in synaptic activity

J.C. Arévalo*, T. Takahashi⁺, S.H. Wu* and M.V. Chao*

*Molecular Neurobiology Program, Skirball Institute of Biomolecular medicine, Departments of Cell Biology, Physiology and Neuroscience, New York University School of Medicine, New York, NY 10016, USA. ⁺Cold Spring Harbor Laboratory, Cold Spring Harbor, NY 11724, USA, arevalo@saturn.med.nyu.edu

PS3-30

Effects of poly(ADP-ribose) polymerase inhibition on hippocampal neurons survival subjected to ischemia-reperfusion injury.

RP Strosznajder¹, M Walski², R Gadamski³, B Gajkowska²

¹Department of Neurosurgery, ²Department of Cell Ultrastructure, ³Department of Neuropathology, M. Mossakowski Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland, roberts@cmdik.pan.pl

POSTER SESSION 4
Cell Signalling Mechanisms in Neuroprotection, Neurogenesis and Neurorepair.
MONDAY 21st – 15:00-15:30 h

PS4-01

Molecular events underlying antioxidant properties of cyclo -(His-Pro) in PC12 cells

C Conte, S Grottelli, I Bellezza, A Minelli

Dipartimento Medicina Sperimentale Scienze Biochimiche, Sezione Biochimica Cellulare, Università di Perugia, Via del Giochetto 06126 Perugia, Italia, aminelli@unipg.it

PS4-02

Brain endothelial cells-retinal pericyte co-cultures induce PLA₂ expression through activation of PKC α and MAPK/ERK cascade

G Lupo¹, C Daniela Anfusio¹, L Romeo¹, G Giurdanella¹, C Motta¹, C Tirolo², B Marchetti², M Alberghina¹

¹*Department of Biochemistry, University of Catania, viale Andrea Doria 6, 95125 Catania, Italy;* ²*OASI Institute for Research and Care on Mental Retardation and Brain Aging (IRCCS), Neuropharmacology Section, 94018 Troina, Italy, lupogab@unict.it*

PS4-03

The mechanism of haloperidol neurotoxicity involves Ras- pteoin inhibition through NMDA receptor and GRF-factor

E Zhuravliova, T Barbakadze, N Narmania, DG Mikeladze

Institute of Physiology, Tbilisi, Georgia, helenzhur@yahoo.com

PS4-04 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 15:00-16:00 h**

A novel lovastatin-mediated neuroprotective signaling mechanism

AM Dolga, IM Nijholt, A Ostroveanu, PGM Luiten, ULM Eisel

Department of Molecular Neurobiology, Graduate School of Behavioral and Cognitive Neurosciences, University of Groningen, The Netherlands, a.m.dolga@rug.nl

PS4-05

Simvastatin prevent the inflammatory process and dopaminergic degeneration induced by the intranigral injection of lipopolysaccharide

MC Hernández-Romero, S Argüelles, RF Villarán, MJ Delgado-Cortes, RM De Pablos, AJ Herrera, J Cano

Departamento de Bioquímica, Bromatología, Toxicología y Medicina Legal. Facultad de Farmacia. Universidad de Sevilla. España, carmenhdez@us.es

PS4-06

Disruption of the plasma membrane structure by depletion of cholesterol impairs effectiveness of TRH receptor-mediated signal transduction via G_q/G₁₁ α protein

D Durchankova^{1,2}, P Ostasov^{1,2}, J Novotny^{1,2}, L Bourova^{1,2}, P Svoboda^{1,2}

¹*Department of Biochemistry of Membrane Receptors, Institute of Physiology, Academy of Sciences and* ²*Laboratory of Molecular Pharmacology, Department of Physiology and Developmental Physiology, Faculty of Sciences, Charles University, Prague, Czech Republic, durchy@seznam.cz*

PS4-07

Splice variant of G α_{i2} protein in the formation of intracellular dopamine D₂ receptor pool

MF López-Aranda¹, MJ Acevedo¹, A Gutierrez², P Koulen³, ZU Khan¹

¹*Neurobiology Lab., CIMES, Faculty of Medicine,* ²*Department of Cell Biology, Faculty of Science, University of Malaga, 29071-Malaga, Spain;* ³*Department of Pharmacology and Neuroscience, University of North Texas Health Science Center, Fort Worth, Texas 76107, USA, zkhan@uma.es*

