Society on NeuroImmune Pharmacology (SNIP)

22nd Scientific Conference

Hotel Galaxy
Krakow, Poland

April 6-9, 2016

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Acknowledgements

The Society on NeuroImmune Pharmacology expresses its deep appreciation for the contributions made by so many individuals and institutions in support of this 22nd SNIP Scientific Conference in Krakow, Poland. The scientific program and symposia were developed by the Meetings Committee and Symposia Chairs under the guidance of the Executive Committee. Other aspects of the conference agenda were organized by the Executive Committee and local team. Special thanks go to the local hosts from the Institute of Pharmacology, Polish Academy of Sciences, Krakow, Poland: Professors Marta Kubera, Dept. of Experimental Neuroendocrinology, Wladyslow Lason, of the Department of Experimental Neuroendocrinology, Krzysztof Wedzony, Director of the Institute of Pharmacology and head of the Department of Pharmacology for their work in organizing the meeting on-site as well as the local scientist symposium. We also thank Dr. Michal Toborek, who established links between SNIP and the scientific community of the host country, and moreover, helped to secure funding from scientific institutions in Poland.

Sponsors and Contributors

The Society on NeuroImmune Pharmacology (SNIP) sincerely thanks following sponsors who have generously contributed to different activities during 22nd Society of NeuroImmune Pharmacology Meeting.

National Institute on Drug Abuse R13 DA023184* to Sulie Lin Chang, Seton Hall University
Support of SNIP Early Career Investigators

Miami Center for AIDS Research P30AI073961

Institute of Neuroimmune Pharmacology, Herbert Wertheim College of Medicine, Florida International University
Graduate trainee associated expenses, support for Early Career Investigator lunch

Ponce Research Institute, Ponce Health Sciences University, Ponce, PR

Polish Academy of Sciences, Warszawa, Poland

The Academy of Physical Education, Katowice, Poland

Institute of Pharmacology, Polish Academy of Sciences, Krakow, Poland

Dr. Pravin Singhal, Long Island Jewish Medical Center
Support of trainee participation in the 22nd SNIP conference

Carol Swarts, M.D. Neuroscience Research Laboratory, Omaha, Nebraska
General support of the Conference

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University of Nebraska Medical Center
Omaha, NE 68198-5880
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Annual Society Awards

Each year the Society recognizes a few of its members who have exemplified unique qualities of leadership, service and/or scholarship on behalf of the Society and its mission. The following awards are bestowed annually.

**Herman Friedman Founders Award**
*For Visionary Contributions in the Establishment and Continued Development of the Society*
This award is named in honor of Herman Friedman, PhD, a man who promoted the study of drugs of abuse, infections, and immunity, promoted meetings among scientists based on this theme, and was a founding member of the Society. He passed away in 2007. This award recognizes individuals whose contribution to SNIP was visionary and served as a key to the founding of the Society and/or its continued development and perpetuation.

**Distinguished Services Award**
*For Extraordinary Service to Society and to the Accomplishment of its Mission*
The Distinguished Services Award recognizes an individual whose efforts and commitment to the society has been both consistent and exemplary over protracted years of service.

**Outstanding Service and Support Award**
*For Extraordinary Service to Society and to the Accomplishment of its Mission*
This award is given in recognition of individuals who are not necessarily investigators or members, but who have provided extraordinary service in facilitating the operation of Society initiatives. Examples would include individuals who often work “behind the scenes” to facilitate the Society by work on its publications, fundraising, and/or in the organization or conduct of meetings and symposia.

**Wybran Award**
*For Extraordinary Contributions that Help to Integrate the Fields of NeuroImmunology, Drugs Of Abuse, and Immunity to Infection*
Joseph Wybran, MD, was trained in Immunology and worked for some time in the USA before returning to his Brussels home. He was a seminal contributor through the 1970s and into the 1980s to the integration of the fields of neuroimmunology, drugs of abuse and immunity to infection. As a measure of the impact that his science had on the field of neuroimmune pharmacology, his seminal paper published in the Journal of Immunology 1979 regarding the ability of endogenous and exogenous opioids to modulate T cell rosette formation in a naloxone reversible way was the most cited research article through the early 1980s. He was killed, presumably, by terrorists reacting to his leadership and participation in Jewish causes. He was shot in his car in the parking lot of his work, October 3, 1989 in Brussels. Sadly, this tragedy occurred at the peak of Joe’s career. The Wybran Award was created to memorialize Joe’s scientific prestige in the area of neuroimmune pharmacology. It is meant, most particularly, to serve as a remembrance of his leading contributions that underpin SNIP. The Wybran Award is the highest honor bestowed by SNIP in recognition of the very best scientific contributions that have resulted in the preservation and expansion of the field of Neuroimmune Pharmacology.
In order to promote interest in the field of Neuroimmune Pharmacology and to recognize the excellent work being done by Early Career Investigators in this field, the Society provides Early Career Investigator Travel Awards (ECITA) to graduate students and post-doctorate trainees (within 5 years of Ph.D.) working with a SNIP member and seeking funds to attend the annual conference of the Society on NeuroImmune Pharmacology. For the 2016 SNIP Scientific Conference, a total of 81 abstracts were submitted, of which 42 graduate students and 21 post-doctorate fellows were awarded. The awards were divided into different categories: $1000 + registration waiver, $300 + registration waiver, $125 + registration waiver, registration waiver only, and "certificate of excellence." Candidates receiving past SNIP support or representing the 3rd trainee from a mentor received only registration waiver or certificate of excellence. The top 6 graduate students and the top 6 post-doctorate fellows were selected for the Early Career Investigator Symposium. As well, additional speakers were selected for the ECI session to help attendance to this international SNIP Conference. Special thanks to the ECITA committee, NIDA, and SNIP leadership for their service and support.

**ECITA Awardees**

**Pre-Doctoral**

<table>
<thead>
<tr>
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<th>Institution</th>
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<tbody>
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<td>Antell, G,</td>
<td>Nonnemacher, M Drexel University College of Medicine</td>
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<td>Avalos, MP</td>
<td>Cancela University of North Texas Health Science Center</td>
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<td>Borgmann, K</td>
<td>Ghorpade, A University of Gdansk</td>
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<td>Chomik, A</td>
<td>Wrona, D University of Gdansk</td>
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<td>Egan, KP</td>
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<td>Górska, AM</td>
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<td>Greene, C</td>
<td>Campbell, M Trinity College Dublin</td>
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<td>Harazin, A</td>
<td>Deli, MA Biological Research Ctr., Hungarian Acad of Sci.</td>
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<td>Jackson, JW</td>
<td>Magginwar, SB University of Rochester Medical Center</td>
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<td>Lamboy, R</td>
<td>Noel, R Ponce Health Sciences University</td>
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<td>Lapiere, J</td>
<td>El-Hage, N Florida International University</td>
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<td>Laska E</td>
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<td>Liu, H</td>
<td>Xiong, H University of Nebraska Medical Center</td>
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<td>Liu, J</td>
<td>Ho, W Wuhan University</td>
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<td>Ludzga, TM</td>
<td>Obuchowicz, EM School of Med. in Katowice, Medical Univ. of Silesia</td>
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<td>Lutton, EM</td>
<td>Ramirez, SH Temple University School of Medicine</td>
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<td>Martínez-Orengo, N</td>
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<td>Mosińska, PM</td>
<td>Właż Medical University of Lodz</td>
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<td>Most, D</td>
<td>Harris, RA University of Texas at Austin</td>
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<td>Nooka, S</td>
<td>Ghorpade, A University Of North Texas Health Science Center</td>
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Noworyta-Sokołowska, K  Golembiowska, K  Inst of Pharmacology Polish Academy of Sciences
Parira, T  Agudelo, M  Florida International University
Patters, BJ  Kumar, S  University of Tennessee Health Science Center
Pinoli, M,  Marino, F  University of Insubria
Podlacha, M  Wrona, D  University of Gdansk
Quizon, PM  Zhu, J  University of South Carolina
Rivera, J  Rivera-Amill, V  Ponce Health Sciences University
Rodriguez-Santiago, R  Rivera-Amill, V  Ponce Health Sciences University
Slusarczyk, J  Basta-Kaim, A  Inst of Pharmacology Polish Academy of Sciences
Sullivan, N,  Wigdahl, B  Drexel University College of Medicine
Thaney, V  Kaul, M  Sanford Burnham Prebys Med Discovery Institute
Tiwari, S  Nair, M  Florida International University
Trojan, E,  Basta-Kaim, A  Inst of Pharmacology Polish Academy of Sciences
Veilleux, C  Eugenin, EA  Rutgers University
Velez-Lopez, O  Melendez, L  University of Puerto Rico – Medical Sciences
Wenzel, ED  Mocchetti, I  Georgetown University
Zhao, R  Zheng, JC  University of Nebraska Medical Center

**Post-Doctoral**

Albino, EM  Rivera-Amill, V  Ponce Health Sciences University
Andrews, AM  Ramirez, S  Lewis Katz School of Medicine at Temple University
Bertrand, L  Toborek, M  University of Miami
Campbell, LA  Harvey, BK  National Institute on Drug Abuse
Castro, V  Toborek, M  University of Miami
Cisneros, IE  Ghorpade, A  University of North Texas Health Science Center
Glombik, K  Basta-Kaim, A  Inst of Pharmacology Polish Academy of Sciences
Gnanadhas, DP  Gorantla, S  University of Nebraska Medical Center
Kaminski, R  Khalili, K  Lewis Katz School of Medicine at Temple University
Kasprowska, D  Barski, JJ  The Jerzy Kukuczka Acad of Physical Ed, Katowice
Malik, S,  Eugenin, EA  Public Health Research Institute
Nowacka-Chmielewska, M  Obuchowicz, A  The Jerzy Kukuczka Acad of Physical Ed, Katowice
Plato, MM  Obuchowicz, EM  School of Med. in Katowice, Medical Univ. of Silesia
Rodriguez, M  El-Hage, N  Florida International University
Sagar, V  Nair, M  Florida International University
Skowronska, M  Toborek, M  University of Miami Miller School of Medicine
Vashist, A  Nair, M  Florida International University
Walter, FR  Dér, A  Biological Research Ctr., Hungarian Acad of Sci.
Wang, Y  Zheng, J.  Qinghai University

**MD/Ph.D**

Gaiazzi, MG  Cosentino, MC  University of Insubria
Ianache, IC  Oprea  Victor Babes Hosp. Infectious & Tropical Diseases
Parikh, NU  Mahajan  State University of New York at Buffalo

*ECITA Awardees are expected to attend all sessions of the conference to be eligible for travel award support.*

