

**3<sup>rd</sup> Plant Microbiome Symposium**  
**Bonar Hall, Park Place,**  
**Dundee DD1 4HW, UK**  
**24<sup>th</sup> – 26<sup>th</sup> May 2022**



## Program

23/05/2022

17:00 to 19:00 | Optional set-up

24/05/2022

08:30 to 09:30	Arrival & Registration
09:30 to 09:45	Welcome Note
	<b>Session 1: Plant microbiome assembly: control by host and environmental factors</b>
	<b>Chair: Tim Mauchline, Rothamsted Research</b>
	<b>Co-chair: Carmen Escudero-Martinez, Dundee</b>
09:45 to 10:15	Keynote presentation: Invasion ecology of plant pathogens <b>Thomas Bell, Imperial College London</b>
10:15 to 10:35	Digging deep into <i>Arabidopsis thaliana</i> roots: quantifying the rhizosphere effect along a soil-to-root gradient <b>Sanne Poppeliers</b>
10:35 to 10:55	Cowpea ecological niche harbored microbial phyla of varied nutrient preferences and metabolic properties <b>Olubukola Oluranti Babalola</b>
10:55 to 11:25	<i>Break</i>
11:25 to 11:55	Keynote presentation: Insights into the rhizosphere microbiome: past and future perspectives <b>Vanessa Nessner Kavamura, Rothamsted Research</b>
11:55 to 12:15	Substantial variations in biological nitrification inhibition activity of different rice genotypes <b>Jasmeet Kaur-Bhambra</b>
12:15 to 12:35	Echoes of the potato seed tuber microbiome <b>Yang Song</b>

	Poster pitches: 3-min each
	The identification of the potato cv. Sumi core rhizosphere microbiota and network <b>Gye-ryeong Bak</b>
12:35 to 12:45	Bacteria community inhabiting Heterobasidion fruit body and associated wood of different decay classes <b>Ren Wenzi</b>
	Can microbiome profiles be used as an indicator of soil health to investigate the impacts from compaction and potato cropping? <b>Ashleigh Holmes</b>
	Exploiting the rhizosphere microbiome diversity in the wheat Moroccan agroecosystem <b>Rodrigo Alegria Terrazas</b>
12:45 to 14:30	<i>Lunch</i>
	<b>Session 2: Plant microbiome communication: microbe-microbe and plant-microbe</b>
	<b>Chair: Jacob Malone, JIC</b>
	<b>Co-chair: Siyu Song, University of British Columbia</b>
14:30 to 15:00	Keynote presentation: Plant-pathogen-mutualist interactions in the rhizosphere microbiome
	<b>Cara Haney, University of British Columbia</b>
15:00 to 15:20	Rhizosphere communication by plants drives MiCRopbiome recruitment
	<b>Harro Bouwmeester</b>
15:20 to 15:40	Interplay between <i>Arabidopsis</i> defenses and root associated microbes
	<b>Ioannis Stringlis</b>
	Poster pitches: 3-min each:
	Exploring close-rotation microbiome dysbiosis in legumes <b>Supakan Panturat</b>
15:40 to 15:50	Signaling molecules in the root exudates of cucumbers shape the rhizosphere microbiome under herbivory stresses <b>Sébastien Jaupitre</b>
	Myo-inositol metabolism enhances rhizosphere competence of root-associated Pseudomonas <b>Juan José Sanchez-Gil</b>
	Exudate-microbiome interactions on Maize roots <b>Klaus Schlaeppi</b>
15:50 to 16:30	<i>Break</i>
16:30 to 17:00	Keynote presentation: Origin of strains matters for SynCom-specific host responses in Lotus japonicus and Arabidopsis thaliana
	<b>Kathrin Wippel, Max Planck Institute for Plant Breeding Research</b>
17:00 to 17:20	Interruption of the life-cycle of the root parasitic weed <i>Striga hermonthica</i> by root-associated microbes
	<b>Mahdere Z Shimels</b>
17:20 to 17:40	Mapping and characterizing bacterial interactions in the <i>Arabidopsis</i> phyllosphere
	<b>Martin Schäfer</b>
18:00 to 20:00	City Welcome Reception: drinks & canapes and Meet the Head Chef
	<b>Bonar Hall, Dundee</b>

