Waggoner Center Welcomes New Affiliated Faculty Members

Three researchers focused on the neurobiology of addiction at The University of Texas at Austin joined the Waggoner Center for Alcohol and Addiction Research as affiliated faculty members: Lauren Dobbs, assistant professor in the Department of Neuroscience, and Regina Mangieri, research assistant professor, and Kimberly Nixon, associate professor and James T. Doluisio Centennial Fellow, in the Division of Pharmacology and Toxicology.

Dobbs hopes to change public perception of alcoholism and related illnesses. “I’m pursuing this topic because I want to help public health and because I want people to see substance use disorders as treatable diseases,” she said.

Her lab studies the circuit mechanisms underlying polysubstance abuse. Though evidence indicates that opiates and cocaine target distinct components of the brain’s reward circuitry, she plans to pursue the hypothesis that these distinct components interact within a common circuit to ultimately elicit the expression of similar drug seeking and taking behaviors for both substances.

Following a postdoctoral fellowship in the Laboratory on Neurobiology of Compulsive Behaviors at the National Institute on Alcohol Abuse and Alcoholism, she was drawn to the center’s partnerships across disciplines—between clinicians and scientists.

“I think the science is better when we do it in a collaborative environment,” said Dobbs, who also has a courtesy faculty appointment in the Department of Neurology at Dell Medical School.

Mangieri’s research examines how neuroimmune signaling molecules impact neurophysiology and alcohol-reinforced behaviors. She heads the Target Validation Electrophysiology Core of the Integrative Neuroscience Initiative on Alcoholism-Neuroimmune Consortium, which is led by R. Adron Harris, the center’s associate director.

Long-term, she would like to be influential in identifying more effective drug therapies. “It’s very motivating to know that I get to go to work and do something that will hopefully one day benefit people that I care about,” she said.

Nixon was previously a faculty member at the University of Kentucky and a postdoctoral fellow at the Bowles Center for Alcohol Studies at the University of North Carolina School of Medicine, where she studied the effect of alcohol on adult neurogenesis—an area her lab continues to lead today.

“We look at different cellular events that happen in response to typical binge-like exposure and how that damage then contributes to changes in the brain,” she said.

Nixon, who received her Ph.D. from UT Austin, is thrilled to be back at the university and to be part of the center.

“I jumped on [the opportunity] because of the center’s outstanding reputation. It is just ahead of the curve on so many fronts.”

She would ultimately like to find a novel treatment that would help reverse alcoholic brain damage.
NEWS

R. Adron Harris, the M. June and J. Virgil Waggoner Chair in Molecular Biology, WCAA associate director and professor of Neuroscience, took part in The University of Texas System’s 52nd Chancellor’s Council "Great Minds" Symposium April 26, 2019. The event attracted nearly 1,200 UT System friends and supporters. Harris’s panel, “Addressing Addiction,” which included researchers from other UT institutions, discussed improving addiction understanding and treatment.

Kim Fromme, professor of Psychology, received the 2019 award for Distinguished Scientific Contribution from the Society for Addiction Psychology, American Psychological Association.

Carlton Erickson, professor emeritus of Pharmacology and Toxicology, received the 20th Annual Research Society on Alcoholism Media Award for his authorship of “The Science of Addiction: From Neurobiology to Treatment” and for championing public outreach, for decades, as it pertains to the addiction science fields.

The 7th Annual Waggoner Center Advance, a showcase of faculty, postdoctoral fellow and student research, took place March 29, 2019. Thomas Kash, the John R. Andrews Distinguished Professor in the Department of Pharmacology, University of North Carolina School of Medicine, was the featured speaker. He talked about the role of neuromodulation in alcohol abuse.

UT Brainstorms: A Conversation on the Brain, a seminar series sponsored by the Department of Neuroscience for the Austin community, featured the following talks by three WCAA researchers.

