



**The National Institute on Drug Abuse
and The National Institute on Aging
Intramural Research Programs**

**Summer Student
Poster Day**

**Tuesday, August 5, 2014
1:00 – 3:00 p.m.**

BRC, Baltimore Maryland

Light Refreshments Will be Served
(light refreshments are donated by Drs. Bonci and Ferrucci)

NIDA

NATIONAL INSTITUTE

ON DRUG ABUSE

Behavioral Neuroscience Branch

- 1** **Suhayla Ahmed**
University of Maryland, College Park
Yavin Shaham, PhD

Context-induced relapse to palatable food seeking after punishment-imposed abstinence
- 2** **Mizan Gaillard**
Sidwell Friends School
Yavin Shaham, PhD

Effect of the mGluR2 positive allosteric modulator AZD8529 on incubation of methamphetamine craving after prolonged self-imposed abstinence
- 3** **Angelita Garcia**
Bioscience High School
Bruce Hope, PhD

Role of glutamate-dependent signaling in dorsostriatal neurons in context-induced reinstatement of methamphetamine seeking
- 4** **Nada Ibrahim**
Towson High School
Maria Secci, PhD

Attenuation of nicotine self-administration behavior by enhancing endogenous brain levels of kynurenic acid in rats
- 5** **Nicola Knights**
Western High School
Charles Schindler, PhD

Physiological effects of synthetic cannabinoids
- 6** **Laurence Spekterman**
University of Maryland, College Park
Eugene Kiyatkin, PhD

Pattern of glucose and fructose consumption driving behavior in rats
- 7** **Reecha Suri**
University of Maryland, Baltimore County
Satoshi Ikemoto, PhD

Is the supramammillary nucleus involved with dopamine reward circuitry? An optogenetic study
- 8** **Harsh Thakkar**
University of Texas, Austin
Satoshi Ikemoto, PhD

Synergistic interaction between caloric restriction and amphetamine in food-unrelated approach behavior of rats

Cellular Neurobiology Branch

- 9** **Sherri-Chanelle Brighthaupt**
Columbia University
Carl Lupica, PhD
Role of the lateral habenula in cocaine self-administration behavior
- 10** **Keenan Hope**
University of Maryland, Baltimore County
Ross McDevitt, PhD
Effects of the serotonin-releasing agent fenfluramine on fear and anxiety in mice
- 11** **Jakub Kaczmarzyk**
Union College
Carl Lupica, PhD
Effects of novel synthetic cannabinoids on hippocampal synaptic function
- 12** **Daniel Nemirovsky**
University of Maryland, College Park
Brian Sadacca, PhD
Correlates of inferred associations in orbitofrontal neurons observed during sensory preconditioning
- 13** **Gabriel Noble**
Catonsville High School
Mihaela Iordanova, PhD
Predicting rewards: an optogenetic examination of the role of VTA dopamine
- 14** **Ray Rada**
Catonsville High School
Thomas Stalnaker, PhD
Dopaminergic prediction error encoding after cocaine self-administration
- 15** **Martha Zemen**
University of Maryland, Baltimore County
Ross McDevitt, PhD; Antonello Bonci, MD
The effects of low doses of fenfluramine on condition place preference

Chemical Biology Branch

- 16** **Godwin Igbinedion**
Saint Johns Catholic Prep
Sarah Sushchyyk, BS; Eliot Gardner, PhD
Medication development for prevention of cocaine relapse: levo-tetrahydropalmatine and low dose naltrexone
- 17** **Sandy Yang**
Centennial High School
Zheng-Xiong Xi, MD, PhD
Effects of R-modafinil and its analogs on cocaine self-administration in rats

Clinical Pharmacology & Therapeutics Branch

- 18** **Dexter Louie**
University of California, San Francisco Medical School
Karran Phillips, MD
Trait, state, and place: comparison of neighborhood-matched drug users and controls

