



**The National Institute on Drug Abuse
Intramural Research Program**

**Poster Day and
Mentoring Awards
Ceremony**

May 14, 2014

NIDA IRP Poster Day and Mentoring Awards Ceremony

May 14, 2014, BRC Atrium

8:30am Light Refreshments and Poster Session

9:00am – 10:00am – Even-numbered posters presented

10:00am – 11:00am – Odd-numbered posters presented

11:15am Mentoring and Poster Awards Ceremony

Welcome and Presentation of Mentoring Awards

Stephen Heishman, Ph.D.

Office of Education and Career Development

Antonello Bonci, M.D.

Scientific Director, NIDA

Postdoctoral Fellow Mentoring Award

2014 Award Recipient – Nathan Marchant, Ph.D.

Staff Scientist Mentoring Award

2014 Award Recipient – Michael Baumann, Ph.D.

Investigator Mentoring Award

2014 Award Recipient – Satoshi Ikemoto, Ph.D.

Diversity Mentoring Award

2014 Award Recipient – Irina Krasnova, Ph.D.

Presentation of Poster Awards

Stephen Heishman, Ph.D.

Office of Education and Career Development

2014 Mentoring Awards Selection Committee

Miriam Bocarsly, Ph.D.

Yuzheng Hu, Ph.D.

Marisol Castaneto, M.S.

Robyn St. Laurent, B.A.

Mark Henderson, Ph.D.

Michelle Leff, M.D. and Susan Harrelson, ex-officio

Award Recipients

Postdoctoral Fellow Mentoring Award – Nathan Marchant, Ph.D.

Dr. Marchant combines his passion for research and intellectual thinking with an unassuming knack for mentoring. He demonstrates a remarkable ability to connect with other postdocs and postbacs. His selfless approach is exemplified by taking time to teach techniques and answer questions, no matter how busy he is. He allows students to follow him at scientific conferences, as he questions and interprets the science at each poster. Former postbacs are now excelling because of Nathan's commitment to their development as scientists.

Staff Scientist Mentoring Award – Michael Baumann , Ph.D.

Dr. Baumann's positive attitude and openness encourage young scientists to think outside of the box, accept that research is filled with trials and errors, and never stop looking for answers. His professionalism and approachable character have fostered active collaborations between NIDA and other research institutions. Mike is a great role model, an accomplished scientist who is passionate about his work, and an inspiration to young and seasoned scientists alike.

Investigator Mentoring Award – Satoshi Ikemoto , Ph.D.

Dr. Ikemoto is generous in facilitating professional growth, within and outside of the lab. He strikes the perfect balance between being hands-off to promote independence and actively participating in experiments. Satoshi allows students to run with an experiment, but is always happy to help. As a result, his mentees receive invaluable advice on how to observe behavior, plan experiments, and interpret results. This is what a mentor should do – pass on wisdom to make their mentee a better researcher and person.

Diversity Mentoring Award – Irina Krasnova , Ph.D.

Dr. Krasnova has mentored numerous high school, college, postbac, and graduate students, many of whom were from underrepresented populations in science. She is dedicated to helping her students achieve their educational and research goals. For example, one mentee wrote, "I appreciate how hard you pushed me, as it helped me learn a great deal about both research techniques and neuroscience." Clearly, Irina's constant commitment to mentoring has been an inspiration to many students.

Poster Session

Behavioral Neuroscience Branch

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| 1 | <p>Konstantin Kaganovsky, B.S. <i>Neurobiology of Relapse Section</i></p> <p>A critical role of lateral hypothalamus in context-induced relapse to alcohol-seeking after punishment-imposed abstinence</p> |
| 2 | <p>Robyn St. Laurent, B.A. <i>Neurobiology of Relapse Section</i></p> <p>Role of projections from ventral subiculum to nucleus accumbens shell in context-induced reinstatement of heroin seeking</p> |
| 3 | <p>Tamara Zeric, B.A. <i>Neurobiology of Relapse Section</i></p> <p>Role of histone deacetylase 5 in dorsal striatum in incubation of methamphetamine craving</p> |
| 4 | <p>Marco Venniro, Pharm.D. <i>Neurobiology of Relapse Section</i></p> <p>Persistent and inflexible palatable food preference in rats with a history of limited and extended access methamphetamine self-administration</p> |
| 5 | <p>Ken Wakabayashi, Ph.D. <i>Neurobiology of Relapse Section</i></p> <p>Fluctuations in nucleus accumbens extracellular glutamate and glucose during motivated glucose-drinking behavior: Dissecting the neurochemistry of reward</p> |
| 6 | <p>Klil Babin, B.A. <i>Molecular Mechanisms of Behavior Unit</i></p> <p>Role of projections from ventral medial prefrontal cortex to nucleus accumbens shell in context-induced reinstatement of cocaine seeking</p> |

