Bonar Hall | Dundee, Scotland, UK

3rd Plant Microbiome Symposium

24th - 26th May 2022

Conference Programme

Contents

Contents **2**
Welcome to 3rd Plant Microbiome Symposium **3**
Welcome to Dundee **4**
A Brief History of Plant Microbiome Symposium **5**
About SRUC and Rothamsted Research **6**
Conference Programme **7**
Monday 23rd May 2022 7
Tuesday 24th May 2022 7
Wednesday 25th May 2022 9
Thursday 26th May 2022 11
Speakers & Chairs **12**
Thomas Bell, Imperial College London 12
Vanessa Nessner Kavamura, Rothamsted Research 12
Cara Haney, University of British Columbia 12
Kathrin Wippel, Max Planck Institute for Plant Breeding Research 13
Robert Jackson, University of Birmingham 13
Matthew T. Agler, Friedrich-Schiller University of Jena 14
Corné Pieterse, University of Utrecht 14
Maddy Giles, The James Hutton Institute 15
Marnix Medema, University of Wageningen 15
Laura Lehtovirta Morley, University of East Anglia 15
Matthew Ryan, CABI 16
Conference Venue **17**
Social Programme **18**
City Welcome Drinks Reception on Tuesday 24 May 2022 18
Social Evening on Wednesday 25 May 2022 19
Presentation Abstracts **20**
Sustainability **20**
Local Information **21**
Visitor Information Centre 21
Getting Around 21
Inclusive Dundee 22
Emergency & Non- Emergency Contacts 22
Acknowledgments **23**

Welcome to 3rd Plant Microbiome Symposium

We welcome everyone to Dundee (UK) to discuss recent scientific achievements in the plant microbiome field and lay the foundations for future collaborative efforts. This meeting builds on the success of the previous symposia to discuss advances in microbial ecology, plant-microbe interactions, molecular biology, chemistry and bioinformatics. We have organised the meeting into six sessions, with keynote and offered presentations covering research topics including plant microbiome assembly and microbiome communication, microbiome-associated plant phenotypes, technological advances and translational application.

This meeting has been delayed from the original planned event in 2020, but we are sure you will agree that it has been worth the wait to enable an in-person meeting. We are certain you will find the meeting useful and inspiring, and wish you an enjoyable visit to Dundee, UK, and look forward to our next meeting in the series.

Warm regards

Nicola Holden & Tim Mauchline, Conference Organisers

Join the Conversation @PMicrobiome

We will be active on social media throughout the conference. We encourage you to share stories, photographs and comments.

Welcome to Dundee

As Chief Executive of Dundee City Council, I would like to take this opportunity to welcome you to our city for the 3rd Plant Microbiome Symposium.

We are honoured that you have chosen Dundee as the venue for this prestigious gathering. Your symposium is an internationally-renowned event, helping to push forward research and understanding of plant and microbial sciences. I am delighted that so many researchers and scientists will be converging on Dundee for the event, and I hope you enjoy your time here.

Science is playing a prominent role in the transformation of Dundee, with the pioneering work of our universities and local research institutes achieving global recognition.

We are a city looking to the future and we are keen to make the most of new opportunities. City partners are now moving forward to establish an Eden Project in the city, while V&A Dundee is recognised as one of Scotland's unique visitor destinations. Many new chances are becoming available for Dundee through the investment that is being unlocked by the Tay Cities Deal into innovative projects.

