Society on Neurolmmune Pharmacology (SNIP)



21st Scientific Conference

Hyatt Regency, Miami, FL April 22-25, 2015

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 Hotel New Orleans, New Orleans, LA

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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 21st SNIP Scientific Conference in Miami, Florida. The scientific program and symposia were developed by the Meetings Committee and Symposia Chairs. Other aspects of the conference agenda were organized by the Executive Committee and local team. Special thanks go to the local SNIP-member hosts, Dr. Madhavan Nair, Dr. Michal Toborek, and Ms. Karla Munoz who were involved in every step of the planning and coordination of the meeting. We also recognize Mr. Jason Cross for his efforts in support of the 21st SNIP Conference.

Sponsors and Contributors

The Society on NeuroImmune Pharmacology (SNIP) sincerely thanks following sponsors who have generously contributed to different activities during 21st Society of NeuroImmune Pharmacology Meeting.

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Institute of Neuroimmune Pharmacology, Herbert Wertheim College of Medicine, Florida International University

\$5000

Graduate trainee associated expenses, support for Early Career Investigator lunch

Society for Personalized Nanomedicine (SPNM), 820 Tangier Street, Coral Gables Florida

\$ 500

General meeting support

University of North Dakota School of Medicine and Health Sciences Joshua Wynne, MD, MBA, MPH

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\$2500

Sponsorship of Symposium 5 – Aging and Alzheimer's in the HIV-1 Infected Population

Ponce Research Institute, Ponce Health Sciences University Kenira Thompson, PhD, President of Ponce Research Institute

\$3000

Sponsorship of Symposium 2 - Neurodegenerative Responses to Viral Infections & Therapeutics

*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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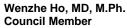
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Annual Society Awards

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 2015

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 2015 SNIP Scientific Conference, a total of 59 abstracts were submitted. Of which 34 graduate students and 17 post-doctorate fellows were awarded. The ECITA awards were made in 4 categories: \$750+registration waiver, \$500+registration waiver, only registration waiver, and "certificate of excellence". The certificate of excellence was given to the 3rd candidate of the same PI. In addition, the top 3 from each graduate student and post-doctorate fellow categories were selected for symposium presentation. It is worth noting that this is the highest number of awards given to Early Career Investigators, which suggests a growing trend of the society. The ECITA committee thanks the SNIP leadership for this.

ECITA Awardees*	Mentor	University
Pre-doctoral Addai, AB Ande, A Bertrand, SJ Cai, Y Cao, L Cisneros, IE Cranston, MC Elliott, DM Fernandes, N Gangwani, MR	Dash, CV Kumar, S Booze, RM Buch, S Kumar, A Ghorpade, A Booze, RM Nagarkatti, M Potula, R Kumar, A	Meharry Medical College, TN University of Missouri-Kansas City University of South Carolina-Columbia University of Nebraska-Medical center University of Missouri-Kansas City Univ. of North Texas-Health Sciences Center University of South Carolina-Columbia University of South Carolina-Columbia Temple University School of Medicine University of Missouri-Kansas City
Ginwala, R Harrison, EB Hill, JD Jaureguiberry-Bravo Jones, ME Kadri, F Li, W Lopez, SN Ma, TC Martínez-Orengo, N	Jain, P Fox, H Persidsky, Y Berman, JW Lysle, DT Peruzzi, F Gendelman, HE Boukli, NM Ho, WZ Noel, R	Drexel University College of Medicine University of Nebraska-Medical center Temple University School of Medicine Albert Einstein College of Medicine University of North Carolina-Chapel Hill Virginia Commonwealth University University of Nebraska-Medical center Universidad Central del Caribe Temple University School of Medicine Ponce Health Sciences University
Maubert, ME McTish, E Merkel, SF Nash, BS Nookala, A Rodriguez-Valentin, M Rozzi, SJ Sagar, D Sido, JM	Nonnemacher, MR Jain, P Ramirez, SH Meucci, O Kumar, A Boukli, NM Mocchetti, I Jain, P Nagarkatti, M	Drexel University College of Medicine Drexel University College of Medicine Temple University School of Medicine Drexel University College of Medicine University of Missouri-Kansas City Universidad Central del Caribe Georgetown University Drexel university college of medicine University of South Carolina-Columbia

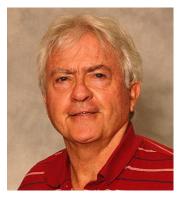
Sullivan, NT	Wigdahl, B	Drexel university college of medicine
Wang, F	Roy, S	University of Minnesota
Wang, Y	Zheng, J	University of Nebraska-Medical center
Wu, B	Zheng, J	University of Nebraska-Medical center
Xu, E	Xiong, H	University of Nebraska-Medical center

ECITA Awardees*	Mentor	University
Post-doctoral		
Andrews, AM	Ramirez, SH	Temple University School of Medicine
Bam, M	Nagarkatti, M	University of South Carolina
Dalvi, P	Dhillon, NK	University of Kansas Medical center
Dave, S	Hu, XT	Rush university Medical center
Hui, L	Geiger, JD	University of North Dakota
Jayant, RD	Nair, M	Florida International University
Meng, J	Roy, S	University of Minnesota, St. Paul
Midde, NM	Kumar, S	University of Tennessee Health Science Center
Moidunny, S	Roy, S	University of Minnesota, St. Paul
Moran, LM	Booze/Mactutus	University of South Carolina
Pandey, RP	Ghorpade, A	Univ. of North Texas-Health Science Center
Periyasamy, P	Buch, S	University of Nebraska-Medical center
Rao, PSS	Kumar, S	University of Tennessee Health Science Center
Shah, A	Kumar, A	University of Missouri-Kansas City
Sharma, U	Roy, S	University of Minnesota, St. Paul
Soliman, ML	Chen, X	University of North Dakota
Zhou, Y	Ho, WZ	Temple University School of Medicine

The SNIP recognizes the service of ECITA committee members (Drs. Kumar (Chair), Nonnemacher, Rivera, Datta, Haorah, Thangavel, Ramirez, Booze, Wang, Tang, Royal, Meléndez, Jain, Khan, Lan, Richards, Singh, Agudelo, Dash, Silverstein, Amedee, and El-Hage), and thanks them for their wonderful job in reviewing the ECITA applications.

*ECITA Awardees are expected to attend all sessions of the conference.

BILL NARAYAN LECTURE



Barry T. Rouse, PhD, DSc is a Distinguished Professor in Biomedical and Diagnostic Sciences at the University of Tennessee. Dr. Rouse's research in the field of infectious disease has focused on viral immunology and immunopathology with a major emphasis on herpes simplex virus (HSV) infection in mice. In addition to devising successful vaccines, much of his his work is directed at determining how HSV causes damage in critical tissues such as the eye and nervous system. His work host innate and adaptive immune mechanisms, particularly the T cells responsible for immunity as well as those involved in orchestrating tissue damage have led to breakthroughs in defining the role of several subtypes of proinflammatory T cells as well as numerous cytokines and chemokines. His group was the first to show a role of regulatory T cells (Treg) in the host response to a virus infection, including demonstration that

Treg responses could act to inhibit the efficiency of immunity, but that Treg were valuable to modulate the severity of immunopathological responses, such as those that occur in the corneal stroma after HSV infection of the eye. For over 30 years, his group has has studied the important blinding lesion herpes stromal keratitis (SK) and shown how multiple events set off by ocular HSV infection culminate in SK. He has trained over 50 graduate students and post-doctoral fellows and published greater than 400 articles.

PLENARY LECTURERS



Thomas J. Hope, PhD is a Professor in Cellular and Molecular Biology in the Feinberg School of Medicine at Northwestern University. For more than a decade his laboratory has studied various aspects of HIV science taking a cell biology approach. The centerpiece of the approach is microscopic imaging, which provides important information relating to context and dynamics of biological functions. To study HIV, the Hope lab has developed a series of techniques and tools that allow the fluorescent labeling of HIV particles or viral proteins and the identification of infected cells. They can now follow virions and infected cells from the tissue culture dish to whole animal models. His group has used this cell biology approach, supplemented with molecular biology, biochemistry, and genetics to study various aspects of HIV from virus entry and assembly, to defining the earliest steps of the sexual transmission of HIV. The studies to define the mechanisms of transmission have recently redirected a large aspect of the lab to HIV prevention science,

including vaccine and microbicide research.



