**SUNDAY, MARCH 7**
Arrival and Registration

**MONDAY, MARCH 8**

**Welcome and Keynote Address (X1)**  
Tim W. Yu†, Boston Children’s Hospital, USA  
Developing Custom Genetic Therapies

**Welcome and Keynote Address (X2)**  
Austin Burt, Imperial College London, UK  
Genes in Conflict: From Nature to Lab and Back

**Mechanisms of Editing and Epi-Editing (X1)**  
Jacob E. Corn, ETH in Zurich, Switzerland  
How Cells Deal with Cas-Based Tools  
Bas van Steensel, Netherlands Cancer Institute, Netherlands  
Probing Genome Regulation  
Speaker to be Announced  
Short Talks Chosen from Abstracts

**Selfish Strategies (X2)**  
Cedric Feschotte, Cornell University, USA  
Selfish Strategies of TEs  
Daven Presgraves, University of Rochester, USA  
Meiotic Drive: Drive by Interference  
Lila Fishman, University of Montana, USA  
A Selfish Centromere in the Wild  
Short Talks Chosen from Abstracts

**Workshop 1: Speed Networking (X2)**

**Molecular Engineering of Editors and Epi-Editors (X1)**  
Nicole Gaudelli†, Beam Therapeutics, USA  
Base and Prime Editing  
Samuel H. Sternberg, Columbia University, USA  
Targeted DNA Integration using CRISPR RNA-guided Transposases  
Cecilia Cotta-Ramusino, Tesserxa Therapeutic, USA  
New Editing Technologies  
Jennifer E. Phillips-Cremins†, University of Pennsylvania, USA  
Tools to Manipulate Chromatin Structure  
Short Talks Chosen from Abstracts

**Theory and Experience with No-Threshold Engineered Gene Drives (X2)**  
Omar S. Akbari, University of California, San Diego, USA  
Homing-Based Drive Systems  
Maciej Maselko, Macquarie University, Australia  
Underdominance via Engineered Genetic Incompatibility

**Ethan Bier**, University of California, San Diego, USA  
Gene-Drives and Other Active Genetic Systems  
Short Talks Chosen from Abstracts

**Poster Session 1**

**TUESDAY, MARCH 9**

**Therapeutics I: Ex Vivo Editing (X1)**  
Rachel E. Haurwitz, Caribou Biosciences, Inc., USA  
The future is allogeneic - Translating a CRISPR platform into gene-edited cell therapies  
Speaker to be Announced  
Gene Editing for Blood Disorders  
Matthew Porteus, Stanford University School of Medicine, USA  
Gene Editing for Hemoglobinopathies and Immunodeficiencies  
Chiara Bonini, Ospedale San Raffaele, Italy  
Stem Cell Transplantation  
Short Talks Chosen from Abstracts

**Dynamics of Natural Drive (X2)**  
Anna K. Lindholm, University of Zurich, Switzerland  
Population Biology of t-Haplotype  
Hanna Johansson, Uppsala University, Sweden  
Spore Killers  
Kelly Dyer, University of Georgia, USA  
Drive Dynamics in Drosophila  
Andreas Houben, Leibniz Institute of Plant Genetics and Crop Plant Research, Germany  
B Chromosome Drive  
Short Talks Chosen from Abstracts

**Workshop/Panel Discussion 2: Ethical, Social and Community Considerations in Using Gene Drive Technologies (X2)**

**Therapeutics II: In Vivo Editing (X1)**  
Shannon E. Boye†, University of Florida, USA  
Gene Editing in the Retina  
Leonela Amaosii, Exonics Therapeutics, USA  
Gene Editing for Muscular Dystrophy  
Fyodor D. Urnov, University of California, Berkeley, USA  
Towards a CRISPRi/a Therapeutic for Radiation Injury  
Charles Gersbach, Duke University, USA  
In Vivo Therapeutic CRISPRi/a Approaches  
Short Talks Chosen from Abstracts

