

# Plant Genomics & Gene Editing Congress: Delegate Flyer

Use code  
PGBB20 for  
20% off RRP!

climate•SMART•publishing  
IN AGRICULTURAL SCIENCE

## Genome editing for precision crop breeding

Edited by: Dr Matthew Willmann, Cornell University, USA

### KEY FEATURES

- **Comprehensive, systematic review of advances in key CRISPR/Cas technologies, such as TALENS and zinc finger nucleases, double-strand break repair techniques, insertion-based genome edits, base editing, guide RNAs, gRNA/Cas9 constructs and CRISPR/Cas off targeting**
- **Covers both techniques and their practical application to particular cereal and other crops**
- **Discusses challenges in regulating this emerging technology**

### CONTENTS

#### Part 1 Genome editing techniques

1. Using TALENS and zinc finger nucleases as genome-editing reagents in plants: *Adam Bogdanove, Cornell University, USA*
2. Double-strand break (DSB) repair in plants: *Holger Puchta, Botanical Institute II - Karlsruhe Institute of Technology, Germany*
3. Advances in the generation of insertion-based genome edits in plants: *Qing-Hui Yu, Xinjiang Chinese Academy of Agricultural Sciences, China*
4. Viruses as vectors for the delivery of gene-editing reagents: *Evan E. Ellison, James C. Chamness and Daniel F. Voytas, University of Minnesota, USA*
5. Base editing in plants: *Nathaniel Graham, Pairwise Plant, USA*
6. Advances in designing guide RNAs in genome editing of plants: *Ling-Ling Chen, Huazhong Agricultural University, China*
7. Advances in assembling gRNA/Cas9 constructs in genome editing of plants: *Diego Orzaez, Polytechnic University of Valencia, Spain*
8. Strategies for CRISPR/Cas9-mediated genome editing: from delivery to production of modified plants: *William Gordon-Kamm, Pierluigi Barone, Sergei Svitashv, Jeffrey D. Sander, Sandeep Kumar and Todd Jones, Corteva Agriscience, USA*
9. Advances in screening plants for edits and off targets: *Chung Wang, Chinese Academy of Agricultural Sciences, China*

10. Genome editing on promoter regions: *Andika Gunadi and Ning Zhang, Boyce Thompson Institute, USA; and John J. Finan, The Ohio State University, USA*
11. The regulation of genome-edited crops: *Gregory Jaffe, Center for Science in the Public Interest, USA*

#### Part 2 Applications

12. Genome editing of barley: *Martin Becker, Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Germany; and Goetz Hensel, Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Germany and Palacký University, Czech Republic*
13. Genome editing of maize: *Kan Wang, Iowa State University, USA*
14. Genome editing of sorghum: *David Holding, University of Nebraska-Lincoln, USA*
15. Genome editing of brassica crops: *Cheng Dai, Huazhong Agricultural University, China*
16. Genome editing of tomatoes and other Solanaceae: *Joyce Van Eck, Boyce Thompson Institute – Cornell University, USA*
17. Genome editing of perennial crops: *Chung Jui (CJ) Tsai, University of Georgia, USA*

BURLEIGH DODDS SERIES IN AGRICULTURAL SCIENCE

Genome editing  
for precision crop  
breeding

Edited by Dr Matthew Willmann, Cornell University, USA



burleigh dodds  
SCIENCE PUBLISHING

"CRISPR/Cas technology is revolutionizing molecular biology and has the potential to create a novel, more sustainable agriculture. With its breadth of coverage and the expertise of the distinguished international team of contributing authors, this comprehensive guide to genome editing for precision crop breeding promises to be an ideal reference for researchers and graduate students and those working in agriculture and plant biotechnology around the world."

*Professor Caixia Gao, Institute of Genetics and Developmental Biology – Chinese Academy of Sciences, China*

### SPECIAL DELEGATE OFFER

Enter code **PGBB20** at checkout via the Burleigh Dodds Bookshop to receive **20% off your purchase of this title!**