This list includes awardees that were registered by March 20, 2016.
PLENARY LECTURERS

Kamel Khalili, PhD, Director, Comprehensive NeuroAIDS Center, Laura H. Carnell Professor and Chair of the Department of Neuroscience, Lewis Katz School of Medicine, Temple University

The research program in my laboratory consists of three areas associated with neurodegeneration, neuroproliferation and neuroinflammation. In all three areas, the aim is to understand the biological events involved in control of neural cell function, growth and differentiation. To achieve this goal, we use human neurotropic viruses, including JCV and HIV, both of which greatly impact on the normal function of a variety of neural cells, as probes to determine the mechanism involved in the control of gene expression and signal transduction in the brain. As expression and replication of these pathogenic viruses in brain induces a broad range of reversible and irreversible injuries, the outcome of our studies provides fundamental information regarding the neuropathogenesis of HIV- and JCV-induced disorders, and offers excellent opportunities for the development of better diagnostic tests and effective therapeutic modalities. Our strategies are transformative in nature and employ a broad range of molecular and cellular techniques in in vitro studies, animal models and clinical samples. Our most current areas of research lie in understanding the effect of viruses on pathways involved in protein quality control, chromosomal instability upon virus infection of the CNS, pathways involved in neurodegeneration upon HIV infection and the neuroprotective role of glial cells, particularly oligodendrocytes in healthy and disease states, and the identification of cellular factors and signaling events that lead to uncontrolled proliferation of glial cells and the development of malignancies of the brain. Dr. Khalili completed a PhD in Microbiology at the University of Pennsylvania, a postdoctoral fellowship at the Wistar Institute and was a Fogarty Scholar in Molecular Virology at NCI.

Anne Bang, PhD, Director, Sanford Burnham Medical Research Institute

Dr. Bang's work has focused on translational research and development utilizing hESC and hiPSC for cell therapy and drug discovery applications. In addition to her technology expertise, Dr. Bang has a strong biology background and her postdoctoral work was in the area of developmental biology studying signaling mechanisms regulating CNS patterning and neurogenesis. In June 2010, Dr. Bang was recruited by the Sanford Burnham Institute, as Director of Cell Biology, to lead efforts to develop stem cell based disease modeling at the Conrad Prebys Center, a state of the art drug screening facility. There she established a stem cell lab focused on developing patient-specific iPSC based models for drug screening, particularly in neurological and neuromuscular diseases. Dr. Bang's experience in stem cell biology began in 2005 at ViaCyte, Inc., where, as Director of Stem Cell Research, she managed an interdisciplinary group working to develop hESC as a source of pancreatic cells for the treatment of diabetes. She received a BS from Stanford University, a Ph.D. from UCSD, and was a post-doc and Senior Scientist in the Neurobiology Laboratory at the Salk Institute.
Siegbert Sopper, PhD, Professor in the Department of Internal Medicine V (Hematology and Oncology) & Tumor Immunology, University of Innsbruck, Austria

Dr. Sieghart Sopper is renowned for his research on the neuroimmunological aspects of HIV infections with emphasis on the role of the microglia in the pathogenesis of HIV-induced neurological disease. For more than 20 years, Dr. Sopper has used the SIV-infection of rhesus macaques as model of neuroAIDS, to examine various aspects of the neuro-immune pathology associated to neurological dysfunction. Dr. Sopper’s trajectory include important research institutes, such as the Institute for Virology and Immune Biology at the University of Wuerzburg, in Germany, a group leader in the Department of Virology and Immunology at the German Primate Center in Göttingen, and more recently, he has been back to his home country, where he is a group leader in the Department of Internal Medicine V of the Medizinische Universität Innsbruck in Austria. Honoring his pioneering in the technique of flow cytometry in brain tissue and also in CSF, he is also the Head of the Flow Cytometry Core Unit of the University of Innsbruck. His contributions to the field of neuroAIDS are enormous, while examining the T cell turnover in various organs during the infection, emphasizing the role of the innate immune response in CNS pathology, and demonstrating a role for intrathecal immune response in encephalopathy and outcome. Dr. Sopper has also contributed a number of papers containing evidence of dopamine defects that precede neurologic deficits and implicate dysfunction of the dopaminergic system in the etiopathogenesis of HIV dementia. He is going to guide us through the fantastic journey of SIV and HIV neuropathology.

Howard E. Gendelman, MD, Margaret R. Larson Professor of Internal Medicine and Infectious Diseases, Chair of the Department of Pharmacology and Experimental Neuroscience, College of Medicine, University of Nebraska Medical Center

Dr. Gendelman is credited in unraveling how functional alterations in brain immunity induce metabolic changes and ultimately lead to neural cell damage for a broad range of infectious, metabolic and neurodegenerative disorders. These discoveries have had significant implications in developmental therapeutics aimed at preventing, slowing or reversing neural maladies. He also demonstrated that AIDS dementia is a reversible metabolic encephalopathy. These works have led to novel immunotherapy and nanomedicine strategies for Parkinson’s and viral diseases successfully tested in phase I clinical trials. Dr. Gendelman obtained a Bachelor’s degree with honors from Muhlenberg College and his M.D. from the Pennsylvania State University-Hershey Medical Center where he honored as the Distinguished Alumnus in 1999. He completed a residency in Internal medicine at Montefiore Hospital, Albert Einstein College of Medicine and was a Clinical and Research Fellow in Neurology and Infectious Diseases at the Johns Hopkins University Medical Center. He occupied senior faculty and research positions at the Johns Hopkins Medical Institutions, the National Institute of Allergy and Infectious Diseases, the Uniformed Services University of the Health Sciences Center, the Walter Reed Army Institute of Research, and the Henry Jackson Foundation for the Advancement in Military Medicine before joining the University of Nebraska Medical Center faculty in March of 1993. Dr. Gendelman has authored over 430 peer-reviewed publications, edited nine books and monographs, holds eight patents, and is the Editor-In-Chief and Founder of the Journal of Neuroimmune Pharmacology, the journal of the Society on NeuroImmune Pharmacology.
Alexei Verkhratsky, MD, PhD, DSc, Professor of Neurophysiology at the School of Biological Sciences, The University of Manchester

Prof. Alexei Verkhratsky is an internationally recognized expert in cellular neurophysiology. His research is concentrated on the mechanisms of inter- and intracellular signaling in the CNS, particularly focused on neurones and neuroglia. His work has contributed to the understanding of chemical and electrical transmission in reciprocal neuronal-glial communications and on the role of intracellular Ca^{2+} signals in the integrative processes in the nervous system. His more recent work is in the area of cellular mechanisms of neurodegeneration including studies of the glial pathology in Alzheimer disease. On the basis of this work, he authored a pioneering hypothesis of astroglial atrophy as a mechanism of neurodegeneration. Prof. Alexei Verkhratsky was awarded his MD from the Kiev Medical Institute, and received PhD and D.Sc. in Physiology from Bogomoletz Institute of Physiology, Kiev, Ukraine. He joined the Division of Neuroscience, School of Biological Sciences in Manchester in September 1999, became a Professor of Neurophysiology in 2002 and served as Head of the said Division from 2002 to 2004. From 2007 to 2010 he was appointed as a visitor professor/Head of Department of Cellular and Molecular Neurophysiology at the Institute of Experimental Medicine, Academy of Sciences of Check Republic. In 2010 A. Verkhratsky was appointed as a Research Professor of Ikerbasque (the Basque Research Council), in 2011 as an Honorary Visiting Professor at Kyushu University - sity, Fukuoka, Japan and from 2012 he acts as Adjunct Scientific Director of the Achucarro Basque Centre for Neuroscience (Bilbao, Spain).
CONFERENCE AGENDA
22nd Annual Scientific Conference
April 6-9, 2016

Wednesday April 6, 2016
Registration opens
3pm
Opening Reception and
Poster Session 1 ECITA 5-8 pm

Thursday April 7, 2016
Welcome
Sanjay Maggirwar, PhD, Univ. of Rochester Med. Center (SNIP President) 7:45 am

Presidential Symposium
Neurotoxicity Society Joint Symposium – Neurotoxic / neuroinflammatory effects of drugs of abuse and cART drugs.
Chaired by: Italo Mocchetti, PhD, Georgetown Univ. Med. Center, DC, USA
Sanjay Maggirwar, PhD, Univ. of Rochester Med. Center, NY, USA
Dr. Rosario Moratalla, Instituto Cajal, Madrid, Spain
Functional consequences of methamphetamine abuse. 8:00

Dr. Jean Harry, Nat. Inst. of Environmental Sciences, North Carolina, USA
Neuroinflammation: dissecting microglia phenotypes and contributions to injury and repair 8:20

Dr. Kathleen A. Maguire-Zeiss, Georgetown Univ. Med. Center, DC, USA
Role of Toll-like receptors in the brain's innate immune response 8:40

Dr. Sandra Ceccatelli, Karolinska Institute, Stockholm, Sweden
Immunoinflammation and neuronal stem cells, Title: proBDNF and p75 in HIV neurotoxicity 9:00

Break 9:20

Plenary Speaker 1 (Introduction by Michal Toborek)
Kamel Khalili, PhD, Temple University, Philadelphia, USA 9:40
Elimination of HIV Genomes from Human T-Lymphoid Cells by CRISPR/Cas9
Gene Editing; In vitro, Ex vivo, and In vivo studies

Symposium 2
Neuroinflammation and the Gut: What is its relevance to HIV infection, neurological pathology, and therapy? Neurodegenerative Responses to Viral Infections and Therapeutics
Chaired by: T. Celeste Napier, PhD, Rush University, Chicago, IL, USA
Peter J. Gaskill, PhD, Drexel University, Philadelphia, PA, USA

Dr. Niall Hyland, Cork University in Ireland 10:20
Mast cells, microbes and the gut-brain axis

Dr. Satya Dandekar, UC Davis, CA, USA 10:40
Gut immune interactions with HIV and implications for viral pathogenesis
Dr. Hamid Akbarali, Virginia Commonwealth University, USA  11:00
Effect of HIV/AIDS on enteric neuropathogenesis: role of enteric glia

Dr. Amanda Persons, Rush University, Chicago, IL, USA  11:20
Comorbidity of gut-brain pathology in rodent models of HIV/AIDS and drug abuse

Meet the Mentors Luncheon  12:00

SNIP Council Meeting  12:00

Plenary Speaker 2  (Introduction by Marcus Kaul)  2:00 pm
Anne Bang, PhD, Sanford Burnham Medical Discovery Institute, USA
Human Induced Pluripotent Stem Cell (hiPSC) Based Disease Models in Drug Discovery

Symposium 3
Neurobiology of exercise in drug abuse and neurodegenerative diseases
Chaired by:  Adam Zajac, PhD, Academy of Physical Education, Katowice
Wendy J. Lynch, PhD, Univ. of Virginia, School of Medicine, USA

Dr. Michael Jakowec, University of Southern California, USA  2:40
Circuit specific neuroplasticity: a novel approach to treat degenerative brain disorder

Dr. Sonata Suk-yu Yau, Hong Kong Polytechnic University, China  3:00
Tracking the antidepressant effects of physical exercise and its mechanisms

Dr. Carmen Gomez-Cabrera, University of Valencia, Spain  3:20
Physical exercise in the prevention and treatment of Alzheimer’s disease

Dr. Wendy J. Lynch, University of Virginia School of Medicine, USA  3:40
Mechanisms for the efficacy of exercise as an intervention for drug addiction

Dr. Marta Skowronska, University of Miami School of Medicine and Academy of Physical Education, Katowice, Poland  4:00
Methamphetamine and HIV-induced aberrant neurogenesis: protection by exercise  4:20

End

Poster Session 2/Reception  5:00-8:00

Friday  April 8, 2016
Start time  7:45am

Symposium 4
Local Host Symposium, Institute of Pharmacology, Polish Academy of Sciences
Chaired by:  Marta Kubera, PhD, Institute of Pharmacology, PAS
Wladyslaw Lason, PhD, Institute of Pharmacology, PAS

Dr. Janusz Marcinkiewicz  7:45
Myeloperoxidase – a halide system in innate immunity. A role of taurine.

