



**The Jackson
Laboratory**



JOHNS HOPKINS
UNIVERSITY

Human and Mammalian Genetics and Genomics: The 67th McKusick Short Course

July 20 – 31, 2025

All times listed are EDT (UTC – 4:00)

Schedule is subject to change.

Day 1: Monday, July 20th

Transportation to The Jackson Laboratory (See shuttle schedule for full details)

8:00 – 9:30 AM	General Registration & Breakfast
9:30 – 9:45 AM	Course Announcements & General Housekeeping
9:45 – 10:00 AM	Welcome & Opening Remarks Lon Cardon, Ph.D., <i>The Jackson Laboratory</i>
10:00 – 11:00 AM	History of Human Genetics Dave Valle, M.D., <i>Johns Hopkins University School of Medicine</i>
11:00 – 12:00 PM	Mice as Models for Human Diseases Greg Cox, Ph.D., <i>The University of Maine</i>
12:00 – 1:00 PM	Lunch Break
1:00 – 2:00 PM	Chromosome Regulation and Nuclear Genome Organization Jeanne Lawrence, Ph.D., <i>University of Massachusetts Medical School</i>
2:00 – 3:00 PM	Genetic Recombination & Mutation Beth Dumont, Ph.D., <i>The Jackson Laboratory</i>
3:00 – 4:00 PM	Opportunities and Limits in the 21st Century Mouse Model System Steven Munger, Ph.D., <i>The Jackson Laboratory</i>
4:00 – 4:45PM	Thomas H. Roderick Memorial Lecture Reception
4:45 – 5:00 PM	Introduction & Welcome – Thomas H. Roderick Memorial Lecture
5:00 – 6:30 PM	Thomas H. Roderick Memorial Lecture – The Jackson Laboratory Auditorium Speaker TBD

Transportation to COA/BH Regency

Day 2: Tuesday, July 21st ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:00 – 10:00 AM	TBD
10:00 – 11:00 AM	TBD
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	TBD
12:30 – 12:45 PM	Group Photo (Rain Date: Thursday, July 23)
12:45 – 1:30 PM	Lunch Break
1:30 – 2:30 PM	WORKSHOP: gnomAD - Human Genome Variation & its Properties Speaker TBD
2:30 – 3:15 PM	WORKSHOP: OMIM and Other Useful Genetic and Genomic Resources Ada Hamosh, M.D., <i>Johns Hopkins University School of Medicine</i>
3:15 – 4:45 PM	WORKSHOP: The UCSC Genome Browser - Gateway to Genomic Data Robert Kuhn, Ph.D., <i>University of California Santa Cruz (Retired)</i>

Participants responsible for transportation. Island Explorer is available.

7:00 – 8:30 PM	Human Genomic Variants – The Stone House at the Bar Harbor Regency Stylianos Antonarakis, M.D., DSc, <i>University of Geneva Medical School</i>
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Day 3: Wednesday, July 22nd ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:30 – 10:30 AM	Transcriptional Regulation of Gene Expression Andrew McCallion, Ph.D., <i>Johns Hopkins University School of Medicine</i>
10:00 – 11:00 AM	Machine Learning for Regulatory Genomics: Basics and Pitfalls Michael Beer, Ph.D., <i>Johns Hopkins University</i>
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	TBD
12:30 – 1:30 PM	Lunch

1:30-2:30 **Systems Genetics and the Biology of the Cell**
Aravinda Chakravarti, Ph.D., *NYU Langone Health*

2:30 – 4:30 PM **WORKSHOP: ClinGen, ClinVar, and other Genomic Curation Databases**
Heidi Rehm, Ph.D., *Massachusetts General Hospital & The Broad Institute*

Participants responsible for transportation. Island Explorer is available.

7:00 – 8:30 PM **Senior Lecture: Title TBD – Stone House at the Bar Harbor Regency**
Anne Bowcock, Ph.D., *Icahn School of Medicine at Mount Sinai*

Day 4: Thursday, July 23rd ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM Breakfast

9:30 – 10:30 AM **TBD**

10:00 – 11:00 AM **The Landscape of Structural Variation and Dosage Sensitivity in the Human Genome**
Michael Talkowski, Ph.D., *Harvard Medical School, Mass General Hospital*

11:00 – 11:30 AM Coffee Break

11:30 – 12:30 PM **Mendelian Disorders of the Epigenetic Machinery: Genetic Disorders with Epigenomics Consequences**
Jill Fahrner, Ph.D., *Johns Hopkins University School of Medicine*

12:30 – 1:30 PM Lunch

1:30-2:30 **The Power of Ancient and Modern Genomics in Reconstructing Human Population Histories**
Maanasa Raghavan, Ph.D., *The University of Chicago*

2:30 – 4:15 PM **WORKSHOP: Human Pangenome Workshop - An Introduction to the Human Pangenome Tools and Workflows**
Speaker TBD

4:15 – 6:00 PM Poster Session

Transportation to COA/BH Regency

7:00 – 8:30 PM **TBD**

Day 5: Friday, July 24th ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:30 – 10:30 AM	Title TBD Leon Mutesa, M.D., Ph.D., <i>University of Rwanda</i>
10:00 – 11:00 AM	TBD
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	Heterogeneity & Evolutionary Trajectory of Breast Cancer Olufunmilayo Olopade, M.D., FACP, <i>UChicago Medicine</i>
12:30 – 1:30 PM	Lunch
1:30-2:30	TBD
2:30 – 4:30 PM	WORKSHOP: Mouse Genome Informatics Speaker TBD
4:15 – 4:30 PM	Introduction and Welcome to Chen K. Chai Memorial Lecture
4:30 – 6:00 PM	Chen K. Chai Memorial Lecture – The Jackson Laboratory Auditorium Title TBD John Mattick, Ph.D., <i>University of New South Wales Sydney</i>