PS4-08

Effect of *in vitro* and *in vivo* treatment with the mitochondrial inhibitor diclofenac on oxidative stress induced [³H]dopamine release in rat striatal slices

B Sperlagh, E Milusheva, A Kittel, M Baranyi, A Fekete, T Zelles, ES Vizi
Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary,
sperlagh@koki.hu

PS4-09

Functional activity of G α protein in detergent resistant membrane domains from rat brain cortex

J Stöhr^{1,2}, V Rudajev^{1,2}, L Bourova^{1,2}, V Lisy¹, J Novotny^{1,2}, P Svoboda^{1,2}

¹*Institute of Physiology, Academy of Sciences of the Czech Republic, v.v.i. and* ²*Department of Physiology, Faculty of Natural Sciences, Charles University, Prague, Czech Republic, stohr@biomed.cas.cz*

PS4-10

Different behaviour of GPCRs from rat brain cortex when exposed to Triton X-100

V Rudajev^{1,2}, J Stöhr^{1,2}, L Bourova^{1,2}, V Lisy¹, J Novotny^{1,2}, P Svoboda^{1,2}

¹*Institute of Physiology, Academy of Sciences of the Czech Republic, v.v.i. and* ²*Department of Physiology, Faculty of Natural Sciences, Charles University, Prague, Czech Republic, zkhan@uma.es*

PS4-11

Xanomeline wash-resistently bound to presynaptic M₂ and M₄ muscarinic receptors decreases the evoked release of acetylcholine

E Machová¹, J Jakubík¹, EE El-Fakahany², V Dolezal¹

¹*Institute of Physiology CAS, Prague, Czech Republic;* ²*University of Minnesota Medical School, Minneapolis, USA, avocham@biomed.cas.cz*

PS4-12

P2-receptor mediated modulation of noradrenaline release by electrical field stimulation and ischemic conditions in superfused rat hippocampus slices

C Csölle, A Heinrich, B Sperlagh

Laboratory of Molecular Pharmacology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary, sperlagh@koki.hu

PS4-13

The chronic intraventricular administration of the neuropeptide galanin induces a recovery of the M1 and M2 cholinergic receptors in the rat brain

G Barreda, MT Giralt, R Rodríguez-Puertas

Dept. Pharmacology. Fac. Medicine and Odontology. Univ. of the Basque Country. Leioa, Vizcaya, Spain, bcpbagog@ehu.es

PS4-14

Mu and delta opioid receptors differentially modulate dopamine extracellular levels in nucleus accumbens shell and core

L Hipólito, I Zanolini, MJ Sanchez-Catalán, A Polache, L Granero

Departament de Farmàcia i Tecnologia Farmacèutica. Facultat de Farmàcia. Universitat de València, Avda. Vicente Andrés Estellés s/n. 46100 Burjassot, València, Spain, Lucia.Hipolito@uv.es

PS4-15

The role of the orexinergic neuronal system in the brain of the teleost *Thalassoma pavo* in relation to different photoperiod conditions

M Crudo, G Giusi, R Alò, A Carelli, MC Canonaco, RM Facciolo

Comparative Neuroanatomy Lab., Ecology Dept., University of Calabria, Arcavacata di Rende (CS), 87030, Italy, michelecrudo@virgilio.it

PS4-16

Involvement of group IIA secretory phospholipase A₂ (GIIA) in NGF-induced neuritogenesis of PC12 cells

M Ferrini¹, V Nardicchi¹, E Persichetti², T Beccari², R Mannucci³, I Nicoletti³, G Goracci¹

¹Dept. of Int. Medicine, Section of Biochemistry, ²Dept. of Exp. Medicine, and ³Lab. of Image Analysis, University of Perugia, Italy, goracci@unipg.it

PS4-17

Effect of noradrenergic fiber degeneration on brain inflammatory responses to systemic lipopolysaccharide

G Huesa, E Galea

Institute of Neurosciences, Universitat Autònoma de Barcelona, Spain, gema.huesa@uab.es

PS4-18

Radiation induced alteration of proliferative activity in the adult rat rostral migratory stream

S Balentova¹, E Racekova², E Misurova¹

¹Institute of Biological and Ecological Sciences, Faculty of Sciences, P.J. Safarik University Kosice and