Dr. Bożena Kamińska  8:00
Microglia plasticity - molecular characteristics of different phenotypes in neuropathologies

Dr. Joanna Mika  8:15

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Importance of microglial activation in neuropathic pain.

Dr. Rafał Olszanecki 8:30
Pharmacological activation of mitochondrial aldehyde dehydrogenase (ALDH2) in animal models of depression and neurodegeneration – summary of the behavioral, biochemical and proteomic data.

Dr. Michał Korostyński 8:45
Regulation of GR-dependent genes in the brain in response to psychotropic drugs

Dr. Anna Sadakierska-Chudy 9:00
Hippocampal DNA methylation in rat cocaine self-administration model.

Break 9:15

Plenary Speaker 3 (Introduction by M. Cecilia Marcondes) 9:30
Sieghart Sopper, PhD, University of Innsbruck, Austria
Microglia activation and neurotransmitter disturbances in the SIV/macaque model for AIDS

Special Symposium Joint Session of SIF/SNIP – Boxed lunch provided. 10:10
Chaired by: Marco Cosentino, PhD, University of Insubria, Italy
Madhavan Nair, PhD, Florida International University, Miami, USA
Questions held until final speaker.

Dr. Marco Cosentino, University of Insubria, Varese, Italy 10:15
Dopamine at the crossroad of neural, immune and infectious disease

Dr. Salvatore Cuzzocrea, University of Messina, Messina, Italy 10:30
Neuroinflammation in the pathogenesis of CNS diseases: a new tool for the search of novel therapeutic approaches

Dr. Carlo Riccardi, University of Perugia, Perugia, Italy 10:45
Role of Glucocorticoid Induced Leucine Zipper (GILZ) in mediating the anti-inflammatory effect of glucocorticoids

Dr. Paola Sacerdote, University of Milan, Milan, Italy 11:00
Short and long term effects of delta-9-Tetrahydrocannabinol on cytokines in adult and adolescent mice

Dr. Madhavan Nair, Florida International University, USA 11:15
Getting in to the brain: Potential of Nanotechnology to cure Neuro-AIDS and Drug Addiction

Dr. Mahendra Kumar, University of Miami, USA 11:30
CVD Risk in cocaine Abusing HIV infected individuals – Preliminary Findings

Dr. Bruno Conti, Scripps Research Institute, CA, USA 11:45
Neuroimmunology of Interleukin 13

Panel for questions of speakers 12:00-12:15

(Box lunch provided to allow afternoon free, pick up 12:15)
**Symposium 6**
Astrocyte-neuron interaction: metabolism, ion homeostasis and impulse propagation  
Chaired by:  
Professor Jan Albrecht, Warsaw, Poland  
Professor Magdalena Zielinska, Warsaw, Poland  
Dr. Israel Sekler, Ben Gurion University, Israel  
Role of the mitochondrial Na+\Ca2+ exchanger NCLX in glial physiology  
Dr. Christine Rose, Heinrich Heine University, Germany  
Sodium signalling in neurons and glial cells of the CNS  
Dr. Farrukh A. Chaudhry, University of Oslo, Norway  
Glu transporters as tools in astrocytic-neuronal communication  
Dr. Magdalena Zielińska, Polish Academy of Sciences, Warszawa, Poland  
Arginine in astrocytic-neuronal interaction  
**End**  
Afternoon free

**Saturday**  
**April 9, 2016**

**Dr. Bill Narayan Memorial Lecture:** *(Introduction by Sanjay Maggirwar)*  
Howard Gendelman, MD, Univ of Nebraska Med Center, USA  
Neuroimmune transformation in Parkinson’s disease  
Special Lecture  
Dr. Pekka Kallunki, Principle Scientist, H. Lundbeck A/S, Denmark  
Passive vaccination therapy for alpha-synucleinopathies  
**End**  
**Symposium 7**  
Glia-endocrine system and neurodegeneration  
Chaired by:  
Alexei Verkhratsky, MD, PhD, DSc, University of Manchester, England  
Dr. Mami Noda, Kyushu University, Japan  
Glia-endocrine system and neurodegeneration  
Dr. Agneta Nordberg, Karolinska Institute, Sweden  
Early astrocytosis in presymptomatic Alzheimer’s disease  
Dr. Arthur Butt, University of Portsmouth, England  
White matter in neurodegeneration  
Dr. Balasz Gulyash, Nanyang Technological University, Singapore  
Molecular imaging studies on small animal disease models of neuroinflammation  
Dr. Robert Zorec, University of Ljubljana, Slovenia  
Vesicular trafficking in astrocytes in the neurodegeneration  
**Break**  
**10:25**  
**Early Career Investigator Session**  
10:40  
Chaired by:  
Marisela Agudelo, PhD, Florida International University, USA
10:45 Dana Most, Univ. Texas at Austin (Dr. R. Adron Harris, Dr. R. Dayne Mayfield) 
Manipulation of synaptic MicroRNAs in-vivo reduces alcohol consumption

10:50 Jinbiao Liu, Wuhan University (Dr. Wenzhe Ho) 
EGCG Prevents Mucosal SIV/SHIV transmission of Macaques.

10:55 Evan M. Lutton, Lewis Katz School of Med at Temple University (Dr. SH Ramirez) 
Acute administration of endothelial-targeted catalase attenuates neuropathology and cortical microglia activation in traumatic brain injury.

11:00 Han Liu, University of Nebraska Medical Center (Dr. Huangui Xiong) 
Involvement of voltage-dependent K+ channel 1.3 in HIV Tat-induced oligodendrocyte/myelin injury.

11:05 Kathleen Borgmann, Univ of North Texas Health Science Center (Dr. A. Ghorpade) 
Methamphetamine & Astrocytes in TAARgeting HAND.

11:10 Joseph W. Jackson, University of Rochester Medical Center (Dr. Sanjay Maggirwar) 
Elucidating the antiplatelet activity of minocycline: implications for HIV secondary disorders.

11:15 Neysha Martínez-Orengo, Ponce Health Sciences University, (Dr. Richard Noel) 
Endogenously produced Nef changes neuronal morphology in a co-culture system

11:20 Omar Velez Lopez, Univ of Puerto Rico Medical Sciences (Dr. Loyda Melendez) 
Sigma-1 receptor/cocaine interplay in cathepsin B secretion by HIV infected macrophages.

11:25 Jocelyn Rivera Ortiz, Ponce Health Sciences University (Dr. Vanessa Rivera-Amill) 
HIV-1 Nef expression by astrocytes induces gastrointestinal and lung inflammation and increase in CD68+ macrophages.

11:30 Ronald Rodriguez-Santiago, Ponce Health Sciences Univ (Dr. V. Rivera-Amill) 
Changes in the microbiome of HIV subjects with sustained virological control.

11:35 Rocio Lamboy, Ponce Health Sciences University, (Dr. R Noel) 
HIV-1 Vpr transfected astrocytes cause morphological damage in neurons.

11:40 Question and Answer for all speakers (10 minutes)

Break 11:50

12:10 Rafał Kaminski, PhD, Temple University School of Medicine (Dr. Kamel Khalili) 
Eradication of HIV-1 from brain cells using CRISPR/Cas9 gene editing technology.

12:15 Lee A. Campbell, PhD, National Institute on Drug Abuse (Dr. Brandon Harvey) 
Using CRISPR/Cas9 gene editing technology to develop novel models for the study of HIV neuropathology.

12:20 Fruzsina Walter, PhD, Hungarian Academy of Sciences (Dr. Maria A. Deli) 
Lab-on-a-chip tool for modeling biological barriers.
12:25 Divya P. Gnanadhas, PhD, Univ. of Nebraska Med. Ctr. (Drs. Gendelman and Gorantla)
URMC-099 facilitates nanoART mediated HIV-1 clearance in monocyte-macrophages.

12:30 Katarzyna Głombik, PhD, Inst of Pharmacology, Krakow (Dr. Agnieszka Basta-Kaim)
Regulation of brain mitochondrial protein expression by acute peripheral lipopolysaccharide administration- study in an animal model of depression.

12:35 Arti Vashist, PhD, Florida International University (Dr. Madhavan Nair)
Nanocomposite Hydrogels for Neuro Drug Delivery.

12:40 Neil Parikh, MD, State Univ. of NY at Buffalo (Dr. Supriya Mahajan)
Galectin-1 reduces neuroinflammation via modulation of the nitric oxide-arginase network in microglia: implications for a neuroprotective role in HIV-associated neurocognitive disorders.

12:45 Michela Gaiazzi, MD, University of Insubria (Dr. Marco Cosentino)
Expression of dopaminergic receptors on human monocytes and peripheral blood dendritic cells.

