HELEN WILLS NEUROSCIENCE INSTITUTE

2016 UC BERKELEY NEUROSCIENCE ANNUAL CONFERENCE

Pajaro Dunes Resort

SEPTEMBER 16 – 18, 2016

FRIDAY, SEPTEMBER 16

2:00 – 3:00pm: Arrival and Registration

3:00 – 4:15pm: Talks session 1 in Cypress House

3:00 - 3:05pm – Welcome by Marla Feller, Division Head MCB-Neurobiology

3:05 – 3:25pm - **Anna Vlasits** (Feller Lab)

"All by myself: intrinsic motion detection by dendrites"

3:25 – 3:45pm - **Bill Wood** (Theunissen Lab)

"The Emergence of an Auditory Template- ensemble dynamics in secondary auditory areas during song learning"

3:45 – 4:15pm - **Jose Carmena** (Professor, Dept. of Electrical Engineering and Computer Science)

"BMIs and neurotechnologies for motor skill learning, neuromodulation, and PNS applications"

4:15 – 4:35pm: Coffee break and check-in

4:35 – 6:05pm: Talks session 2 in Cypress House

4:35 – 4:55pm - **Sean Mackesey** (Sommer Lab)

"Neurodata Without Borders: a Lingua Franca for Neurophysiology Data"

4:55 – 5:15pm - **Julia Veit** (Adesnik Lab)

"*Cortical gamma band synchronization through somatostatin interneurons*"

5:15 – 5:35pm - **Polina Kosillo** (Bateup Lab)

"*mTOR signaling controls the output of dopamine neurons*"

5:35 – 6:05pm - **Andrew Dillin** (Professor, Dept. of Molecular and Cell Biology, HHMI)

"*Neuroendocrine coordination of aging*"

6:10 – 7:25pm: Dinner in Lagoon House

7:30 – 9:30pm: Evening session in Cypress House

7:30 – 7:40pm – HWNI Executive Director's welcome - Barbara Peterson

7:40 – 8:00pm - HWNI Director's welcome - Ehud Isacoff

8:00 – 8:10pm - Berkeley Brain Initiative – Leti Light

8:15 – 9:30pm - 3rd year graduate students' data slam

9:30 – 11:00pm: Social in Lagoon House

SATURDAY, SEPTEMBER 17

8:00 – 10:00am: Breakfast in Lagoon House

Morning: Free time and poster set-up

10:30 – 11:45pm: Screening of *"My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond"* in Cypress House (synopsis below)

12:00 – 1:10pm: Lunch in Lagoon House

1:15 – 2:45pm: **Talks session 3 in Cypress House**

1:15 – 1:35pm – **Kim Long** (Kaufer Lab)
"Glial plasticity underlying resilience vs. vulnerability in response to stress"

1:35 – 1:55pm – **Michelle Antoine** (Feldman Lab)
"Evaluation of the excitation-inhibition ratio hypothesis in Autism Spectrum Disorder mouse models"

1:55 – 2:15pm – **Anwar Nunez-Elizalde** (Gallant Lab)
"Spatiotemporal encoding models with multivariate normal priors"

2:15 – 2:45pm – **David Feinberg** (Adj. Professor, HWNI)
"Pushing the limits of spatial resolution in functional MRI of human brain"

2:45 – 3:05pm: Coffee break

3:05 – 4:15pm: Talks session 4 in Cypress House

3:05 – 3:25pm - **Hsiu-Chun Chuang** (Saijo Lab)
"*The effects of different maternal infections on microglial dysfunction and autism pathogenesis*"

3:25 – 3:45pm - **Katelyn Arnemann** (Jagust Lab)
"*Metabolic inefficiency predicts the spatial pattern of amyloid-beta in late life*"

3:45 – 4:15pm - **Anne Collins** (Assistant Professor, Dept. of Psychology)
"*Reinforcement learning: Identifying the key players in computation, brain and behavior*"

4:15 – 6:15pm: Poster session in Terrace Room (next to Lagoon House)