Integrative Neuroscience Branch

- 19** **Daniel Baumann**
Towson University
Amina Woods, PhD
Factors affecting the formation of non-covalent complexes between the well-known A2A and D2 receptors
- 20** **Lynn Cournoyer**
University of Maryland, College Park
Marisela Morales, PhD
Distribution of ventral tegmental area glutamatergic and GABAergic neurons in the non-human primate brain
- 21** **Senque Little-Poole**
Pittsburgh Science and Technology Academy
Marisela Morales, PhD
Monosynaptic afferents to ventral tegmental area glutamatergic neurons
- 22** **Hanna McKown**
University of Virginia
Anne Tsai, PhD
Sigma-1 receptors modulate p35 activities via the regulation of N-myristoylation

- 23** **Hanan Muzemil**
Whitney M. Young Magnet High School
Amina Woods, PhD
High resolution imaging of lipids in mouse pancreatic tissue using MALDI imaging
- 24** **Chiamaka Ngumi**
Whitney M. Young Magnet High School
Amina Woods, PhD
High spatial mapping of the lipids in the liver de-LIVER-ed by mass spectrometry imaging
- 25** **Tiffany Yee**
Notre Dame Prep
Yuko Yasui, PhD
Sigma-1 receptor acetylation by PCAF: potential relation to cocaine-induced sigma-1 receptor translocation

Molecular Neurobiology Branch

- 26** **Stephanie Golub**
Johns Hopkins University
Scott Hall, PhD
CDH13 consumption of ethanol, nicotine and methamphetamine
- 27** **Ayush Kumar**
Massachusetts Academy of Math and Science
Jana Drgonova, PhD
Effect of cadherin 13 deletion on innervation of prefrontal cortical areas by dopaminergic cells
- 28** **Sulabh Singhal**
Temple City High School
Jana Drgonova, PhD
Behavioral and anatomical characterization of CSMD1 knockout mice

Molecular Neuropsychiatry Branch

- 29** **Daniel Collector**
Loyola University Maryland
Irina Krasnova, PhD
Methamphetamine self-administration-induced transcriptional changes in the expression of sirtuins in the rat hippocampus

- 30** **Nicolas Herard**
Whitney M. Young Magnet High School
Michael McCoy, MS
Methamphetamine self-administration and the hippocampal hypocretin system in the rat
- 31** **Margaret Jokoh**
Loyola University Maryland
Oscar Torres, PhD
The affects of acute METH on class I HDAC gene expression in the nucleus accumbens of HDAC2 knockout and wild-type mice
- 32** **Kanika Kamal**
Tufts University
Jean Lud Cadet, MD
Effects of methamphetamine self-administration on class I HDAC mRNA expression in the rat hippocampus
- 33** **Taylor Kaminsky**
Washington College
Oscar Torres, PhD
Effects of methamphetamine on the expression of class II HDAC genes in the nucleus accumbens of wild-type and HDAC2 knockout mice
- 34** **Jean-Paul Lamour**
Florida International University
Irina Krasnova, PhD
Effects of punishment-induced abstinence from methamphetamine self-administration on histone deacetylase class-II in the rat hippocampus
- 35** **Oluwaseyi Omonijo**
University of Chicago
Subramaniam Jayanthi, PhD
Effects of toxic doses of methamphetamine on the striatal expression on HDAC genes
- 36** **La Traveette Smith**
Towson University
Subramaniam Jayanthi, PhD
Effects of toxic doses of methamphetamine on BDNF, TrkB, synapsin, VGF genes in the dorsal striatum

Molecular Targets & Medications Discovery Branch

- 37** **Russell Burkhardt**
Rochester Institute of Technology
Comfort Boateng, PhD
Design and synthesis of novel high-affinity and selective ligands for the dopamine D4 receptor
- 38** **Josh Elmore**
Frostburg State University
Michael Baumann, PhD
Functional correlates of the accumulation of MDMA and its metabolites in rat brain
- 39** **Margit Maple**
Towson High School
Gianluigi Tanda, PhD
Attenuation of cocaine and heroin reward by (+)naloxone and (+)naltrexone as novel TLR4 ligands: antagonism to stimulation of mesolimbic DA?
- 40** **Evan Whitehouse**
Poolesville High School
Xavier Guitart, PhD
Investigating the intrinsic efficacy of putative antagonists and partial agonists of dopamine D1 receptors in D1-D3 receptor heteromers