12:50 Question and Answer for all speakers (10 minutes)

SNIP Business Meeting/Lunch for Regular SNIP members 1:05
[Others - Lunch on your own]

Dr. Laura Bandura-Morgan from the National Science Centre, Krakow Poland
Grant Writing Workshop (for Polish and European Participants) 1:30

Banquet and Awards Ceremony

6PM Transportation to Wieliczka Salt Mines

Banquet speaker: Alexei Verkhratsky, MD, PhD, DSc,
Professor in Faculty of Life Sciences, University of Manchester. England

Reassessing neurocentrism: Principles of astrogliopathology

Meeting Adjourned!
LIST OF POSTER ASSIGNMENTS

WEDNESDAY, APRIL 6

PRE-DOCTORAL POSTER SESSION

Pre Doctoral Scientists

W1. HIV-1 subtype B Tat amino acid substitutions associate with neurocognitive impairment in the Drexel Medicine CARES cohort
Antell, G, BS1, Pirrone, V, Ph.D.2, Dampier, W, Ph.D.2, Aiamkitsumrit, B, Ph.D.2, Williams, J, BS2, Passic, S, MS2, Kercher, K, MS2, Zhong, W., BS3, Jacobson, J, MD3, Wigdahl, B, Ph.D.1, Hershberg, U, Ph.D.1, Nonnemacher, M, Ph.D.2; 1School of Biomedical Engineering, Science and Health Systems, Drexel University, Philadelphia, PA, 19104 United States. 2Microbiology and Immunology, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. 3Medicine, Division of Infectious Disease and HIV Medicine, Drexel University School of Medicine, Philadelphia, PA, 19102 United States.

W2. Cocaine-induced microglia activation in nucleus accumbens and caudate-putamen is reversed by naloxone
Avalos, MP, MS1, Mongi-Bragato, B, Ph.D.1, Bartos, M, Ph.D.3, Iribarren , P, Ph.D.2, Cancela, LM, Ph.D.; 1Institute of Experimental Pharmacology CONICET, School of Chemistry Sciences, Cordoba, Cordoba, 5016 Argentina. 2Institute of Biochemist and Immunology CONICET, School of Chemistry Sciences, Cordoba, Cordoba, 5016 Argentina. 3School of Biochemist, University of South, Bahia Blanca, Cordoba, 5016 Argentina.

W3. Regulation of Astrocyte-Trace Amine Associated Receptor 1 Subcellular Distribution and Interacting Partners in the context of Methamphetamine and HIV-Associated Neurocognitive Disorders.
Borgmann, K, BS1, Ghorpade, A, Ph.D.1; 1Cell Biology and Immunology, University of North Texas Health Science Center, Fort Worth, TX, 76107 United States.

W4. The influence of chronic venlafaxine administration on the chemokine CXCL12 concentration in the brain of adult offspring rats - study in the animal model of depression
Chamera, K., MS1, Trojan, E., MS1, Slusarczyk, J., MS1, Glombik, K., Ph.D.1, Basta-Kaim, A., Ph.D.1; 1Department of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Science, Krakow, 31-343 Poland.

W5. Streptozotocin and dimethyl fumarate-induced changes in plasma corticosterone concentration in old rats with different behavioral characteristics
Chomik, Aleksandra1, Podlacha, Magdalena1, Majkutewicz , Irena 1, Wrona, Danuta1; 1Department of Animal and Human Physiology, University of Gdansk, Gdansk, pomorskie, 80-309 Poland.

W6. Medial septal NMDA receptor inhibition affects peripheral blood immune cell distribution in rats differing in their locomotor response to novelty test
Chwiej, Monika1, Podlacha, Magdalena1, Laska , Ewa1, Wrona, Danuta1; 1Department of Animal and Human Physiology, University of Gdansk, Gdansk, pomorskie, 80-309 Poland.

W7. The kynurenine pathway in rats resistant to antidepressant effect of imipramine
Curzytek, K, MS1, Duda, W, MS1, Fagan, E, Ph.D.3, Connor, T, Ph.D.3, Gruca, P, MS2, Leskiewicz, M, Ph.D.1, Reguliska, M, Ph.D.1, Kurek, A, MS1, Detka, J, MS1, Korzeniak, B, Kubera, M, Ph.D.1; 1Department of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Sciences, Krakow, Maloposkie, 31-343 Poland. 2Laboratory of Behavioral Pharmacology, Institute of Pharmacology Polish Academy of Sciences, Krakow, Malopolska, 31-343 Poland. 3School of Medicine, Trinity College, Institute of Neuroscience, Dublin, Dublin, 2 Ireland.

W8. HSV-1 replication kinetics and immune response in the lip scarification model of infection
Egan, KP, BS1, Turner, P, BS1, Wigdahl, B, Ph.D.1, Jennings, SR, Ph.D.1; 1Department of Microbiology and Immunology, Institute for Molecular Medicine and Infectious Disease, Drexel University College of Medicine, Philadelphia, PA, 19102 United States.
W9. The neonatal anti-viral response in the CNS is associated with immune cell infiltration and cytokine production, but fails to control measles viral spread
Ganesan, PG, BS¹, Bohn, LB, BS¹, O'Donnell, LOD, Ph.D.¹; ¹Duquesne University, Mylan School of Pharmacy, Pittsburgh, PA, 15208 United States.

W10. Sex moderates neurocognition in a preclinical model of HAND
Gassmann, M.R., BS¹, McLaurin, K.A., BS¹, Booze, R.M., Ph.D.¹, Mactutus, C.F., Ph.D.¹; ¹Department of Psychology, University of South Carolina, Columbia, SC, 29208 United States.

W11. Effect of caffeine given chronically with MDMA or methamphetamine in a ‘binge’ mode of treatment on DA and 5-HT extracellular level in the mouse striatum
Gorska, A.M., MS¹, Golembiowska, K., Ph.D.¹; ¹Department of Pharmacology, Institute of Pharmacology, Polish Academy of Sciences, Krakow, Little Poland, 31-343 Poland.

W12. A molecular genetic association of blood brain barrier dysfunction in schizophrenia
Greene, C, BS¹, Humphries, MM, Ph.D.¹, Kealy, J, Ph.D.¹, Murphy, K, MD², Campbell, M, Ph.D.¹; ¹Smurfit Institute of Genetics, Trinity College Dublin, Dublin, -, - Ireland. ²Department of Psychiatry, Beaumont Hospital, Dublin, -, - Ireland.

W13. Two new potential blood-brain barrier protective agents: experiments on rat brain endothelial cells
Harazin, A, MS¹, Bocsik, A, MS¹, Vecsemyes, M, Ph.D.², Matyus, P, Ph.D.³, Deli, MA, MD, Ph.D.¹; ¹Biological Research Centre, Institute of Biophysics, Szeged, Csongrad, 6726 Hungary. ²University of Debrecen, Institute of Pharmaceutical Technology, Debrecen, Hajdu-Bihar, 4032 Hungary. ³Semmelweis University, Department of Organic Chemistry, Budapest, Budapest, 1092 Hungary.

W14. Tetrahydrocannabinol (THC) suppresses CpG Oligodeoxynucleotide (CpG)-mediated activation of human Plasmacytoid Dendritic Cells (pDC)
Henriquez, J. E., MS¹, Rizzo, M. D., BS¹, Schultz, M., BS¹, Crawford, R., BS¹, Kaminski, N., Ph.D.¹; ¹Institute of Integrative Toxicology, Michigan State University, East Lansing, MI, 48824 United States.

W15. Difficult neurological complication in HIV-infected young woman
Ianache, I.C., MS¹, Oprea, A.C., MD, Ph.D.¹; ¹"Victor Babes" Clinical Hospital for Infectious and Tropical Diseaseses, HIV/AIDS Department, Bucharest, Bucharest, 030303 Romania.

W16. Minocycline inhibits platelet dependent neuroinflammatory response to HIV infection by blocking MLK3-p38 MAPK axis
Jackson, JW, MS¹, Singh, MV, Ph.D.¹, Singh, VB, Ph.D.¹, Jones, LD, MS¹, Davidson, GA, BS¹, Gorantla, S, Ph.D.², Poluektova, LY, Ph.D.³, Schifitto, G, MD², Maggiwar, SB, Ph.D.¹; ¹Department of Microbiology and Immunology, University of Rochester Medical Center, Rochester, NY, 14642 United States. ²Department of Neurology, University of Rochester Medical Center, Rochester, NY, 14642 United States. ³Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE, 68198 United States.

W17. A Novel Role of the Metabolic Redox Enzyme Proline Oxidase in Methamphetamine-Induced Neurotoxicity
Jones, B¹, Dash, S, MS¹, Balasubramaniam, M, Ph.D.¹, Villalta, F, Ph.D.¹, Dash, C, Ph.D.¹, Pandhare, J, Ph.D.¹; ¹Center for AIDS Health Disparities Research, Meharry Medical College, Nashville, TN, 37208 United States.

W18. Involvement of TNFA in proapoptotic action of corticosterone in hippocampal organotypic cultures
Kurek, A¹, Kucharczyk, M¹, Detka, J¹, Glombik, K, Ph.D.¹, Trojan, E¹, Ludwikowska, A, Ph.D.¹, Czytey, K¹, Slusarczyk, J¹, Kubera, M, MD, Ph.D.¹, Budziszewska, B, MD, Ph.D.¹; ¹Department of Experimental Neuroendocrinology, Institute of Pharmacology, Polish Academy of Sciences, Krakow, 31-343 Poland.
W19. HIV-1 Vpr-transfected astrocytes cause morphological changes in neurons
Lamboy, R1, Noel, R1; 1Ponce Research Institute, Ponce Health Sciences University, Ponce, Puerto Rico, 00716 Puerto Rico.

W20. The Role of Autophagy in HIV-1 Tat Induced Neurodegeneration Using Beclin-1 Heterozygous Mouse Behavior Model
Lapierre, J, MS2, Vinerean, H1, Rodriguez, M, Ph.D.1, Nair, M, Ph.D.1, El-Hage, N, Ph.D.1; 1Department of Immunology, Florida International University College of Medicine, Miami, FL, 33199 United States.

W21. Dimethyl fumarate effects on corticosterone response in young rats with Alzheimerâ€™s Disease model
Laska, Ewa1, Grzybowska, Maria1, Podlacha, Magdalena1, Chwiej, Monika1, Majkutewicz, Irena1, Wrona, Danuta1; 1Department of Animal and Human Physiology, University of Gdansk, Gdansk, pomorskie, 80-309 Poland.

W22. Involvement of voltage-dependent K+ channel 1.3 in HIV Tat-induced oligodendrocyte/myelin injury
Liu, H1, Xiong, H, MD, Ph.D.1; 1Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE, 68198-5880 United States.