Glen R. Hanson, DDS, PhD is a Professor of Pharmacology and Toxicology in the Interdepartmental Program in Neuroscience at the University of Utah. Dr. Hanson conducts research concerning the relationship between CNS transmitter systems such as the monoamines (e.g., dopamine and serotonin), neuropeptides (e.g., neurotensin, substance P, dynorphin, and enkephalins) and the amino acid (e.g., glutamate and GABA) transmitters. His research particularly focuses on the areas of the brain involved in addiction, goal seeking, compulsive behavior, the control of mental states, and locomotion. This research helps elucidate the cause, consequences and treatment of substance abuse, psychiatric disorders and CNS

degenerative diseases. In his studies he investigates psychoactive drugs such as the amphetamines, cocaine, nicotine, the antidepressants and the antipsychotic agents to help elucidate these transmitter interactions. A variety of analytical procedures are routinely employed in Dr. Hanson's laboratory including: radioimmunoassays (RIA); radioenzymatic assays; in situ hybridization for analysis of mRNA expression; receptor binding techniques; transporter activity assays; microdialysis for measuring transmitter release; and behavioral analysis employing self-administration and operant training strategies in rats.

CONFERENCE AGENDA

21st Annual Scientific Converence April 22-25, 2015

weanesaay	<u>Aprii 22, 2015</u>	
SNIP con	nmittee meetings by arrangement with chairs	8am-3pm
Registrati	ion opens	3:00pm

Opening Reception and

Poster Session 1 Pre-doctoral Poster Session 5-8pm

Location: UPPER AND LOWER PROMENADE

List of Wednesday Poster Assignments Starts on Page 15.

Thursday April 23, 2015

Continental Breakfast, Riverfront South – Lobby Level 7:00-8:00

Location: JASMINE/HIBISCUS

Welcome	7:55	
Anil Kumar, PhD, University of Missouri-Kansas City (SNIP President)		
Bill Narayan Lecture		
Barry T. Rouse, PhD, DSc, University of Tennessee Immunity or Tissue Damage to Virus Infections: Can We Exploit What We Know? (Introduction by Howard Fox, MD, PhD)		
Presidential Symposium	9:00	
HIV Eradication and Cure		
Chairs: Dr. Anil Kumar, University of Missouri-Kansas City Dr. Michal Toborek, University of Miami, Miller School of Medicine		
Mario Stevenson, PhD, University of Miami, Miller School of Medicine Obstacles to HIV-1 Eradication	9:00	
Jacob Estes, PhD, Frederick National Laboratory Utilizing Nonhuman Primate Models and Novel in vivo Tools to Understand Viral Persistence During cART Break	9:25 9:50	
Tae-Wook Chun, PhD, NIH, NIAID		
HIV Reservoirs: Implications for Pathogenesis and Viral Eradication	10:05	
Susana Valente, PhD, Scripps Research Institute, Florida		
Targeting HIV-1 Latent Infection with a Potent Tat Inhibitor	10:30	
Michal Toborek, MD, PhD, University of Miami Miller School of Medicine HIV Trafficking into the Brain: The Blood-Brain Barrier Story	10:55	
Meet the Mentors Luncheon (Location: RIVERFRONT SOUTH - LOBBY LEVEL)		

11:20

SNIP Council Meeting (Location: *GARDENIA*)

Symposium 2	1:30		
Neurodegenerative Responses to Viral Infections and Therapeutics Chair: Vaness Rivera Amill, PhD, Ponce Health Sciences University			
David Mock, MD, University of Rochester Medical Center Human Herpesvirus-6 Latency Transcript U94 Disrupts Key Human Neural Progenitor Functions	1:30		
Monahan Valiya Veettil, PhD, Rosalind Franklin University Glutamate Secretion and Metabotropic Glutamate Receptor 1 Expression During			
Kaposi's Sarcoma-Associated Herpesvirus Infection Promotes Cell Proliferation Paul B. Fisher, PhD, Virginia Commonwealth University The Path to Novel Therapeutics for Neurodegeneration: Targeting the Excitatory	1:55		
Amino Acid Transporter-2 (EAAT2) Promoter to Regulate Glutamate Transport Vickram Ramkumar, PhD, Southern Illinois School of Medicine	2:20		
Targeting Cochlear Inflammation for the Treatment of Cisplatin-Induced Hearing Loss	2:45		
Break	3:10		
Symposium 3 SNIP Member Research Chairs: Raul Gonzalez, PhD, Florida International University Marcus Kaul, PhD, Sanford Burnham Medical Research Institute	3:30		
Vir B. Singh, PhD, University of Rochester Medical Center Sonic Hedgehog Signaling Confers Neuroprotection in HIV-1 Infected Humanized Mice	3:30		
Shaunglin Hao, PhD, University of Miami Miller School of Medicine HSV Vector-Mediated GAD67 Suppresses Neuropathic Pain Induced by HIV			
gp120 Combined with ddC Through Reducing ROS in Rats	3:50		
Tina Calderon, PhD, Albert Einstein College of Medicine Dopamine Increases CD14+CD16+ Monocyte Transmigration across the Blood Brain Barrier: Implications for Substance Abuse and HIV Neuropathogenesis	4:10		
Liana Asatryan, PhD, University of Southern California Potential Role of Purinergic P2X7 Receptors in the Progression of Alcohol Induced			
Brain and Liver Damage	4:30		
Maria Jose Miguez, MD, PhD, Florida International University Cytokines and Alcohol Use as Possible Underlying Biological Mechanisms Associated with Racial Disparities in Cognitive Status Among HIV Infected Individuals Receiving Antiretroviral Therapy	4:50		
Poster Session 2/Reception ECI Post-doc and General Session Location: UPPER AND LOWER PROMENADE 5:30-8pm			
List of Thursday Poster Assignments Starts on Page 19.			

Friday April 24, 2015 Continental Breakfast, Riverfront South - Lobby Level 7:00-8:00 Location: JASMINE/HIBISCUS Symposium 4 8:00 Therapeutic Challenges in HIV Infection and Drug Addiction Chairs: Madhavan Nair, PhD, FIU, Herbert Wertheim School of Medicine Savita Pahwa, MD, University of Miami Miller School of Medicine Savita Pahwa, MD, University of Miami Miller Schoolof Medicine Cocaine Abuse and HIV Infection-Double Trouble for the Immune System 8:10 Courtney Miller, PhD, Scripps Research Institute, Florida 8:35 Developing New Treatments to Prevent Relapse to Drug Use Rahul Jayant, PhD, Florida International University 9:00 Nanoengineered Sustained Drug Release to Eradicate HIV in CNS Wolfgang Streit, PhD, University of Florida College of Medicine Microglial Senescence in Normal and Pathological Aging 9:25 Rafick-Pierre Sekaly, PhD, Vaccine and Gene Therapy Institute of Florida Systems Approaches to Exploration of the Immune Response to Vaccines and Pathogens 9:50 **Break** 10:15 **Plenary Lecture** 10:30 Thomas Hope, PhD, Northwestern University Feinberg School of Medicine Characterization of the Earliest Events of Mucosal Transmission in Macague Models (Introduction by Anil Kumar, PhD) Early Career Investigator & Trainee Training session 11:30 Getting from Here to There: Making the transition from post-doc to assistant professor and beyond. Organized by: Maureen Richards, PhD, Rush University Peter J. Gaskill, PhD, Albert Einstein College of Medicine (bag lunch for participants) For all others, lunch on your own, return by 1pm. Symposium 5 1:00 Aging and Alzheimer's in the HIV-1 Infected Population Jonathan Geiger, PhD, University of North Dakota Chair: Ned Sacktor, MD Johns Hopkins 1:00 HIV-Associated Neurocognitive Disorders Among Older HIV+ Individuals Christian Achim, MD, PhD, University of California, San Diego 1:25 Brain Amyloid and HAND in the cART Era Xuesong Chen, PhD, University of North Dakota Endolysosome Involvement of HIV-1 Tat-Induced Neuronal Amyloid Beta Production 1:50 Kelly Jordan-Sciutto, PhD, University of Pennsylvania Mechanisms of Antiretroviral Drug-Induced Changes in Amyloid Precursor Protein Processing: Implications for HAND 2:15 End Afternoon free 2:40