Neuroimaging Branch

- 41** **Julie Fedorko**
Pomona College
Vani Pariyadath, PhD; Elliot Stein, PhD
Effects of adversity on addiction-related function and circuitry
- 42** **Raheem Knight**
St. Croix Educational Complex High School
Yuzheng Hu, PhD
Neural circuits associated with nicotine addiction
- 43** **Shashank Mishra**
Shrewsbury High School
Kate Brynildsen, BA; Elliot Stein, PhD
Development of a novel rodent model for assessing neural circuitry associated with nicotine dependence

- 44** **Brian Tan**
Trinity School
Hanbing Lu, PhD
Developing an awake rodent imaging method for fMRI
- 45** **Kamy Wakim**
Carnegie Mellon University
Elliot Stein, PhD
Effects of adversity on structural connectivity and addiction-related circuits

Optogenetics & Transgenic Technology Core

- 46** **Julius Barriteau**
Maret School
Brandon Harvey, PhD
Assessing pharmacologic modulators of endoplasmic reticulum calcium using a secreted reporter protein (SERCaMP)
- 47** **Pyrý Koivula**
Temple University
Brandon Harvey, PhD
A novel microdissection method to isolate mitochondria from dopaminergic nerve fibers in the rat striatum
- 48** **Molly Lutrey**
Aberdeen High School
Brandon Harvey, PhD
Developing an approach to simultaneously examine ER calcium homeostasis and ER stress response

Administrative Management Branch

- 49** **Molly Cluster**
Hood College
Alan Hyde
IRB approval timeline
- 50** **Aishu Raveesh**
University of Maryland, College Park
Massoud Vahabzadeh, PhD
A guide to accessibility: creating fillable 508-compliant forms in PDF



NIA Poster Session

Laboratory of Behavioral Neuroscience (LBN)

- 1 Katherine H. Schulze (Junior)**
Gustavus Adolphus College - Saint Peter, MN
Amy Spiegel, PhD and Jeffrey Long, PhD
Interneuron vulnerability in aged monkeys with memory impairment
- 2 Jessica Yang (Freshman)**
Northwestern University - Evanston, IL
Susan Resnick, PhD and Vijay Venkatraman, PhD
Modifiers of Age-Related Cortical Thinning

Laboratory of Cardiovascular Science (LCS)

- 3 Annie Yang (Freshman)**
Dartmouth College - Hanover, NH
Li Lin, PhD and Yunqian Peng, PhD
Inflamed with RAGE: Decoding AGE Signal Generated NF- κ B RelA/p65 "Barcode" that Directs Collagen-1 Expression
- 4 Henry S. Wu (Freshman)**
University of Maryland Baltimore County - Baltimore, MD
Mingyi Wang, PhD and Kim McGraw, MS
IGFBP5 is a Potential Biomarker of the Aging Arterial Wall
- 5 Steven L. Zeng (Junior)**
Gilman School - Baltimore, MD
Mingyi Wang, PhD and Richard Telljohann, MS
Tropoelastin Modifies Behavior of Vascular Smooth Muscle Cells in Aging Arterial Walls

Laboratory of Clinical Investigation (LCI)

- 6 Brianna C. Roberts (Sophomore)**
Morgan State University - Baltimore, MD
Olga Carlson, PhD and Josephine Egan, MD
The Effects of Growth Hormone on Insulin Resistance in Young and Middle Aged Men
- 7 Hillary D. Yeboah (Freshman)**
Cornell University - Ithaca, NY
Nagendra Singh, PhD and Ruin Moaddel, PhD
The identification of Novel SIRT6 Modular from Fenugreek Seed Extract

8 **Rajiv S. Desphande (Freshman)**
Johns Hopkins University - Baltimore, MD
David Reiter, PhD and Richard Spencer, MD, PhD
Changes in Skeletal Muscle Composition with Aging and Their relationship with Mobility

