

Genome Engineering: From Mechanisms to Therapies (B4)

Scientific Organizers: Andrew May, Rodolphe Barrangou and Knut Woltjen

February 19–23, 2019

Fairmont Empress Victoria, Victoria, British Columbia, Canada

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DEADLINES:

**All deadlines end at 11:59 PM US Mountain Standard Time*

Scholarship Deadline: Oct 23, 2018 [\[details\]](#)

Discounted Abstract Deadline: Oct 23, 2018 [\[details\]](#)

Abstract Deadline: Nov 20, 2018 [\[details\]](#)

Discounted Registration Deadline: Dec 19, 2018 [\[details\]](#)

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No registration fees are used to fund entertainment or alcohol at this conference

Conference Program [Print](#) | [View meeting in 12 hr \(am/pm\) time](#)

The meeting will begin on Tuesday, February 19 with registration from 16:00 to 20:00 and a welcome mixer from 18:00 to 20:00. Conference events conclude on Saturday, February 23 with a closing plenary session from 17:00 to 19:00, followed by a social hour and entertainment. We recommend return travel on Sunday, February 24 in order to fully experience the meeting.

TUESDAY, FEBRUARY 19

16:00–20:00	Arrival and Registration	Palm Court
18:00–20:00	Welcome Mixer	Palm Court

No registration fees are used to fund alcohol served at this function.

WEDNESDAY, FEBRUARY 20

07:30–08:30	Breakfast	Palm Court
08:30–09:30	Welcome and Keynote Address	Salon A-B
	Registered attendees can view abstracts starting on 01/19/2019	
	Philip D. Gregory , Bluebird Bio, USA Talk Title to be Announced	
09:30–11:45	Genome Engineering Tools and Technologies	Salon A-B
	Registered attendees can view abstracts starting on 01/19/2019	
	Prashant Mali , University of California, San Diego, USA <i>Therapeutic Strategies via Genome Engineering: New Approaches and New Challenges</i>	
	Coffee Break	
	Zoltan Ivics , Paul Ehrlich Institute, Germany <i>Transposons: Molecular Parasites Tamed for Advanced Genome Engineering</i>	
	Alexis C. Komor , University of California, San Diego, USA <i>Early Career Talk: Using Uracil as a Genome Editing Intermediate</i>	
	Short Talk(s) Chosen from Abstracts	
11:45–17:00		

On Own for Lunch

11:45–13:00	Poster Setup	Salon C
13:00–22:00	Poster Viewing	Salon C
14:30–16:30	Workshop 1: Tools and Technologies A collection of short talks chosen from the abstracts discussing exciting new approaches and techniques being developed for the engineering of genomes. The workshop would cover topics including computational approaches to design and analysis of experiments, harnessing DNA repair mechanisms for improved engineering, epigenome editing, screening methods and engineering of DNA binding and modifying proteins.	Salon A-B
	Short Talks Chosen from Abstracts	
16:30–17:00	Coffee Available	Prefunction 2
17:00–19:00	Structure and Mechanism of Genome Editing Systems Registered attendees can view abstracts starting on 01/19/2019 Benjamin P. Kleinstiver , Massachusetts General Hospital, USA <i>Engineered CRISPR Nucleases to Enhance Genome Editing</i> Andrew May , Chan Zuckerberg Biohub, USA <i>DNA Repair Outcomes Provide Insight into Genome Editing Mechanisms in Primary Cell Systems</i> Osamu Nureki , University of Tokyo, Japan <i>Structure and Mechanism of RNA-Programmable Nucleases</i> Short Talk(s) Chosen from Abstracts	Salon A-B
19:00–20:00	Social Hour with Lite Bites No registration fees are used to fund alcohol served at this function.	Salon C
19:30–22:00	Poster Session 1	Salon C

THURSDAY, FEBRUARY 21

07:30–08:30	Breakfast	Palm Court
08:00–08:30	Poster Setup	Salon C
08:30–17:00	Poster Viewing	Salon C
08:30–11:30	Engineered Models of Genetic Disease Registered attendees can view abstracts starting on 01/19/2019 Danwei Huangfu , Memorial Sloan Kettering Cancer Institute, USA <i>Human Pluripotent Stem Cells as Models for Genetic Disease</i> Knut Woltjen , CiRA, Kyoto University, Japan <i>Isogenic Models of Disease from Induced Pluripotent Stem Cells</i> Coffee Break Amy J. Wagers , Harvard University, USA <i>Gene Editing in Stem Cells</i> Erika Sasaki , Central Institute for Experimental Animals, Japan <i>Talk Title to be Announced</i> Short Talk(s) Chosen from Abstracts	Salon A-B
11:30–12:30	Lunch	Salon C
12:00–14:30	Poster Session 2	Salon C
14:30–16:30	Workshop 2: Delivery Methods A collection of short talks chosen from the abstracts describing methods and approaches for in vitro and in vivo delivery of genome engineering technologies. The workshop would cover topics including devices for electroporation, mechanical introduction of molecules into cells, cell-specific targeting, viruses and viral-like particles, nanoparticles to address the key need to develop delivery vehicles for	Salon A-B

effective use of genome engineering approaches in therapeutics and research models.

