

Junior Scientist Workshop on Genetic and Neurobiological Basis for Evolution of Behavior
Janelia Research Campus | April 3-6, 2016
SYNAPSE ROOM

Sunday, April 3

- 3:00 pm Check-in
- 5:00 pm Welcome Reception and Science Speed Dating (*Lobby*)
- 6:30 pm Dinner
- 8:00 pm Welcome and opening remarks**
- 8:10 pm Plenary Talk: Georg Striedter**, University of California, Irvine
The telencephalon and other key innovations in vertebrate brain evolution
- 9:10 pm Refreshments available at Bob's Pub

NOTE:
Meals are in the **Dining Room**
Talks are in **Synapse Room**
Posters are in the **Lobby**

Monday, April 4

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 1**
Chair: *tbd*
- 9:00 am **Christa Baker**, Princeton University
Evolutionary divergence in peripheral sensory coding strategies in mormyrid weakly electric fishes
- 9:25 am **Charlotte Barkan**, Columbia University
*Mechanisms underlying call pattern divergence in *Xenopus**
- 9:50 am **Pedro F. Jacob**, University of Cambridge
Distribution of the cricket singing central pattern generation network across the abdominal ganglia
- 10:15 am Break
- 10:45 am **Nicholai M. Hensley**, University of California, Santa Barbara
*The origins and genetic basis of bioluminescent mating signals in ostracods (*Cypridinidae*, Crustacea)*
- 11:10 am **Joshua Lillvis**, Janelia Research Campus/HHMI
*The neural basis of dorsal-ventral swimming in *Nudipleura* Molluscs*
- 11:35 am Discussion and recap**
Moderators: *tbd*
- 12:00 pm Lunch (*service ends at 1pm*)
- 1:00 pm Tour (*optional - meet at reception*)
- 2:00 pm Session 2**
Chair: *tbd*
- 2:00 pm **Alejandro Gomez-Marin**, Champalimaud Centre for the Unknown
Searching for behavioral homologies: Shared generative rules of locomotor behavior in arthropods and vertebrates
- 2:25 pm **Rebecca Young Brim**, University of Texas
Evolution of the monogamous brain: Neuromolecular variations on a conserved theme

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- 2:50 pm **Yuxiang Liu**, University of North Carolina at Chapel Hill
Parallel evolution of gene molecular mechanisms underlying evolution of hippocampal function
- 3:15 pm Break
- 3:45 pm **Z Yan Wang**, University of Chicago
A Next-generation approach to profiling the Octopus bimaculoides optic gland
- 4:10 pm **Ikuo K. Suzuki**, University of Brussels
Molecular mechanisms linking evolution and the development of the human cerebral cortex
- 4:35 pm **Discussion and recap**
Moderators: tbd
- 5:00 pm Form small working groups / assign one question per group
- 5:00 pm Reception
(Groups discuss posed questions)
- 6:00 pm Dinner
(Continuation of working group discussions)
- 7:15 pm Reconvene to present and discuss answers (5-10 min per group)**
- 8:15 pm Refreshments available at Bob's Pub

Tuesday, April 5

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 3**
Chair: *tbd*
- 9:00 am **Xu Wang**, Cornell University
*Transcriptome and allele frequency responses to selection for tame/aggressive behaviors in silver foxes (*Vulpes vulpes*)*
- 9:25 am **Ingrid A. Fetter Pruneda**, The Rockefeller University
The neurobiology of social behavior: Characterization of the oxytocin/vasopressin system in ants
- 9:50 am **Yun Ding**, Janelia Research Campus/HHMI
*Towards a genetic understanding of courtship song evolution in *Drosophila**
- 10:15 am Break
- 10:45 am **Alejandro Berrio**, University of Texas at Austin
Selective forces shape the evolution of regulatory elements that influence pair-bonding and sexual fidelity
- 11:10 am **Discussion and recap**
Moderators: *tbd*
- 11:35 am Lunch (*service ends at 1pm*)
- 12:30 pm Poster Session (*Lobby*)
- 2:00 pm Session 4**
Chair: *tbd*
- 2:00 pm **Ayako Katsumata**, North Carolina State University
Rapid evolution of gustatory gain-of-function mutations in cockroaches
- 2:25 pm **Lucia Prieto Godino**, University of Lausanne
Evolution of acid-sensing olfactory circuits in drosophilids
- 2:50 pm **Joshua Greene**, Rockefeller University
Alternative density-dependent foraging strategies result from combinatorial expression remapping of pheromone receptor genes

