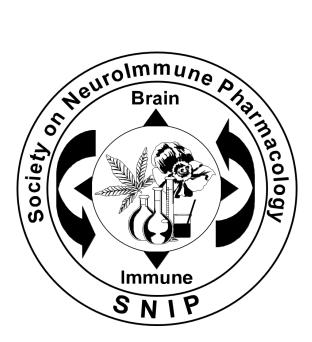
Society on Neurolmmune Pharmacology (SNIP)



22nd Scientific Conference

Hotel Galaxy Krakow, Poland

April 6-9, 2016

Previous Conferences:1993 Toronto Hilton, Canada; 1994 Breakers, Palm Beach, FL; 1995 Bristol Court, San Diego, CA; 1996 Caribe Hilton, San Juan, PR; 1997 Opryland Hotel, Nashville TN; 1998 Scottsdale Princess, Scottsdale, AR; 2000 NIH Mazur Auditorium, Bethesda MD; 2001 Emory University, Atlanta, GA; 2002 Clearwater Beach Hilton, Clear Water, FL; 2004, La Fonda Hotel, Santa Fe, NM; 2005 Clearwater Beach Hilton, Clear Water, FL; 2006 La Fonda Hotel, Santa Fe, NM; 2007 City Center Marriott Hotel, Salt Lake City, UT; 2008 Francis Marion Hotel, Charleston, SC; 2009 Pearl Plaza Howard Johnson, Wuhan, China; 2010 Manhattan Beach Marriott, Manhattan Beach, CA; 2011 Hilton Clearwater Beach Resort, Clear Water Beach, FL; 2012 Hawaii Prince Hotel, Honolulu, HI; 2013 Conrad Hilton, San Juan, PR; 2014 Intercontinental New Orleans, LA.; 2015; Hyatt Regency, Miami, FL.

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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

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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 CenterSupport of trainee participation in the 22nd SNIP conference

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

*Funding for this conference was made possible [in part] by R13 DA023184 from the National Institute on Drug Abuse. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

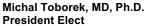
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Professor, Departments of Pharmacology and Psychiatry

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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.

Early Career Investigator Travel Award Winners 2016

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-D	octoral
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Antell, G,	Nonnemacher, M	Drexel University College of Medicine
Avalos, MP	Cancela	Institute of Experimental Pharmacology CONICET
Borgmann, K	Ghorpade, A	University of North Texas Health Science Center
Chomik, A	Wrona, D	University of Gdansk
Chwiej, M	Wrona, D	University of Gdansk
Egan, KP Fernandes, N	Jennings, SR Potula, R	Drexel University College of Medicine Temple University School of Medicine
Ganesan, PG	O'Donnell	Duquesne University, Mylan School of Pharmacy
Górska, AM	Gołembiowska, K	Inst. of Pharmacology Polish Academy of Sciences
Greene, C	Campbell, M	Trinity College Dublin
Harazin, A	Deli, MA	Biological Research Ctr., Hungarian Acad of Sci.
Jackson, JW	Maggirwar, SB	University of Rochester Medical Center
Jones, B	Pandhare, J	Meharry Medical College
Lamboy, R	Noel, R	Ponce Health Sciences University
Lapierre, J	El-Hage, N	Florida International University
Laska E	Wrona, D	University of Gdansk
Liu, H	Xiong, H	University of Nebraska Medical Center
Liu, J	Ho, W	Wuhan University
Ludyga, TM	Obuchowicz, EM	School of Med. in Katowice, Medical Univ. of Silesia
Lutton, EM Ma, T Martinez-Orengo, N	Ramirez, SH Zhuang, K Noel, R	Temple University School of Medicine Temple University School of Medicine Ponce Health Sciences University
Maubert, ME	Nonnemacher, M	Drexel University College of Medicine
McLaurin, KA	Mactutus, CF	University of South Carolina
Miller, D	Khoshbouei, H	University of Florida
Mosińska , PM	Wlaź	Medical University of Lodz
Most, D	Harris, RA	University of Texas at Austin
Nooka, S	Ghorpade, A	University Of North Texas Health Science Center

Noworyta-Sokołowska, K	Gołembiowska, 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
Rodríguez-Santiago, R	Rivera-Amill, V	Ponce Health Sciences University
Slusarczyk, J	Basta-Kaim, .	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 Bertrand, L Campbell, LA Castro, V	Ramirez, S Toborek, M Harvey, BK Toborek, M	Lewis Katz School of Medicine at Temple University University of Miami National Institute on Drug Abuse 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
lanache, 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.