Saturday April 25, 2015

Continental Breakfast, Riverfront South – Lobby Level

	Location: JASMINE/HIBISCUS	
Plenary Lo	ecture 2 Glen Hanson, DDS, PhD, University of Utah Broadening the Dimension of Methamphetamine Preclinical Studies (Introduction by Sanjay Maggirwar, PhD)	8:00
Symposiu	ım 6	8:55
	Stress at the Crossroads between Immune Function and Neuropsychiatric Dysfunction Chair: Gretchen Neigh, PhD, Emory University	on
	Bonnie Blomberg, PhD, University of Miami Miller School of Medicine Positive Effects of Cognitive Behavioral Stress Management on Immunity	8:55
Break	Jennifer Felger, PhD, Emory University Inflammatory Cytokine Effects on Neurotransmitters, Neurocircuits, and Behavior in Depression	9:20 9:45
Dican	Gretchen Neigh, PhD, Emory University	0.10
	Striking a Balance: Neural and Behavioral Implications of the Interplay of Stress and Immunity in Health and Disease	9:55
	Erick Tatro, PhD, University of California San Diego	
	Depressive Symptoms Point to New Therapeutic Targets in HIV Infection	10:20
	Leah Rubin, PhD, University of Illinois at Chicago Effects of Stress and Stress Hormones on Cognition and Brain Function in Women with HIV	10:45
	ymposium Early Career Investigator Session Chair: Santosh Kumar, PhD, University of Tennessee Health Science Center	11:10
	Anantha R. Nookala, B. Pharm., University of Missouri-Kansas City	
	HIV-1 Tat and Methamphetamine Mediated Synergistic Expression of IL-6 in Astrocytes Involves PI3KT/AKT and NFxB Signaling Pathways	11:15
	Fuyyan Wang, MPH, University of Minnesota Morphine Disrupts Gut Homeostasis and Induces Distinct Signatures of Gut Microbiome and Metabolome Partially Through the TLR2 Pathway	11:30
	Summer J. Rozzi, BA, Georgetown University HIV-1 Tat Induces Mitochondrial Dysfunction in Neurons	11:45
Po	st-doctoral	
	Yu Zhou, PhD, Temple University School of Medicine Exosomes Mediate Cell-to-Cell Transmission of TLR3-Induced Antiviral Activity and the Involvement of Micro RNAs	12:00
	Palsamy Periyasamy, PhD, University of Nebraska Medical Center Cocaine Induces Endoplasmic Reticulum Stress-Mediated Activation of Autophagy in	40.45
	Astrocytes: Implications for Astrogliosis	12:15
	PSS Rao, PhD, University of Tennessee Health Science Center Chronic Effects of Alcohol and/or Antiretroviral Drugs on Monocytes/Macrophages: Potential Role of Cytochrome P450, Efflux Transporter, and Antioxidant Enzymes	12:30

7:00-8:00

SNIP Business Meeting (bag lunch for Regular SNIP members) For all others, lunch on your own, return by 2:30pm.	
Symposium 7	2:30
Innate Immunity and HIV/HCV co-infection Chairs: Johnny He, PhD, University of North Texas Health Science Center Mahendra Kumar, PhD, University of Miami Miller School of Medicine	
Andrea Cox, MD, PhD, Johns Hopkins School of Medicine HIV/HCV Co-infection: Pathogenesis and Treatment	2:30
April Thames, PhD, University of California Los Angeles Neuroimaging and Neurobehavioral Correlates of HIV/HCV Co-Infection	3:00
Wenzhe Ho, MD, MPH, Temple University Innate Immunity and HIV/HCV Co-Infection	3:20
Marianna Baum, PhD, Florida International University HIV/HCV Co-Infection and Substance Abuse	3:40
End	4:00
Banquet & Awards Ceremony	

Meeting Adjourned!

LIST OF POSTER ASSIGMENTS List in Alphabetical Order

WEDNESDAY, APRIL 22

- W1 ENHANCEMENT OF HIV-1 INTEGRATION IN CD4+ T CELLS BY COCAINE Addai, Amma, Pandhare, J, Ph.D., Dash, CV, Ph.D.
- W2 EFFECT OF METHAMPHETAMINE ON SPECTRAL BINDING AND LIGAND DOCKING OF ANTI-HIV DRUGS WITH CYP3A4 Ande, Anusha, BS, Nookala, Anantha Ra, BS, Kumar, Santosh, Ph.D., Kumar, Anil, Ph.D.
- W3 A POTENTIAL GUT MICROBIOME THERAPEUTIC APPROACH FOR HIV-1+ DRUG ABUSERS

 Bertrand, SJ, BS, Moran, LM, Ph.D., Harrod, SB, Ph.D., Mactutus, CF, Ph.D., Booze, RM, Ph.D.
- W4 MORPHINE INDUCES SYNAPTODENDRITIC IMPAIRMENT IN CULTURED HIPPOCAMPAL NEURONS: REVERSAL WITH PLATELET-DERIVED GROWTH FACTOR

 Cai, Yu, MD, Arikkath, Jyothi, Ph.D., Buch, Shilpa, Ph.D.
- W5 CATHEPSIN B AND SERUM AMYLOID P COMPONENT CONTRIBUTE TO HIV-INDUCED NEURONAL APOPTOSIS

 Cantres-Rosario, YM, BS, Hernandez, N, Negron, K, Plaud, M, MS, Melendez, LM, Ph.D.
- W6 EFFECT OF METHAMPHETAMINE AND HIV-1 GP120 ON AUTOPHAGY IN SVGA ASTROCYTES Cao, L, Kumar, S, Kumar, A
- W7 MARIJUANA UP-REGULATES HIV REPLICATION IN MICROGLIA-LIKE CELLS AND RESTRICTS EXNEF- MODULATION OF GLIA IMMUNE FUNCTION.

 Chevelon, S, BS, Diaz, P, Raymond, A, Ph.D., Yndart-Arias, A, BS, Agudelo, M, Ph.D., Nair, M, Ph.D.
- W8 METH-INDUCED, TAAR1-ASSOCIATED CREB SIGNALING SERVES AS A MASTER REGULATOR FOR ASTROCYTE EAAT-2
 Cisneros, IE, BS, Ghorpade, A, Ph.D.
- W9 GLUTHATIONE REDUCES LYSOSOMAL DISRUPTION IN HIV INFECTED MACROPHAGES Colon, K, BS, Cruz, E, Zenon, C, BS, Melendez, LM, Ph.D.
- W10 HIV-1 TG RAT: SELECTIVE ALTERATIONS IN LOCOMOTOR ACTIVITY IN THE OPEN FIELD VS. VOLUNTARY WHEEL RUNNING
 Cranston, MC, Booze, RM, Harrod, SB, Mactutus, CF
- W11 ASTROCYTIC HIV-1 NEF EXPRESSION CAUSES LEARNING IMPAIRMENT AND INFLAMMATION Cruz, M.L., BS, Cintrón, K, Isidro, R.A., BS, Hernández, S, BS, Maldonado, A, Isidro, A.A, MD, Noel, R.J., Ph.D.
- W12 MARIJUANA PROMOTES HIV REPLICATION IN GLIA CELLS BUT INHIBITS HIV-EXNEF MEDIATED NEUROPATHOLOGY
 Diaz, P, Chevelon, S, BS, Raymond, A, Ph.D., Yndart-Arias, A, BS, Agudelo, M, Ph.D., Nair, M, Ph.D.
- W13 MARIJUANA UPREGULATES HIV REPLICATION IN ASTROCYTES AND MODULATES HIV-EXNEF ASSOCIATED NEUROPATHOLOGY Diaz, P, Chevelon, S, BS, Raymond, A, Ph.D., Yndart-Arias, A, BS, Agudelo, M, Ph.D., Nair, M, Ph.D.
- W14 USING THE LIP SCARIFICATION MODEL TO STUDY HSV-1 REPLICATION KINETICS AND THE CD8+ T-CELL RESPONSE

 Egan, KPE, BS, Turner, PET, BS, Wigdahl, BW, Ph.D., Jennings, SRJ, Ph.D.