6:15 – 7:25pm: Dinner in Lagoon House

7:30 – 8:30pm: Keynote speaker – Jennifer Raymond, Department of Neurobiology, Stanford University *"Neural Learning Rules in the Cerebellum"*

8:30 – 11:00pm: Social in Lagoon House

SUNDAY, SEPTEMBER 18

8:00 – 10:00am: Breakfast in Lagoon House

Check out before 11am

Departure

Poster presentations

Katelyn Benthall (Bateup Lab) – *"Conditional Tsc1 deletion induces cell type-specific alterations to intrinsic and synaptic excitability in striatal neurons"*

Amanda Chang (Bautista/Robey Labs) – *"The role of olfactory sensory neurons in parasite-induced behavior change"*

Brain Cheung (Olshausen Lab) – *"The fovea as an emergent property of visual attention"*

Shih-Wei Victoria Chou (Isacoff Lab) – *"Understanding radial glia in zebrafish spinal cord"*

Malak El-Quessny (Feller Lab) – *"Alternative circuit mechanisms for the development of directional tuning in the retina: Gap junction-coupling and dendritic asymmetry"*

Julie Elie (Theunissen Lab) – *"Encoding models reveal how and when the meaning of communication calls is extracted by the auditory cortex"*

Stephanie Engert (Scott Lab) – *"A candidate second order gustatory neuron modifies feeding-associated behavior in Drosophila melanogaster"*

Daniel Kramer (Bateup Lab) – *"Defining the circuitry and disease susceptibility of a novel subclass of dopamine neuron"*

Amy LeMessurier (Feldman Lab) – *"Environmental enrichment increases whisker responsiveness and alters somatotopy in L2/3 of somatosensory cortex"*

Kim Long (Kaufer Lab) – *"Oligodendrocytes and myelin are associated with persistent high anxiety in a rodent model of traumatic stress"*

Ryan Morrie (Feller Lab) – *"Exploring how altered starburst cell morphology effects synaptic wiring and dendritic integration in the direction selective circuit"*

Daniel Mossing (Adesnik Lab) – *Fast volumetric neural imaging with light field microscopy"*

Ignacio Saez (Hsu/Knight Labs) – *"Coordinated activation of value-related computations across human orbitofrontal cortex"*

Samantha Santacruz (Carmena Lab) – *"Caudate microstimulation increases value of specific choices"*

Katarina Slama (Knight Lab) – *"Oscillatory mechanisms of visual attention in frontal and parietal cortex in humans"*

Mathew Summers (Feller Lab) – *"What makes direction selective computations robust across velocities and stimuli?"*

Frederic Theunissen – *"Voice discrimination in zebra finches"*

Amy Winans (Isacoff Lab) – *"Sensing light through a ciliary non-visual opsin on the developing vertebrate spinal cord"*

Tong Xiao (C. Chang Lab) – *"Copper-dependent origins of the locus coeruleus-norepineprhine system"*

Film screening

My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond

Luna Productions, 2015, 62 minutes

(a documentary about the life and research of UC Berkeley professor Marian Diamond)

From the DOXA Documentary Film Festival website:

"How can you not fall in love with a woman who carries around a preserved human brain inside a giant flowery hat box? Meet Dr. Marian Diamond, renowned academic and research scientist, and prepare to be smitten. Catherine Ryan and Gary Weimberg's film follows this remarkable woman over a 5-year period and introduces the viewer to both her many scientific accomplishments and the warm, funny, and thoroughly charming woman herself, who describes her 60-year career researching the human brain as "pure joy." As one of the founders of modern neuroscience, it's no exaggeration to say that Dr. Diamond changed science, and society at large in dramatic ways over the course of her career. Her groundbreaking work is all the more remarkable because it began during an era when so few women entered science at all. Shouted at from the back of the conference hall by noteworthy male academics as she presented her research, and disparaged in the scientific journals of a more conservative era, Dr. Diamond simply did the work and followed where her curiosity led her, bringing about a paradigm shift (or two) in the process. As she points out, in order to get to the answers that matter, you have to start by asking the right questions."