Sieghart 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 year, 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 interand 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 Univer - sity, Fukuoka, Japan and from 2012 he acts as Adjunct Scientific Director of the Achucarro Basque Centre for Neuroscience (Bilbao, Spain).

CONFERENCE AGENDA

	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 effect of abuse and cART drugs. Chaired by: Italo Mocchetti, PhD, Georgetown Univ. Med. Center, DC, Sanjay Maggirwar, PhD, Univ. of Rochester Med. Center,	, 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
Break	Dr. Sandra Ceccatelli, Karolinska Institute, Stockholm, Sweden Immunoinflammation and neuronal stem cells, Title: proBDNF and p75 in HIV neurotoxicity	9:00 9:20
	Plenary Speaker 1 (Introduction by Michal Toborek) Kamel Khalili, PhD, Temple University, Philadelphia, USA Elimination of HIV Genomes from Human T-Lymphoid Cells by CRISPR/Cas9 Gene Editing; In vitro, Ex vivo, and In vivo studies	9:40
	Symposium 2 Neuroinflammation and the Gut: What is its relevance to HIV infection, repathology, and therapy? Neurodegenerative Responses to Viral Infection Therapeutics Chaired by: T. Celeste Napier, PhD, Rush University, Chicago, II, LIS	ections and

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 Effect of HIV/AIDS on enteric neuropathogenesis: role of enteric glia	11:00
	Dr. Amanda Persons, Rush University, Chicago, IL, USA Comorbidity of gut-brain pathology in rodent models of HIV/AIDS and drug abuse	11:20
	Meet the Mentors Luncheon	12:00
	SNIP Council Meeting	12:00
	Plenary Speaker 2 (Introduction by Marcus Kaul) Anne Bang, PhD, Sanford Burnham Medical Discovery Institute, USA Human Induced Pluripotent Stem Cell (hiPSC) Based Disease Models in Drug	2:00 pm g Discovery
	Symposium 3 Neurobiology of exercise in drug abuse and neurodegenerative diseases Chaired by: Adam Zajac, PhD, Academy of Physical Education, Katow Wendy J. Lynch, PhD, Univ. of Virginia, School of Medicin	
	Dr. Michael Jakowec, University of Southern California, USA Circuit specific neuroplasticity: a novel approach to treat degenerative brain of	2:40 lisorder
	Dr. Sonata Suk-yu Yau, Hong Kong Polytechnic University, China Tracking the antidepressant effects of physical exercise and its mechanisms	3:00
	Dr. Carmen Gomez-Cabrera, University of Valencia, Spain Physical exercise in the prevention and treatment of Alzheimer's disease	3:20
	Dr. Wendy J. Lynch, University of Virginia School of Medicine, USA Mechanisms for the efficacy of exercise as an intervention for drug addiction	3:40
End	Dr. Marta Skowronska, University of Miami School of Medicine and Academy of Physical Education, Katowice, Poland Methamphetamine and HIV-induced aberrant neurogenesis: protection by ex	4:00 ercise 4:20
	Poster Session 2/Reception	5:00-8:00
Friday	April 8, 2016 Start time Symposium 4	7:45am
	Local Host Symposium, Institute of Pharmacology, Polish Academy of Science Chaired by: Marta Kubera, PhD, Institute of Pharmacology, PAS Wladyslaw Lason, PhD, Institute of Pharmacology, PAS	ces
	Dr. Janusz Marcinkiewicz Myeloperoxidase – a halide system in innate immunity. A role of taurine.	7:45
	Dr. Bożena Kamińska Microglia plasticity - molecular characteristics of different phenotypes in neuro	8:00 pathologies
	Dr. Joanna Mika	8:15