W23. EGCG Prevents Mucosal SIV/SHIV transmission of Macaques
Liu, Jinbiao, MS1, Li, Jieliang, Ph.D.2, Zhuang, Ke, Ph.D.1, Wang, Xu, Ph.D.2, Xian, Qiaoyang, MS1, Wang, Yong, BS3, Liu, Hang, MS1, Zhou, Runhong, MS1, Zhou, Li, Ph.D.1, Ma, Tongcui, MS1, Sun, Li, MS1, Li, Xiangdong, MS1, Guo, Deqin, Ph.D.3, Wu, Jianguo, Ph.D.3, Ho, Wenzhe, MD, M.Ph.2; 1Animal Biosafety Level III Laboratory at the Center for Animal Experiment, Wuhan University, Wuhan, Hubei, 430071 China. 2Department of Pathology and Laboratory Medicine, Temple University School of Medicine, Philadelphia, PA, 19140 United States. 3The State Key Laboratory of Virology, Wuhan University, Wuhan, Hubei, 430071 China.

W24. METABOLIC REMODELING IN GLIOMA T98G CELL CULTURE: A SIMPLE TRIAL TO WEAKEN THE MALIGNANT NATURE OF CANCER CELLS?
Ludyga, T.M., MS1, Bielecka-Wajdman, A.M., Ph.D.1, Obuchowicz, E.M., MD, M.Ph.1; 1Department of Pharmacology, School of Medicine in Katowice, Medical University of Silesia, Katowice, Silesian, 40-752 Poland.

W25. Acute administration of endothelial-targeted catalase attenuates neuropathology and cortical microglia activation in traumatic brain injury (TBI)
Lutton, EM1, Razmpour, R2, Seasock, M1, Merkel, SF1, Andrews, AM, Ph.D.1, Shuvaev, V, Ph.D.2, Muzykantov, VR, MD, Ph.D.2, Ramirez, SH, Ph.D.1; 1Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine at Temple University, Philadelphia, PA, 19130 United States. 1Institute of Translational Medicine and Therapeutics, University of Pennsylvania, Philadelphia, PA, 19104 United States.

W26. Endogenously produced Nef changes neuronal morphology in a co-culture system
Martinez-Oreno, N, BS1, Vargas, V2, Noel, R, Ph.D.1; 1Ponce Research Institute, Ponce Health Sciences University, Ponce, PR, 00716 United States. 2Department of Biology, University of Puerto Rico, Ponce, PR, 00734 United States.

W27. Blood-brain barrier compromise by HIV-1 Tat and opioids in an in vitro model
Maubert, ME, BS1, Kercher, KA, MS1, Strazza, M, Ph.D.1, Pirrone, V, Ph.D.1, Lin, W, BS2, Feng, R, Ph.D.2, Wigdahl, B, Ph.D.1, Nonnemacher, M, Ph.D.1; 1Department of Microbiology and Immunology, Institute for Molecular Medicine and Infectious Disease, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. 2Department of Biostatistics and Epidemiology, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania School of Medicine, Philadelphia, PA, 19104 United States.

W28. Minding the gap: Progression of temporal processing deficits in the HIV-1 transgenic rat
McLaurin, K.A., BS3, Booze, R.M., Ph.D.1, Moran, L.M., Ph.D.1, Li, H., MD, Ph.D.1, Mactutus, C.F., Ph.D.1; 1Program in Behavioral Neuroscience, Department of Psychology, University of South Carolina, Columbia, SC, 29208 United States.
W29. HIV-1 Tat regulates dopamine neurotransmission
Miller, DR, BS¹, Streit, S, BS², Saha, K, Ph.D.¹, Koutzoumis, D, BS³, McLaughlin, JP, Ph.D.¹, Streit, WJ, Ph.D.¹, Khoshbouei, H¹; ±Department of Neuroscience, University of Florida, Gainesville, FL, 32608 United States.

W30. Melatonin, but not novel melatonin receptor agonists Neu-P11 and Neu-P67, displays anticonvulsant activity in mice
Mosinska, PM, MS¹, Socala, KS², Nieczym, DN², Fichna, JF¹, Wlaz, PW²; ±Department of Biochemistry, Medical University of Lodz, Lodz, Lodz, 90-419 Poland. ²Department of Animal Physiology, Institute of Biology and Biochemistry, Maria Curie-Sklodowska University, Lublin, Lublin, 20-031 Poland.

W31. Manipulation of synaptic microRNAs in-vivo reduces alcohol consumption by reversing the effects of alcohol on synaptic mRNA levels
Most, D., BS³, Black, M., BS³, Blednov, Y.A., Ph.D.¹, Mayfield, R.D., Ph.D.¹, Harris, R.A., Ph.D.¹; ±The Waggoner Center for Alcohol and Addiction Research, The University of Texas at Austin, Austin, TX, 78712 United States.

W32. Astrocyte AEG-1 regulates E R stress responses in the context of HAND
Nookala, S, MS¹, Ghorpade, A, Ph.D.¹; ±Cell Biology and Immunology, University of North Texas and Health Science Center, Fort Worth, TX, 76107 United States.

W33. Long term administration of methamphetamine in Tat mice causes alteration of behavior and neuroplasticity gene expression - Implications in neuroAIDS
Nookala, Anantha Ra, BS¹, Kumar, Anil, Ph.D.¹; ±Department of Pharmacology & Toxicology, University of Missouri Kansas City, Kansas city, MO, 64108 United States.

W34. Examination of illicit drug 5-Methoxy-N,N-diiopropyltryptamine, 5-MeO-DIPT actions in the rat brain.
Noworyta-Sokolowska, K., MS¹, Golembiowska, K., Ph.D.¹; ±Department of Pharmacology, Institute of Pharmacology, Polish Academy of Sciences, Krakow, Little Poland, 31-343 Poland.

W35. EPIGENETIC MODULATIONS DUE TO CHRONIC ALCOHOL TREATMENT AND ITS ASSOCIATION WITH THE CANNABINERGIC PATHWAY.
Parira, T, MS¹, Figueroa, G, BS¹, Casteleiro, G¹, Laverde, A¹, Yndart, A, BS¹, MuÅ±oz, K, MS¹, Nair, M.P., Ph.D.¹, Agudelo, M, Ph.D.¹; ±Department of Immunology, Herbert Wertheim College of Medicine,Florida International University, Miami, FL, 33199 United States.

W36. Effect of Polycyclic Aromatic Hydrocarbons of Cigarette Smoke Condensate on Cytochrome P450 and Oxidative Stress Pathways in Monocytic Cells: Implications for HIV-1 Pathogenesis
Ranjit, Sabina¹, Mohammad, A Rahman¹, Patters, Benjamin¹, Midde, Narasimha, Ph.D.¹, Sinha, Namita¹, Cory, Theodore J, Ph.D.¹, Rao, PSS, Ph.D.¹, Kumar, Santosh, Ph.D.¹; 1Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN, 38105 United States.

W37. Dopamine affects migration and morphology of human neutrophils through D1-like dopaminergic receptors
Pinoli, M, BS¹, Rasini, E, BS¹, Legnaro, M, BS¹, De Eguileor, M, BS², Pulze, L, Ph.D.², Cosentino, M, MD, Ph.D.¹, Marino, F, BS¹; ±Center of Research in Medical Pharmacology, University of Insubria, Varese, Varese, 21100 Italy. ²Department of Biotechnology and Life Sciences, University of Insubria, Varese, Varese, 21100 Italy.

W38. The activation of pro- and antinociceptive PENK-derived peptides as an important element in pathology of neuropathic pain - behavioural studies
Piotrowska, Anna¹, Starnowska, Joanna¹, Makuch, Violetta¹, Mika , Joanna¹, Przewlocka, Barbara¹; ±Department of Pain Pharmacology, Institute of Pharmacology, Polish Academy of Sciences, Krakow, MALOPOLSKA, 31-343 Poland.

W39. Enhancement of interleukin-10 response and anxiolytic activity following intraseptal NMDA glutamate receptor agonist injection are more pronounced in high responder rats
Podlacha, M,¹, Wrona, D,¹; ±Department of Animal and Human Physiology, University of Gdansk, Gdansk, pomorskie, 80-309 Poland.
W40. Mutation of Histidine 547 on the human dopamine transporter enhances dopamine transport and attenuates Tat-induced inhibition of dopamine transporter
Quizon, P.M.1, Sun, W.L.1, Yu, P.L.1, Poon, C.Y.1, Williams, J.1, Chodosh, L.1, Tan, J.1, 3, 4, 5, 6, 7, 8, 9; 1Department of Drug Discovery and Biomedical Sciences, South Carolina College of Pharmacy, University of South Carolina, Columbia, SC, 29208 United States. 2Molecular Modeling and Biopharmaceutical Center, and Department of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington, KY, 40506 United States.

W41. HIV-1 Nef expression by astrocytes induces gastrointestinal and lung inflammation and increases in CD68+ macrophages.
Rivera, J.1, MS1, Cruz, M, BS1, Isidro, R, BS1, Loucil, R, Ph.D.1, Noel, R, Ph.D.1, Rivera-Amill, V, Ph.D.1; 1Ponce Research Institute, Ponce Health Science University, Ponce, PR, 00732 United States.

W42. Tetrahydrocannabinol (THC)-mediated suppression of human plasmacytoid dendritic cell and monocyte maturation
Rizzo, M.D., BS1; 1Department of Pain Pharmacology, Institute of Pharmacology, Polish Academy of Sciences, Cracow, Cracow, 31-343 Poland.

W43. Changes in the Microbiome of HIV Subjects with Sustained Virological Control
Rodriguez-Santiago, R, BS1, Sanchez, R, BS1, Garcia-Justiniano, J, BS1, Pabon-Cruz, E, BS1, Lopez, P, BS1, Yamamura, Y, Ph.D.1, Rivera-Amill, V, Ph.D.1; 1Ponce Research Institute, Ponce Health Sciences University, Ponce, PR, 00716 United States.

W44. Exogenous fractalkine treatment modulates the expression of pro-inflammatory factors in the hippocampus of adult, prenatally stressed rats
Slusarczyk, J, MS1, Trojan, E, MS1, Glombik, K, Ph.D.1, Chamera, K, MS1, Basta-Kaim, A, Ph.D.1; 1Department of Experimental Neuroendocrinology, Institute of Pharmacology, Polish Academy of Sciences, Cracow, Cracow, 31-343 Poland.

W45. Comparison of analgesic action of novel opioid-NK1R bifunctional ligands in acute and neuropathic pain in mice
Starnowska, J1, Guillenmyn, K2, Betti, C2, Makuch, W1, Ballet, S2, Mika, J1, Przewlocka, B1; 1Department of Pain Pharmacology, Institute of Pharmacology PAS, Krakow, malopolskie, 31-343 Poland. 2Department of Organic Chemistry, Vrije Universiteit Brussel, Brussels, Brussels, B-1050 Belgium.