08:00 to 09:00	<p>Arrival &amp; Registration</p> <p><b>Session 3: Microbiome-associated plant phenotypes: biotic and abiotic stress tolerance</b></p> <p><b>Chair: Cara Haney, University of British Columbia</b></p> <p><b>Co-chair: Jasmeet Kaur-Bhambra, Aberdeen</b></p>
09:00 to 09:30	<p>Keynote presentation: Examining the emergence of host-adapted phytopathogens via the role of mobile genetic elements</p> <p><b>Robert Jackson, University of Birmingham</b></p>
09:30 to 09:50	<p>Repeated exposure of wheat to the fungal root pathogen <i>Bipolaris sorokiniana</i> affects rhizosphere microbiome assembly and disease suppressiveness</p> <p><b>Rodrigo Mendes</b></p>
09:50 to 10:10	<p>The interplay between the leaf microbiota, plant immunity and opportunistic pathogens</p> <p><b>Sebastian Pfeilmeier</b></p>
10:10 to 10:30	<p>PSKR1 helps recruit <i>Pseudomonas fluorescens</i> to the plant rhizosphere microbiome</p> <p><b>Siyu Song</b></p>
10:30 to 11:00	<p><i>Break</i></p>
11:00 to 11:30	<p>Keynote presentation: Insights from wild leaf microbiomes: Can promoting microbial diversity contribute to plant health?</p> <p><b>Matthew T. Agler, Friedrich-Schiller University of Jena</b></p>
11:30 to 11:50	<p>Offered abstract: Selecting microbes in the field: mycorrhiza depletion in naturally-infected soybean plants</p> <p><b>Sietske Van Bantum</b></p>
11:50 to 12:10	<p>Offered abstract: Microbial natural product discovery pipeline for next generation fungicides effective against <i>Z. tritici</i></p> <p><b>George Lund</b></p>
12:10 to 12:20	<p>Poster pitches: 3-min each</p> <p>Beneficial endophytes of a cold desert plant, <i>Arnebia euchroma</i> alleviate cold stress tolerance in <i>Arabidopsis</i> <b>Bhardwaj Priyanka</b></p> <p>Nitrogen deficiency results in changes in the microbiome composition and functionality in tomato rhizosphere <b>Abedini Davar</b></p> <p>Ozone-Mediated Control of Food Spoilage and Food-Borne Pathogens <b>Ashleigh Macdonald</b></p>
12:20 to 14:00	<p><i>Lunch</i></p>

## **Session 4: Microbiome-associated plant phenotypes: plant growth and development**

**Chair: Matthew Ryan, CABI**

**Co-chair: Javier Martínez-Pérez, JIC**

14:00 to 14:30	Keynote presentation: Bi-directional communication along the microbiome-root-shoot axis <b>Corné Pieterse, University of Utrecht</b>
14:30 to 14:50	Has plant domestication decoupled beneficial plant-microbe interactions in wheat? <b>Tessa E. Reid</b>
14:50 to 15:10	Nitrogen starvation induced metabolic interactions between plants and microbes <b>Dong Lemeng</b>
15:10 to 15:30	Identifying plant genes shaping microbiota composition in the barley rhizosphere <b>Carmen Escudero-Martinez</b>
15:30 to 16:00	<i>Break</i>
16:00 to 16:30	Keynote presentation: Linking nutrient cycling and the soil microbiome – The impact of plant-microbiome interactions on carbon and nitrogen cycling in soils <b>Maddy Giles, The James Hutton Institute</b>
16:30 to 16:50	Offered abstract: The impact of soil microbiome diversity on rhizosphere microbial communities' assembly and plant health <b>Caroline S Nishisaka</b>
16:50 to 17:00	Poster pitches: 3-min each
16:50 to 17:00	Biological fertilizer in sugarcane: physiological effects and stalk yield improvement <b>Gabriela Siqueira</b>
16:50 to 17:00	Use of Microgeo and different doses of phosphorus in soybean (Glycine max) <b>Luiz Floss</b>
16:50 to 17:00	Microbe-dependent trait expression in wheat <b>Rajiv Sharma</b>
17:00 to 18:00	Poster session
17:00 to 18:00	Social Evening:
19:00 to 22:00	<b>Drinks reception at Discovery Point, Discovery Quay, Dundee DD1 4XA followed by dinner at Malmaison Dundee, 44 Whitehall Crescent, Dundee DD1 4AY</b> (ticketed)

08:00 to 09:00	<p>Arrival &amp; Registration</p> <p><b>Session 5: Technological advances: modelling, bioinformatics, chemistry, physics, experimental evolution, new model species</b></p> <p><b>Chair: Susan Jones, James Hutton Institute</b></p> <p><b>Co-chair: Rodrigo Taketani, Rothamsted Research</b></p>
09:00 to 09:30	<p>Keynote presentation: Computational metagenomics to elucidate functions in plant microbiomes</p> <p><b>Marnix Medema, Wageningen University</b></p>
09:30 to 09:50	<p>Microbiome sequence data analysis of the UK Crop Microbiome CryoBank</p> <p><b>Payton Yau</b></p>
09:50 to 10:10	<p>Downy mildew diseased plants are enriched for a disease-associated phyllosphere microbiome that benefits the plant</p> <p><b>Roeland Berendsen</b></p>
10:10 to 10:40	<p>Keynote presentation: Archaea – important but overlooked players in the plant microbiome?</p> <p><b>Laura Lehtovirta Morley, University of East Anglia</b></p>
10:40 to 11:10	<p><i>Break</i></p> <p><b>Session 6: Translational application - SynComs, breeding, field testing, product development</b></p> <p><b>Chair: Fernando Andreote, Sao Paulo</b></p> <p><b>Co-chair: Rumana Kapadia, Dundee/SRUC</b></p>
11:10 to 11:40	<p>Keynote presentation: Conserving the microbiome – unravelling the conundrum</p> <p><b>Matthew Ryan, CABI</b></p>
11:40 to 12:00	<p>Unlocking the biocontrol potential of kiwifruit <i>Pseudomonas</i></p> <p><b>Javier Martínez-Pérez</b></p>
12:00 to 12:15	<p>Harnessing the spinach bacterial microbiome for sustainable food production and nutrition</p> <p><b>Senga Robertson-Albertyn</b></p>
12:15 to 12:30	<p>Plant protection abilities of the <i>Arabidopsis</i> leaf microbiota</p> <p><b>Christine Vogel</b></p>
12:30 to 12:40	<p>Final remarks</p>
12:40	<p><i>Packed lunch available for collection</i></p> <p>Departure</p>