	Dr. Rafał Olszanecki Pharmacological activation of mitochondrial aldehyde dehydrogenase (ALI in animal models of depression and neurodegeneration – summary of the behavioral, biochemical and proteomic data.	8:30 DH2)
	Dr. Michał Korostyński Regulation of GR-dependent genes in the brain in response to psychotropi	8:45 c drugs
	Dr. Anna Sadakierska-Chudy Hippocampal DNA methylation in rat cocaine self-administration model.	9:00
Break		9:15
	Plenary Speaker 3 (Introduction by M. Ceclia Marcondes) Sieghart Sopper, PhD, University of Innsbruck, Austria Microglia activation and neurotransmitter disturbances in the SIV/macaque for AIDS	9:30 model
	Special Symposium Joint Session of SIF/SNIP – Boxed lunch provided Chaired by: Marco Cosentino, PhD, University of Insubria, Italy Madhavan Nair, PhD, Florida International University, M Questions held until final speaker.	
	Dr. Marco Cosentino, University of Insubria, Varese, Italy Dopamine at the crossroad of neural, immune and infectious disease	10:15
	Dr. Salvatore Cuzzocrea, University of Messina, Messina, Italy Neuroinflammation in the pathogenesis of CNS diseases: a new tool for the search of novel therapeutic approaches	10:30 e
	Dr. Carlo Riccardi, University of Perugia, Perugia, Italy Role of Glucocorticoid Induced Leucine Zipper (GILZ) in mediating the anti inflammatory effect of glucocorticoids	10:45
	Dr. Paola Sacerdote, University of Milan, Milan, Italy Short and long term effects of delta-9-Tetrahydrocannabinnol on cytokines adult and adolescent mice	11:00 in
	Dr. Madhavan Nair, Florida International University, USA Getting in to the brain: Potential of Nanotechnology to cure Neuro-AIDS and Drug Addiction	11:15
	Dr. Mahendra Kumar, University of Miami, USA CVD Risk in cocaine Abusing HIV infected individualsPreliminary Finding	11:30 js
	Dr. Bruno Conti, Scripps Research Institute, CA, USA Neuroimmunology of Interleukin 13	11:45
Pane	. ,	:00-12:15

Importance of microglial activation in neuropathic pain.

(Box lunch provided to allow afternoon free, pick up 12:15)

	Symposium 6 Astrocyte-neuron interaction: metabolism, ion homeostasis and impulse proportion interaction: professor Jan Albrecht, Warsaw, Poland Professor Magdalena Zielinska, Warsaw, Poland	agation
	Dr. Israel Sekler, Ben Gurion University, Israel Role of the mitochondrial Na+\Ca2+ exchanger NCLX in glial physiology	12:30
	Dr. Christine Rose, Heinrich Heine University, Germany Sodium signalling in neurons and glial cells of the CNS	12:50
	Dr. Farrukh A. Chaudhry, University of Oslo, Norway Glu transporters as tools in astrocytic-neuronal communication	1:10
End	Dr. Magdalena Zielińska, Polish Academy of Sciences, Warszawa, Poland Arginine in astrocytic-neuronal interaction Afternoon <i>free</i>	1:30
lay	<u>April 9, 2016</u>	
	Dr. Bill Narayan Memorial Lecture : (<i>Introduction by Sanjay Maggirwar</i>) Howard Gendelman, MD, Univ of Nebraska Med Center, USA Neuroimmune transformation in Parkinson's disease	7:45am
	Special Lecture Dr. Pekka Kallunki, Principle Scientist, H. Lundbeck A/S, Denmark Passive vaccination therapy for alpha-synucleinopathies	8:25
	End Symposium 7 Glial cells in neurodegeneration Chaired by: Alexei Verkhratsky, MD, PhD, DSc, University of Mancheste	8:40 er, England
	Dr. Mami Noda, Kyushu University, Japan Glia-endocrine system and neurodegeneration	8:45
	Dr. Agneta Nordberg, Karolinska Institute, Sweden Early astrocytosis in presymptomatic Alzheimer's disease	9:05
	Dr. Arthur Butt, University of Portsmouth, England White matter in neurodegeneration	9:25
	Dr. Balasz Gulyash, Nanyang Technological University, Singapore Molecular imaging studies on small animal disease models of neuroinflamma	9:45 tion
	Dr. Robert Zorec, University of Ljubljana, Slovenia Vesicular trafficking in astrocytes in the neurodegeneration	10:05
Break		10:25
	Early Career Investigator Session Chaired by: Marisela Agudelo, PhD, Florida International University, US	10:40 SA