9 **David Liu (Medical)**
University of Massachusetts Medical School - Worcester, MA
Chee Chia, MD and Josephine Egan, MD
Senior's sweet tooth: Age-associated preference for carbohydrate in the Baltimore Longitudinal Study of Aging

10 **Ariel Hafftko (Graduate Student - 4th Year)**
University of Maryland, College Park - College Park, MD
Hasan Celik, PhD and Richard Spencer, PhD
Accelerated 2D and 3D NMR Relaxometry using Compressed Sensing

Laboratory of Epidemiology and Population Sciences (LEPS)

11 **Ezra I. Fishman (Graduate Student - 2nd Year)**
University of Pennsylvania - Philadelphia, PA
Tamara Harris, MD and Rachel Murphy, PhD
Association between Objectively Measured Physical Activity and Mortality: NHANES 20032004

12 **Felicia R. Griffin (Graduate Student - 4th Year)**
Florida State University - Tallahassee, FL
Michele Evans, MD and Alan Zonderman, PhD
Effects of Frailty in a Racially and Socioeconomically Diverse Sample of MiddleAged Urban Americans

13 **Abraham D. Killanin (Junior)**
Yale University - New Haven, CT
Alan Zonderman, PhD and Michele Evans, MD
Is Personality Associated with Cognitive Change Across the Life Span?

14 **Logan A. Lewis (Junior)**
Maret School - Washington, DC
Nicole Noren Hooten, PhD and Douglas Dluzen, PhD
Differential microRNA and mRNA Expression Contribute to Racial Disparities in Hypertension

Laboratory of Genetics (LG)

- 15** **Maria E. Espinoza (Junior)**
University of Maryland, College Park - College Park, MD
Carl Sasaki, PhD and Paritosh Ghosh, PhD
The Role of Reactive Oxygen Species in Human TCell Activation
- 16** **Eric D. Sun (Sophomore)**
Pueblo West High School - Pueblo West, CO
Ilya Goldberg, PhD
Measuring Aging Rates in the SardiNIA Population Using Pattern Recognition
- 17** **Matthew W. Coile (Junior)**
Homeschool - Gaithersburg, MD
Kevin Becker, PhD and Elin Lehrmann, PhD
The Effects of Tomatidine on 3 Cell Line Models of Differentiation
- 18** **Leon Chen (Sophomore)**
Johns Hopkins University - Baltimore, MD
Seung Kyu Lee, PhD and Weidong Wang, PhD
TDRD3 is required for Drosophila neuronal development and miRNA regulation
- 19** **Darren F. Morgan (2014 Graduate)**
Hampton University - Hampton, VA
Myriam Gorospe, PhD and Kotb Abdelmohsen, PhD
Characterization of HuR-associated circular RNAs

Laboratory of Molecular Biology and Immunology (LMBI)

- 20** **Kaitlyn C. Murray (Junior)**
Case Western Reserve University - Cleveland, OH
Guobing Chen, PhD and Nanping Weng, MD, PhD
Features of TCell Receptors (TCR) against Cytomegalovirus and Influenza Virus Antigens
- 21** **John T. Lawson (Sophomore)**
Liberty University - Lynchburg, VA
Kimberly Zanotti, PhD and Patricia Gearhart, PhD
Elucidating the Activated B Cell Response in Atherosclerosis
- 22** **Arielle L. Kilner (Junior)**
Ursinus College - Collegetown, PA
Lisa Russell, PhD and Patricia Gearhart, PhD
Comparative Mutational Analysis of the Heavy and Light Chains of Follicular and Age-associated B Cells

- 23** **Lawal A. Labaran (Senior)**
Southern Illinois University - Carbondale, IL
Ranjan Sen, PhD and Xiang Qiu, PhD
Disruption of CTCFdependent Loops Alters Epigenetic State and DNA Recombination at the IgH Locus

Laboratory of Molecular Gerontology (LMG)

