Human and Mammalian Genetics and Genomics: The 59th McKusick Short Course
July 16 – July 27, 2018

WEBCAST EVENT SCHEDULE

For more information, please contact Erin McDevitt; erin.mcdevitt@jax.org

NOTE: All times listed on this schedule are in Eastern Standard Time

Monday, July 16

8:20-8:30am  Course Welcome
Edison Liu, M.D., The Jackson Laboratory

8:30-9:25am  History of Human Genetics
David Valle, M.D., Johns Hopkins University School of Medicine

9:25–10:15 am  Opportunities for Using Mouse Models in the 21st Century
Gary Churchill, Ph.D., The Jackson Laboratory

10:45-11:40am  Chromosome Structure and Function
Jeanne Lawrence, Ph.D., University of Massachusetts Medical School

11:40-12:30pm  Recombination
Kenneth Paigen, Ph.D, The Jackson Laboratory

1:30-2:30pm  Mice as Models for Human Diseases
Greg Cox, Ph.D., The Jackson Laboratory

2:30-3:30pm  Molecular Genetics
John A. Phillips, III., M.D., Vanderbilt University School of Medicine
Evening Lecture

7:00-8:15pm  Thomas H. Roderick Memorial Lecture
Title TBD
Richard A. Gibbs, Ph.D., Baylor College of Medicine

Tuesday, July 17

8:30-9:25am  Epigenetics
Hans Bjornsson, M.D., Ph.D., Johns Hopkins University School of Medicine

9:25-10:15am  Transcriptional Regulation of Gene Expression
Andrew S. McCallion, Ph.D., Johns Hopkins University School of Medicine

10:45-11:40am  Single Cell RNA-Seq
Loyal Goff, Ph.D., Johns Hopkins University School of Medicine

11:40-12:30pm  3D Genome Reconfiguration in Mammalian Brain Development and Disease
Jennifer Phillips-Cremins, Ph.D., University of Pennsylvania

1:30-2:30pm  Introduction to MGI/OMIM
MeiYee Law, Ph.D., The Jackson Laboratory and Ada Hamosh, M.D., The Johns Hopkins University School of Medicine

Evening Lecture  (Not Available Live)

7:30-9:00pm  The Nature of Mutation
Stylianos Antonarakis, M.D., DSc, University of Geneva Medical School

Wednesday, July 18

8:30-9:25am  Massively Parallel Sequencing: Technologies and Applications
Elaine Mardis, Ph.D., Nationwide Children’s Hospital

9:25-10:15am  CNVs in Human Disease
Charles Lee, Ph.D., The Jackson Laboratory for Genomic Medicine

10:45-11:40am  Immune Control of Tissue Regeneration
Nadia Rosenthal, Ph.D., The Jackson Laboratory

11:40-12:30pm  The Humanized Mouse in Biomedical Research
Lenny Shultz, Ph.D., The Jackson Laboratory
Evening Lecture (Not Available Live)

7:30-9:00pm  TBD

Thursday, July 19

8:30-9:40am  A Primer on Quantitative Systems Biology
Aravinda Chakravarti, Ph.D., Johns Hopkins University School of Medicine

9:40-10:15am  Methods for Genetic Association Studies in Humans
Goncalo Abecasis, Ph.D., The University of Michigan

10:45-11:40am  Mapping Complex Traits in Mice
Gary Churchill, Ph.D., The Jackson Laboratory

11:40-12:30pm  Transcriptional Responses to Hypoxia and Ischemia
Gregg Semenza, M.D., Ph.D., Johns Hopkins University School of Medicine

1:30- 2:30pm  Inborn Errors
David Valle, M.D., Johns Hopkins University School of Medicine

Evening Lecture (Not Available Live)

7:30-9:00pm  Title TBD
Connie Cepko, Ph.D., Harvard University

Friday, July 20

8:30-9:25am  Genetic Epidemiology of Breast and Ovarian Cancer
Larry Brody, Ph.D., National Human Genome Research Institute

9:25-10:15am  Cancer Biology Exposed by Large-Scale Sequencing
Victor Velculescu, M.D., Ph.D., Johns Hopkins University School of Medicine

10:45-11:40am  Inborn Errors of the Epigenetic Apparatus: Genetics of Chromatin Readers and Writers
Hans Bjornsson, M.D., Ph.D., Johns Hopkins University School of Medicine

11:40- 12:30pm  Gene Regulation and ENCODE
David Bodine, Ph.D., National Human Genome Research Institute
Evening Lecture

7:30-9:00pm  Chen K. Chai Lecture
            Title TBD
            Jack Szostak, Ph.D., Harvard Medical School and Massachusetts General Hospital