- W15 CANNABIDIOL-INDUCED MYELOID-DERIVED SUPPRESSOR CELLS AMELIORATE EXPERIMENTAL AUTOIMMUNE ENCEPHALOMYELITIS THROUGH MICRORNA REGULATION Elliott, DM, Nagarkatti, P, Ph.D., Nagarkatti, M, Ph.D.
- W16 THE ROLE OF P2X7R ANTAGONISM IN METH-INDUCED CPP Fernandes, N, BS, Potula, R, Ph.D.
- W17 SYNAPTODENDRITIC INJURY IN HAND: ROLE OF IL1-BETA MEDIATED INDUCTION OF THE PROTEIN FERRITIN HEAVY CHAIN IN CORTICAL NEURONS

 Festa, L, MS, Meucci, O, MD, Ph.D.
- W18 INTERFERON-GAMMA PRODUCING IMMUNE CELLS PLAY A ROLE DURING NEONATAL CENTRAL NERVOUS SYSTEM INFECTIONS

 Ganesan, PG, BS, O'Donnell, LOD, Ph.D.
- W19 METHAMPHETAMINE SYNERGISTICALLY INTERACTS WITH HIV-1 VPR IN THE INDUCTION OF IL-6 IN ASTROCYTES

 Gangwani, Mohitkumar, BS, Kumar, Anil, Ph.D.
- W20 PRE-CHIASMATIC SUBARACHNOID HEMORRHAGE LEADS TO TIGHT JUNCTIONS DISASSEMBLANCE IN ACUTE PHASE OF EARLY BRAIN INJURY

 Gendosz, D, MS, Debska, K, BS, Jedrzejowska-Szypulka, H, Ph.D., Lewin-Kowalik, J, MD, Ph.D.
- W21 POTENTIATING DENDRITIC CELLS TO TARGET HYPOXIC ENVIRONMENT OF BRAIN TUMOR Ginwala, R., MS, Sagar, D., MS, Betesh, L., MS, Huang, X., Ph.D., Foss, C., Ph.D., Karakashev, S., MS, Mehta, A., Ph.D., Philip, R., Ph.D., Pomper, M., MD, Ph.D., Reginato, M., Ph.D., Khan, Z.K., Ph.D., Jain, P., Ph.D.
- W22 DEVISING A GLYCOANTIGEN SPECIFIC DC IMMUNOTHERAPY TO DEVELOP AN EFFICIENT ANTI-TUMOR RESPONSE IN THE HYPOXIC ENVIRONMENT OF GLIOBLASTOMA.

 Ginwala, R., MS, Sagar, D., MS, Huang, X., Ph.D., Foss, C., Ph.D., Karakashev, S., MS, Khan, Z.K., Ph.D., Philip, R., Ph.D., Pomper, M., MD, Ph.D., Reginato, M., Ph.D., Jain, P., Ph.D.
- W23 HTLV-1 INFECTION AND T-CELL EXHAUSTION IN RAG1-/-γC-/- (RAG1) MOUSE MODEL Ginwala, R., MS, Sagar, D., MS, Akkina, R., Ph.D., Jacobson, S., Ph.D.
- W24 INFLAMMATION-ASSOCIATED MICRORNAS INCREASE IN HIPPOCAMPAL NEURONS IN A CONTROLLED CORTICAL IMPACT MOUSE MODEL OF TRAUMATIC BRAIN INJURY Harrison, E. B., Kelso, M. L., Fox, H. S.
- W25 EFFECTS OF CB2R/GPR55 AGONIST TREATMENT ON NEURAL PROGENITOR CELL IMMUNE RESPONSES TO CHRONIC INFLAMMATION

 Hill, JD, Zuluaga, V, Winfield, M, Persidsky, Y, MD, Ph.D.
- W26 PHYTOESTROGEN EQUOL PREVENTS HIV-1+COCAINE INDUCED SYNAPTODENDRITIC INJURY VIA ESTROGEN RECEPTOR BETA MEDIATED MECHANISM
 Hu, C, Bertrand, SJ, BS, Askenova, MV, Ph.D., Mactutus, CF, Ph.D., Booze, RM, Ph.D.
- W27 NOVEL ANTIPLATELET ACTIVITY OF MINOCYCLINE INVOLVES INHIBITION OF P38 MAPK Jackson, JW, Singh, MV, Ph.D., Davidson, GA, Schifitto, G, MD, Maggirwar, SB, Ph.D.
- W28 EFFECTS OF BUPRENORPHINE ON CCL2 MEDIATED HIV INFECTED AND UNINFECTED CD14+CD16+ MONOCYTE MIGRATION IN THE CONTEXT OF NEUROAIDS

 Jaureguiberry-Bravo, MB, MS, Carvallo, L, Ph.D., Wilson, R, MD, Williams, D, Ph.D., Berman, JW, Ph.D.

W29 DREADD ACTIVATION OF HIPPOCAMPAL ASTROCYTES INFLUENCES CONTEXTUAL FEAR CONDITIONING

Jones, M.E., Barrus, D, Lebonville, C.L., Lysle, D.T.

W30 HIV-1 TAT AND GP120 REGULATE ASTROCYTE TISSUE INHIBITOR OF MATRIX METALLOPROTEINASES-1 (TIMP-1)

Joshi, C, MS, Ghorpade, A, Ph.D.

- W31 HIV-TAT ALTERS TAU EXON 10 SPLICING THROUGH DYSREGULATION OF SC35

 Kadri, F, MS, Pacifici, M, Ph.D., Parker-Struckhoff, A, Ph.D., Hauser, K, Ph.D., Knapp, P, Ph.D.,
 Peruzzi, F, Ph.D.
- W32 COMBINATORIAL PERIPHERAL AND BRAIN HUMANIZATION IN IMMUNODEFICIENT MICE Li, W, MD, Knibbe, J, MS, Makarov, E, BS, Wu, L, MD, Gorantla, S, Ph.D., Gendelman, HE, MD, Poluektova, L, MD, Ph.D.
- W33 ACTIVITY OF MITOCHONDRIAL FISSION PROTEIN IS INVOLVED IN HIV GP120-INDUCED NEUROPATHIC PAIN IN RATS THROUGH SPINAL MITOCHONDRIAL SUPEROXIDE

 Liu, S, BS, Kanda, H, MD, Huang, W, MD, Ph.D., Levitt, RC, MD, Candiotti, KA, MD, Lubarsky, DA, MD, Hao, S, MD, Ph.D.
- W34 ROLE OF ER-STRESS AND NEUROINFLAMMATION IN HUMAN ASTROCYTES TREATED WITH HIV-1 TAT AND GP120

López, SN, Rodríguez, M, Rivera, M, Cubano, LA, Ph.D., Rios, E, Ph.D., Boukli, NM, Ph.D.

W35 SOYBEAN-DERIVED BOWMAN-BIRK INHIBITOR (BBI) INHIBITS HIV INFECTION OF HUMAN MACROPHAGES

Ma, T-C, Wang, X, Li, J-L, Zhou, L, Zhuang, K, Liu, J-B, Zhou, Y, Ho, W-Z

W36 TGF-BETAR1 BLOCKER DECREASES INFLAMMATORY CYTOKINES EXPRESSION IN NEURONS EXPOSED TO ASTROCYTES EXPRESSING NEF

Martínez-Orengo, N, BS, Chompre, G, Ph.D., Velázquez, B, BS, Noel, R, Ph.D.

W37 TIGHT JUNCTION PROTEIN EXPRESSION IN A BLOOD-BRAIN BARRIER MODEL UPON EXPOSURE TO HIV-1 TAT AND/OR MORPHINE

Maubert, M, BS, Strazza, M, Ph.D., Pirrone, V, Ph.D., Lin, W, Ph.D., Feng, R, Ph.D., Wigdahl, B, Ph.D., Nonnemacher, MR, Ph.D.

W38 PLANT-BASED PRODUCT APIGENIN ATTENUATES EAE SEVERITY THROUGH MODULATION OF IMMUNE CELL FUNCTION.

McTish, E, BS, Ginwala, R., MS, Sagar, D., MS, Raman, C., Ph.D., Khan, Z.K., Ph.D., Jain, P., Ph.D.

- W39 BRAIN INJURY INDUCES NEUROINFLAMMATION IN THE NUCLEUS ACCUMBENS THAT COINCIDES WITH ENHANCED ADDICTION-LIKE BEHAVIOR IN ADOLESCENT MICE

 Merkel, SF, MS, Tallarida, CS, BS, Razmpour, R, BS, Lutton, EM, BS, Persidsky, Y, MD, Ph.D., Rawls, SM, Ph.D., Ramirez, SH, Ph.D.
- W40 MORPHINE UPREGULATES FERRITIN HEAVY CHAIN IN PRIMARY INHIBITORY NEURONS IN A μOR/G PROTEIN DEPENDENT MANNER
 Nash, B. S., BS, Pitcher, J. H., MD, Ph.D., Meucci, O., MD, Ph.D.
- W41 TRAFFICKING OF CONVENTIONAL DENDRITIC CELLS (DCS) INTO THE CENTRAL NERVOUS SYSTEM IN RESPONSE TO SIV AND MORPHINE CREATING VIRAL RESERVOIR IN FOLLICULAR DCs WITHIN CERVICAL LYMPH NODES OF RHESUS MACAQUES

 Nehra, AP., Hollenbach, R., Sagar, D., Ph.D., Callen, S., Ph.D., Honghong, Y., Ph.D., Buch, S., Ph.D., Khan, ZK., Ph.D., Byrareddy, S., Ph.D., Jain, P., Ph.D.