“The Addicted Brain, A Conversation about Alcohol and Drug Addiction” - Robert O. Messing, WCAA director, professor of Neurology and Neuroscience

“The Inflamed Brain: A Conversation about Immune Responses, Addiction, Depression & PTSD” - R. Adron Harris

“The Craving Brain: A Conversation about Vulnerability to Drug Addiction” - Michela Marinelli, associate professor of Neuroscience

Videos of their talks can be found at: neuroscience.utexas.edu/brainstorms

The Waggoner Center made a substantial contribution to UT Austin’s new Nikon Center of Excellence, housed at Dell Medical School. The imaging center is one of several sites around the world that provides state-of-the-art technology to researchers. Instrumentation includes A1R multiphoton and confocal microscopes and can be used to study the effects of alcohol on development of the nervous system and the structure and function of specific brain regions that control addiction-related behaviors. A recent color image from the new A1R confocal microscope, and a 19th century drawing by the father of Neuroscience, Santiago Ramon y Cajal, of perivascular astrocytes, are shown below. These star-like cells in brain, like certain neurons, are critical regulators of addition-related behaviors.

FUNDING NEWS

Rajani Maiya, Research Scientist
NIAAA R01: “Role of the Transcriptional Regulator in Alcohol Consumption and Reward,” 5-Year Award Total: $1,125,000
Khoi Le, Mayfield Lab
2018-19 Unrestricted, Undergraduate Endowed Presidential Scholarship, Award Total: $4,750
Dylan Kirsch, Lippard Lab
Texas Research Society on Alcoholism Travel Award - $300

“Childhood Maltreatment and Correlated Prefrontal-Paralimbic Gray Matter Volume and Activity during Emotional and Cognitive Processing in Young Adults with Familial Risk for Bipolar Disorder”

DOCTORAL DEGREES AWARDED

Laura Ferguson | Mar. 2018 | Harris Lab
“Alcohol Use Disorders: Transcriptomic and Bioinformatic Approaches”

Chris Tulsiak | May 2018 | Harris/Ponomarev Labs
“Regulation of the DNA Methyolme in Models of Alcohol Use Disorders”

Roberto Cofresi | May 2018 | Gonzales Lab
“Attenuating Enduring Alcohol Cue Reactivity via Extinction during Memory Reconsolidation”

Emily Wilhite | Aug. 2018 | Fromme Lab
“Alcohol-related Hookups, Online Dating, and the Associated Negative and Positive Outcomes in Young Women”

Matthew Pomrenze | Nov. 2018 | Messing Lab
“Genetic Dissection of an Amygdala CRF Circuit for Fear and Anxiety”

Natasha Pfianz | Dec. 2018 | Mihic Lab
“Endogenous, Exogeneous and Novel Allosteric Modulators of Ligand-gated Ion Channels”

Joel Shillinglaw | Feb. 2019 | Gonzales/Mangieri Labs
“Synaptic Effects of Ethanol on the Agranular Insular Cortex”
PUBLICATIONS


(Translations continued next page.)

BUILDING A PARTNERSHIP

Individual, foundation and corporate support is essential to the continued growth and success of this world-class research center.

To support the Waggoner Center for Alcohol and Addiction Research, please visit: utdirect.utexas.edu/apps/utgiving/online/nlogeon/?menu1=NSwc or call: 512-471-3299

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USEFUL WEBSITES

Addiction Science Research and Education Center sites.utexas.edu/asrec/
National Institute on Alcohol Abuse and Alcoholism (NIAAA). niaaa.nih.gov
National Institute on Drug Abuse (NIDA). nida.nih.gov
Research Society on Alcoholism (RSA). rsoa.org
International Society for Biomedical Research on Alcoholism (ISBRA) isbra.com
Integrative Neuroscience Initiative on Alcoholism-Neuroimmune (INIA-N) sites.cns.utexas.edu/inia-neuroimmune/about-inia-o
PUBLICATIONS continued