Saturday, July 25th & Sunday, July 26th

No Scheduled Course Activities

Day 6: Monday, July 27th ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:30 – 10:30 AM	Human Evolution and Adaptation in Africa Sarah Tishkoff, Ph.D., <i>University of Pennsylvania, Perelman School of Medicine</i>
10:00 – 11:00 AM	Harnessing African Genomes to Enhance Health Globally Ambroise Wonkam, M.D., Ph.D., <i>Johns Hopkins University</i>
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	Uncovering New Regions of the Human Genome using Long-Read Sequencing Solomon Ofori-acquah, Ph.D., <i>Emory School of Medicine</i>
12:30 – 1:30 PM	Lunch

1:30-2:30	TBD
2:30 – 4:30 PM	WORKSHOP: Exome and Genome Analysis Workshop Nara Sobreira, M.D., Ph.D., <i>Johns Hopkins University</i>
<i>Participants responsible for transportation. Island Explorer is available.</i>	
7:00 – 8:30 PM	Genetics and Genomics of Oxygen Homeostasis – The Stone House at the Bar Harbor Regency Gregg Semenza, M.D., Ph.D., <i>Johns Hopkins University School of Medicine</i>

Day 7: Tuesday, July 28th ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:30 – 10:30 AM	Genetics of Infectious Diseases: Where the Rubber Hits the Road of Life Steven Holland, M.D., <i>National Institute of Allergy & Infectious Diseases, NIH</i>
10:00 – 11:00 AM	TBD
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	Genomics Surveillance and Characterization of Microbial Threats Facilitates Early Detection and Containment of Disease Outbreaks in West Africa Christian Happi, Ph.D., <i>Redeemer's University</i>
12:30 – 1:30 PM	TBD
1:30-2:30	Lunch
2:30 – 3:00 PM	What Happens in a Human Genetics Clinic Ada Hamosh, Ph.D., <i>Johns Hopkins</i>
3:00 – 4:30 PM	Human Genetics Clinic Presentations

Participants responsible for transportation. Island Explorer is available.

7:00 – 8:30 PM	Victor A. McKusick Memorial Lecture – Stone House at the Bar Harbor Regency Genomic Newborn Screening Wendy Chung, M.D., Ph.D., <i>Boston Children's Hospital</i>
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Day 8: Wednesday, July 29th ---

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:30 – 10:30 AM	Prenatal Screening Diagnosis & Therapy Ignatia Van den Veyver, M.D., <i>Baylor College of Medicine</i>

10:00 – 11:00 AM	Title TBD Robert Burgess, Ph.D., <i>The Jackson Laboratory</i>
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	TBD
12:30 – 1:30 PM	Lunch
1:30-2:30	Ethics and Policy Issues Raised by Genetics and Genomics Debra Mathews, Ph.D., M.A., <i>Johns Hopkins University</i>
2:30 – 4:30 PM	WORKSHOP: TBD

Participants responsible for transportation. Island Explorer is available.

7:00 – 8:30 PM	ELSI Case Studies – Stone House at the Bar Harbor Regency John A. Phillips, III., M.D., <i>Vanderbilt University School of Medicine</i> Ada Hamosh, M.D., <i>Johns Hopkins University School of Medicine</i> Louise Wilkins-Haug, M.D., Ph.D., <i>Brigham and Women's Hospital</i>
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Day 9: Thursday, July 30th

Transportation to The Jackson Laboratory

8:30 – 9:00 AM	Breakfast
9:30 – 10:30 AM	Inborn Errors of Metabolism Hilary Vernon, M.D., Ph.D., <i>Johns Hopkins University School of Medicine</i>
10:00 – 11:00 AM	Metabolomics and Human Disease Phenotypes Ralph DeBerardinis, M.D., Ph.D., <i>University of Texas, Southwestern</i>
11:00 – 11:30 AM	Coffee Break
11:30 – 12:30 PM	Pharmacogenomics to Pharmaco-omics Liewei Wang, M.D., Ph.D., <i>Mayo Clinic</i>
12:30 – 1:30 PM	Lunch
1:30-2:30	TBD
2:30 – 4:30 PM	Skippy Lane Memorial Mouse Clinic – Tentative

Participants responsible for transportation. Island Explorer is available.

7:00 – 8:30 PM	Insights into the Pathogenesis and Treatment of Vascular Connective Tissue Disorders – Stone House at the Bar Harbor Regency Harry 'Hal' Dietz, M.D., <i>Johns Hopkins University School of Medicine</i>
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Day 10: Friday, July 31st

Transportation to The Jackson Laboratory

7:30 – 8:30 AM	Breakfast
8:30 – 9:30 AM	Precision Genome Editing Tools Greg Newby, Ph.D., <i>Johns Hopkins University School of Medicine</i>
9:30 – 10:30 AM	Genetic Medicine for Sickle Cell Disease Daniel Bauer, M.D., Ph.D., <i>Harvard Stem Cell Institute</i>
10:30 – 10:45 AM	Coffee Break
10:45 – 11:45 AM	TBD
11:45 – 12:45 PM	Genetic & Pharmacologic Modifiers of Cystic Fibrosis Garry Cutting, M.D., <i>Johns Hopkins University School of Medicine</i>
12:45 – 1:15 PM	Course Summary and Wrap-Up
1:15 – 1:45 PM	Lunch

Participants responsible for transportation. Island Explorer is available