- W42 HIV-1 TAT AND METHAMPHETAMINE MEDIATED SYNERGISTIC EXPRESSION OF IL-6 IN ASTROCYTES INVOLVES PI3K/AKT AND NF-?B SIGNALING PATHWAYS

 Nookala, Anantha Ra, BS, Kumar, Anil, Ph.D.
- W43 DIFFERENTIAL EFFECT OF HUMAN DOPAMINE TRANSPORTER SITE-DIRECTED MUTATIONS ON HIV-1 TAT-INDUCED INHIBITION OF DOPAMINE TRANSPORT

 Quizon, PM, Sun, WL, Yuan, Y, Midde, NM, Huang, X, Zhan, CG, Zhu, J
- W44 EFFECT OF NAPHTHALENE, AN IMPORTANT CIGARETTE SMOKE CONSTITUENT, ON CYTOCHROME P450 AND OXIDATIVE STRESS PATHWAYS IN U937 MONOCYTIC CELLS: IMPLICATIONS WITH HIV PATHOGENESIS
 Rahman, MA, MS, Midde, NM, Ph.D., Rao, PSS, Ph.D., Kumar, S, Ph.D.
- W45 EXPOSURE TO PHENANTHRENE, AN IMPORTANT CONSTITUENT OF TOBACCO, AND POSSIBLE ROLE OF CYTOCHROME P450 AND OXIDATIVE STRESS IN MONOCYTIC CELLS: IMPLICATIONS FOR HIV PATHOGENESIS
 Ranjit, S, MS, Midde, NM, Ph.D., Rao, PSS, Ph.D., Kumar, S, Ph.D.
- W46 ASTROCYTIC HIV-1 TAT PROTEIN CAUSES INFLAMMATION IN PERIPHERAL ORGANS Rivera, J, MS, Cruz, M.L., BS, Chompré, G, Ph.D., Isidro, A.A., MD, Noel, R.J., Ph.D.
- W47 GRP78 POTENTIAL MARKER OF NEUROCOGNITIVE IMPAIRMENT IN HIV INFECTED POLYDRUG USERS

 Rodriguez-Valentin, M, Lopez, SN, Rivera, M, Narvaez, K, Cubano, LA, Rios-Olivares, E, Boukli, NM
- W48 HIV-1 TAT INDUCES MITOCHONDRIAL DYSFUNCTION IN NEURONS Rozzi, S.J., BS, Avdoshina, V, MD, Ph.D., Mocchetti, I, Ph.D.
- W49 ANTIBODY BLOCKING OF CLEC12A DELAYS THE COURSE AND ATTENUATES EAE SEVERITY BY IMPAIRING MYELOID CELL CNS INFILTRATION: A POTENTIAL NEW THERAPY FOR MULTIPLE SCLEROSIS

 Sagar, D, MS, Singh, NP, Ph.D., Huang, X, Ph.D., Ginwala, R, MS, Philip, R, Ph.D., Nagarkatti, M, Ph.D., Nagarkatti, P, Ph.D., Khan, ZK, Ph.D., Jain, P, Ph.D.
- W50 IN VIVO IMMUNOGENICITY OF TAX (11-19) EPITOPE IN HLA-A2/DTR TRANSGENIC MICE: IMPLICATION FOR DENDRITIC CELL-BASED ANTI-HTLV-1 VACCINE.
 Sagar, D., MS, Masih, Shet, Ph.D., Schell, T., Ph.D., Jacobson, S., Ph.D., Comber, J.D., Ph.D., Philip, R., Ph.D., Wigdahl, B., Ph.D., Jain, P., Ph.D., Khan, Z.K., Ph.D.
- W51 MARIJUANA THC ATTENUATES ALLOGENEIC HOST-VERSUS-GRAFT RESPONSE AND SKIN ALLOGRAFT TRANSPLANTS THROUGH INDUCTION OF MDSCS

 Sido, JM, BS, Nagarkatti, PS, Ph.D., Nagarkatti, M, Ph.D.
- W52 POTENTIAL ROLE OF CYTOCHROME P450 AND OXIDATIVE STRESS PATHWAYS IN ALCOHOL-MEDIATED HIV PATHOGENESIS: OBSERVED EFFECTS IN PLASMA, MONOCYTES, AND EXOSOMES.

 Sinha, N, BS, Ande, A, BS, Rao, PSS, Ph.D., McArthur, C, MD, Ph.D., Kumar, A, Ph.D., Kumar, S, Ph.D.
- W53 SINGLE NUCLEOTIDE POLYMORPHISMS (SNPS) IN THE HIV-1 LTR CORRELATE WITH CLINICAL DISEASE PARAMETERS

 Sullivan, NT, BS, Pirrone, V, Ph.D., Nonnemacher, MR, Ph.D., Dampier, W, Ph.D., Aiamkitsumrit, B,

Ph.D., Williams, J, BS, Shah, S, Ph.D., Passic, S, MS, Blakey, B, BS, Zhong, W, BS, Moldover, B, Ph.D., Feng, R, Ph.D., Jacobson, JM, MD, Wigdahl, B, Ph.D.

W54 HIV INFECTION AND/OR HEROIN USE DYSREGULATE THE PLASMA EXOSOME MIRNA EXPRESSION

Sun, L, MS, Zhou, Y, Ph.D., Wang, X, Ph.D., Li, JL, Ph.D., Zhou, L, Ph.D., Sang, M, Ph.D., Zhuang, K, Ph.D., Xiao, QH, BS, Ho, WZ, MD

W55 POST-TRANSCRIPTIONAL REGULATION OF ASTROCYTE-TISSUE INHIBITOR METALLOPROTEINASE-1 (TIMP-1) IN HAND

Thete, M, MS, Ghorpade, A. PhD

W56 ROLE OF AUTOPHAGY PATHWAYS IN THE NEUROPATHOGENESIS OF HIV-1 CLADE B/C AND THE EXACERBATING EFFECTS OF DRUG OF ABUSE

Tiwari, S, MS, Nair, M, Ph.D., El-Hage, N, Ph.D.

W57 MORPHINE DISRUPTS GUT HOMEOSTASIS AND INDUCES DISTINCT SIGNATURES OF GUT MICROBIOME AND METABOLOME PARTIALLY THROUGH THE TLR2 PATHWAY

Wang, Fuyuan, Meng, J, Chen, C, Roy, S

W58 BRAIN-SPECIFIC GLUTAMINASE C OVEREXPRESSION INDUCES NEUROINFLAMMATION AND LEARNING IMPAIRMENT IN MICE

Wang, Y, Li, Y, Huang, Y, Zheng, J

W59 CORTICAL DYSFUNCTION IN HIV-1 TRANSGENIC RATS: EFFECTS OF COCAINE SELF-ADMINISTRATION

Wayman, W.N., BS, Chen, L, Ph.D., Hu, X.T., MD, Ph.D., Napier, T.C., Ph.D.

W60 SELENIUM SUPPLEMENTATION ATTENUATES EARLY EVENTS INVOLVED IN TUMOR CELL EXTRAVASATION INTO THE BRAIN BY MODULATING ADHESIVE PROPERTIES OF THE BRAIN VASCULAR ENDOTHELIUM

Wrobel, JK, MS, Wolff, G, Ph.D., Xiao, R, Ph.D., Power, R, Ph.D., Toborek, M, MD, Ph.D.

W61 MICROVESICLES MEDIATE GLUTAMINASE RELEASE IN HIV-1-INFECTED MACROPHAGES: IMPLICATION FOR HIV-1-ASSOCIATED NEUROCOGNITIVE DISORDERS (HAND)

Wu, B, MD, Huang, Y, MD, Ph.D., Braun, A, BS, Zhao, L, Ph.D., Zheng, J, MD, Ph.D.

W62 ACTIVATION OF MICROGLIA NLRP3 INFLAMMASOME UNDERLIES METHAMPHETAMINE-INDUCED NEUROINFLAMMATION

Xu, E, MD, Liu, J, MD, Ph.D., Liu, H, MD, Xiong, H, MD, Ph.D.

W63 TNF α INDUCES PAIN-LIKE BEHAVIOR AND INCREASES SPINAL P-CREB AND P-CEBP? IN RATS

Yi, HY, BS, Huang, W, MD, Ph.D., Liu, C-H, Ph.D., Kanda, H, MD, Liu, S, BS, Levitt, RC, MD, Candiotti, KA, MD, Lubarsky, DA, MD, Hao, S, Ph.D.