W46. Clinical and functional characterization of single nucleotide polymorphisms (SNPs) within the HIV-1 long terminal repeat (LTR) COUP binding site associated with increased virus persistence in the Drexel Medicine CARES Cohort
Sullivan, N, BS1, Nonnemacher, MR, Ph.D.1, Pirrone, V, Ph.D.1, Feng, Rui, Ph.D.2, Moldover, B, Ph.D.3, Dampier, W, Ph.D.4, Passic, S, MS1, Williams, J, BS1, Aiamkitsumrit, B, Ph.D.1, Zhong, W, BS1, Blakey, B, MS1, Shah, S, Ph.D.1, Jacobson, JM, MD4, Wigdahl, B, Ph.D.1; 1Department of Microbiology and Immunology, Institute for Molecular Medicine and Infectious Disease, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. 2Department of Biostatistics and Epidemiology, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania School of Medicine, Philadelphia, PA, 19104 United States. 3B-Tech Consulting, LTD, B-Tech Consulting, LTD, Philadelphia, PA, 19130 United States. 4Department of Medicine, Division of Infectious Disease and HIV Medicine, Drexel University College of Medicine, Philadelphia, PA, 19102 United States.

W47. IFNB PROTECTS NEURONS IN A CCL4-DEPENDENT FASHION AGAINST HIV-1 GP120-INDUCED INJURY
Thaney, V, BS3, Hoefer, M, Ph.D; Kaul, M, Ph.D.; 1Immunity and Pathogenesis Program, Sanford-Burnham Prebys Medical Discovery Institute, La Jolla, CA, 92037 United States.

W48. HIV-infection and substance of abuse: Oxidative stress induces dopaminergic dysfunction and neuroplasticity
Tiwari, S, MS1, Kaushik, A, Ph.D.1, Yndart, A, MS1, Atluri, V, Ph.D.1, Jayant, RD, Ph.D.1, Nair, M, Ph.D.1; 1Center of Personalized Nanomedicine, Institute of Neuroimmune Pharmacology, Department of Immunology, Florida International University, Miami, FL, 33199 United States.
W49. Prenatal stress impairs chemokine CXCL12 and its receptor (CXCR4) communication in adult offspring rats: beneficial influence of antidepressants  
Trojan, E, MS1, Slusarczyk, J, MS1, Glombik, K, Ph.D.1, Chamera, K, MS1, Basta-Kaim, A, Ph.D.1; 1Department of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Sciences, Krakow, malopolskie, 31-343 Poland.

W50. Gap Junctions and Hemichannels are key regulators of antiretroviral metabolism and toxicity: A new role in NeuroAIDS  
Veilleux, Courtney1, Eugenin, EA, Ph.D.1; 1Department of Microbiology, Biochemistry, and Molecular Biology, Rutgers University, Newark, NJ, 07103 United States.

W51. Sigma-1 Receptor/Cocaine Interplay in Cathepsin B Secretion by HIV Infected Macrophages  
Velez Lopez, O., BS1, Melendez Aponte, L., Ph.D.1, Segarra Marrero, A., Ph.D.1, Melendez, R., Ph.D.1, Gorantla, S., Ph.D.2; 1Department of Microbiology-Neurovirology, School of Medicine- University of Puerto Rico Medical Sciences Campus , San Juan , PR, 00935 United States. 2Department of Experimental Neuroscience and Pharmacology, University of Nebraska Medical Center, Omaha, NE, 68198 United States.

W52. Small molecule ONC201/TIC10 inhibits HIV-1 replication and integration  
Zhao, R, BS1, Wu, B, MD1, Huang, Y, MD, Ph.D.1, Zheng, JC, MD1; 1Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE, 68105 United States.

W53. THE ROLE OF LYMPHOTACTIN AND ITS RECEPTOR IN MICE DIABETIC NEUROPATHIC PAIN MODEL  
Zychowska, Magdalena, MS1, Rojewska , Ewelina, Ph.D.1, Piotrowska, Anna, MS1, Kreiner, Grzegorz, Ph.D.2, Mika, Joanna, Ph.D.1; 1Department of Pain Pharmacology, Institute of Pharmacology Polish Academy of Sciences, Krakow, -, 31-343 Poland. 2Department of Brain Biochemistry, Institute of Pharmacology Polish Academy of Sciences, Krakow, -, 31-343 Poland.

W54. Receptor-independent mechanism of HIV gp120 neurotoxicity  
Wenzel, ED, BS1, Taraballi, F, Ph.D.2, Caragher, SP1, Avdosheva, V, MD, Ph.D.1, Bachis, A, Ph.D.1, Mocchetti, I, Ph.D.1; 1Laboratory of Preclinical Neurobiology, Georgetown University, Washington, DC, 20057 United States. 2Nanomedicine, Houston Methodist Research Institute, Houston, TX, 77030 United States.

W55. The role of microRNAs from microglia-derived extracellular vesicles during methamphetamine abuse  
Fernandes, N, MS1, Potula, R, Ph.D.1; 1Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine, Temple University, Philadelphia, PA, 19140 United States

W56. Kunitz Inhibitor (KI) Inhibits HIV Infection of Macrophages through Jak/STAT Pathway  
Ma, T-C, MS1, Wang, X, MS1, Li, J-L, Ph.D.1, Zhuang, K, Ph.D.2; 1Department of Pathology and Laboratory Medicine, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. 2School of Basic Medical Sciences, Wuhan University, Wuhan, Hubei, 430071 China.

THURSDAY, APRIL 7 POSTER SESSION 2

Post Doctoral and Regular Scientists

T1. DNA damage in HIV-1 patients taking ART  
Albino, EM, Ph.D.1, Figueroa, L2, Van Daalen, Y2, Godoy, L, BS1, Hill, M, Ph.D.1, Rivera-Amill, V, Ph.D.3; 1Pharmacology and Toxicology Department, Ponce Health Sciences University, Ponce, PR, 00732 United States. 2Biology Department, University of Puerto Rico in Ponce, Ponce, PR, 00732 United States. 3Microbiology Department, Ponce Health Sciences University, Ponce, PR, 00732 United States.

T2. Peripheral effects of the interaction between alcohol and the HDAC inhibitor mocetinostat  
Agudelo, M, Ph.D.1, Figueroa, G, BS3, Parira, T, BS1, Laverde, A1, Madhavan , N, Ph.D.1; 1Herbert Wertheim College of Medicine, Florida International University, Miami, FL, 33190 United States.
T3. Utility of LIF to protect against HIV-1 associated neurocognitive disorders
Alves, J.M., Ph.D.¹, Hunter, R.M., MD, Ph.D.¹, Cruz, M.L., MS², Ramos, K., BS¹, Velázquez, B., BS², Noel, R., Ph.D.²; ¹Microbiology and Immunology Department, Universidad Central del Caribe, Bayamón, PR, 00960 United States. ²Basic Sciences Department, Ponce Health Sciences University, Ponce, PR, 00716 United States.

T4. Extracellular vesicles of the blood-brain barrier: role in the HIV-1-induced amyloid beta pathology
Andras, I.E¹, Leda, A¹, García Contreras, M², Bertrand, L¹, Skowronska, M¹, Toborek, M¹; ¹Department of Biochemistry and Molecular Biology, University of Miami School of Medicine, Miami, FL, 33136 United States. ²Diabetes Research Institute, University of Miami School of Medicine, Miami, FL, 33163 United States.

T5. Comparison of the effects of psychostimulant drugs of abuse on brain endothelial barrier integrity and extracellular microvesicle production
Andrews, AM, Ph.D.¹, Merkel, SF, MS¹, Lutton, EM, BS¹, Rawls, SM, Ph.D.², Ramirez, SH, Ph.D.¹; ¹Department of Pathology & Laboratory Medicine, Lewis Katz School of Medicine at Temple University, Philadelphia, PA, 19140 United States. ²The Center for Substance Abuse Research, Lewis Katz School of Medicine at Temple University, Philadelphia, PA, 19140 United States.

T6. Disruption of tight junction integrity in brain microvascular endothelium by anti-retroviral therapy
Bertrand, L, Ph.D.¹, Dygert, L¹, Toborek, M, MD, Ph.D.¹; ¹Biochemistry and Molecular Biology, University of Miami, Miami, FL, 33136 United States.

T7. Coriolus versicolorâ€™s Polysaccharide Peptide Activates the Immune Response and inhibits HIV-1 replication
Boukli, Nawal, Ph.D.¹, Rodríguez, M, MS¹, López, S, MS¹, Rivera, M, MS¹, Rodríguez, M, MS¹, Cubano, L, Ph.D.¹, Ràjos, E, Ph.D.¹; ¹Biomedical Proteomics Facility, Microbiology and Immunology Department, Universidad Central del Caribe School of Medicine, Bayamon, Puerto Rico, 00960 Puerto Rico.

T8. Using CRISPR/Cas9 to create HIV-nanoLuc CHME-5, a novel microglia cell line
Campbell, LA, Ph.D.¹, Ritchie, C, Ph.D.¹, Heathward, E, MS¹, Harvey, BK, Ph.D.¹; ¹Optogenetic and Transgenic Technology Core, National Institute on Drug Abuse, Baltimore, MD, 21224 United States.

T9. Acute exposure to methamphetamine alters TLR9-mediated cytokine expression in macrophage
Ciborowski, P, Ph.D.¹, Burns, A, Ph.D.¹; ¹University of Nebraska Medical Center, Pharmacology and Experimental Neuroscience, Omaha, NE, 68198 United States.

T10. Dual activation of astrocyte TAAR1 and TRP channels mitigates autophagy during METH-associated hyperthermia in the context of HAND
Cisneros, IE, Ph.D.¹, Ghorpade, A, Ph.D.¹; ¹Cell Biology and Immunology, University of North Texas Health Science Center, Fort Worth, TX, 76107 United States.

T11. Role of HIV-1 Tat, cocaine and miR-29b in the regulation of excitatory amino acid transporter, EAAT2 expression in astrocytes.
Datta, PK, Ph.D.¹, Deshmane, S, Ph.D.¹, Douthitt, ML, BS¹; ¹Neuroscience, Lewis Katz School of Medicine at Temple University, Philadelphia, PA, 19140 United States.

T12. Augmentation of pulmonary vasculopathy and hemodynamics in HIV-transgenic rats on exposure to cocaine
Dhillon, ND, Ph.D.¹, Daibi, P¹, Spikes, L¹, Julie, J¹, Gupta, V², Sharma, H¹, Gillcrist, M¹, Montes de Oca, J¹, O’Brien-Ladner, A¹; ¹Internal Medicine, University of Kansas Medical Center, Kansas City, KS, 66160 United States. ²Molecular & Integrative Physiology, University of Kansas Medical Center, Kansas City, KS, 66160 United States.

