

DEPARTMENT OF BIOLOGICAL STRUCTURE ANNUAL RETREAT

Center for Urban Horticulture

September 14th, 2022

8:30AM - 5PM

9:30-10:00 Faculty Blitz

10:00-11:00 New Arrivals to our community

11:00-11:15 Coffee break

11:15-12:45 Diversity, Equity and Inclusion

12:45-2:30 Lunch and Posters

2:30-3:30 Research from our Postdocs

3:30-3:45 Cookies break

3:45-5:00 Hendrickson Lecture by Beth Buffalo, PhD
Chair of Physiology & Biophysics

5:00 Closing remarks from Rachel Wong



Rachel Wong, Professor and Chair of the Department of Biological Structure

SPOTLIGHT

Developmental Neurobiologist named to National Academy of Sciences 2021

Dr. Rachel Wong, one of the world's leading experts in developmental neurobiology, has been elected to the National Academy of Sciences.

SPOTLIGHT

Systems Neuroscientist named to National Academy of Sciences 2022

Dr. Buffalo, one of the world's leading experts in the neural mechanisms for learning and memory, has been elected to the National Academy of Sciences.



Elizabeth Buffalo, Professor and Chair of the Department of Physiology & Biophysics



Michele Basso, Professor and Director of the Washington National Primate Research center

SPOTLIGHT

Michele Basso, PhD and her lab joined the Department of Biological Structure 2021

Dr. Basso's lab focuses on the neural circuits and computations that underlie perceptual decision-making.

SCHEDULE

8:30 - 9:30 Breakfast

9:30-10:00 Faculty Blitz

Rachel O. Wong (Development & regeneration of synaptic circuits in the vertebrate retina)
Wyeth Bair (Computational & experimental visual neuroscience)
Olivia Bermingham-McDonogh (Development & regeneration of the mammalian inner ear)
Dennis Dacey (Retinal circuitry & human vision)
Ajay Dhaka (The molecular basis of somatosensory perception)
Sam Golden (Neural basis of social behavior & neuropsychiatric disorder)
Kate Mulligan (Neuroscience & Human anatomy)
Anitha Pasupathy (Neural basis of visual processing)
David Raible (Development & regeneration in the zebrafish)
Tom Reh (Retinal development & regeneration)
Ron Stenkamp (Crystallography of rhodopsin, cell adhesion proteins & enzymes)
Nick Steinmetz (Brain-wide circuits underlying perception, cognition, & action)

10:00 - 11:00 New Arrivals to our community

Anna Gillespie (New faculty, Biological Structure)



"Hippocampal representations of space as a window into age-related memory impairment"

Inbal Israel (New faculty, Physiology & Biophysics)



"Probing functional and structural plasticity at synaptic inputs to understand neuronal learning rules in health and disease"

11:00-11:15 Coffee break

SCHEDULE

11:15-12:45 Diversity, Equity and Inclusion

12:45-2:30 Lunch and Posters

Marielle Beaulieu, Raible lab:	Characterizing hair cell regeneration in the zebrafish inner ear
Kiara Eldred, Reh lab:	Mechanisms of DNA-methyl Aging in Trisomy 21 Human and Mouse Retina
Alexandria Murry, Golden lab:	Mapping cellular resolution whole brain activity in mice under anesthetized and emerging states of isoflurane anesthesia
Jovana Navarrete, Golden lab:	Operant Social Stress
Yeon Jin Kim, Dacey lab:	Connectomic re-examination of S-cone connectivity in marmoset and human retina
Kathryn Powers, Bermingham-McDonogh lab:	Investigating the role of a new transcriptional regulator in the development of the Organ of Corti
Francisco Barros, Raible lab:	Automated image segmentation to study aminoglycoside compartmentalization in hair cells
Anna Li, Steinmetz lab:	Accounting for visual cortex variability with distributed, brain-wide activity states
Juliette Wohlschlegel, Reh lab:	Stimulation of neurogenic regeneration from human Muller glia
Kate Mulligan, Tricia Wu, Dave Raible (on behalf of DEI committee):	Your Department's DEI Committee
Eric Szelenyi, Golden lab:	Optimization of large-scale image segmentation of single-cells with a novel genetically-encoded molecular tag
Nastacia L. Goodwin, S.R.O. Nilsson, S.A. Golden:	Targeted unsupervised machine learning reveals the effects of sex and environment on the latent constituent motifs of aggression

2:30-3:30 Research from our Postdocs (Talks)

