

HIGHLIGHTS

Friday

Kick-Off Breakfast: 9:00

Lunch Breakaway: 12pm

Mary Michelle's Winery opens: 12pm

Wine and spirits will be available for purchase.

Room Check-In: 4:15pm

Keys will be distributed in the Great Room at the registration desk.

Sports Break: 5:00pm

It doesn't matter if you are a novice or expert.

- Volleyball
- Kickball
- Soccer

Dinner: 6pm

Dinner will be served in the Great Room.

Poster Session: 7pm

Posters will be available for viewing beginning at 7 p.m. in the Conference Room.

Retreat Party: 9pm

Saturday

Breakfast: 8:00am

Buffet-style breakfast bar will be set up in the Great Room. Coffee, juice and soda will be available.

Room Check out: 11am

2013 NEUROSCIENCE RETREAT

September 27-28, 2013

Pere Marquette Lodge and Conference Center, Grafton, Illinois



Talk Title: Sex, Drugs, and Cinnamon Rolls: Neural Correlates of Human Reward and Self Regulation

Bill Kelley, Ph.D.
Professor, Dartmouth College

Bill Kelley is a Professor of Psychological and Brain Science at Dartmouth College. His research on human reward and self-regulation is a collaborative effort with Dr. Todd Heatherton that investigates a putative shared neural architecture for the representation of different kinds of reward (e.g., food, drugs, attractive people). Specifically, we are investigating individual differences in (1) neural responses to environmental cues that predict reward and motivate behavior and (2) control mechanisms that are disrupted during failures of self-regulation. This work is supported by research grants from the National Institute on Drug Abuse (NIDA) the National Heart, Lung, and Blood Institute (NHLBI), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA).



Talk Title: How A (One) Physiologist Thinks About Psychiatric Illnesses

Charles Zorumski, M.D.
Samuel B. Guze Professor and Head of Psychiatry

Dr. Zorumski is the Samuel B. Guze Professor and Head of the Department of Psychiatry and Professor of Neurobiology at Washington University School of Medicine. Dr. Zorumski is also Psychiatrist-in-Chief at Barnes-Jewish Hospital and Director of the Taylor Family Institute for Innovative Psychiatric Research.

Dr. Zorumski's laboratory studies synaptic transmission in the hippocampus. His studies focus on short- and long-term changes in the glutamate and GABA neurotransmitter systems with emphasis on how these transmitters participate in learning and memory and neuropsychiatric disorders. An ongoing line of work concerns the mechanisms by which neurosteroids modulate GABA and glutamate receptors. Clinically, Dr. Zorumski is interested in the use of brain stimulation methods for the treatment of refractory psychiatric illnesses. He has published more than 290 scientific papers and holds five patents. His research is funded by grants from the National Institutes of Mental Health (NIMH) and Alcohol Abuse and Alcoholism (NIAAA).

*Sponsored by The McDonnell Center for Systems Neuroscience,
The McDonnell Center for Cellular and Molecular Neurobiology, and
the Division of Biology and Biomedical Sciences*



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- 9:00 Kick-Off Breakfast
- 9:30 Welcome Message presented by Steve Petersen, Ph.D.
- 9:45 **“World War II and the Nerve Impulse” Alan McComas, M.D.**
- 10:15 “Mapping Higher Order Brain Function and Resting-State Networks with High-Density Diffuse Optical Tomography”
Adam Eggebrecht, Ph.D.
- 10:23 “Serotonin Induced Activation of Protein Kinase A Mediates the Reduction of Interstitial Fluid Amyloid Beta In Vivo”
Jon Fisher
- 10:31 “The Small GTPase Ran Regulates Axon Growth” Dana Watt
- 10:39 “SARM triggers rapid necrotic death via NAD⁺ depletion” Josiah Gerdtz
- 10:50 Break
- 11:00 **Bill Kelley, Ph.D. “Sex, Drugs, and Cinnamon Rolls: Neural Correlates of Human Reward and Self Regulation”**
- 12:00 Lunch Breakaway
- 1:40 **Charles Zorumski, MD “How A (One) Physiologist Thinks About Psychiatric Illnesses”**
- 2:40 Break
- 2:50 “Model-Based Stimulation Design for Control of Neuronal Populations” ShiNung Ching, Ph.D.
- 3:05 “The Na⁽⁺⁾/Ca⁽²⁺⁾ Exchanger NCKX4 Accelerates Light Response of Mammalian Cones” Frans Vinberg, Ph.D.
- 3:13 “Spatial Organization Influences Functional Responses in Olfactory Circuits” Gary Hammen
- 3:21 “Measure Rapid Changes in ISF Abeta Using Microimmuno-electrodes” Carla Yuede, Ph.D.
- 3:29 “Role of the Intellectual Disability Protein PQBP1 and the GTPase Dynamin 2 in Neuronal Ciliogenesis”
Yoshiho Ikeuchi, Ph.D.
- 3:37 “Functional Connectivity Patterns in Spontaneous Cerebral Blood Flow of Mice” Karla Bergonzi
- 3:45 “Post-Conditioning with Isoflurane Reduces SAH-induced Vasospasm and Microthrombosis via Hypoxia-Inducible
Factor 1 and Nitric Oxide Synthase” Eric Milner
- 3:55 “Genetic and Environmental Associations with Amygdala Function and Psychopathology” Ryan Bogdan, Ph.D.
- 4:10 Brief announcements
- 4:15 Room Check-In
- 5:00 Sports Break
- 6:00 Dinner
- 7:00 Poster Session
- 9:00 Retreat Party

Saturday

- 8:00 - 10:30 Breakfast
- 11:00 Checkout