T13. Regulation of hematopoietic stem cell (HSC) development: role of Glucocorticoid Induced Leucine Zipper (GILZ)
T14. Expression of dopaminergic receptors on human monocytes and peripheral blood dendritic cells
Gaizzi, MG, MD, T.1, Rasini, ER, BS, T.1, Marino, FM, BS, T.1, Zaffaroni, MZ, MD,T.1, Cosentino, MC, MD, Ph.D, 1; 1Department of Medicine, Section of Pharmacology, University of Perugia, Perugia, Perugia, 06100 Italy.

T15. LOSARTAN AND SECRETASE INHIBITOR REGULATE THE AMYLOID PRECURSOR PROTEIN CLEAVAGE INDUCED BY ANGIOTENSIN II IN HUMAN NEURONAL CELLS
Gerena, Y, Ph.D, 1, Delgado, A, BS, T.2, Velez, JG, BS, T.2, Ayala, G, BS, T.2, De Jesus, E, BS, T.1, Marrero, L, BS, T.1, Flores, M, BS, T.1, Wojna, V, MD, T.3; 1Pharmacology Department, University of Puerto Rico, Medical Sciences Campus, San Juan, Puerto Rico, 00936 Puerto Rico. 2Rio Piedras Campus, University of Puerto Rico, Rio Piedras, Puerto Rico, 00931 Puerto Rico. 3Chair of Pharmacology, Jagiellonian University Medical College, Cracow, Malopolskie, 31-531 Poland.

T16. Regulation of mitochondrial protein expression in the hippocampus by acute peripheral lipopolysaccharide administration- study in an animal model of depression
Glombik, K, Ph.D, 1, Stachowicz, A, Ph.D, 2, Olszanecki, R, MD, Ph.D, 2, Trojan, E, MS, 1, Slusarczyk, J, MS, 1, Basta-Kaim, A, Ph.D, 1; 1Department of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Sciences, Cracow, Malopolskie, 31-343 Poland. 2Chair of Pharmacology, Jagiellonian University Medical College, Cracow, Malopolskie, 31-531 Poland.

T17. URMC-099 transformation of the expression and localization of transcription factor-EB provides a potential mechanism for Rab endosomal nanoformulated antiretroviral depot formation in monocyte-macrophages
Gnanadhas, Divya Prak, Ph.D, 1, Dash, Prasanta K, Ph.D, 1, Lin, Zhiyi, MS, 1, Puccini, Jenna M, Ph.D, 2, Gelbard, Harris A, MD, Ph.D, 2, Gendelman, Howard E, MD, 1, Gorantla, Santhi, Ph.D, 1; 1Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE, 68198 United States. 2School of Medicine and Dentistry, University of Rochester Medical Center, Rochester, NY, 14642 United States.

T18. SLPI is involved in the induction of NGF in the psoriatic skin
Grygier, B., Ph.D, 1, Majchrzak-Gorecka, M., MS, 1, Majewski, P., Ph.D, 1, Cichy, J., Ph.D, 1; 1Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Krakow, Malopolska, 30-387 Poland.

T19. Epigenetic downregulation of microRNA-124 promotes cocaine-mediated microglial activation: implication for drug addiction
Guo, M, Ph.D, 1, Periyasamy, P, Ph.D, 1, Callen, S, Ph.D, 1, Buch, S, Ph.D, 1; 1Department of Pharmacology and Experimental Neuroscience, College of Medicine, Omaha, NE, 68198 United States.

T20. Methadone promotes HIV-1 infection of macrophage by inhibiting the expression of antiviral genes
Hou, Wei, MD, Ph.D, 1, Wu, Di-di, BS, 1, Wang, Hui, BS, 1, Li, Li, Ph.D, 1, Wang, Xiao-kun, Ph.D, 1, Xie, Lin-lin, Ph.D, 1, Luo, Fan, MD, Ph.D, 1; 1State Key Laboratory of Virology/Institute of Medical Virology/Hubei Province Key Laboratory of Allergy and Immunology, School of Basic Medical Sciences, Wuhan University, Wuhan, Hubei, 430071 China.

T21. Eradicating HIV-1 from brain compartment using Tat inducible CRISPR/Cas9 gene editing strategy
Kaminski, R, Ph.D, 1, Chen, Y, Ph.D, 1, Salkind, J, BS, 1, Bella, R, MS, 2, Hu, W, MD, Ph.D, 1, Khalili, K, Ph.D, 1; 1Department of Neuroscience and Center for Neurovirology, Temple University School of Medicine, Philadelphia, PA, 19140 United States. 2Department of Biomedical, Surgical and Dental Sciences, University of Milan, Milan, 2100 Italy.

T22. Increased social interactions in rats fed with a high fat ketogenic diet
Kasprowska, D., Ph.D, 1, Likiewicz, A.D., Ph.D, 2, Sugocka, A., MS, 3, Barski, J.J., Ph.D, 3; 1Laboratory of Molecular Biology, Faculty of Physiotherapy, The Jerzy Kukuczka Academy of Physical Education, Katowice, Silesia, 40-065 Poland. 2Department of Physiology, School of Medicine in Katowice, Medical University of Silesia, Katowice,
T23. CNS delivery of magneto-electro nanoparticles in non-human primates
Kaushik, A, Ph.D.\(^1\); \(^1\)Center of Personalized Nanomedicine, Institute of Neuroimmune Pharmacology, Department of Immunology, Herbert Wertheim College of Medicine, Florida International University, Miami, FL, 33199 United States.

T24. Behavioural changes in a mouse model of schizophrenia: The role of the blood-brain barrier in the dorsal hippocampus and medial prefrontal cortex.
Kealy, J, Ph.D.\(^1\), Greene, C, BS\(^1\), Campbell, M, Ph.D.\(^1\); \(^1\)Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Dublin, D 2 Ireland.

T25. Pattern recognition receptors and inflammasome activation in the blood-brain barrier
Krizbai, I.A., MD, Ph.D.\(^1\), Wilhelm, I, MD, Ph.D.\(^1\), Molnár, J, MS\(^1\), Fazakas, C, Ph.D.\(^1\), Haskó, J, MS\(^1\), Kozma, M, BS\(^1\), Nagy szí, P, Ph.D.\(^1\), Nyádl-Tóth, A, MS\(^1\); \(^1\)Biological Research Centre, Institute of Biophysics, Szeged, 6726 Hungary.

T26. Stimulatory effect of desipramine on lung metastasis of adenocarcinoma MADB 106 cells in stress high-sensitive and stress non-reactive rats
Kubera, M, Ph.D.\(^1\), Grgyer, B, Ph.D.\(^1\), Wrona, D, Ph.D.\(^4\), Roman, A, Ph.D.\(^2\), Gruca, P, MS\(^3\), Papp, M, Ph.D.\(^3\), Leskiewicz, M, Ph.D.\(^1\), Budziszewska, B, Ph.D.\(^1\), Basta-Kaim, A, Ph.D.\(^1\), Regul'ska, M, Ph.D.\(^1\), Korzeniak, B\(^1\), Curytek, K, MS\(^1\), Maes, M, MD, Ph.D.\(^5\), Lason, W, Ph.D.\(^1\); \(^1\)Department of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Sciences, Krakow, Malopolskie, 31-343 Poland. \(^2\)Department of Brain Biochemistry, Institute of Pharmacology Polish Academy of Sciences, Krakow, Malopolskie, 31-343 Poland. \(^3\)Laboratory of Behavioral Pharmacology, Institute of Pharmacology Polish Academy of Sciences, Krakow, Malopolskie, 31-343 Poland. \(^4\)Department of Animal and Human Physiology, University of Gdansk, Gdansk, Pomorskie, 80-308 Poland. \(^5\)Department of Psychiatry, Chulalongkorn University, Bangkok, Bangkok, 10330 Thailand.

T27. Effect of ethanol on the metabolisms of darunavir and elvitegravir in hepatic and monocytic cells: Potential role of cytochrome P450 3A4
Kumar, S, Ph.D.\(^1\), Narasimha, M, MS\(^1\), Rahman, MA, MS\(^1\); \(^1\)Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN, 38163 United States.
Supported by NIH AA-022063

T28. Methamphetamine-mediated oxidative stress contributes to the dysregulation of autophagic flux of astrocytes
Li, J-L, Ph.D.\(^1\), Onyeachu, V, BS\(^1\), Wang, X, Ph.D.\(^1\), Ma, T-C, MS\(^3\), Ho, W-Z, MD, M.Ph.\(^2\); \(^1\)Department of Pathology and Laboratory Medicine, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. \(^2\)Center for Substance Abuse Research, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. \(^3\)Animal Biosafety Level III Laboratory at the Center for Animal Experiment, State Key Laboratory of Virology, Wuhan University School of Basic Medical Sciences, Wuhan, Hubei, 430071 China.

T29. Involvement of Voltage-gated K Channels in Methamphetamine Potentiation of HIV-induced Microglia Neurotoxicity
Liu, J, MD, Ph.D.\(^1\), Liu, H, MS\(^1\), Xu, E, MS\(^1\), Xiong, H, MD, Ph.D.\(^1\); \(^1\)Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE, 68198 United States.

T30. Human Immunodeficiency Virus infection causes mitochondrial dysfunction in astrocytes
Malik, S, Ph.D.\(^1\), Eugenin, EA, Ph.D.\(^1\); \(^1\)Public Health Research Institute, New Jersey Medical School-Rutgers University, Newark, NJ, 07103 United States.

T31. Interleukin-1beta induces long-term effects on the development of glutamatergic neurons
Marchetti, N\(^1\), Boraso, M, Ph.D.\(^1\), Galli, CL, Ph.D.\(^1\), Marinovich, M, Ph.D.\(^1\), Viviani, B, Ph.D.\(^1\); \(^1\)Department of Pharmacological and Biomolecular Sciences, University of Milan, Milan, Milan, 20133 Italy.
T32. Methamphetamine abuse affects gene expression in brain-derived microglia of SIV-infected macaques to enhance inflammation and promote virus targets

Marcondes, MC, Ph.D.; Najera, JA, Ph.D.; Bustamante, EA, MD; Bortell, N, BS; Morsey, B, Ph.D.; Fox, HS, MD; Ph.D.; Ravasi, T, Ph.D.; Marcondes, MC, Ph.D.; 1Molecular and Cellular Neurosciences Department, The Scripps Research Institute, La Jolla, CA, 92037 United States. 2Department of Pharmacology and Experimental Neuroscience, university of Nebraska Medical Center, Omaha, NE, 68198 United States. 3Division of Chemical and Life Sciences and Engineering, King Abdullah University of Science and Technology, Thuwal, NA, 23955 Saudi Arabia.

