NIDA IRP Peer Mentoring Program

Navigating the transition from undergraduate education to graduate/professional studies or from graduate school to postdoctoral research can be daunting. The NIDA IRP Peer Mentoring Program was established to bring "seasoned" postdocs, grad students, and postbacs together with new trainees to develop support networks, provide advice and guidance, and foster a sense of community.

We meet on the **2nd Thursday of each month** at **12:00 p.m.** in the **BRC 5th floor conference room (5A508)** for informal discussions. Peer Mentors are also available via e-mail or phone.

Alessandro Bonifazi, Ph.D.
Postdoctoral Fellow, Molecular Targets and Medications Discovery Branch
Email: alessandro.bonifazi2@nih.gov Phone: ext. 2897

My research includes the rational design of highly selective D_2 receptor ligands to elucidate this receptor subtype's structure and function and to obtain compounds able to activate specific functional pathways. In my projects, I combine synthetic medicinal chemistry and *in vitro* pharmacology.

Tyler Harte, B.S.
Postbaccaluareate Fellow, Behavioral Neuroscience Branch
Email: tyler.harte@nih.gov Phone: ext. 2725

My lab studies behavioral models of addiction and learning. Based on the neuronal ensemble hypothesis, we use the immediate early gene, cfos, as a marker for neuronal activation in operant learning contexts. My current project involves elucidating the role of the medial prefrontal cortex in food self-administration.

Yuzheng Hu, Ph.D.
Postdoctoral Fellow, Neuroimaging Branch
Email: yuzheng.hu@nih.gov Phone: ext. 2616

My research focuses on the neurobiological mechanism of drug addiction. I examine drug (especially cocaine) effects on brain structure and function using multiple magnetic resonance imaging techniques, including task-based fMRI, resting-state fMRI, DTI, and MRS.

Andrew Kesner, B.A.
Predoctoral Fellow, Behavioral Neuroscience Branch
Email: andrew.kesner@nih.gov Phone: ext. 2689

I am interested in the neuronal circuits that control basic motivated behaviors. I am using optogenetics and behavioral paradigms to study neuronal circuits that mediate reward and aversion in awake behaving animals.

Jorge Miranda-Barrientos, Ph.D.
Postdoctoral Fellow, Integrative Neuroscience Branch
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My lab focuses on electrophysiological and synaptic characterization of different neuronal populations involved in reward and aversion. I use slice electrophysiology combined with optogenetics and pharmacology to describe the ion channel configuration and the synaptic inputs and outputs of dorsal raphe glutamatergic neurons.

Rachel Slack, Ph.D. (co-chair)
Postdoctoral Fellow, Molecular Targets and Medications Discovery Branch
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My research focuses on the design and synthesis of small molecules that target the dopamine transporter. I use synthetic chemistry to modify molecular scaffolds, creating ligands with high affinity and selectivity. I hope to use these small molecules as tools to explore the biological mechanisms underlying drug abuse and addiction.

Julia Slocomb, B.S. (co-chair)
Predoctoral Fellow, Cellular Neurobiology Branch
Email: slocombj@nida.nih.gov Phone: ext. 2661

I am interested in the neuronal circuits that drive natural behaviors, such as feeding, drinking and mating. I am using optogenetics and in vivo endomicroscopy to study neuronal circuits in awake behaving animals.

Hannah Weiss, B.S.
Postbaccaluareate Fellow, Neuroimaging Branch
Email: hannah.weiss@nih.gov Phone: ext. 2364

My research uses non-invasive neurostimulation techniques in humans to understand brain areas important in addiction and how to modulate them. I use transcranial magnetic stimulation, functional magnetic imaging, and cognitive testing. I am also interested in how dissociative phenomena and lapses of attention manifest in the mind.

Jocelyn Wu, B.A.
Postbaccaluareate Fellow, Cellular Neurobiology Branch
Email: jocelyn.wu@nih.gov Phone: ext. NA

My lab is interested in the cellular mechanisms underlying neuronal plasticity alternations in brain reward circuitry. I am using optogenetics to study the role of kappa opioid receptors and their endogenous ligand, dynorphin, in modulating neuronal transmission within the nucleus accumbens.