Levi Todd, Reh lab:	Stimulating Regeneration of Retinal Ganglion cells from Muller Glia
Zhiwen Ye, Steinmetz lab:	Spontaneous neural fluctuations are coordinated topographically across cortical and subcortical area
Kevin Schneider, Golden lab:	Neural circuits modulating social decision-making following repeated social stress
Yizhe Zhang, Golden lab:	An assessment of sensory and physical interaction during trial based social self-administration procedures
Andrea McQuate, Raible lab:	Mitochondria in hair cells and afferent neurons of the zebrafish lateral line
Eric Szelenyi, Golden lab:	Neural system sensitization preceding the induction of incubation to palatable food craving in mice

SCHEDULE

3:30-3:45 Cookies break

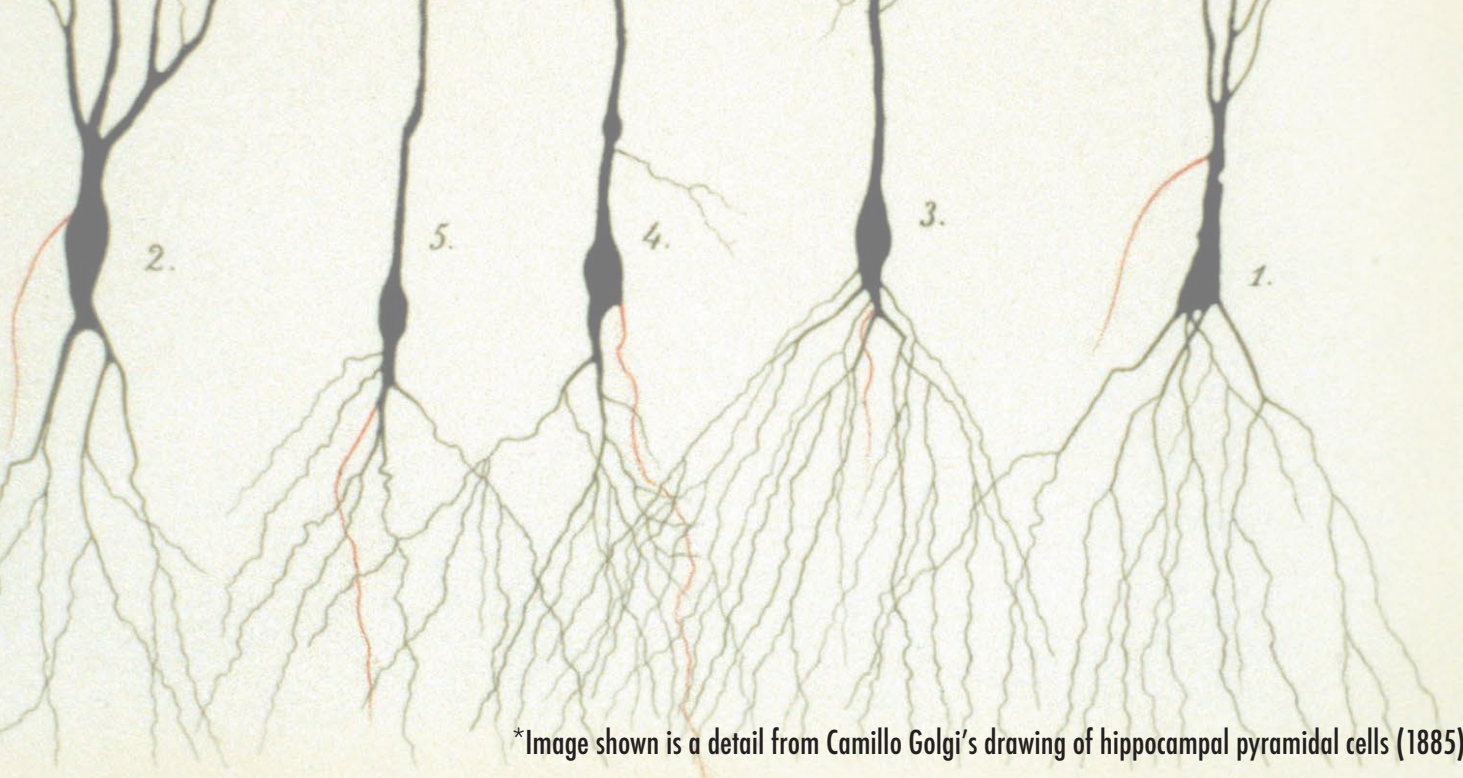
3:45-5:00 Hendrickson Lecture

**“Neural Dynamics of Memory Formation
in the Primate Hippocampus”**

**Beth Buffalo, PhD
Chair of Physiology & Biophysics**



5:00 Closing remarks from Rachel Wong



*Image shown is a detail from Camillo Golgi's drawing of hippocampal pyramidal cells (1885).