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| 7 | <p style="text-align: center;">F. Javier Rubio, Ph.D. <i>Molecular Mechanisms of Behavior Unit</i></p> <p style="text-align: center;">Unique molecular alterations in dorsal striatal neuronal ensembles selectively activated by environmental cues associated with methamphetamine seeking in rats</p> |
| 8 | <p style="text-align: center;">Kylie McPherson, B.A. <i>Molecular Mechanisms of Behavior Unit</i></p> <p style="text-align: center;">Activation of neuronal ensembles during early acquisition of operant learning in rats</p> |
| 9 | <p style="text-align: center;">Veronica Wallace, M.S. <i>Molecular Mechanisms of Behavior Unit</i></p> <p style="text-align: center;">Neuronal phagocytosis in SH-SY5Y cell culture and in rat brain</p> |
| 10 | <p style="text-align: center;">Sam Bacharach, B.A. <i>Neurophysiology of Reward Seeking Unit</i></p> <p style="text-align: center;">Sign- and goal-tracking rats learn differently in the face of changing reward value</p> |
| 11 | <p style="text-align: center;">Yu-Wei Chen, Ph.D. <i>Neurophysiology of Reward Seeking Unit</i></p> <p style="text-align: center;">Effect of yohimbine on reinstatement of operant responding in rats is dependent on cue contingency but not food reward history</p> |
| 12 | <p style="text-align: center;">Kimberly Fiscella, B.A. <i>Neurophysiology of Reward Seeking Unit</i></p> <p style="text-align: center;">Effect of cafeteria diet history on cue-, pellet-priming-, and stress-induced reinstatement of food seeking in female rats</p> |

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| 13 | Andrew Kesner, B.A. <i>Neurocircuitry of Motivation Section</i> Dissecting the neural circuitry involved with rewarding stimulation of the supramammillary nucleus |
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| 14 | Dong Wang, Ph.D. <i>Neurocircuitry of Motivation Section</i> Median raphe nucleus regulates hippocampal ripple oscillation and memory consolidation |
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Cellular Neurobiology Branch

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| 15 | Miriam Bocarsly, Ph.D. <i>Neuronal Circuits & Behavior Unit</i> Using two-photon endomicroscopy to image cell types in deep brain circuits underlying feeding-reward behaviors |
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| 16 | Zachary Fusfeld, B.A. <i>Synaptic Plasticity Section</i> Heterogeneity of microglia within the basal ganglia |
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| 17 | Brian Sadacca, Ph.D. <i>Behavioral Neurophysiology Section</i> VTA neurons show value prediction signals for cues possessing inferred value |
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| 18 | Andrew Wright, B.S. <i>Electrophysiology Section</i> Postsynaptic actions of serotonin on select neuronal populations in the orbitofrontal cortex |
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Chemical Biology Branch

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| 19 | Fuying Li, Ph.D. <i>Drug Design & Synthesis Section</i> Synthesis and immunological investigation of hydrolytically stable heroin-mimetic haptens |
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| 20 | Brandon Selfridge, Ph.D. <i>Drug Design & Synthesis Section</i> Synthesis of (+)-naltrexone derivatives in the search for toll-like receptor 4 (TLR-4) antagonists and opioid analgesics |
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Clinical Pharmacology and Therapeutics Branch

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| 21 | Mary Fakunle, B.S. <i>Treatment Section</i> Relationships between laboratory measures of nicotine dependence |
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| 22 | Melody Furnari, Ph.D. <i>Treatment Section</i> Real-time stress, craving and mood differences in drug treatment responders and nonresponders |
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| 23 | Zofia Klosowska, B.S. <i>Treatment Section</i> An objective cumulative measure of stress burden in a methadone-maintained population |
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| 24 | William Kowalczyk, Ph.D. <i>Treatment Section</i> Clonidine, a novel adjunct therapy to buprenorphine-maintenance, increases the length of opiate abstinence |
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| 25 | <p>Tulha Siddiqi, B.S. <i>Treatment Section</i></p> <p>Effects of hepatitis C status on methadone metabolism and treatment outcome in methadone-maintenance patients</p> |
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Integrative Neuroscience Branch

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| 26 | <p>Kyle Ireton, B.S. <i>Neuronal Networks Section</i></p> <p>Optogenetic interrogation of ventral tegmental area projections to lateral habenula</p> |
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| 27 | <p>David Root, Ph.D. <i>Neuronal Networks Section</i></p> <p>The ventral tegmental area of the adult rat has a dual type of neuron that co-transmits glutamate and GABA to lateral habenula</p> |
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| 28 | <p>Ajay Kailas, B.S. <i>Structural Biology Unit</i></p> <p>Imaging of lipids in the rat kidney by MALDI-MSI using silver nanoparticle matrix</p> |
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| 29 | <p>Pin-Tse Lee, Ph.D. <i>Cellular Pathology Section</i></p> <p>Sumoylation and localization of sigma-1 receptor chaperones at the nuclear pore complex suggest a role of sigma-1 receptors in the control of macromolecular trafficking across nuclear membrane</p> |
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| 30 | <p>Yoki Nakamura, Ph.D. <i>Cellular Pathology Section</i></p> <p>Cocaine stimulating the release of the ER chaperone sigma-1 receptor into the extracellular vesicles as an emerging route in regulating cocaine-induced neuroplasticity</p> |
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| 31 | Michael Pokrass, B.S. <i>Cellular Pathology Section</i> Sigma-1 receptor regulation of axon extension: Potential involvement of p35 degradation |
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| 32 | Yuko Yasui, Ph.D. <i>Cellular Pathology Section</i> Acetylation of the AMPA receptor subunits GluR1 and GluR2 and the endoplasmic reticulum chaperone sigma-1 receptor: Implication for cocaine addiction |
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Molecular Targets and Medications Discovery Branch