W64 EFFECTS OF 3-N-BUTYLPHTHALIDE (NBP) ON THE EXPRESSION OF BAX, CASPASE-8 AND TH IN THE SUBSTANTIA NIGRA OF PD RATS

Zhao, J, MD, Liu, YL, Zhang, XP, Liang, YC

THURSDAY, APRIL 23 List in Alphabetical Order

*abstract will be presented as talk in Symposium 3, April 23, 3:30pm

T1 EX-VIVO AND IN-VITRO EVIDENCE OF EPIGENETIC MECHANISMS OF ALCOHOL ABUSE Agudelo, M., Ph.D., Figueroa, G., BS, Muñoz, K., MS, Casteleiro, G., Nair, M.P., Ph.D.

T2 GENE EXPRESSION CHANGES ASSOCIATED WITH HIV-INDUCED NUCLEAR TRANSLOCATION OF AMYLOID BETA IN BRAIN ENDOTHELIUM

Andras, IE, Rampersaud, E, Eum, SY, Toborek, M

T3 BRAIN ENDOTHELIAL DERIVED EXTRACELLULAR MICROVESICLES (EMVS) AS BIOMARKERS OF BBB REMODELING DURING NEUROINFLAMMATION: IMPLICATIONS FOR CEREBROVASCULAR INJURY IN SUBSTANCE ABUSE

Andrews, AM, Ph.D., Merkel, SF, MS, Lutton, EM, BS, Razmpour, R, BS, Ramirez, SH, Ph.D.

* POTENTIAL ROLE OF PURINERGIC P2X7 RECEPTORS IN THE PROGRESSION OF ALCOHOL INDUCED BRAIN AND LIVER DAMAGE

Asatryan, L, Ph.D., Freire, D, BS, Jayne, J, BS, Tsukamoto, H, Ph.D., Davies, DL, Ph.D., Ph.D.
Ph.D.

T4 METHAMPHETAMINE TREATMENT AND HIV-1 INFECTION DYSREGULATE SYNAPTIC PLASTICITY IN SKNMC NEURONAL CELLS

Atluri, VSR, Ph.D., Hernandez, O, BS, Hidalgo, M, BS, Kurapati, KRV, Ph.D., Thangavel, S, Ph.D., Pilakka-Kanthikeel, S, Ph.D., Sagar, V, Ph.D., Yndart, A, BS, Nair, M, Ph.D.

- T5 DYSREGULATED IL12 EXPRESSION IN THE PERIPHERAL CIRCULATION OF ISCHEMIC STROKE PATIENTS IS REGULATED BY MULTIPLE EPIGENETIC MECHANISMS.

 Bam, M, Ph.D., Yang, X, Ph.D., Nagarkatti, P, Ph.D., Nagarkatti, M, Ph.D.
- T6 MORPHINE INDUCED BILE ACID IMBALANCE LEADS TO GUT BARRIER COMPROMISE AND SYSTEMIC INFLAMMATION.DESPITE BEING PREDOMINANT DRUGS OF CHOICE FOR ANTI-NOCICEPTION, MORPHINE AND ITS PHARMACOLOGICAL DERIVATIVES RESULT IN SEVERE CO-MORBIDITIES STUDIED IN NUMEROUS

 Banerjee, S, Ph.D., Sindberg, G, Ph.D., Wang, F, MS, Meng, J, Ph.D., Sharma, U, Ph.D., Dalluge, J, Ph.D., Roy, S, Ph.D.
- T7 DYSREGULATION OF ER STRESS AND AUTOPHAGIC RESPONSES BY THE ANTI-RETROVIRAL DRUG EFAVIRENZ. Bertrand, L, Ph.D., Toborek, M.J., MD, Ph.D.
- T8 HIV+ APOE4 CARRIERS ARE AT RISK FOR NEUROCOGNITIVE IMPAIRMENT DUE TO GREATER DISEASE SEVERITY AND CSF INFLAMMATION

 Briones, MS, Ph.D., Thames, AD, Ph.D., Panos, SE, Magpantay, L, Singer, EJ, Martinez-Maza, O, Hinkin, CH, Levine, AJ
- * DOPAMINE INCREASES CD14+CD16+ MONOCYTE TRANSMIGRATION ACROSS THE BLOOD BRAIN BARRIER: IMPLICATIONS FOR SUBSTANCE ABUSE AND HIV NEUROPATHOGENESIS Calderon, TM, Ph.D., Williams, DW, Ph.D., Lopez, L, Eugenin, EA, Ph.D., Gaskill, PJ, Ph.D., Anastos, K, MD, Morgello, S, MD, Berman, JW, Ph.D.
- T9 OCCLUDIN REGULATES GLUCOSE UPTAKE AND EPIGENETICALLY REGULATES INFLAMMATORY RESPONSE IN BBB PERICYTES
 Castro, V, MD, Ph.D., Lombardi, J, He, J, Luethen, M, BS, Toborek, M, MD, Ph.D.
- T10 COCAINE SELF-ADMINISTRATION BY HIV-1 TRANSGENIC RATS POTENTIATES THE PATHOPHYSIOLOGY IN THE NUCLEUS ACCUMBENS CORE INDUCED BY COCAINE OR THE GENOTYPE ALONE

Chen, L, Ph.D., Wayman, W.N., BS, Hu, X.T., MD, Ph.D., Napier, T.C., Ph.D.

- T11 ENHANCED AUTOPHAGY OF PULMONARY ENDOTHELIAL CELLS ON EXPOSURE TO HIV-TAT AND MORPHINE: ROLE IN HRPAH ASSOCIATED PULMONARY VASCULAR REMODELING Dalvi, P, Ph.D., Allen, J, BS, O'Brien Ladner, A, MD, Dhillon, NK, Ph.D.
- T12 LONGITUDINAL SURVEILLANCE SEQUENCING REVEALS VARIABILITY DESPITE UNDETECTABLE VIRAL LOADS

<u>Dampier, W. Ph.D.</u>, Nonnemacher, MR, Ph.D., Pirrone, V, Ph.D., Aiamkitsumrit, B, Ph.D., Parikh, N, Ph.D., Zhong, W, BS, Kercher, K, MS, Passic, S, MS, Williams, JW, BS, Jacobson, JM, MD, Wigdahl, B, Ph.D.

T13 METHAMPHETAMINE DECREASES VOLTAGE-GATED POTASSIUM CURRENTS IN PRIMARY HUMAN FETAL ASTROCYTES

Dave, S, Ph.D., Yu, C, Ph.D., Seaton, M, BS, Chen, L, Ph.D., Khodr, C, Ph.D., Al-Harthi, L, Ph.D., Hu, XT, MD, Ph.D.

T14 PCB153-INDUCED LOSS OF OCCLUDIN AND DISRUPTION OF ENDOTHELIAL BARRIER THROUGH LIPID RAFT-MEDIATED PP2A AND MMP-2

Eum, SY, Ph.D., Jaraki, D, BS, Andras, IE, Ph.D., Toborek, M, MD, Ph.D.

T15 C/EBPβ EXPRESSION IN THE BRAIN DURING HIV INFECTION: IMPLICATIONS FOR NEURONAL GENE EXPRESSION

Fields, JA, Ph.D., Masliah, E, MD, Adame, A, BS, Spencer, B, Ph.D.

T16 ACTIVATION OF DOPAMINE RECEPTORS INCREASES HIV ENTRY INTO MACROPHAGES BY ALTERING CALCIUM RELEASE

Gaskill, PJ, Ph.D., Berman, JW, Ph.D.

T17 MECHANISMS OF ANGIOTENSIN II-INDUCED OXIDATIVE STRESS IN HUMAN NEURONAL CELLS

Gerena, Y, Ph.D., Sierra, J, BS, Delgado, A, BS, Mendez, J, BS, Wojna, V, MD

* HSV VECTOR-MEDIATED GAD67 SUPPRESSES NEUROPATHIC PAIN INDUCED BY HIV GP120 COMBINED WITH DDC THROUGH REDUCING ROS IN RATS

Hao, S, Ph.D., Kanda, H, MD, Kanao, M, MD, Liu, S, BS, Wan, H, MD, Ph.D., Yi, H, BS, Levitt, RC, MD, Candiotti, KA, MD, Lubarsky, DA, MD

T18 ACIDIC STORE-OPERATED CALCIUM ENTRY---INVOLVEMENT OF LYSOSOME CALCIUM AND LYSOSOME EXOCYTOSIS

Hui, L, Ph.D., Chen, X, MD, Ph.D., Singh, B, Ph.D., Geiger, JD, Ph.D.