Saturday

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) Endogenuosly 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 Rodríguez-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	Rafal 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.

- Divya P, Gnanadhas, PhD, Univ. of Nebraska Med. Ctr. (Drs. Gendelman and Gorantla) URMC-099 facilitates nanoART mediated HIV-1 clearance in monocytemacrophages.
 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 ASSIGMENTS

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., BS², 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.¹; Institute 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

<u>Chamera, K., MS</u>¹, 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

<u>Chomik, Aleksandra</u>¹, Podlacha, Magdalena¹, Majkutewicz, Irena¹, Wrona, Danuta¹; Department 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

<u>Chwiej, Monika</u>¹, Podlacha, Magdalena¹, Laska, Ewa¹, Wrona, Danuta¹; ¹Departament 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, Regulska, M, Ph.D.¹, Kurek, A, MS¹, Detka, J, MS¹, Korzeniak, B¹, 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, Vecsernyes, M, Ph.D.², Matyus, P, Ph.D.³, Deli, MA, MD, Ph.D.¹; Biological Research Centre, Institute of Biophysics, Szeged, Csongrad, 6726 Hungary. University of Debrecen, Institute of Pharmaceutical Technology, Debrecen, Hajdu-Bihar, 4032 Hungary. Semmelweis 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.

W.15. Difficult neurological complication in HIV-infected young woman

<u>lanache, I.C., MS</u>¹, Oprea, A.C., MD, Ph.D.¹; ¹"Victor Babes" Clinical Hospital for Infectious and Tropical Diseaseases, 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.³, Poluektova, LY, Ph.D.³, Schifitto, G, MD², Maggirwar, 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; Center 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

<u>Kurek, A</u>¹, Kucharczyk, M¹, Detka, J¹, Glombik, K, Ph.D.¹, Trojan, E¹, Ludwikowska, A, Ph.D.¹, Cuzytek, 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

<u>Lamboy, R</u>¹, 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

<u>Lapierre, J, MS</u>¹, Vinerean, H¹, Rodriquez, 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 Alzheimer's Disease model

<u>Laska, Ewa</u>¹, 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

<u>Liu, H</u>¹, 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 Macagues

<u>Liu, Jinbiao, MS</u>¹, Li, Jieliang, Ph.D.², Zhuang, Ke, Ph.D.¹, Wang, Xu, Ph.D.², Xian, Qiaoyang, MS¹, Wang, Yong, BS¹, Liu, Hang, MS¹, Zhou, Runhong, MS¹, Zhou, Li, Ph.D.¹, Ma, Tongcui, MS¹, Sun, Li, MS¹, Li, Xiangdong, MS¹, Guo, Deyin, 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?

<u>Ludyga, T.M., MS</u>¹, 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)

<u>Lutton, EM</u>¹, Razmpour, R¹, 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. ²Institute 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

<u>Martinez-Orengo, N, BS</u>¹, 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., BS¹, Booze, R.M., Ph.D.¹, Moran, L.M., Ph.D.¹, Li, H., MD, Ph.D.¹, Mactutus, C.F., Ph.D.¹; Program in Behavioral Neuroscience, Department of Psychology, University of South Carolina, Columbia, SC, 29208 United States.

W29. HIV-1 Tat regulates dopamine neurotranmission

Miller, DR, BS¹, Streit, S, BS¹, Saha, K, Ph.D.¹, Koutzoumis, D, BS¹, 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, Nieoczym, DN², Fichna, JF¹, Wlaz, PW²; ¹Department of Biochemistry, Medical University of Lodz, Lodz, 20-419 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., BS¹, Black, M., BS¹, 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

Nooka, S, MS¹, Ghorpade, A, Ph.D.¹; ¹Cell 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; ¹Department of Pharmacology & Toxicology, University of Missouri Kansas City, Kansas city, MO, 64108 United States.

