Sunday, October 26th

3:00 pm Check-in

6:00 pm Reception *(Lobby)*

7:00 pm Dinner

8:00 pm Welcome & Opening Remarks

8:05 pm Keynote Lecture
Sean Eddy, Janelia Research Campus/HHMI
Computational analysis of high-throughput sequence data for neuroscience

9:05 pm Refreshments available at Bob's Pub

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

Monday, October 27th

7:30 am	Breakfast *(service ends at 8:45am)*
9:00 am	**Session 1: Neuronal Diversity I** **Chair: Sacha Nelson**
9:00 am	**Oliver Hobert**, HHMI/Columbia University *Do we need deep sequencing to define and study neuronal diversity?*
9:25 am	**Larry Zipursky**, HHMI/University of California, Los Angeles *Approaching synaptic specificity through RNA seq*
9:50 am	**Nathaniel Heintz**, Rockefeller University *Molecular Phenotyping: Understanding pathophysiology and therapy at the cellular level*
10:15 am	**Ken Sugino**, Janelia Farm Research Campus/HHMI *What makes neuronal cell types different?*
10:40 am	Break
11:10 am	**Session 2: Neuronal Diversity II** **Chair: Antonella Riccio**
11:10 am	**Michael Rosbash**, HHMI/Brandeis University *mRNA and miRNA dynamics within Drosophila circadian neurons*
11:35 am	**Chris P. Ponting**, University of Oxford *G&T-Seq: Combined DNA and RNA sequencing from a single cell*
12:00 pm	**Benjamin Matthews**, Rockefeller University *Transcriptome profiling and genome engineering in the mosquito Aedes aegypti*
12:15 pm	Lunch *(service ends at 1pm)*
2:00 pm	**Session 3: Neuronal Diversity III** **Chair: Miriam Heiman**
2:00 pm	**G. Lee Henry**, Janelia Farm Research Campus/HHMI *Application of the INTACT system to the optic lobe of Drosophila*
2:25 pm	**Alexander Nord**, Lawrence Berkeley National Laboratory *Atlas of developmental forebrain enhancers*

2:40 pm **Ivo Spiegel**, Harvard Medical School
Unique experience-induced gene programs in interneuron subtypes shape cortical circuits

2:55 pm **Alisa Mo**, Johns Hopkins Medical School
Unique patterns of epigenetic control in distinct subtypes of neocortical neurons

3:10 pm Break

3:45 pm **Session 4: Neuronal Diversity IV**
Chair: Kelsey Martin

3:45 pm **Sacha B. Nelson**, Brandeis University
Maintaining the transcriptional identity of cortical neurons

4:10 pm **Anthony Zador**, Cold Spring Harbor Laboratory
Sequencing the connectome

4:35 pm Discussion: *Who needs deep sequencing?*
Moderator: Sacha Nelson

5:15 pm Break

5:30 pm **Poster Blitz *(5-minutes each / 3-slide max)***
Chair: Mike Nitabach

Chongyuan Luo, Salk Institute
Kate Abruzzi, Brandeis University
Anirban Paul, Cold Spring Harbor Laboratory
Fred Davis, Janelia Research Campus/HHMI
Victor Luria, Harvard University
Jin Billy Li, Stanford University

6:15 pm Dinner

7:30 pm Poster Reception

9:00 pm Refreshments available at Bob's Pub

Tuesday, October 28th

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am **Session 5: Epigenetics and Neuronal Identity I**
Chair: Susan Ackerman

9:00 am **Gill Bejerano**, Stanford University
Some basic principles of genomic data interpretation: Not quite the lean mean fighting machine

9:25 am **Hongjun Song**, Johns Hopkins University School of Medicine
Decoding neural transcriptomes and epigenomes via high-throughput sequencing

9:50 am **Joseph Ecker**, HHMI/Salk Institute
Cell type specificity and developmental dynamics of neuronal epigenomes

10:15 am **Anne E. West**, Duke University Medical Center
Chromatin regulation of neuronal differentiation

10:30 am Break

11:00 am **Session 6: Epigenetics and Neuronal Identity II**
Chair: Nathaniel Heintz

11:00 am **Catherine Dulac**, HHMI/Harvard University
New insights into genomic imprinting in the adult and developing brain

11:25 am **Hynek Wichterle**, Columbia University
Sequencing motor neuron development

11:50 am **Kenneth S. Kosik**, University of California, Santa Barbara
RNAseq in iPS-derived neurons

12:15 pm **Jessica Tollkuhn**, Cold Spring Harbor Laboratory
Epigenetic regulation of sexual differentiation of the brain

12:30 pm Lunch *(service ends at 1pm)*

1:15 pm Tour *(optional – meet at reception)*

2:15 pm **Session 7: Plasticity and Activity-Dependence I**
Chair: Catherine Dulac

2:15 pm **Leon Reijmers**, Tufts University Research
Sequencing of ribosome-bound mRNA collected from the soma and dendrites of activated projection neurons

2:30 pm **Erin Schuman**, Max Planck Institute for Brain
The local transcriptome in neurons

2:55 pm **Wei Chen**, Max Delbrück Center for Molecular Medicine
Comprehensive transcriptome characterization of synaptic neuropil

3:20 pm **Kelsey Martin**, University of California, Los Angeles
The cytoplasmic Rbfox1 splice isoform regulates the expression of autism susceptibility genes in neurons

3:45 pm Break

4:15 pm **Session 8: Plasticity and Activity-dependence II**
Chair: Ken Kosik

4:15 pm **Antonella Riccio**, University College London
Identification of a novel class of activity-regulated enhancers in cortical neurons

4:40 pm **Jesse M. Gray**, Harvard Medical School
The anatomy of mouse and human neural activity-regulated enhancers

5:05 pm **Michael N. Nitabach**, Yale School of Medicine
Cell-specific activity-induced transcriptomes of Drosophila brain

5:30 pm Break

5:45 pm Discussion: *Epigenetics, Stem Cells and Activity-Dependence*
Moderator: Erin Schuman

6:30 pm Dinner

7:45 pm Poster Reception

9:15 pm Refreshments available at Bob's Pub

Wednesday, October 29th

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am **Session 9: Disease Models I**
Chair: Erin Schuman

9:00 am **Susan L. Ackerman**, HHMI/The Jackson Laboratory
Mutation of a CNS-specific tRNA causes ribosome stalling and neurodegeneration

9:25 am **Christopher Walsh**, HHMI/Boston Children's Hospital
Somatic mutation and genomic variation in the human cerebral cortex

9:50 am **Myriam Heiman**, Massachusetts Institute of Technology
In vivo synthetic lethal screening in the mammalian central nervous system

10:15 am Break

10:45 am **Session 10: Disease Models**
Chair: G. Lee Henry

10:45 am **Joseph Buxbaum**, Icahn School of Medicine at Mount Sinai Hospital
Exome analyses reveal new autism genes in synaptic and chromatin networks

11:10 am **Mark Zylka**, University of North Carolina School of Medicine
Use of high-throughput sequencing to identify chemical risk factors for autism

11:35 am **Joshua T. Dubnau**, Cold Spring Harbor Laboratory
The transposon storm hypothesis of neurodegeneration

12:00 pm Closing Discussion: *Where are we going?*
Moderator: Lee Henry

12:30 pm Lunch & Departure

1:00 pm First shuttle to Dulles
2:00 pm Second shuttle to Dulles
3:00 pm Last shuttle to Dulles