T19 CPEB PLAYS AN IMPORTANT ROLE IN THE HIV NEUROPATHIC PAIN STATE THROUGH SPINAL ROS AND WNT SIGNALING

IIDA, T, MD, Liu, S, BS, Levitt, RC, MD, Candiotti, KA, MD, Lubarsky, DA, MD, Hao, S, Ph.D.

T20 THE EFFECT OF ANTIRETROVIRAL MEDICATIONS ON NEUROGENESIS

Izzo, J, Jin, J, Ph.D., Brown, LAM, MS, Hudson, C, Ph.D., Sanberg, PR, Ph.D., Adam, AJ, Ph.D., Tan, J, MD, Ph.D., Bickford, PC, Ph.D., Giunta, B, MD, Ph.D.

T21 DOPAMINE TRANSPORTER ACTIVITY IN THE STRIATUM OF HIV-1 TRANSGENIC FEMALE RATS

Javadi Paydar, M, Ph.D., Roscoe Jr., RF, MS, Mactutus, CF, Ph.D., Booze, RM, Ph.D.

T22 CCR5 ANTAGONISTS PRESERVE THE BRAIN VASCULAR ENDOTHELIUM IN HIV/AIDS ANIMAL MODELS

Kanmogne, GD, Ph.D., Li, H, BS, Woollard, SM, MS

T23 CCR5 ANTAGONISTS PRESERVED BLOOD CELLS AND DIMINISHED BLOOD AND CNS VIREMIA IN VIVO

Kanmogne, GD, Ph.D., Li, H, BS, Woollard, SM, MS

T24 IN VITRO & IN-VIVO CYTOTOXIC EVALUATION OF MAGNETO-ELECTRIC NANOPARTICLES FOR THE CNS DELIVERY

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T25 ACUTE PHASE PROTEIN LIPOCALIN 2 AND CCR5 CONTROL MICROGLIAL ACTIVATION AND NEURONAL INJURY IN AN IN VIVO MODEL OF HIV-INDUCED BRAIN INJURY.

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T26 HIV-TAT 101 PROTEIN REGULATION OF ELECTROPHYSIOLOGICAL PROPERTIES OF MIDBRAIN DOPAMINERGIC NEURONS

Khoshbouei, HK, Saha, KS, Ph.D., Steger, RS, Ph.D.

T27 B -AMYLOID, HIV-1 INFECTION AND DRUGS OF ABUSE INDUCED NEURODEGENERATION AND PROTECTIVE EFFECTS OF ASHWAGANDHA

<u>KURAPATI, VKR, Ph.D.</u>, SAMIKKANNU, T, Ph.D., ATLURI, VSR, Ph.D., YNDART, A, MS, NAIR, MPN, Ph.D.

T28 COMPARATIVE ANALYSIS OF LYMPHOCYTE AND CYTOKINE PROFILES IN PERIPHERAL AND ENTERIC LYMPH NODES OF SIV-INFECTED CHINESE RHESUS MACAQUES

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T29 PROLONGED INTRATHECAL EXPOSURE TO GP120 INDUCES HIV-RELATED NEUROPATHIC PAIN AND SPINAL PHARMACOLOGICAL CHARACTERISTICS

<u>Liu, CH, Ph.D.</u>, Godai, K, MD, Liu, S, BS, Levitt, RC, MD, Candiotti, KA, MD, Lubarsky, DA, MD, Hao, S, MD, Ph.D.

T30 MORPHINE POTENTIATES LPS-INDUCED AUTOPHAGY INITIATION BUT INHIBITS AUTOPHAGOSOMAL MATURATION IN MURINE MACROPHAGES THROUGH TLR4 DEPENDENT AND INDEPENDENT SIGNALING

Ma, J, Ph.D., Wan, J, MD, Ph.D., Anand, V, MD, Ramakrishnan, S, Ph.D., Roy, S, Ph.D.

T31 SIRT-1 REGULATES INFLAMMATION AND SENESCENCE IN MICROGLIA FOLLOWING SIV

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T32 CO-MORBID HIV-TAT AND MORPHINE ATTENUATE HUMAN NEURAL STEM CELL NEUROGENESIS AND ALTER PROTEINS REGULATING NEURAL FUNCTIONS Malik, S, Ph.D., Seth, P, Ph.D.

T33 CNS EXPOSURE TO HIV-1 TAT PROTEIN MODULATES FOREBRAIN GLUTAMATE LEVELS AND INCREASES DEPRESSION-LIKE BEHAVIOR

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T34 OPIOID EXACERBATION OF GRAM-POSITIVE SEPSIS, INDUCED BY GUT MICROBIAL MODULATION, IS RESCUED BY IL-17A NEUTRALIZATION

Meng, J, Ph.D., Banerjee, J, Ph.D., Li, D, MD, Ph.D., Sindberg, G, Ph.D., Wang, F, MS, Ma, J, Ph.D., Roy, S, Ph.D.

T35 CIGARETTE SMOKE CONDENSATE (CSC) DIFFERENTIALLY REGULATES PRDX6 AND CATALASE EXPRESSION IN EXOSOMES SECRETED FROM MONOCYTES-DERIVED MACROPHAGES

Midde, NM, Ph.D., Sinha, N, MS, Rao, PSS, Ph.D., Kashanchi, F, Ph.D., Kumar, S, Ph.D.

T36 EFFECT OF ALCOHOL ON THE METABOLISM OF ANTIRETROVIRAL DRUGS DARUNAVIR, DARUNAVIR/RITONAVIR, AND ELVITEGRAVIR: AN ANALYSIS USING LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY

Midde, NM, Ph.D., Rathi, C, MS, Meibohm, B, Ph.D., Kumar, S, Ph.D.

- * CYTOKINES AND ALCOHOL USE AS POSSIBLE UNDERLYING BIOLOGICAL MECHANISMS ASSOCIATED WITH RACIAL DISPARITIES IN COGNITIVE STATUS AMONG HIV INFECTED INDIVIDUALS RECEIVING ANTIRETROVIRAL THERAPY

 Miguez, MJ, MD, Ph.D.
- T37 LEARNING AND MEMORY IMPAIRMENT IN HIV-1-TRANSGENIC (TG)26 MICE IS ASSOCIATED WITH REDUCED LEVELS OF BRAIN-DERIVED NEUROTROPHIC FACTOR

 Moidunny, S., Ph.D., Benneyworth, M.A., Ph.D., Macheda, T., Ph.D., Metzger, S.K., MS, Sharma, U., Ph.D., Meints, J., MS, Thomas, M.J., Ph.D., Roy, S., Ph.D.
- THE GUT MICROBIOTA AS A THERAPEUTIC INTERVENTION FOR SUSTAINED ATTENTION DEFICITS IN THE HIV-1 TRANSGENIC RAT

 Moran, LM, Ph.D., Booze, RM, Ph.D., Mactutus, CF, Ph.D.
- T39 IDENTIFICATION OF HIV-1 TAT GENETIC POLYMORPHISMS ASSOCIATED WITH NEUROCOGNITIVE IMPAIRMENT AND CNS COMPARTMENTALIZATION

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- T40 ALCOHOL REGULATES HIV-1-MEDIATED ASTROCYTE INFLAMMATORY RESPONSES VIA CPLA2 SIGNALING PATHWAY Pandey, RP, Ph.D., Ghorpade, AG, Ph.D.
- T41 A NOVEL ROLE OF PROLINE OXIDASE-MEDIATED ROS GENERATION IN HIV-1 ENVELOPE GLYCOPROTEIN GP120 INDUCED NEURONAL AUTOPHAGY Pandhare, J, Ph.D., Villalta, F, Ph.D., Dash, C, Ph.D.
- T42 EXERCISE PROTECTS AGAINST METHAMPHETAMINE-INDUCED NEUROTOXICITY IN THE HIPPOCAMPUS

 Park, M, Ph.D., Levine, H, Toborek, M
- T43 AGEING AND NEUROAIDS: DECODING THE SYNAPSE
 Pendyala, G, Ph.D., Callen, S, MS, Liao, K, MS, Lisco, S.J., MD, Buch, S.J., Ph.D.
- T44 COCAINE INDUCES ENDOPLASMIC RETICULUM STRESS-MEDIATED ACTIVATION OF AUTOPHAGY IN ASTROCYTES: IMPLICATIONS FOR ASTROGLIOSIS

 Periyasamy, P, Ph.D., Guo, M.L, Ph.D., Buch, S, Ph.D.
- THE EFFECT OF METHAMPHETAMINE SELF-ADMINISTRATION ON GUT-MUCOSAL BARRIER INTEGRITY IN ADULT HIV-1 TRANSGENIC RATS

 Persons, AL, Ph.D., Forsyth, CB, Ph.D., Keshavarzian, A, MD, Shaikh, M, MS, Raeisi, S, MS, Napier, TC. Ph.D.
- T46 MICRORNA-155 REGULATES SAMHD1 FACILITATED HIV RESTRICTION IN ASTROCYTES Pilakka-Kanthikeel, S, Ph.D., Raymond, A, Ph.D., Atluri, VSR, Ph.D., Sagar, V, Ph.D., Nair, M, Ph.D.
- **T47 EFFECTS OF CIGARETTE SMOKE CONDENSATE ON HIV PATHOGENESIS** Rao, PSS, Ph.D., Ande, A, BS, Midde, N, Ph.D., Kumar, S, Ph.D.