²Institute of Neurobiology, Slovak Academy of Sciences, Kosice, Slovak Republic, sonabalent@yahoo.com

PS4-19

Evidence for brain injury-induced neurogenesis in adult rats

H Kozłowska, M Janowski, E Wanacka, K Domanska-Janik, B Lukomska

NeuroRepair Department, Medical Research Institute, Warsaw, Poland, hkozłowska@cmdik.pan.pl

PS4-20 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 15:00-16:00 h**

APC-Cdh1-mediated Skp2 degradation is essential for retinoic acid-induced cell cycle arrest and neuroblastoma differentiation

J Cuende^{1,2}, JP Bolaños², A Almeida^{1,2}

¹Unidad de Investigación, Hospital Universitario Salamanca, Instituto de Estudios de Ciencias de la Salud de Castilla y León, Spain; ²Dpto. Bioquímica y Biología Molecular, Universidad de Salamanca, Salamanca, Spain, jcuende@usal.es

PS4-21

Effect of GSK-3 β inhibition on neural stem cell proliferation and differentiation

R Luna-Medina¹, M Cortes-Canteli¹, JA Morales-Garcia¹, A Martinez², A Santos³, A Perez-Castillo¹

¹Instituto de Investigaciones Biomédicas, CSIC-UAM. ²Neuropharma, S.A. ³Facultad de Medicina, UCM, Madrid, Spain, aperez@iib.uam.es

PS4-22

Regulation of post-translational modifications of growth associated protein GAP-43 by palmitoylcarnitine: Implication for restructuring of plasma membrane during differentiation of neural cells

KA Nalecz, D Szczepankowska, M Czeredys

Nencki Institute of Experimental Biology, Warsaw, Poland, k.nalecz@nencki.gov.pl

PS4-23

Oleic acid behaves as a neurotrophic factor during postnatal brain development acting synergistically with NT-3 and NT-4/5

V Tello, A Bento-Abreu, E Polo-Hernández, A Tabernero, JM Medina

Departamento de Bioquímica y Biología Molecular, Instituto de Neurociencias de Castilla y León (INCYL), Universidad de Salamanca. Spain, mavegath@usal.es

PS4-24 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 15:00-16:00 h**

Metabotropic glutamate mGlu5 receptor-dependent forms of hippocampal synaptic plasticity triggered by low-frequency stimulation

M Vignes, F Lanté, M Cavalier, C Cohen-Solal, MC de Jésus-Ferreira, J Guiramand

UMR5247 Institut des Biomolécules – Max Mousseron, University Montpellier 2, 34095 Montpellier cedex 5, France, mvignes@univ-montp2.fr

POSTER SESSION 5
Neurodegenerative Diseases: Mechanisms, Animal Models and Neuroprotective Strategies.

TUESDAY 22nd – 14:30-15:00 h

PS5-01

Neuroprotective effects of cannabinoids against axonal damage in a viral model of multiple sclerosis

F Loría, F Docagne, D Clemente, F Correa, M Hernangómez, L Mestre, C Guaza

Neuroimmunology Group, Department of Neural Plasticity, Cajal Institute (CSIC), Madrid, Spain, fridaloria@gmail.com

PS5-02

Role of the cannabinoid CB2 receptor in the development of experimental autoimmune encephalomyelitis

J Palazuelos¹, E Hatterer², B Julien¹, M Guzmán¹, S Nataf², N Davoust², I Galve-Roperh¹

¹*Department of Biochemistry and Molecular Biology, Complutense University, Madrid, Spain;* ²*INSERM U433, Lyon, France, javipalaz@hotmail.com*

PS5-03

Polymorphism in environment responsive genes and susceptibility to Parkinson's Disease

M Singh¹, AJ Khan¹, PP Shah¹, R Shukla², VK Khanna¹, D Parmar¹

¹*Industrial Toxicology Research Centre, M.G. Marg, P.O. Box-80, Lucknow 226001, India;* ²*Department of neurology, King George's Medical University, Lucknow 226003, India, madhu_itrc@rediffmail.com*