**Spatially and Temporally Restricted Gene Drives (X2)**  
Luke S. Alphey, Pirbright Institute, UK  
Underdominance-Like Systems

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* Session Chair  † Invited but not yet accepted     Program current as of February 18, 2020. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit [https://www.keystonesymposia.org](https://www.keystonesymposia.org).
**Wednesday, March 10**

**Delivery (X1)**
- Kathryn Whitehead, Carnegie Mellon University, USA
  *Non-viral Lipid Nanoparticles for RNA Delivery and Gene Editing*
- Aravind Asokan†, Duke University, USA
  *Engineering AAV for Targeted In Vivo Editing*
- James Dahlman, Georgia Tech / Emory Medical School, USA
  *Delivering Gene Editing Components by Testing Thousands of Nanoparticles in vivo*
- Speaker to be Announced

**Natural Drive Mechanisms (X2)**
- Amanda Larracuente, University of Rochester, USA
  *Molecular Mechanisms of Meiotic Drive in Drosophila*
- Sarah Zanders, Stowers Institute for Medical Research, USA
  *wtf Genes and Meiotic Drive Mechanisms in Yeasts*
- Seth Bordenstein, Vanderbilt University, USA
  *Wolbachia-mediated Cyttoplasmic Incompatibility*
- Marce Lorenzen, North Carolina State University, USA
  *Medea Systems in Insects*

**Short Talks Chosen from Abstracts**

**Workshop 3: Early Career Professional Short-Talks (X2)**

**Controlling CRISPR (X1)**
- Ahmad S. Khalili†, Boston University, USA
  *Synthetic Epigenetic Systems*
- Hyongbum Henry Kim, Yonsei University College of Medicine, South Korea
  *High-throughput Analysis and Prediction of Genome Editing Outcomes*
- Speaker to be Announced

**Drive Suppressors and Resistance (X2)**
- Catherine Montchamp-Moreau, Paris-Saclay University, France
  *Suppressors of Sex Chromosome Drive in D. Simulans*

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**Thursday, March 11**

**RNA Editing (X1)**
- Patrick D. Hsu†, University of California, Berkeley, USA
  *Novel RNA Editing Systems*
- Kathie Bishop†, Locana, USA
  *RNA Targeting Technologies and Therapeutic Applications*
- Prashant Mali, University of California San Diego, USA
  *Endogenous RNA Editing Systems*
- Speaker to be Announced

**Modelling Selfish Genetic Elements - Natural and Synthetic (X2)**
- Fred Gould, North Carolina State University, USA
  *How Population Structure could Impact Gene Drives*
- Penny Hancock, University of Oxford, UK
  *Demographic Models of the Spread of Selfish Genetic Elements in Aedes Aegypti Arbovirus Vector Populations*
- Robert Unckless, University of Kansas, USA
  *Meiotic Drive Population Extinction, Speciation and Sex-Chromosome Evolution*
- Manus M. Patten, Georgetown University, USA
  *Multi-locus Models of Drive*

**Single Cell Technologies (X1)**
- John G. Doench, Broad Institute of MIT and Harvard University, USA
  *Latest Improvements to Screening Tools*
- Britt S. Adamson, Princeton University, USA
  *Single Cell Sequencing Technologies*
- Jonathan S. Weissman, University of California, San Francisco, USA
  *Genome-Wide Screening Technologies*

**Technology Applications in the Field (X2)**
Anthony A. James, University of California, Irvine, USA
UC-Malaria Initiative: Mosquito Population Modification to Control Malaria Transmission

Aboulaye Diabaté†, Institut de Recherche en Sciences de la Santé/Centre Muraz, Bobo-Dioulasso, Burkina Faso
Target Malaria

Owain Edwards, Commonwealth Scientific and Industrial Research Organisation, Australia
In silico Assessments of Feasibility and Risk for Gene Drives against Feral Cats in Australia

Short Talks Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X1)
Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X2)

FRIDAY, MARCH 12

Departure