W34. Examination of illicit drug 5-Methoxy-N,N-diisopropyltryptamine, 5-MeO-DIPT actions in the rat brain.

Noworyta-Sokolowska, K., MS¹, Golembiowska, K., Ph.D.¹; ¹Department 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.

<u>Parira, T, MS</u>¹, Figueroa, G, BS¹, Casteleiro, G¹, Laverde, A¹, Yndart, A, BS¹, Muñoz, 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

<u>Pinoli, M, BS</u>¹, Rasini, E, BS¹, Legnaro, M, BS¹, De Eguileor, M, BS², Pulze, L, Ph.D.², Cosentino, M, MD, Ph.D.¹, Marino, F, BS¹; ¹Center 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

<u>Piotrowska, Anna</u>¹, Starnowska, Joanna¹, Makuch, Wioletta¹, Mika, Joanna¹, Przewlocka, Barbara¹; ¹Department 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

<u>Podlacha, M.</u>¹, Wrona, D.¹; ¹Department 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, WL.¹, Yuan, Y.², Midde, N.M.¹, Huang, X.², Zhan, CG.², Zhu, J.¹; 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, MS¹, Cruz, M, BS¹, Isidro, R, BS¹, Loucil, R, Ph.D.¹, Noel, R, Ph.D.¹, Rivera-Amill, V, Ph.D.¹; Ponce Research Institute, Ponce Health Science University, Ponce, PR, 00732 United States.

W42. Tetrahydrocannabinol (THC)-mediated suppression of human plasmacytoid dendritic cell and monocyte maturation

<u>Rizzo, M.D., BS</u>¹, Henriquez, J.E., MS¹, Crawford, R.B., BS¹, Kaminski, N.E., Ph.D.¹; ¹Institute for Integrative Toxicology, Michigan State University, East Lansing, MI, 48824 United States.

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; Ponce 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

<u>Starnowska</u>, J¹, Guillemyn, 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 associate 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.¹, 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; Department of Microbiology and Immunology, Institute for Molecular Medicine and Infectious Disease, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. Department of Biostatistics and Epidemiology, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania School of Medicine, Philadelphia, PA, 19104 United States. B-Tech Consulting, LTD, B-Tech Consulting, LTD, Philadelphia, PA, 19130 United States. 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

<u>Thaney, V, BS</u>¹, 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

<u>Tiwari, S, MS</u>¹, 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

<u>Trojan, E, MS</u>¹, 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

<u>Veilleux, Courtney</u>¹, 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; Department of Microbiology-Neurovirology, School of Medicine- University of Puerto Rico Medical Sciences Campus, San Juan, PR, 00935 United States. Department 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, Avdoshina, V, MD, Ph.D.¹, Bachis, A, Ph.D.¹, Mocchetti, I, Ph.D.¹; Laboratory of Preclinical Neurobiology, Georgetown University, Washington, DC, 20057 United States. Nanomedicine, Houston Methodist Research Institute, Houston, TX, 77030 United States.

W55. The role of microRNAs from microglia-derived extracellular vesicles during methamphetamine

<u>Fernandes, N, MS</u>¹, Potula, R, Ph.D.¹; ¹1Department 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; Department of Pathology and Laboratory Medicine, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. School 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; Pharmacology 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

<u>Agudelo, M, Ph.D.</u>¹, Figueroa, G, BS¹, 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, VelÃ_izquez, B., BS², Noel, R., Ph.D.²; ¹Microbiology and Immunology Department, Universidad Central del Caribe, BayamÃ³n, 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, IE¹, Leda, A¹, Garcia 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, 33136 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. ², The 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; Biochemistry and Molecular Biology, University of Miami, Miami, FL, 33136 United States.
- T7. Coriolus versicolor's Polysaccharide Peptide Activates the Immune Response and inhibits HIV-1 replication

<u>Boukli, Nawal, Ph.D.</u>¹, RodrÃguez, M, MS¹, López, S, MS¹, Rivera, M, MS¹, RodrÃguez, M, MS¹, Cubano, L, Ph.D.¹, RÃos, 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 Medcial 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

<u>Cisneros, IE, Ph.D.</u>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.