- 24** **Apollo K. Kabukuru (Senior)**
Seattle University - Seattle, WA
Robert Brosh, PhD
Small molecules that modulate DNA unwinding by human DNA repair helicases
- 25** **Nambi H. Williams (Junior)**
Whitney M. Young Magnet High School - Chicago, IL
Magdalena Misiak, PhD and Vilhelm Bohr, PhD
Evidence for the involvement of DNA polymerase beta in the regulation of neurogenesis in aging and Alzheimer's disease
- 26** **Bre'Anna D. James (2014 Graduate)**
Trinity Washington University - Washington, DC
Jennifer Illuzzi, PhD and David Wilson III, PhD
Overexpression of APE1 in relationship to disease

Laboratory of Neurogenetics (LNG)

- 27** **Veronica L. Handunge (Freshman)**
Columbia University - New York, NY
Aleksandra Beylina, PhD and Mark Cookson, PhD
Two golgi proteins, ArfGAP1 and Rab7L1, interact with LRRK2, a kinase associated with Parkinson's Disease
- 28** **Shannon M. Glynn (Sophomore)**
Georgetown University - Washington, DC
Alan Renton, PhD and Hannah Pliner, B.S.
Whole genome sequencing of familial Amyotrophic Lateral Sclerosis cases

Laboratory of Neurosciences (LNS)

- 29** **Sarah E. Jarrin (Junior)**
St. Mary's College of Maryland - St. Mary's City, MD
Chinmoyee Maharana, PhD and Mark Mattson, PhD
Impact of Familial Alzheimer's Disease Presenilin 1 Mutations on Energy Homeostasis

- 30** **Christopher Ramirez (Senior)**
University of Central Florida - Orlando, FL
Mark Mattson, PhD and Krisztina Marosi, PhD
Effects of Fasting Conditions on Neurons in Vitro
- 31** **Naya A. Eady (Junior)**
Trinity Washington University - Washington, DC
Simonetta Camandola, PhD and Kathy Perdue, D.V.M.
Uricase Knock Out Mice Display Enhanced Endurance
- 32** **Rebecca J. Wellman (Freshman)**
University of Maryland Baltimore County - Baltimore, MD
Simonetta Camandola, PhD
Lipidomics Analysis of Liver from High Fat/Fructose Diet Induced Obese Control and TLR4 KO Mice
- 33** **Brandon D. Griess (Senior)**
California State University Northridge - Northridge, CA
Dong Liu, PhD and Mark Mattson, PhD
Impaired Regional Cerebral Blood Flow Response to K+ATP Channel Opener Diazoxide in Relation to Age and Alzheimer's Disease Brain Pathology in the 3xTgAD Mouse Model
- 34** **James C. Hickey (Junior)**
St. Mary's College of Maryland - St. Mary's City, MD
Erez Eitan, PhD and Mark Mattson, PhD
Method Development for High Throughput Detection of Extracellular Vesicle transfer between cells

Translational Gerontology Branch (TGB)

- 35** **Nancy R. Zhang (Junior)**
Glenelg Country School - Ellicott City, MD
Rafael DeCabo, PhD and Michel Bernier, PhD
Once injected, twice shy: increase in glucose clearance in mice due to repeated exposure to insulin
- 36** **Robert Seftel (Sophomore)**
New York University - New York, NY
Eleanor Simonsick, PhD
Lifestyle Management of Chronic Conditions: Reported use and relative success in BLSA participants
- 37** **Luis A. Salcido Holguin (Freshman)**
George Washington University - Washington, DC
Jessica Curtis, PhD and Rafael De Cabo, PhD
Reduced Intracellular Citrate Flux Positively Regulates Healthspan and Lifespan

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Michael L. LaNasa (Junior)

Georgetown University - Washington, DC

Alberto DiazRuiz, PhD and Rafael de Cabo, PhD

Unraveling the Role of NQO1 in the Insulin Signaling Pathway

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Michael D. Flesch (Junior)

Marquette University Health Sciences - Milwaukee, WI

Sarah Mitchell, PhD and Rafael de Cabo, PhD

Let Them Eat Cake! How Disulfiram Prevents Diet-Related Obesity in Mice