Short Talks Chosen from Abstracts

16:30–17:00	Coffee Available	Prefunction 2
17:00–19:00	Design and Engineering of Cellular Devices Registered attendees can view abstracts starting on 01/19/2019 Wilson Wong , Boston University, USA <i>Synthetic Biology in Cellular Immunotherapy</i> Timothy K. Lu , Massachusetts Institute of Technology, USA <i>Synthetic Gene Circuits for Next-Generation Therapeutics</i> Charles Gersbach , Duke University, USA <i>Cell Programming with Genome Engineering Technologies</i>	Salon A-B
	Short Talk(s) Chosen from Abstracts	
19:00	On Own for Dinner	

FRIDAY, FEBRUARY 22

07:30–08:30	Breakfast	Palm Court
08:30–11:30	Genome Editing Screens for Function and Disease Mechanisms Registered attendees can view abstracts starting on 01/19/2019 Fyodor D. Urnov , Altius Institute for Biomedical Sciences, USA <i>Editing Human Genome Control Circuits to Reveal Disease Mechanisms and Targets for Intervention in the Clinic</i> Jan E. Carette , Stanford University, USA <i>CRISPR-Cas Screens for Studying Virus-Host Interactions</i> Coffee Break Speaker to be Announced Brittany Adamson , University of California, San Francisco, USA <i>Early Career Talk: Perturb-Seq: Combining High throughput CRISPR Screening with Single-Cell Sequencing</i> Short Talk(s) Chosen from Abstracts	Salon A-B
11:30–17:00	On Own for Lunch	
11:30–13:00	Poster Setup	Salon C
13:00–22:00	Poster Viewing	Salon C
16:30–17:00	Coffee Available	Prefunction 2
17:00–19:00	Harnessing DNA Repair Mechanisms for Genome Engineering Registered attendees can view abstracts starting on 01/19/2019 Maria Jasin , Memorial Sloan Kettering Cancer Center, USA <i>Homologous Recombination and End-Joining Mechanisms in Genome Editing</i> Beeke Wienert , UC Berkeley, USA <i>Unbiased Identification of CRISPR Off Targets in vivo using DISCOVER-seq</i> Nancy Maizels , University of Washington School of Medicine, USA <i>Gene Correction at Targeted DNA Breaks</i> Short Talk(s) Chosen from Abstracts	Salon A-B
19:00–20:00	Social Hour with Lite Bites No registration fees are used to fund alcohol served at this function.	Salon C
19:30–22:00	Poster Session 3	Salon C

SATURDAY, FEBRUARY 23

07:30–08:30	Breakfast	Palm Court
08:30–11:30	Genome Engineering of Bacteria for Therapeutic and Diagnostic Applications Registered attendees can view abstracts starting on 01/19/2019 Rodolphe Barrangou , North Carolina State University, USA <i>Engineered Lactobacilli for Human Health Applications</i> Jason M. Peters , University of Wisconsin-Madison, USA <i>Bacterial CRISPRi Screens to Identify the Mode of Action of Novel Antibiotics</i> Coffee Break Richard P. Novick , New York University, USA <i>Conversion of Staphylococcal Pathogenicity Islands (SaPIs) to CRISPR-Cas9-Carrying Antibacterial Drones That Cure Staphylococcal Infections</i> Short Talk(s) Chosen from Abstracts	Salon A-B
11:30–17:00	On Own for Lunch	
14:30–16:30	Workshop 3: Clinical Development Progress A collection of both invited speakers and speakers selected from the abstracts focused on the current status of clinical trials using genome editing systems. Short Talks Chosen from Abstracts	Salon A-B
16:30–17:00	Coffee Available	Prefunction 2
17:00–18:45	Genome Editing for Treating Human Disease Registered attendees can view abstracts starting on 01/19/2019 Bruce R. Conklin , Gladstone Institutes, USA <i>Genome Surgery for Treating Neuronal Disorders</i> Paula M. Cannon , University of Southern California, Keck School of Medicine, USA <i>Genome Editing to Treat Hematopoietic Disorders and Infectious Diseases</i> Michel Sadelain , Memorial Sloan Kettering Cancer Center, USA <i>Genome Edited CAR-T Cells for Improved Treatment of Solid Tumors</i> Juan Carlos Izpisua-Belmonte , The Salk Institute for Biological Studies, USA <i>Engineering Stem Cells in vivo for Therapeutic Benefit</i> Short Talk Chosen from Abstracts	Salon A-B
18:45–19:00	Meeting Wrap-Up: Outcomes and Future Directions (Organizers) Registered attendees can view abstracts starting on 01/19/2019	Salon A-B
19:00–20:00	Social Hour with Lite Bites No registration fees are used to fund alcohol served at this function.	Salon C
20:00–23:00	Entertainment Entertainment is not subsidized by conference registration fees nor any U.S. federal government grants. Funding for this expense is provided by other revenue sources.	Salon C

SUNDAY, FEBRUARY 24**Departure**

*Session Chair †Invited, not yet responded.

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