<u>Datta, PK, Ph.D.</u>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

<u>Dhillon, ND, Ph.D.</u>¹, Dalvi, 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)

<u>Frammartino, T, MD, Ph.D.</u>¹, Cimino, M, MD, Ph.D.¹, Sorcini, D, MD, Ph.D.¹, Biagioli, M, MD, Ph.D.¹, Bruscoli, S, MD, Ph.D.¹, Bereshchenko, O, MD, Ph.D.¹, Riccardi, C, MD, Ph.D.¹; Department of Medicine, Section of Pharmacology, University of Perugia, Perugia, Perugia, 06100 Italy.

T14. Expression of dopaminergic receptors on human monocytes and peripheral blood dendritic cells <u>Gaiazzi, MG, MD</u>¹, Rasini, ER, BS¹, Marino, FM, BS¹, Zaffaroni, MZ, MD², Cosentino, MC, MD, Ph.D.¹; ¹Center of Research in Medical Pharmacology, University of Insubria, Varese, VA, 21100 Italy. ²Multiple Sclerosis Center, S. Antonio Abate Hospital, Gallarate, VA, 21013 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, BS², Velez, JG, BS², Ayala, G, BS², De Jesus, E, BS¹, Marrero, L, BS¹, Flores, M, BS¹, Wojna, V, MD³; 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. ³Neurology Division, University of Puerto Rico, Medical Sciences Campus, San Juan, PR, 00936 Puerto Rico.

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, MS¹, Slusarczyk, J, MS¹, Basta-Kaim, A, Ph.D.¹; Department Of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Sciences, Cracow, Malopolskie, 31-343 Poland. Chair 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 monocytemacrophages

Gnanadhas, Divya Prak, Ph.D.¹, Dash, Prasanta K, Ph.D.¹, Lin, Zhiyi, MS¹, Puccini, Jenna M, Ph.D.², Gelbard, Harris A, MD, Ph.D.², Gendelman, Howard E, MD¹, 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

<u>Grygier, B., Ph.D.</u>¹, Majchrzak-Gorecka, M., MS¹, 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

<u>Guo, M, Ph.D.</u>¹, Periyasamy, P, Ph.D.¹, Callen, S¹, 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, BS¹, Wang, Hui, BS¹, 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, BS¹, Bella, R, MS², Hu, W, MD, Ph.D.¹, Khalili, K, Ph.D.¹; Department 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, Milan, 2100 Italy.

T22. Increased social interactions in rats fed with a high fat ketogenic diet

<u>Kasprowska, D., Ph.D.</u>¹, Likiewicz, A.D., Ph.D.², Sugocka, A., MS³, 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,

Silesia, 40-752 Poland. ³Center of Experimental Medicine, Medical University of Silesia, Katowice, Silesia, 40-752 Poland.

T23. CNS delivery of magneto-electro nanoparticles in non-human primates

<u>Kaushik, A, Ph.D.</u>¹; ¹Center 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, BS¹, Campbell, M, Ph.D.¹; ¹Smurfit 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, MS¹, Fazakas, C, Ph.D.¹, Haskó, J, MS¹, Kozma, M, BS¹, Nagy szi, P, Ph.D.¹, Nyðl-Tóth, A, MS¹; ¹Biological 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, Grygier, B, Ph.D.¹, Wrona, D, Ph.D.⁴, Roman, A, Ph.D.², Gruca, P, MS³, Papp, M, Ph.D.³, Leskiewicz, M, Ph.D.¹, Budziszewska, B, Ph.D.¹, Basta-Kaim, A, Ph.D.¹, Regulska, M, Ph.D.¹, Korzeniak, B¹, Curzytek, K, MS¹, Maes, M, MD, Ph.D.⁵, Lason, W, Ph.D.¹; ¹Department of Experimental Neuroendocrinology, Institute of Pharmacology Polish Academy of Sciences, Krakow, Maloposkie, 31-343 Poland. ²Department of Brain Biochemistry, Institute of Pharmacology Polish Academy of Sciences, Krakow, Malopolskie, 31-343 Poland. ³Laboratory of Behavioral Pharmacology, Institute of Pharmacology Polish Academy of Sciences, Krakow, Malopolskie, 31-343 Poland. ⁴Department of Animal and Human Physiology, University of Gdansk, Gdansk, Pomorskie, 80-308 Poland. ⁵Department 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