T48 CHRONIC EFFECTS OF ALCOHOL AND/OR ANTIRETROVIRAL DRUGS ON MONOCYTES/MACROPHAGES: ROLE OF CYTOCHROME P450, EFFLUX TRANSPORTER, AND ANTIOXIDANT ENZYMES

Rao, PSS, Ph.D., Kumar, S, Ph.D.

T49 POLYDRUG NANOCARRIERS TO TREAT OPIATE ADDICTION AND REDUCE EXNEF-ASSOCIATED HIV NEUROPATHOGENESIS.

Raymond, Andrea, Ph.D., Diaz, P, Chevelon, S, Yndart-Arias, A, Kaushik, A, Ph.D., Dev Jayant, R, Ph.D., Roy, U, Ph.D., Pilakka-Kanthikeel, S, Ph.D., Nair, M, Ph.D.

T50 POLYDRUG NANOCARRIERS TO TREAT OPIATE ADDICTION AND REDUCE HIV EXNEF-ASSOCIATED NEUROPATHOGENESIS.

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T51 A SUBSET OF CD8+ T CELLS (CD4DIMCD8BRIGHT CELLS) CONTROL HIV INFECTION IN THE BRAIN

Richards, MH, Ph.D., Seaton, MS, BS, Al-Harthi, L, Ph.D.

T52 DIFFERING ROLES OF AUTOPHAGY IN HIV-ASSOCIATED NEUROCOGNITIVE IMPAIRMENT AND ENCEPHALITIS WITH IMPLICATIONS FOR MORPHINE CO-EXPOSURE Rodriguez, M, Ph.D., Dever, S, Ph.D., Costin, B, Ph.D., El-Hage, N, Ph.D.

T53 CHARACTERIZATION OF ON DEMAND DELIVERY OF FLUORESCENT MAGNETIC NANOPARTICLE (MNP) TARGETED TOWARDS THE BRAIN

Roy, U, Ph.D., Dlng, H, Ph.D., Huang, Z, Ph.D., Kaushik, A, Ph.D., Jayant, R, Ph.D., Kanthikeel, S, Ph.D., Raymond, A, Ph.D., Sagar, V, Ph.D., Yndart-Arias, A, Ph.D., Atluri, V, Ph.D., Nair, M.P, Ph.D.

T54 EFFECT OF MAGNETO-ELECTRIC NANOPARTICLE ON DEEP BRAIN MOTOR COORDINATION ACTIVITY

Sagar, Vidya, Ph.D., Huang, Z., Ph.D., Kaushik, A., Ph.D., Roy, U., Ph.D., Jayant, , R.D., Ph.D., Atluri, V.S.R., Ph.D., Pilakka-Kanthikeel, S., Ph.D., El-Hage , N., Ph.D., Nair, M. , Ph.D.

T55 METHAMPHETAMINE ALTERS THE NORMAL PROGRESSION BY INDUCING CELL CYCLE ARREST IN ASTROCYTES

Shah, A, Ph.D., Jackson, A, Ph.D., Kumar, A, Ph.D.

T56 EFFECT OF HYDROMORPHONE ON GUT BARRIER FUNCTION AND IMMUNOMODULATION IN THE CONTEXT OF DSS INDUCED COLITIS

Sharma, U, Ph.D., Khatri, R, MD, Meng, J, Ph.D., Banerjee, S, Ph.D., Roy, S, Ph.D.

* SONIC HEDGEHOG SIGNALING CONFERS NEUROPROTECTION IN HIV-1 INFECTED HUMANIZED MICE.

Singh, V B, Ph.D., Singh, M V, Ph.D., Jones, LD, MS, Shanthi, G, Ph.D., Poluektova, LY, Ph.D., Maggirwar, SB, Ph.D.

T57 METHAMPHETAMINE ENHANCES HIV-1 INFECTION OF NEURAL STEM CELLS Skowronska, M, Ph.D., Park, M, Ph.D., Toborek, M, MD, Ph.D.

T58 THE NEUROPROTECTIVE ROLE OF CAFFEINE IN LDL-TREATED HUMAN NEUROBLASTOMA CELL LINE

Soliman, ML, MD, Ph.D., Geiger, JD, Ph.D., Chen, X, Ph.D.

T59 MUTATION OF TYROSINE 470 OF HUMAN DOPAMINE TRANSPORTER IS CRITICAL FOR TAT-MEDIATED ALLOSTERIC MODULATION ON HUMAN DOPAMINE TRANSPORTER

Sun, W.L., Ph.D., Ananthan, S., Ph.D., Quizon, P.M., BS, Huang, X., Ph.D., Zhan, C.G., Ph.D., Zhu, J., MD, Ph.D.

T60 HIV AND MORPHINE: OXIDATIVE STRESS IMPACT CELL CYCLE REGULATION AND NEURODEGENERATION

Thangavel, S, Ph.D., Rao, KVK, Ph.D., Agudelo, M, Ph.D., Atluri, VSR, Ph.D., Mulet, C, BS, Nair, MP, Ph.D.

T61 DEVELOPMENT OF BRAIN TARGETED THERANOSTIC AGENT FOR MULTIMODAL IMAGING AND ANTI-HIV DRUG DELIVERY

Tomitaka, A, Ph.D., Kaushik, A, Ph.D., Nair, M, Ph.D.

TRACHEO-BRONCHIAL MUCOCILIARY DYSFUNCTION IN HIV PATIENTS Unwalla, H, Ph.D., Morris, A, MD, Ph.D., Ivonnet, P

T63 IFN-LAMBDA INHIBITS DRUG-RESISTANT HIV-1 INFECTION OF MACROPHAGESWang, X, Ph.D., Liu, M-Q, MD, Peng, J-S, Ph.D., Li, J-L, Ph.D., Wang, Y-Z, Ph.D., Zhou, Y, Ph.D., Zhou, W, MD, Ho, W-Z, MD

T64 EXERCISE MAINTAINS BLOOD-BRAIN BARRIER INTEGRITY DURING EARLY STAGES OF BRAIN METASTASIS FORMATION

Wolff, G, Ph.D., Davidson, SJ, Wrobel, JK, MS, Balke, JE, BS, Toborek, M, MD, Ph.D.

T65 DELTA -9-TETRAHYDROCANNABINOL-MEDIATES ALTERATIONS IN GENE EXPRESSION IN LYMPHOCYTES

Yang, X, Ph.D., Bam, M, Ph.D., Nagarkatti, P.S., Ph.D., Nagarkatti, M, Ph.D.

T66 MIR-21 IN EXTRACELLULAR VESICLES LEADS TO NEUROTOXICITY VIA TLR7 SIGNALING IN SIV NEUROLOGICAL DISEASE Yelamanchili, SY, Ph.D.

T67 METHANANDAMIDE BOUND TO MAGNETIC ELECTRIC NANOPARTICLE DID NOT COMPROMISE RESISTANCE AND PERMEABILITY OF THE BLOOD BRAIN BARRIER Yndart, A, BS, Kaushik, A, Ph.D., Agudelo, A, Ph.D., El-Hage, N, Ph.D., Rodriguez, M, Ph.D., Nair, M, Ph.D.

T68 NEURAL CORRELATES OF COGNITIVE DEFICITS IN HIV INFECTION Zahr, NM, Ph.D., Fama, R, Ph.D., Rohlfing, T, Ph.D., Sullivan, EV, Ph.D., Pfefferbaum, A, MD

T69 EXOSOMES MEDIATE CELL-TO-CELL TRANSMISSION OF TLR3-INDUCED ANTIVIRAL ACTIVITY AND THE INVOLVEMENT OF MICRORNAS

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