T33. Higher hypocretin (orexin) levels correlates with better motor skills in HIV+ women

Menendez-Delmestre, R; Rodriguez-Benitez, R; Gonzalez, C; Matos, M; Noel, RJ; Wojna, V; 1NeuroAIDS , University of Puerto Rico Medical Sciences Campus, San Juan, PR, 00926 United States. 2General Social Sciences, University of Puerto Rico Rio Piedras Campus, San Juan, PR, 00926 United States. 3Biochemistry Department, Ponce School of Medicine, Ponce, PR, 00716 United States.

T34. Selection of gRNAs to target the HIV-1 quasispecies with CRISPR/cas9

Nonnemacher, M.R., Ph.D.; Dampier, W, Ph.D.; DeSimone, M, MS; Pirrone, V, Ph.D.; Kercher, K, MS; Passic, S, MS; Williams, J, BS; W digahl, B, Ph.D.; 1Department of Microbiology and Immunology, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. 2Center for Molecular Virology and Translational Neuroscience, Institute for Molecular Medicine and Infectious Disease, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. 3School of Biomedical Engineering and Health Systems, Drexel University, Philadelphia, PA, 19104 United States.

T35. VEGF alterations induced by antidepressant drugs in female rats under chronic stress condition

Nowacka-Chmielewska, M, Ph.D.; Paul-Samojedny, M, Ph.D.; Bielecka, AM, Ph.D.; Obuchowicz, A, Ph.D.; 1Laboratory of Molecular Biology/Faculty of Physiotherapy, The Jerzy Kukuczka Academy of Physical Education in Katowice, Katowice, Woj. Slaskie, 40-065 Poland. 2Center For Experimental Medicine, Medical University of Silesia, Katowice, Woj. Slaskie, 40-752 Poland. 3Department of Pharmacology, Medical University of Silesia, Katowice, Woj. Slaskie, 40-752 Poland.

T36. Sex differences in the effects of acute peripheral IL-1beta administration on the brain and serum VEGF expression in rats

Obuchowicz, E, MD, M.Ph.; Nowacka, MM, Ph.D.; Paul-Samojedny, M, Ph.D.; Bielecka-Wajdman, AM, Ph.D.; 1Department of Pharmacology, School of Medicine in Katowice, Medical University of Silesia, Katowice, Upper Silesia, 40-752 Poland. 2Laboratory of Molecular Biology, Faculty of Physiotherapy, The Jerzy Kukuczka Academy of Physical Education, Katowice, Upper Silesia, 40-065 Poland. 3Department of Medical Genetics, Faculty of Pharmacy with Division of Laboratory Medicine, Medical University of Silesia, Sosnowiec, Upper Silesia, 41-200 Poland.

T37. Alcohol and HIV-1 differentially regulate Toll Like Receptor (TLRs) expression and signaling in Primary Human Astrocytes

Pandey, R, Ph.D.; Gorpade, A, Ph.D.; 1Cell Biology and Immunology, University of North Texas and Health Science Center, Fort Worth, TX, 76107 United States.

T38. Galectin-1 reduces neuroinflammation via modulation of the nitric oxide-arginase network in Microglia: Implications for a neuroprotective role in HIV associated neurocognitive disorders

Parikh, NU, MD; Magnum, C; Aalinkeel, R, Ph.D.; Reynolds, JL, Ph.D.; Sykes, DE, Ph.D.; Mammen, M, MD; Schwartz, SA, MD, Ph.D.; Mahajan, SD, Ph.D.; 1Department of Medicine, Division of Allergy, Immunology & Rheumatology, State University of New York at Buffalo, Clinical Translational Research Center, Buffalo, NY, 14226 United States.

T39. Secoisolariciresinol diglucoside (SDG) protects blood brain barrier in vitro and in vivo during neuroinflammation

Persidsky, Y, MD, Ph.D.; Reichenbach, N, BS; Zuluaga-Ramirez, V; Rom, S, Ph.D.; Jordan-Sciutto, K, Ph.D.; 1Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine, Temple University,
T40. PARP inhibition in leukocytes diminishes inflammation via effects on integrins/cytoskeleton and protects the blood brain barrier

Persidsky, Y., MD, Ph.D.; Reichenbach, N., BS; Zuluaga-Ramirez, V.; Dykstra, B., BS; Gajghate, S., M.S.; Rom, S., Ph.D.; 1Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine, Temple University, Philadelphia, PA, 19140 United States.

T41. Imipramine enhances expression of some neuronal markers in glia cells: A study on the rat primary mixed glial culture

Plato, M.M., Ph.D.; Bielecka-Wajdman, A.M., Ph.D.; Silesia, Katowice, Silesian, 40-055 Poland; 1Department of Pharmacology, School of Medicine in Katowice, Medical University of Silesia, Katowice, Silesian, 40-055 Poland.

T42. Role of Autophagy on HIV-infected Human Astrocytes Functionality

Rodriguez, M., Ph.D.; Lapierre, J., MS; Estrada, H., BS; Dever, S., Ph.D.; Madhavan, N., Ph.D.; El-Hage, N., Ph.D.; 1Department of Immunology, Florida International University College of Medicine, Miami, FL, 33199 United States.

T43. Mapping Gene-network signatures of different neurological disorders in AIDS: Implications to neuroAIDS

Sagar, Vidy, Ph.D.; Martinez, Paola C.; Atluri, Venkata Su, Ph.D.; Pilakka-Kanthikeel, Sudheesh, Ph.D.; Nair, Madhavan, Ph.D.; 1Institute of Neuroimmune Pharmacology, Florida International University, Miami, FL, 33199 United States.

T44. Pharmacological activation of autophagy prevents long-term reduction of ATP levels in neurons exposed to antiretrovirals, methamphetamine and HIV-1 gp120


T45. Tetherin links microparticle release with blood-brain barrier dysfunction in HIV-infected opioid users

Singh, MV, Ph.D.; Singh, VB, Ph.D.; Jackson, JW, Ph.D.; Kobie, JJ, Ph.D.; Bidlack, JM, Ph.D.; Schifitto, G, MD; Maggiwar, SB, Ph.D.; 1Microbiology and Immunology, University of Rochester School of Medicine and Dentistry, Rochester, NY, 14642 United States.

T46. Effects of SRI-30827 and SRI-20041 on the allosteric modulation of HIV-1 Tat binding sites on human dopamine transporter

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T47. Neuron-astrocyte interaction in the pathogenesis of HIV-1/AIDS-Associated Neuropathic Pain

Tang, S.J., Ph.D.; Liu, X., Ph.D.; Yuan, S., MD, Ph.D.; Shi, Y., Ph.D.; 1Department of Neuroscience and Cell Biology, University of Texas Medical Branch, Galveston, TX, 77555 United States.

T48. Effect of tobacco smoke and HIV infection on mucociliary clearance

Unwalla, Hoshang, Ph.D.; Chinnapaiyan, S., Ph.D.; Periera, T., BS; Agedelo, M, Ph.D.; Morris, A, MD; 1Herbert Wertheim College of medicine, Department of Immunology, Florida International University, Miami, FL, 33199.
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T49. Nanocomposite hydrogels for neuro drug delivery
Vashist, Arti, Ph.D. 1, Ghosal, Anujit, Ph.D. 2, Gupta, Y.K., MD 3, Ahmad, Sharif, Ph.D. 2, Nair, Madhavan, Ph.D. 1; 1Center for Personalized Nanomedicine, Institute of Neuro immune Pharmacology, Department of Immunology, Herbert Werthem College of Medicine, Florida International University, MIAMI, FL, 33199 United States. 2Materials Research Laboratory, Department of Chemistry, Jamia Millia Islamia, NEW DELHI, DELHI, 110025 India. 3Department of Pharmacology, All India Institute of Medical Sciences, NEW DELHI, DELHI, 110029 India.

T50. Lab-on-a-chip tool for modeling biological barriers
Walter, FR, Ph.D. 1, Valkai, S, Ph.D. 1, Kincses, A, MS 1, Veszelka, S, Ph.D. 1, Ormos, P, Ph.D. 1, Deli, MA, MD, Ph.D. 1, Der, A, Ph.D. 1; 1Biological Research Centre, Hungarian Academy of Sciences, Institute of Biophysics, Szeged, 6726 Hungary.

T51. Brain-specific overexpression of glutaminase C induces neuroinflammation, synaptic damage and dementia in mice
Wang, Y 1, Li, Y 1, Huang, Y 1, Zheng, J 1; 1University of Nebraska Medical Center, College of Medicine, Omaha, NE, 68198 United States.

T52. Inhibition of the HIV Restriction Factors Contributes to Morphine Withdrawal-mediated Enhancement of HIV Replication in Macrophages
Wang, X 1, Li, J-L, Ph.D. 1, Ma, T-C 1, Petovic, J-L 1, Peng, J-S, Ph.D. 2, Zhou, W, MD, Ph.D. 2, Ho, W-Z, MD, M.Ph. 1; 3Department of Pathology and Laboratory Medicine, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. 2Division of Virology, Wuhan Centers for Disease Prevention & Control, Wuhan, Hubei, 430015 China.

T53. Occludin-AMPK interplay regulate pericyte metabolism
CASTRO, V, MD, Ph.D.1, He, J, MD1, Lombardi, J1, Seth, N1, Toborek, M, MD, Ph.D.1; 1Department of Biochemistry and Molecular Biology, University of Miami. Miller School of Medicine, Miami, FL, 33136 United States.

T54. Differential neurotoxicity induced by HIV protease inhibitors in vitro
Williams, K, Ph.D. 1, Li, J 1, Lee, R 1, Chuang, E 2, Jordan-Sciutto, K, Ph.D. 1, Espinoza, C, Ph.D. 1; 1School of Dental Medicine, University of Pennsylvania, Philadelphia, PA, 19104 United States. 2School of Medicine, University of Pennsylvania, Philadelphia, PA, 19104 United States.

T55. Neuroprotective effects of FK506 in a model of HIV1-gp120 neurotoxicity
Fields, JA, Ph.D. 1, Overk, C, Ph.D. 2, Adame, A, BS 2, Florio, J, BS 2, Mante, M, BS 2, Pineda, A, BS 2, Desplats, P, Ph.D. 2, Rockenstein, E, BS 2, Masliah, E, MD 2; 1Department of Pathology, University of California, San Diego, La Jolla, CA, 92093 United States. 2Department of Neurosciences, University of California, San Diego, La Jolla, CA, 92093 United States.

T56. HIV-1-mediated mPFC pyramidal neuron hyperactivity is alleviated by combined chronic blockade of L-type Ca2+ channels and NMDA receptors
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