<u>Kumar, S, Ph.D.</u>¹, Narasimha, M, MS¹, Rahman, MA, MS¹; ¹Pharmaceutical 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, BS¹, Wang, X, Ph.D.¹, Ma, T-C, MS³, Ho, W-Z, MD, M.Ph.²; ¹Department of Pathology and Laboratory Medicine, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. ²Center for Substance Abuse Research, Temple University Lewis Katz School of Medicine, Philadelphia, PA, 19140 United States. ³Animal 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

<u>Liu, J, MD, Ph.D.</u>¹, Liu, H, MS¹, Xu, E, MS¹, Xiong, H, MD, Ph.D.¹; ¹Department 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; ¹Public 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, N¹, Boraso, M, Ph.D.¹, Galli, CL, Ph.D.¹, Marinovich, M, Ph.D.¹, Viviani, B, Ph.D.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.¹, Najera, JA, Ph.D.¹, Bustamante, EA, MD¹, Bortell, N, BS¹, Morsey, B, Ph.D.², Fox, HS, MD, Ph.D.², Ravasi, T, Ph.D.³, Marcondes, MC, Ph.D.¹; Molecular and Cellular Neurosciences Department, The Scripps Research Institute, La Jolla, CA, 92037 United States. Department of Pharmacology and Experimental Neuroscience, university of Nebraska Mediical Center, Omaha, NE, 68198 United States. Division 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, R¹, Rodriguez-Benitez, R², Gonzalez, C¹, Matos, M¹, Noel, RJ³, Wojna, V¹; 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, Wigdahl, B, Ph.D., Department of Microbiology and Immunology, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. Center for Molecular Virology and Translational Neuroscience, Institute for Molecular Medicine and Infectious Disease, Drexel University College of Medicine, Philadelphia, PA, 19102 United States. School 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 conditionNowacka-Chmielewska, M, Ph.D.¹, Paul-Samojedny, M, Ph.D.², Bielecka, AM, Ph.D.³, Obuchowicz, A, Ph.D.³;
Laboratory of Molecular Biology/Faculty of Physiotherapy, The Jerzy Kukuczka Academy of Physical Education in Katowice, Katowice, Woj. Slaskie, 40-065 Poland. Center For Experimental Medicine, 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.¹, Nowacka, MM, Ph.D.², Paul-Samojedny, M, Ph.D.³, Bielecka-Wajdman, AM, Ph.D.¹; Department of Pharmacology, School of Medicine in Katowice, Medical University of Sielsia, 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

<u>Pandey, R, Ph.D.</u>¹, Gorpade, A, Ph.D.¹; 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, MD¹, Magnum, C¹, Aalinkeel, R, Ph.D.¹, Reynolds, JL, Ph.D.¹, Sykes, DE, Ph.D.¹, Mammen, M, MD¹, Schwartz, SA, MD, Ph.D.¹, Mahajan, SD, Ph.D.¹; Department 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.¹, Reichenbach, N, BS¹, Zuluaga-Ramirez, V¹, Rom, S, Ph.D.¹, Jordan-Sciutto, K, Ph.D.²; Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine, Temple University,

Philadelphia, PA, 19140 United States. ²Department of Pathology, School of Dental Medicine University of Pennsylvania, Philadelphia, PA, 19147 United States.

