



Agenda

October 20 – 24, 2024

Sunday, October 20

Time	Activity	Location
5:00pm - 7:00pm	Registration Opens & Reception Begins	Lake Washington Ballroom Terrace
7:00pm - 8:00pm	Introduction: Rui Costa , Allen Institute	Lake Washington Ballroom
	Opening Remarks: Chair: Ed Lein , Allen Institute for Brain Science	
	Keynote Lecture: Gilles Laurent , Max Planck Institute for Brain Research <i>Inheritance and convergence in the brain: sleep, CPGs, claustrum and texture perception</i>	

Monday, October 21

Time	Activity	Location
8:00am - 9:00am	Breakfast	Bellevue Room
	Session 1 Chair: Alex Pollen	
SESSION 1	Cell atlases and tools reinventing the field of comparative neurobiology	9:00am - 10:40am
9:00am - 9:25am	Detlev Arendt , EMBL Heidelberg <i>Building bilaterian brains: innovations in molecular machinery, neuron types and circuits</i>	Lake Washington Ballroom

9:25am - 10:00am **Ed Lein**, Allen Institute
Comparative brain cell atlasing to understand human and mammalian brain structure and function

10:00am - 10:25am **Zizhen Yao**, Allen Institute
Building High-resolution Transcriptomic and Spatial Cell Type Atlas Across Adult, Aging and Development Mouse Brains

10:25am - 10:50am **Jonathan Ting**, Allen Institute
Viral genetic targeting of brain cell types across mammalian species

10:50am - 11:05am **Coffee and Discussion**

11:05am - 1:00pm **Lunch** Bellevue Room

Session 2 Chair: Genevieve Konopka

SESSION 2

Mammalian brain development and human specializations

1:00pm - 2:40pm

1:00pm - 1:25pm **Christine Charvet**, College of Veterinary Medicine, Auburn University
Cutting cross scales to Translate Time across mammals

Lake Washington Ballroom

1:25pm - 1:50pm **Nenad Sestan**, Yale University
Development and Evolution of the Prefrontal Cortex

1:50pm - 2:15pm **Debby Silver**, Duke University Medical Center
Enhancing development: Genetic basis of cortical evolution

2:15pm - 2:40pm **Alex Pollen**, Dept of Neurology, University of California
Scalable Genome Engineering Approaches for Studying Human Brain Evolution

2:40pm - 3:10pm **Coffee and Discussion**

3:10pm - 3:35pm **Katie Pollard**, Gladstone Institutes and UCSF
Decoding Human Accelerated Regions

3:35pm - 5:30pm **Personal Time**

5:30pm - 7:00pm **Dinner** Bellevue Room

7:00pm - 9:00pm **Poster Session 1 (A-K)** Seattle Rooms

Time	Activity	Location
8:00am - 9:00am	Breakfast	Bellevue Room
Session 3 Chair: Eddie Chang		
SESSION 3	Evolution and human specialization in motor control	9:00am - 10:40am
9:00am - 9:25am	Leah Krubitzer , UC Davis <i>Cortical areas involved in motor control of the limbs: Cortical plasticity within and across lifetimes</i>	Lake Washington Ballroom
9:25am - 9:50am	Peter Strick , Neurobiology Department University of Pittsburgh School of Medicine <i>Cortical Motor Areas and the Emergence of Motor Skills</i>	
9:50am - 10:15am	Morgan Wirthlin , Allen Institute, Seattle <i>Transcriptomic Innovation in the Evolution of Mammalian Cortex</i>	
10:15am - 10:40am	Josh Huang , Duke School of Medicine Distinguished Professor in Neuroscience <i>Evo-devo diversification of cortical output channels</i>	
10:40am - 11:10am	Coffee and Discussion	Bellevue Room
11:10am - 1:00pm	Lunch and Personal Time	Bellevue Room
Session 4 Chair: Nancy Kanwisher		
SESSION 4	Structure, function and evolution of language circuits	1:00pm - 3:25pm
1:00pm - 1:25pm	Ev Fedorenko , Department of Brain and Cognitive Sciences and McGovern Institute of Technology, MIT <i>The language system in the broader landscape of the human brain</i>	Lake Washington Ballroom
1:25pm - 1:50pm	Eddie Chang , UCSF <i>Functional organization of human speech cortex</i>	
1:50pm - 2:15pm	Coffee and Discussion	
2:15pm - 2:40pm	Erich Jarvis , Investigator, Howard Hughes Medical Institute; Professor, The Rockefeller University <i>Enhancing cortico-motoneuronal projections for vocalizations</i>	