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| 33 | Jordi Bonaventura, Ph.D. <i>Integrative Neurobiology Section</i> New pharmacological properties of GPCR: Cross-antagonism or how caffeine modulates ligand binding to dopamine D2 receptors |
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| 34 | Hideaki Yano, Ph.D. <i>Integrative Neurobiology Section</i> Development of novel G _s /G _o biosensors: G _s -G _o functional selectivity in D1 receptors |
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| 35 | Marta Sanchez, B.S. <i>Integrative Neurobiology Section</i> ADHD-associated D4.7 variant does not show differences in G-protein coupling |
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| 36 | Caitlin Burzynski, B.A. <i>Medicinal Chemistry Section</i> Novel modafinil analogues as potential treatment for psychostimulant abuse |
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| 37 | <p>Thomas Keck, Ph.D. <i>Medicinal Chemistry Section</i></p> <p>Novel analogues of sumanirole provide clues to D2-D3 receptor selectivity and biased agonism at the dopamine D2 receptor</p> |
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| 38 | <p>Oluyomi Okunola-Bakare, Ph.D. <i>Medicinal Chemistry Section</i></p> <p>Development of highly selective and potent D3 receptor antagonists and partial agonists using a synthon approach</p> |
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| 39 | <p>Catherine Schweppe, B.S. <i>Medicinal Chemistry Section</i></p> <p>A comparison of acute and long-access models of methamphetamine exposure: Effects of exposure pattern and contingency on behavioral and neurochemical outcomes</p> |
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| 40 | <p>Mohammad Bukhari, B.S. <i>Designer Drug Research Unit</i></p> <p>Neuropharmacology of 3,4-methylenedioxypyrovalerone (MDPV) and its phase I metabolites in the rat</p> |
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Neuroimaging Branch

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| 41 | <p>Bryson Lochte, B.A. <i>Cognitive Neuroscience & Psychopharmacology Section</i></p> <p>The role of the extended amygdala in craving and anxiety during acute nicotine withdrawal in smokers</p> |
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| 42 | <p>Vani Pariyadath, Ph.D. <i>Cognitive Neuroscience & Psychopharmacology Section</i></p> <p>Individual differences in avoidance learning correlate with dopamine-dependent cognitive function</p> |
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| 43 | <p>Moxi Zhou, B.S. <i>Cognitive Neuroscience & Psychopharmacology Section</i> The effect of reward dependence and impulsivity and their underlying fronto-striatal circuitry on nicotine addiction</p> |
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| 44 | <p>Miji Um, B.S. <i>Cognitive Neuroscience & Psychopharmacology Section</i> The comparison of familiarity and cue modality on cue presentation and reward receipt among individuals with cocaine dependence in a temporal difference error task</p> |
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Office of the Scientific Director

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| 45 | <p>Mark Henderson, Ph.D. <i>Glia Neuron Interactions Unit</i> SERCAMP: A secreted reporter protein to monitor perturbations in endoplasmic reticulum calcium homeostasis</p> |
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| 46 | <p>Emily Simons Wires, B.S. <i>Glia Neuron Interactions Unit</i> Cafeteria diet alters endoplasmic reticulum calcium homeostasis in hepatocytes of rats</p> |
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| 47 | <p>Kathleen Trychta, B.A. <i>Glia Neuron Interactions Unit</i> Examining differences between the KDEL receptor isoforms and their roles in the ER retrieval process</p> |
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| 48 | <p>Heather Baldwin, M.A. <i>Optogenetics and Transgenic Technology Core</i> Generation of a transgenic rat for Cre-dependent expression of the infrared fluorescent protein (iRFP)</p> |
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National Institute of Diabetes and Digestive and Kidney Diseases

49

Danielle Friend, Ph.D.

Diabetes, Endocrinology, and Obesity Branch

D2-dopamine receptors and the development of obesity

50

Kimberly LeBlanc, Ph.D.

Diabetes, Endocrinology, and Obesity Branch

Optically stimulating indirect pathway neurons increases anxiety

51

Chia Li, Ph.D.

Diabetes, Endocrinology, and Obesity Branch

The role of melanocortin-4 receptors in the paraventricular hypothalamic circuits in homeostatic processes of appetite