T40. PARP inhibition in leukocytes diminishes inflammation via effects on integrins/cytoskeleton and protects the blood brain barrier

Persidsky, Y, MD, Ph.D.¹, Reichenbach, N, BS¹, Zuluaga-Ramirez, V¹, Dykstra, H, BS¹, Gajghate, S, MS¹, Rom, S, Ph.D.¹; Department 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.¹, Bielecka-Wajdman, A.M., Ph.D.¹, Orchel, J.J., Ph.D.², Obuchowicz, E.M., MD, M.Ph.¹; Department of Pharmacology, School of Medicine in Katowice, Medical University of Silesia, Katowice, Silesian, 40-055 Poland. Department of Molecular Biology, Faculty of Pharmacy in Sosnowiec, Medical University of Silesia, Katowice, Silesian, 40-055 Poland.

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

Rodriguez, M, Ph.D.¹, Lapierre, J, MS¹, Estrada, H, BS¹, Dever, S, Ph.D.¹, Madhavan, N, Ph.D.¹, El-Hage, N, Ph.D.¹; Department 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

<u>Sagar, Vidya, Ph.D.</u>¹, Martinez, Paola C.¹, Atluri, Venkata Su, Ph.D.¹, Pilakka-Kanthikeel, Sudheesh, Ph.D.¹, Nair, Madhavan, Ph.D.¹; Institute 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

Sanchez, A.B., Ph.D.¹, Varano, G.P., Ph.D.¹, de Rozieres, C.M.¹, Maung, R.¹, Catalan, I.C.¹, Dowling, C.C.¹, Sejbuk, N.E¹, Hoefer, M.M., Ph.D.¹, Kaul, M., Ph.D.¹; Infectious and Inflammatory Disease Center, Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, 92037 United States.

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

Singh, MV, Ph.D.¹, Singh, VB, Ph.D.¹, Jackson, JW, Ph.D.¹, Kobie, JJ, Ph.D.¹, Bidlack, JM, Ph.D.¹, Schifitto, G, MD¹, Maggirwar, SB, Ph.D.¹; 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

Sun, W.L., Ph.D.¹, Quizon, P.M., BS¹, Ananthan, S., Ph.D.², Zhang, W., Ph.D.³, Zhan, C.G., Ph.D.³, Zhu, J., MD, Ph.D.¹; Department of Drug Discovery and Biomedical Sciences/South Carolina College of Pharmacy, University of South Carolina, Columbia, Columbia, SC, 29208 United States. Department of organic Chemistry, Southern Research Institute, Birmingham, AL, 35255 United States. Molecular Modeling and Biopharmaceutical Center and Department of Pharmaceutical Sciences/College of Pharmacy, University of Kentucky, Lexington, KY, 40536 United States.

T47. Neuron-astrocyte interaction in the pathogenesis of HIV-1/AIDS-Associated Neuropathic Pain Tang, SJ, Ph.D.¹, Liu, X, Ph.D.¹, Yuan, S, MD, Ph.D.¹, Shi, Y, Ph.D.¹; Department 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

<u>Unwalla, Hoshang, Ph.D.</u>¹, Chinnapaiyan, S, Ph.D.¹, Periera, T, BS¹, Agudelo, M, Ph.D.¹, Morris, A, MD²; ¹Herbert Wertheim College of medicine, Department of Immunology, Florida International University, Miami, FL, 33199

United States. ²Division of Pulmonary, Allergy and Critical care, University of Pittsburgh Medical Center, Pittsburgh, PA, 15213 United States.

T49. Nanocomposite hydrogels for neuro drug delivery

Vashist, Arti, Ph.D.¹, Ghosal, Anujit, Ph.D.², Gupta, Y.K., MD³, Ahmad, Sharif, Ph.D.², Nair, Madhavan, Ph.D.¹; Center for Personalized Nanomedicine, Institute of Neuro immune Pharmacology, Department of Immunology, Herbert Wertheim 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, MS¹, 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, Y¹, Li, Y¹, Huang, Y¹, Zheng, J¹; 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

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T53. Occludin-AMPK interplay regulate pericyte metabolism

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T54. Differential neurotoxicity induced by HIV protease inhibitors in vitro

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T55. Neuroprotective effects of FK506 in a model of HIV1-gp120 neurotoxicity

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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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