PS5-04

MMP-3 5A/6A gene polymorphism in Parkinson's disease

M Aydin¹, E Ozkok¹, Y Cetinkaya², M Gencer², I Kara¹

¹*Department of Neuroscience, Istanbul University Institute for Experimental Medicine;* ²*Clinic of Neurology, Haydarpaşa Numune Education and Research Hospital, Istanbul, Turkey, aydinm@istanbul.edu.tr*

PS5-05

Changes in the expression of P2 receptors in the brain of parkin knockout vs wild-type mice

M León-Otegui¹, J Gualix-Sánchez¹, MA Mena², RM Solano², J García de Yébenes², MT Miras-Portugal¹

¹*Department of Biochemistry and molecular biology IV, Faculty of Veterinary, University Complutense of Madrid;* ²*Service of Neurology, Department of Investigation, Ramón y Cajal Hospital, Madrid, Spain, mleonotegui@vet.ucm.es*

PS5-06

Role of glia on dopamine cell survival from parkin null mice

RM Solano¹, MJ Casarejos¹, J Menéndez-Cuervo¹, JA Rodríguez-Navarro¹, J G Yébenes², MA Mena¹

¹*Department of Neurobiology, and* ²*Department of Neurology. Hospital Ramón y Cajal, 28034 Madrid, Spain, rosa.m.solano@hrc.es*

PS5-07

Tau accumulation during aging in parkin null mice

MJ Casarejos¹, JA Rodríguez-Navarro¹, RM Solano¹, A Gómez¹, I Rodal¹, C Correa¹, JG Yébenes², MA Mena¹

¹*Department of Neurobiology, and* ²*Department of Neurology. Hospital Ramón y Cajal, 28034 Madrid; Spain, rosa.m.solano@hrc.es*

PS5-08

Behavioural abnormalities and hippocampal tau deposition in parkin null mice over-expressing human mutated tau

JA Rodríguez-Navarro¹, RM Solano¹, MJ Casarejos¹, I Rodal¹, A Gómez¹, J García de Yébenes², MA Mena¹

¹Departments of Neurobiology, and ²Neurology, Hospital "Ramón y Cajal", 28034 Madrid, Spain, maria.a.mena@hrc.es

PS5-09

α -Synuclein, mitochondria failure and cell death

A Kazmierczak, A Adamczyk, JB Strosznajder

Medical Research Center, Polish Academy of Sciences, Department of Cellular Signaling, Pawińskiego 5, 02-106 Warsaw, Poland, aniakazmierczak@gmail.com

PS5-10 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 15:00-16:00 h**

Formation of spherical and annular α -Synuclein oligomers is enhanced by calcium-binding and oxidation

DL Pountney¹, JJ Goodwin¹, WP Gai², NH Voelcker³

¹School of Medical Science, Griffith University, Gold Coast, Australia; ²School of Medicine and ³School of Chemistry, Physics and Environmental Sciences, Flinders University, Adelaide, Australia, d.pountney@griffith.edu.au

PS5-11

Dexamethasone increases the neurotoxic effect of thrombin injection in the substantia nigra of the rat

RF Villarán, S Argüelles, RM De Pablos, I Carreño-müller, AJ Herrera, J Cano, A Machado

Departamento de Bioquímica, Bromatología, Toxicología y Medicina Legal. Facultad de Farmacia. Universidad de Sevilla. España, rut@us.es

PS5-12

Development of a tyrosine hydroxylase assay in 96-well plate format and measurement of TH activity in the 6-hydroxydopamine model of Parkinson's disease

PJ Craig, TK Murray, CV Cella, EH Karran, MJ O'Neill, FG Boess

Eli Lilly & Company, Lilly Research Centre Ltd., Erl Wood Manor, Windlesham, Surrey, UK, CRAIG_PETER_J@LILLY.COM

PS5-13

Novel tissue-specific and temporally regulated genetic tool to inhibit glutathione biosynthesis in dopaminergic neurons

S Fernandez-Fernandez¹, A Almeida^{1,2}, JP Bolaños¹

¹Departament of Biochemistry and Molecular Biology, Institute of Neuroscience of Castille-Leon, University of Salamanca, Spain; ²Unidad de Investigación, Hospital Universitario de Salamanca, Instituto de Estudios de Ciencias de la Salud de Castilla y León, Spain, a90200@usal.es

PS5-14

Linking cell-cycle dysfunction in Alzheimer's disease to a failure of synaptic plasticity

