

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Plant Genome Engineering: From Lab to Field (L3)

April 3-6, 2020 • Beaver Run Resort • Breckenridge, CO, USA

Scientific Organizers: Caixia Gao, Daniel F. Voytas and Holger Puchta

Supported by the Directors' Fund

Discounted Abstract & Scholarship Deadline: December 3, 2019 / Abstract Deadline: January 7, 2020 / Discounted Registration Deadline: February 3, 2020

### FRIDAY, APRIL 3

#### Arrival and Registration

### SATURDAY, APRIL 4

#### Welcome and Keynote Address

**Pamela C. Ronald**, University of California, Davis, USA  
*Genetic Improvement of Rice for a Changing Climate*

#### Plant Genome Editing Tools and Technology Development I

**Feng Zhang**, University of Minnesota, USA  
*Improving HDR-Mediated Genome Editing in Plants*

**Caixia Gao**, Chinese Academy of Sciences, China  
*Programmable Genome Engineering in Plants Using CRISPR Technology*

**Jens Boch**, Leibniz Universität Hannover, Germany  
*Recent Applications of TALENs for Gene Editing*

**Lanqin Xia**, Chinese Academy of Agricultural Sciences, China  
*CRISPR/Cas9-Mediated Precise Gene Replacement for Crop Improvement*

#### Short Talks Chosen from Abstracts

#### Plant Genome Editing Tools and Technology Development II

**Jian-Kang Zhu**, Purdue University and Shanghai Center for Plant Stress Biology, CAS, USA  
*Developing Efficient Base-Editing and Gene-Targeting Tools for Precise Genome Editing in Plants*

**Adam J. Bogdanove**, Cornell University, USA  
*Genome Editing of Disease Resistance QTL in Rice*

**Magdy Mahfouz**, King Abdullah University of Science and Technology, Saudi Arabia  
*Application of Cas13 for RNA Editing in Plants*

#### Short Talks Chosen from Abstracts

#### Poster Session 1

### SUNDAY, APRIL 5

#### DNA Repair and Chromosome Engineering

**Holger Puchta**, Karlsruhe Institute of Technology, Germany  
*CRISPR/Cas Induced Chromosomal Rearrangements*

**Seiichi Toki**, National Institute of Agrobiological Sciences, Japan  
*DNA Repair*

**Steven E. Jacobsen**, University of California, Los Angeles, USA  
*Epigenetic Editing*

**Avraham A. Levy**, Weizmann Institute of Science, Israel  
*Targeted Recombination between Homologous Chromosomes in Plants*

**Joyce Van Eck**, Boyce Thompson Institute, USA  
*CRISPR Tames the Wild Groundberry and Goldenberry*

#### Short Talks Chosen from Abstracts

#### Plant Transformation Technology and Novel Delivery Methods

**Daniel F. Voytas**, University of Minnesota, USA  
*Accelerating Plant Gene Editing Through De Novo Meristem Induction*

**Erika Toda**, Tokyo Metropolitan University, Japan  
*Genome Editing in Rice by Direct Delivery of CRISPR/Cas9 Vectors or Ribonucleoproteins into Zygotes*

**William J. Gordon-Kamm**, Corteva Agriscience, USA  
*A Unified Method for Cereal Transformation to Facilitate Genome Modification*

#### Short Talks Chosen from Abstracts

#### Poster Session 2

### MONDAY, APRIL 6

#### Application of Genome Editing in Agriculture I

**Zachary Lippman**, Cold Spring Harbor Laboratory, USA  
*Engineering Quantitative Trait Variation for Crop Improvement by Genome Editing*

#### Speaker to be Announced

**Lázaro E. P. Peres**, Universidade de São Paulo, Brazil  
*De novo Domestication of Wild Species as a Strategy to Improve Food Security*

**Christine Queitsch**, University of Washington, USA  
*Gene Regulation and Phenotype*

#### Short Talks Chosen from Abstracts

#### Application of Genome Editing in Agriculture II

**Kan Wang**, Iowa State University, USA  
*Corn Genome Editing Using Cas9 and Cas12a*

**Yiping Qi**, University of Maryland, USA  
*Expanding the Targeting Range of CRISPR in Plants*

**Tom Adams**, Pairwise, USA  
*New Tools for Unlocking Plant Diversity*

**Mariette E.S. Andersson**, Swedish University of Agricultural Sciences, Sweden  
*Genome Editing for Development of Novel Potato Traits*

#### Short Talks Chosen from Abstracts

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

### TUESDAY, APRIL 7

#### Departure