

30th Annual

 Root Biology
 Symposium

Schedule

The symposium will be held in the Christopher S. Bond Life Sciences Center at the University of Missouri. Registration and all presentations will be in **Monsanto Auditorium** (ground floor). The poster sessions, vendors, networking reception, and continental breakfasts, meals and coffee breaks will be in **McQuinn Atrium** (first floor).

Wednesday, May 29

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| 7:30–5:00 | Poster Set-Up | |
| 7:30–8:45 | Registration and Continental Breakfast | |
| 8:45–8:50 | Welcome | Robert Sharp and Melissa Mitchum |
| 8:50–9:00 | Opening Remarks | Chancellor Brady Deaton |
| 9:00–9:45 | Chancellor’s Distinguished Visitor | Introduction: Robert Sharp |
| 9:00 | <i>China’s Food Security is Threatened by the Unsustainable Use of Water Resources in North and Northwest China</i> | Jianhua Zhang |
| 9:45–10:30 | Keynote Speaker | Introduction: Melissa Mitchum |
| 9:00 | <i>A Systems Approach to Improved Root Traits</i> | Philip Benfey |
| 10:30–11:00 | Break | |
| 11:00–12:25 | Root Development Session | Chair: Paula McSteen |
| | Sponsored by Developmental Dynamics | |
| 11:00 | <i>Session Keynote: Lateral Root Morphogenesis is Regulated by Mechanical and Hormone Signals</i> | Malcolm Bennett |
| 11:40 | <i>Identification of Novel Loci Regulating Inter-Specific Variation in Root Morphology and Cellular Development in Tomato</i> | Siobhan Brady |
| 12:10 | <i>Growth and Luminescence Observatory for Roots (GLO-Roots): A Platform for High-Resolution Analysis of Root Structure and Physiology in Soil</i> | Ruben Rellan-Alvarez |
| 12:25–2:00 | Lunch – Sponsored by DuPont Pioneer | |
| 2:00–3:00 | Root Development Session (continued) | Chair: Felix Fritschi |
| 2:00 | <i>Peptide-Receptor Signalling Pathways Controlling Root Meristem Development – Old Players with New Functions?</i> | Rudiger Simon |
| 2:30 | <i>Strigolactone Regulation of Adventitious Root Formation – Interactions with Ethylene</i> | Amanda Rasmussen |
| 3:00–3:30 | Break | |

- 3:30–5:10 Abiotic Interactions Session** **Chair: Henry Nguyen**
- 3:30 *Session Keynote: Exploiting Root-to-Shoot Signalling of Drying Soil..... Ian Dodd*
- 4:10 *TBD..... Charlie Messina*
- 4:40 *Genotypic and Environmental Variation in Rice Grain Elements Including Arsenic..... Adam Price*
- 5:10–6:15 Reception (posters open)**
- 6:15–7:00 Keynote Speaker** **Introduction: Robert Sharp**
- 6:15 *From Canola Roots to Curbing Cancer – A Fascinating Journey into Brassica’s Beneficial Bioactives..... John Kirkegaard*

Thursday, May 30

- 7:30 Continental Breakfast and Registration
- 8:30–10:10 Abiotic Interactions Session (continued)** **Chair: Kara Riggs**
- 8:30 *MIZU-KUSSE11 (MIZ1) Regulation of Hydrotropism in Arabidopsis Roots..... Hideyuki Takahashi*
- 9:00 *Digging Deep(er) - Soybean Roots Mining for Water..... Felix Fritschi*
- 9:30 *The Dehydrating Root Metabolome: Global Root Metabolite Profiling in Sporobolus stapfianus..... Abou Yobi*
- 9:45 *Elevated CO₂ Alters Root Distribution, ABA Signals and Enhances Stomatal Closure in Response to Drought in Field-Grown Soybean Andrew Leakey*
- 10:15–10:45 Break
- 10:45–12:15 Biotic Interactions Session** **Chair: Gary Stacey**
- 10:45 *Session Keynote: The Mysterious Intermediate Stages of Root Nodule Development: Analysis by Genetics and Laser Microdissection Sharon Long*
- 11:25 *Pathogen Effectors as Probes to Study Plant Processes..... Sophien Kamoun*
- 11:55 *Functional Assessment of MtNIP/LATD’s Biological and Biochemical Activities..... Rammyani Bagchi*
- 12:15–1:45 Lunch – Sponsored by Dow AgroSciences**
- 1:45–3:30 Biotic Interactions Session (continued)** **Chair: Bruce Hibbard**
- 1:45 *Grazing in the Dark - How Root Herbivory Shapes a Community Scott Johnson*
- 2:15 *Unraveling the Interaction Between Rice and the Root Knot Nematode Meloidogyne graminicola Godelieve Gheysen*
- 2:45 *DELLA Proteins: Key Components in Establishing Arbuscular Mycorrhizas Daniela Floss*
- 3:00 *Regulation of the Mevalonate Pathway by Symbiotic Receptor-Like Kinases and its Role in Early Symbiotic Signaling..... Jean-Michel Ané*
- 3:30–6:00 Poster Session and Vendor Show (light refreshments)**
- 6:00–8:00 Student/PostDoc/Speaker Dinner – Sponsored by Monsanto Company**

Friday, May 31

- 7:30 Continental Breakfast
- 8:30–9:55 Nutrition Session** **Chair: David Mendoza-Cózatl**
- 8:30 *Session Keynote: How Does Transceptor CHL1 in Roots Detect the Concentration and Temporal Changes of Nitrate in the Soil.....* **Yi-Feng Tsay**
- 9:10 *Tissue-specific Synthesis and Vascular Transport Control Glucosinolate Distribution in Arabidopsis.....* **Barbara Halkier**
- 9:40 *Plasticity of the Arabidopsis Root System under Nutrient Deficiencies* **Benjamin Gruber**
- 9:55–10:00 Biochemical Journal's Young Investigator Poster Award.....** **Jan Miernyk**
- 10:00–10:30 Break
- 10:30–Noon Nutrition Session (continued)** **Chair: David Braun**
- 10:30 *Genetic and Molecular Dissection of Maize Root Systems for Nutrient Use Efficiency.....* **Lixing Yuan**
- 11:00 *Whole Genome Mapping of 2D and 3D Root System Architecture in Rice.....* **Leon Kochian**
- 11:30 *Genetic Factors Controlling Root Growth Under Phosphorus Deficiency in Rice.....* **Matthias Wissuwa**
- 12:00 Adjourn**