MK Brückner, A Arendt

Paul Flechsig Institute of Brain Research, Department of Neuroanatomy, University of Leipzig, Leipzig, Germany, brueckm@medizin.uni-leipzig.de

PS5-15

Modulation of expression of amyloid-degrading enzymes in ageing brain and in human neuroblastoma cells as a target for AD therapy

NN Nalivaeva^{1,2}, L Fisk¹, EG Kochkina², N Makova¹, ND Belyaev¹, IA Zhuravin², AJ Turner¹

¹IMCB, Faculty of Biological Sciences, University of Leeds, Leeds LS2 9JT, UK, ²IEPhB, RAS, St. Petersburg, Russia, n.n.nalivaeva@leeds.ac.uk

PS5-16

Metallothionein-I overexpression rescues partly the phenotype of the APP2576 mouse model of Alzheimer disease

J Hidalgo¹, M Giralt¹, J Carrasco¹, J Manso¹, S Florit¹, A Quintana¹, A Molinero¹, M Penkowa², JC López³, JM Delgado³, PA Adlard⁴, AI Bush⁴
¹Autonomous University of Barcelona, Barcelona, Spain, ²University of Copenhagen, Copenhagen, Denmark, ³Pablo de Olavide University, Sevilla, Spain, ⁴The Mental health Research Institute, Victoria, Australia, Juan.Hidalgo@uab.es

PS5-17

Role of cholinergic system in β -amyloid related changes of perivascular innervation of cerebral microvessels in transgenic Tg2576 Alzheimer-like mice

E Kouznetsova, R Schliebs

Paul Flechsig Institute for Brain Research, University of Leipzig, Leipzig, Germany,
Elena.Kouznetsova@medizin.uni-leipzig.de

PS5-18

Homocysteine and homocysteic acid as possible modulators of neuronal and non-neuronal cell glutamate receptors in Alzheimer's Disease

A Boldyrev¹, P Johnson²

¹Department of Biochemistry, M.V. Lomonosov Moscow State University, 119992 Moscow, Russia;
²Department of Biomedical Sciences, Ohio University, Athens, OH 45701, USA, aaboldyrev@mail.ru

PS5-19

Investigations on the mechanism of the A β -lowering effect of Gleevec

YS Eisele¹, M Baumann, C Nordhammer¹, B Klebl², M Jucker¹, E Kilger¹

¹Department of Cellular Neurology, Hertie-Institute for Clinical Brain Research, University of Tuebingen, Tuebingen, Germany; ²GPC Biotech AG, Martinsried, Germany, yvonne.eisele@uni-tuebingen.de

PS5-20

Possible dual neuroprotective/neurotoxic effect of inflammatory reaction in the hippocampus of a PS1xAPP transgenic model of Alzheimer's disease

D Baglietto-Vargas¹, S Jiménez², I Moreno-González¹, R Sánchez-Varo¹, C Caballero², M Torres², M Vizuete², D Ruano², A Gutiérrez¹, J Vitorica²

¹Dept. Cell Biology, Faculty of Sciences, University of Malaga, Spain; ²Dept. Biochemistry, Faculty of Pharmacy, University of Seville, Spain, baglietto@uma.es

PS5-21

Inhibitor of cyclooxygenase-2 (COX-2) protects against A β (1-42) peptide evoked memory impairment in mice

M Cakala, AR Malik, JB Strosznajder

Department of Cellular Signalling, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland, 5 Pawinskiego Str., 02-106 Warsaw, Poland, mcakala@esculap.pl

PS5-22

New approaches to therapy of Alzheimer's disease as a membrane pathology by means of hybrid antioxidants

EB Burlakova, LD Fatkullina, EM Molochkina, OM Zorina, AN Goloschchapov, GA Nikiforov

Emanuel Institute of Biochemical Physics Russian Academy of Sciences, Moscow, Russia, seren@sky.chph.ras.ru

PS5-23 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 15:00-16:00 h**

A β (25-35) has opposite effects on cell proliferation in different neurogenic zones of rat brain

M Stepanichev¹, Y Moiseeva¹, N Lazareva¹, D Peregud², N Gulyaeva¹

¹Institute of Higher Nervous Activity and Neurophysiology, RAS, Moscow, Russia; ²National Center of Drug Addiction, RAMS, Moscow, Russia, mikhail_stepanichev@yahoo.com