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- 3:15 pm Break
- 3:45 pm **Marianthi Karageorgi**, Institut de Biologie du Développement de Marseille
*Evolution of egg-laying behavior in the pest species *Drosophila suzukii*: A case study for the evolution of chemosensory-driven innate behaviors*
- 4:10 pm **Michael Shahandeh**, University of California, Santa Barbara
*From genes to neurons to behavior: Connecting genotype and pheromone preference phenotype in *Drosophila**
- 4:35 pm **Discussion and recap**
Moderators: *tbd*
- 5:00 pm Form small working groups / assign one question per group
- 5:00 pm Reception
(Groups discuss posed questions)
- 6:00 pm Dinner
(Continuation of working group discussions)
- 7:15 pm Reconvene to share and discuss answers (5-10 min per group)**
- 8:15 pm Refreshments available at Bob's Pub

Wednesday, April 6

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 5**
Chair: *tbd*
- 9:00 am **Brian P. Grone**, University of California, San Francisco
Genome duplications and evo-devo of fish neural circuits
- 9:25 am **Tracy A. Larson**, Fred Hutchinson Cancer Research Center
The evolution of adult neurogenesis: The neural and behavioral consequences of genetic changes in threespine stickleback
- 9:50 am **Wen Xu**, Georgia Institute of Technology
*A laboratory adaptation of the nucleosome remodeling factor *nurf-1* in *C.elegans* regulate epigenetic changes in the nervous system*
- 10:15 am Break
- 10:45 am **Troy Shirangi**, Janelia Research Campus/HHMI
*Evolution and neuronal control of *Drosophila* sine song*
- 11:10 am **Adriana Schatton**, Freie Universität Berlin
Invertebrate FoxP is expressed during development in sensory neurons and higher order centers of the nervous system of bees and flies
- 11:35 am **Discussion and recap**
Moderators: *tbd*
- 12:00 pm Lunch (*service ends at 1pm*)
- 1:15 pm Session 6**
Chair: *tbd*
- 1:15 pm **Nicole M. Baran**, Georgia Institute of Technology
The evolution and development of social behavior from birds to fish
- 1:40 am **Osama Ahmed**, University of California, San Francisco
Evolutionary mechanisms that inhibit inter-species mating in flies
- 2:05 pm **Ryan York**, Stanford University
Castles made of sand: Cis-regulatory divergence and behavioral evolution in Lake Malawi cichlids

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- 2:30 pm Break
- 2:50 pm **Jessica Cande**, Janelia Research Campus/HHMI
Quantitative analysis of behavioral evolution in Drosophila species
- 3:15 pm **Caitlin L. Lewarch**, Harvard University
The genetic and neurobiological basis of nesting behavior in wild mice (Genus Peromyscus)
- 3:40 pm Discussion and recap**
Moderators: *tbd*
- 4:05 pm Break
- 4:20 pm Closing Remarks**
- 4:20 pm **James W. Truman**, Janelia Research Campus/HHMI
- 4:50 pm **David Stern**, Janelia Research Campus/HHMI
- 5:20 pm Roundtable Discussion** (*Moderated by the organizers*)
- 6:00 pm Reception
- 6:45 pm Dinner
- 8:00 pm Close of meeting / Refreshments available in Bob's

Thursday, April 7

- 8:00 am First Shuttle to Dulles
- 9:00 am Second Shuttle to Dulles
- 10:00 am Last Shuttle to Dulles