Janelia Junior Scientist Workshop on Protein Engineering:
Making and Using Tools for Neuroscience and Other Biological Problems
Organized by Loren Looger, Eric Schreiter and Luke Lavis
March 4-7, 2018 | SYNAPSE ROOM

Sunday, March 4

5:15 pm	Reception *(Lobby)*
5:30 pm	Speed Dating Ice Breaker
6:30 pm	Dinner *(Bob's Quiet Room)*
7:30 pm	**Welcome and Opening Remarks**
7:35 pm	**Plenary Talk: Tim Ryan,** Weill Cornell Medical College
8:35 pm	Refreshments available at Bob's Pub

Monday, March 5

7:30 am	Breakfast *(Bob's Quiet Room - service ends at 8:45am)*
9:00 am	**Zachary Katz**, Salk Institute *Tracking the nanoscale dynamics of plasma membrane ORAI1 and septin organization during calcium signaling*
9:20 am	**Rajtarun Madangopal**, National Institute on Drug Abuse/NIH *In vivo calcium imaging of rat prelimbic cortex ensembles during different stages of palatable food seeking*
9:40 am	**Yong Qian**, University of Alberta *An IFP-based Ca2+ indicator*
10:00 am	**Jaime de Juan-Sanz**, Weill Cornell Medical College *Activity-driven mitochondrial Ca2+ uptake is independent of ER Ca2+ fluxes in hippocampal axons*
10:20 am	Break
10:45 am	**Samouil Farhi**, Harvard University *Ultra-widefield all-optical neurophysiology in intact tissue via Hadamard microscopy*
11:05 am	**Wenjing Wang**, Stanford University *A light- and calcium-gated transcription factor for imaging and manipulating activated neurons*
11:25 am	**Benjamin Campbell**, Weill Cornell Graduate School *Bright monomeric fluorescent proteins with rapid expression and cell-filling properties for neuronal imaging*
11:45 pm	**Rosana Molina**, Montana State University *Discovering better fluorescent proteins for two-photon microscopy*
12:05 pm	Lunch *(Dining Room - service ends at 1pm)*
1:30 pm	**Yuki Aono**, Tokyo University *Photocyclable fluorescent protein for long-term super-resolution imaging*
1:50 pm	**Daphne Bindels**, Scintillon Institute *Novel reversibly photoswitchable fluorescent proteins for superresolution*

2:10 pm	**Siyu Feng**, University of California, San Francisco *Improved split fluorescent proteins for endogenous protein labeling*
2:30 pm	**Dmitry Gorbachev**, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry *Development of phototoxic fluorescent proteins by high-throughput sequencing-guided directed evolution*
2:50 pm	Break
3:15 pm	**Science Tours/Demos (3 demos / 30 mins each)**
5:30 pm	Reception & Dinner *(Bob's Quiet Room)*
7:30 pm	**Plenary Talk: Loren Looger**, Janelia
8:00 pm	**Plenary Talk: Eric Schreiter**, Janelia
8:30 pm	Refreshments available at Bob's Pub

Tuesday, March 6

7:30 am	Breakfast *(Bob's Quiet Room - service ends at 8:45am)*
9:00 am	**Mike Raymond**, University of Virginia *PhLARe: Development of an apoptosis and phagocytosis reporter*
9:20 am	**Yemima Riani**, The Institute of Scientific and Industrial Research *Utilizing genetically encoded photosensitizer variants for spatiotemporal control of protein inactivation*
9:40 am	**Ning Zhao**, Colorado State University *Thermobodies, a novel class of genetically encodable synthetic antibodies for live cell imaging*
10:00 am	**Madhuvanthi Kannan**, The John B Pierce Laboratory *High-throughput cell-based engineering of a red fluorescent voltage indicator for live animal imaging*
10:20 am	Break
10:45 am	**Mikhail Matlashov**, Albert Einstein College of Medicine *Near-infrared genetically encoded voltage indicators for all-optical electrophysiology*
11:05 am	**Yi Shen**, University of Alberta *Expanding the toolbox of genetically encoded ion indicators*
11:25 am	**Marcus Moreno**, University of California, Davis *Engineering light sensitive cyanobacteriochrome-based dimerization reagents*
11:45 am	**Colin O'Banion**, University of North Carolina at Chapel Hill *Optogenetic tools for subcellular control of the cAMP / PKA pathway: Towards in vivo applications in neuroscience*
12:05 pm	Lunch *(Dining Room - service ends at 1pm)*

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1:00 pm	Building Tour *(optional – meet at reception)*
2:15 pm	**Andy Tay**, University of California, Los Angeles *Directed evolution of magnetotactic bacteria*
2:35 pm	**Kyle Fischer**, The Salk Institute *Develoment of a monosynaptic anterograde tracer using HSV1 for neural circuit mapping*
2:55 pm	**Anand Muthusamy**, California Institute of Technology *Fluorescent biosensors for neural drugs in "inside-out" pharmacology*
3:15 pm	**Colin Rathbun**, University of California, Irvine *Parallel screening for rapid identification of orthogonal bioluminescent tools*
3:35 pm	Break
4:00 pm	Discussion
5:00 pm	**Poster Reception *(Lobby)***
6:30 pm	Dinner *(Bob's Quiet Room)*
7:30 pm	**Plenary Talk: Karel Svoboda**, Janelia
8:30 pm	Refreshments available at Bob's

Wednesday, March 7

7:30 am	Breakfast *(Bob's Quiet Room - service ends at 8:45am)*
9:00 am	**Plenary Talk: Misha Ahrens**, Janelia
10:00 am	Break *(refreshments available in the Lobby)*
10:30 am	Discussion
12:00 pm	Lunch *(Dining Room - service ends at 1pm)*
2:00 pm	**6 x 5-min talks**
2:30 pm	Break
2:45 pm	**6 x 5-min talks**
3:15 pm	Break *(refreshments available in the Lobby)*
3:30 pm	**6 x 5-min talks**
4:00 pm	Break
4:15 pm	**6 x 5-min talks**
4:45 pm	Final Comments / Closing Discussion
5:30 pm	Closing Reception and Dinner *(Bob's Quiet Room)*

Thursday, March 8

Breakfast available in Bob's Pub

Shuttles to Dulles Airport depart at 7:00 am, 8:00 am and 9:00 am
**The front desk can help with other transportation needs*