Saturday, July 21

8:30-9:25am  Genomics and the Inference of Human Population History
              Andrew Clark, Ph.D., Cornell University

9:25-10:15am Interpretation of Genetic Variants using Massive-Scale Reference Data Sets
              Daniel MacArthur, Ph.D., Massachusetts General Hospital

10:45-11:40am H3Africa
               Charles Rotimi, Ph.D., National Human Genome Research Institute

11:40-12:30pm African Genomics: Implications for Studies of Human Evolution and Disease
               Sarah Tishkoff, Ph.D., University of Pennsylvania

Sunday, July 22

No Scheduled Course Events
Monday, July 23

8:30-9:25 am  The Major Histocompatibility Complex in Health and Disease  
Derry Roopenian, Ph.D., The Jackson Laboratory –

9:25-10:15 am  Genetics of Autoimmunity  
David Serreze, Ph.D., The Jackson Laboratory

10:45-11:40 am  Genetics of Infectious Diseases  
Steven M. Holland, M.D., National Institutes of Health

11:40 – 12:30 pm  Innate Immunity and IBD  
Judy Cho, M.D., Icahn School of Medicine at Mount Sinai

Evening Lecture  (Not Available Live)

7:30-9:00 pm  TGF Beta Signaling and the Marfan Syndrome  
Harry C. Dietz, M.D., Johns Hopkins University School of Medicine

Tuesday, July 24

8:30-9:25 am  The Genetics of Skin Diseases and Psoriasis  
Anne Bowcock, Ph.D., Icahn School of Medicine at Mount Sinai

9:25-10:15 am  Modeling Behavior in the Laboratory Mouse  
Vivek Kumar, Ph.D., The Jackson Laboratory

10:45-11:40 am  Genetics of Schizophrenia  
Benjamin Neale, Ph.D., Massachusetts General Hospital

11:40-12:30  Human Microbiome in Health and Disease  
Julia Oh, Ph.D., The Jackson Laboratory for Genomic Medicine

Evening Lecture  (Not Available Live)

7:30-9:00 pm  Title TBD  
Peter Donnelly, FRS, Wellcome Trust Centre for Human Genetics
**Wednesday, July 25**

8:30-9:25am  **Genetic and Pharmacologic Modifiers of CF**  
Garry R. Cutting, M.D., Johns Hopkins University School of Medicine

9:25-10:15am **The Genetics and Clinical Phenotypes of Inherited Skeletal Dysplasias**  
Julie Hoover-Fong, M.D., Ph.D., Johns Hopkins University School of Medicine

10:45-11:40am **Personalized Medicine**  
David Ledbetter, Ph.D., Geisinger Health System

11:40-12:30pm **Pharmacogenomics: Development, Science and Translation**  
Richard Weinshilboum, M.D., Mayo Clinic

**Evening Lecture** (Not Available Live)

7:30-9:00pm  **Senior Lecturer**  
Title TBD  
Leslie Biesecker, M.D., National Human Genome Research Institute

**Thursday, July 26**

8:30-9:25 am  **Proteomics**  
Steven Gygi, Ph.D., Harvard Medical School

9:25-10:25am  **Prenatal Diagnosis and Screening**  
Ignatia B. Van den Veyver, M.D., Baylor College of Medicine

10:45-11:40am **Biomedical Ethics in Genomics**  
Debra Mathews, Ph.D., M.A., Johns Hopkins Berman Institute of Bioethics

11:40-12:30pm **DNA Forensics**  
Phil Reilly, M.D., J.D., Third Rock Ventures

**Evening Lecture** (Not Available Live)

7:30-9:00pm  **ELSI Case Studies and Editing the Human Genome**  
John A. Phillips, III., M.D., Vanderbilt University School of Medicine,  
Debra Mathews, Ph.D., M.A., Johns Hopkins Berman Institute of Bioethics,  
Ada Hamosh, M.D., M.P.H., Johns Hopkins University School of Medicine,
Friday, July 27

8:30-9:25am  
**Metabolomics and Metabolic Flux Analysis**  
Ralph DeBerardinis, M.D., Ph.D., *UT Southwestern*

9:25-10:15am  
**Treatment of Genetic Disease**  
David Valle, M.D., *Johns Hopkins University School of Medicine*

10:45-11:40am  
**IPS Cell Technology, Gene Editing and Disease Research**  
Rudolf Jaenisch, M.D., *Whitehead Institute*

11:40-12:30pm  
**Course Wrap Up**  
**Title TBD**  
Leslie Biesecker, M.D., *National Human Genome Research Institute*

*End of the course*