PS5-24

Nicotinic acetylcholine receptors in neurodegenerative diseases⁴

V Tsetlin, I Shelukhina, E Kruykova, N Gulyaeva, M Stepanichev, N Bobkova., M Titova., O Volpina, Y Utkin

Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry and Institute of Higher Nervous Activity and Neurophysiology, RAS, Moscow, Russia; Institute of Cell Biophysics, RAS, Puschino, Russia, tsetlin@email.ru

PS5-25

Determination of the tertiary structure of exon 1 Huntingtin

T Zuechner¹, AR Kazemi^{1,2}, J Weigelt², J Starikow³, S Tanaka⁴, S Rothstein⁵, P Brundin¹

¹Neuronal Survival Unit, Wallenberg Neuroscience Center, Lund University, Sweden; ²Dep. of Med. Biochemistry and Biophysics, Karolinska Institute, Stockholm, Sweden; ³Free University of Berlin, Institute for Chemistry, Berlin, Germany; ⁴Kobe University, Graduate School of Science and Technology, Kobe, Japan; ⁵Dep. of Chemistry and Centre for Biotechnology, Brock University, St. Catherine, Canada, thole.zuechner@med.lu.se

PS5-26

Purinergic system in Huntington's disease: Develop of new therapeutic strategies

M Diez-Zaera¹, M Diaz-Hernandez¹, J Alberch², MT Miras-Portugal¹, JJ Lucas³

¹Department of Biochemistry and Molecular Biology IV, Faculty of Veterinary, University Complutense of Madrid, Madrid, Spain; ²Department of Celular Biology and Patologic Anatomy, Faculty of Medicine, L'Institut d'Investigacions Biomèdiques August Pi i Sunyer, University of Barcelona, E-08036 Barcelona, Spain; ³Molecular Biology Centre Severo Ochoa, CSIC/University Autònoma of Madrid, Madrid, Spain, mzaera@vet.ucm.es

PS5-27 – **SELECTED FOR ORAL COMMUNICATION ON TUESDAY 22nd – 15:00-16:00 h**

Neurodegeneration in X-ALD: dangerous liaisons between mitochondria and peroxisomes?

A Pujol¹, S Fourcade¹, J López-Erauskin¹, A Schlüter¹, C Duval¹, E Domènech-Estèvez¹, J Galino¹, J Martínez-García¹, F Villarroya², I Ferrer³

¹Genètica Molecular, Institut d'Investigació Biomèdica de Bellvitge; ²Bioquímica i Biologia Molecular, Universitat de Barcelona; ³Institut de Neuropatologia de Bellvitge, Barcelona, Spain, apujol@iro.es

PS5-28

Vesicular glutamate transporter and glutamic acid decarboxylase transcription levels are altered in the brain of cystatin B-deficient mice

A Vaarmann¹, A Kruve², A Zharkovsky¹

¹Department of Pharmacology, ²Department of Chemistry, University of Tartu, Tartu, Estonia, Annika.Vaarmann@ut.ee

PS5-29

Memory consolidation and reconsolidation impairment evoked by mGluR5 inhibition is related to FMRP deficit and protein synthesis disturbances

E Salinska

Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland, elas@cmdik.pan.pl

PS5-30

Memory impairments and oxidative stress in the hippocampus of juvenile rats after a prenatal stress induced by amphetamine administration

V Bashkatova¹, A Vanin², L Panchenko³

¹Institute of Pharmacology, RAMS; ²Institute of Chemical Physics, RAS; ³National Research Center Narcology, Moscow, Russia, bashkatovav@yahoo.com

PS5-31

Developmental impairments of select neurotransmitter systems in brains of CLN3-ki mice, an animal model of juvenile neuronal lipofuscinosis

P Herrmann¹, C Druckrey-Fiskaan¹, M Bigl², SL Cotman³, R Schliebs¹

¹Paul-Flechsig-Institut for Brain Research, Department of Neurochemistry, University of Leipzig, Germany; ²Institute of Biochemistry, Molecular Biology Department, Medical Faculty, University of Leipzig, Germany; ³Center for Human Genetic Research, Massachusetts General Hospital, Simches Research Center, Boston, USA, Reinhard.Schliebs@medizin.uni-leipzig.de