2:40pm - 2:55pm	Arkarup Banerjee , Assistant Professor, Cold Spring Harbor Laboratory <i>Neural mechanisms for evolutionary diversification of vocal behavior</i>	
2:55pm - 3:10pm	Janet Song <i>Uncovering gene regulatory differences between human and chimpanzee neural progenitors</i>	
3:10pm – 3:25pm	Chris Bresee <i>Developmental interaction with natural vs artificial stimuli changes adult cortical responses</i>	
3:25pm - 4:05pm	Discussion and Networking	
4:05pm - 5:30pm	Personal Time	
5:30pm - 7:00pm	Dinner	Bellevue Room
7:00pm - 9:00pm	Poster Session 2 (L-Z)	Seattle Room

Wednesday, October 23

Time	Activity	Location
8:00am - 9:00am	Breakfast	Bellevue Room
	Session 5 Chair: Ev Fedorenko	
SESSION 5	Evolutionary variation and specialization of visual circuitry	9:00am - 10:40am
9:00am - 9:25am	Nancy Kanwisher , Department of Brain & Cognitive Sciences and McGovern Institute for Brain Research, MIT <i>Title TBA</i>	Lake Washington Ballroom
9:25am - 9:50am	Doris Tsao , Professor of Biology, UC Berkeley; Investigator, Howard Hughes Medical Institute <i>Title TBA</i>	
9:50am - 10:15am	Cris Niell , University of Oregon <i>Cell types and functional organization of the octopus visual system</i>	
10:15am - 10:40am	David Van Essen , Department of Neuroscience, Washington University in St Louis <i>Evolution of Mammalian Visual Cortex</i>	
10:40am - 11:00am	Coffee and Discussion Session 6 Chair: Jonathan Ting	

SESSION 6	Evolutionary variation in basal ganglia circuitry, function and disease	11:00am - 12:15pm
11:00am - 11:25am	Ann Graybiel , Institute Professor, MIT <i>The Basal Ganglia and Value-Based Decision-Making</i>	Lake Washington Ballroom
11:25am - 11:50am	Bernardo Sabatini , Harvard <i>Functional, anatomical, and molecular heterogeneity of the globus pallidus externus TBA</i>	
11:50am - 12:15pm	Andreas Pfenning , Associate Professor, Computational Biology Department, School of Computer Science <i>Neuroscience Institute, Carnegie Mellon University</i> Title TBA	
12:15pm - 2:00pm	Lunch	Bellevue Room
Visit to Allen Institute and Evening Cruise		2:00pm - 9:00pm
2:00pm	Load Buses	Meet in Hyatt Regency Lobby
2:30pm - 6:00pm	Visit the Allen Institute	
2:45pm - 4:00pm	Allen Institute Science Speakers: Karel Svoboda, Nuno da Costa, Brian Kalmbach	Allen Institute Auditorium
4:00pm - 5:00pm	Allen Institute Tours Human Cell Types, Brain Science	
4:00pm - 5:25pm	Allen Institute Reception & Posters	
5:30pm - 6:00pm	Load Cruise Boat	Mohai Dock
6:00pm	Lake Cruise Boat Departs	Mohai Dock
6:00pm	Non-boat attendees load bus back to Hyatt	Return to Hyatt Regency hotel
6:30pm - 9:00pm	Boat Cruise Dinner, beer, and wine will be provided with a cash bar for spirits. A shuttle will provide alternate transportation back to the hotel.	Argosy Cruise – Lake Washington

Time	Activity	Location
8:00am - 9:00am	Breakfast <i>Session 7 Chair: Debby Silver</i>	Bellevue Room
SESSION 7	Comparative genomics and genetics findings identifying conserved and human-specific underpinnings of brain structure and disease mechanisms	9:00am - 10:15am
9:00am - 9:25am	Chris Walsh , Chief, Division of Genetics and Genomics, Boston Children's Hospital; Investigator, Howard Hughes Medical Institute <i>Molecular Genetics of Human Brain Development and Evolution</i> Harvard	Lake Washington Ballroom
9:25am - 9:50am	Evan Eichler , Department of Genome Sciences and Howard Hughes Medical Institute, University of Washington <i>Comparative telomere-to-telomere ape genome sequencing and the evolution of the human genome</i>	
9:50am - 10:15am	Genevieve Konopka , UT Southwestern Medical Center, Department of Neuroscience and Peter O'Donnell Brain Institute <i>Cell type-specific transcriptional networks in brain evolution</i>	
10:15am - 10:45am	Coffee and Discussion <i>Session 8 Chair: Evan Eichler</i>	
SESSION 8	Human lineage and brain evolution: Genomic changes that could impact brain circuit function	10:45am - 12:00pm
10:45am - 11:10am	Liran Carmel , Hebrew University, Israel <i>Picking into the Neanderthal brain using ancient DNA methylation</i>	
11:10am - 11:35am	Svante Pääbo , Max Planck, Leipzig, Germany <i>A Neandertal Perspective on Recent Human Brain Evolution</i>	
11:35am - 12:00pm	David Reich , Department of Genetics, Harvard Medical School <i>Leveraging the Allen Ancient DNA Resource to provide insights into the evolution of the human brain</i>	
12:00pm - 1:00pm	Lunch & Final Remarks	Bellevue Room