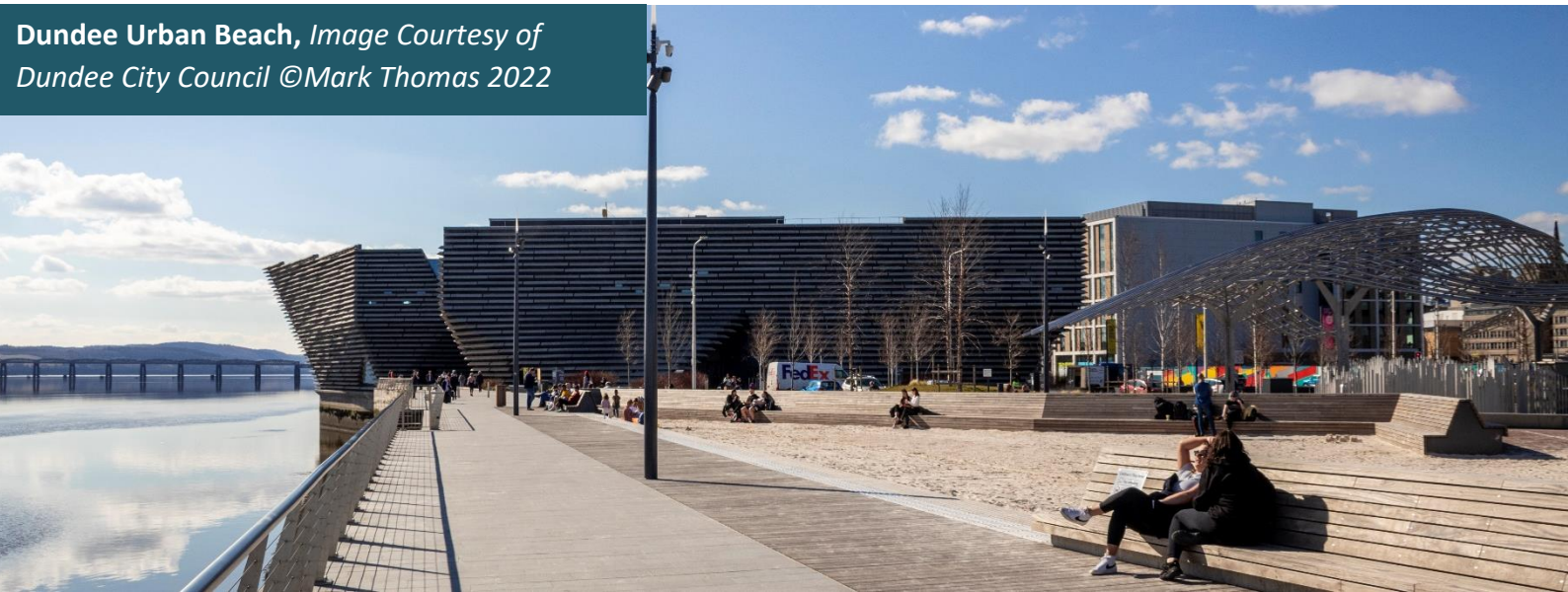
There has been also been an ambitious programme of investment in our Waterfront and in the city's infrastructure, including our schools and nurseries. The growth of the Michelin Scotland Innovation Parc on the site of the former tyre factory shows how city partners are working together to create a greener future, with a focus on sustainable mobility and decarbonisation.

Fairness is the cornerstone of our council's approach to policy and, while much remains to be done, I am proud of the positive changes that have already been made across Dundee.

The potential that exists to further improve Dundee and establish it as a top destination in Scotland is really exciting.

Please accept the best wishes of the city for your work ahead and thank you again for choosing Dundee as the first UK venue for your symposium.

Dundee City Council Chief Executive Greg Colgan



Dundee Urban Beach, *Image Courtesy of Dundee City Council ©Mark Thomas 2022*

A Brief History of Plant Microbiome Symposium

Motivated by the Back to the Roots initiative that examines the microbiome of indigenous plants and their native habitats (Back to the Roots (backrootsproject.wixsite.com), the 1st Plant Microbiome Symposium was organized in Jaguariuna, Brazil, in 2016. Renowned speakers mainly from the Netherlands, UK and Brazil got together for a lunch along the Piracicaba river before starting the 3-day symposium with about 100 participants at the Embrapa Environment institute. At that time the organizers decided to "keep the following meetings small" to promote a good interaction among the participants. This was what happened during the 2nd Plant Microbiome Symposium in 2018 at the historical Barbizon Palace in the heart of the vibrant Amsterdam. After the "pandemic break", we are happy to be back and we are looking forward to the promising future of the Plant Microbiome scientific community.

In addition to promoting strong interactions and building networks, we are delighted to provide opportunities for early career researchers to present their work and get feedback. The ecological crisis and the drive towards Net Zero has put unprecedented pressures on our managed and natural ecosystems, placing plant systems at the centre, requiring breadth and depth of knowledge of the associated microbiomes. Thus, connecting academics, government institutes and industry in different continents remains a key goal in our community towards a sustainable recovery.

About SRUC and Rothamsted Research

Rothamsted Research is the longest-running agricultural research institute in the world with a proud history of ground-breaking discoveries. Our founders, in 1843, were the pioneers of modern agriculture and, through independent science and innovation, we continue to make significant contributions to improving the sustainability of agri-food systems in the UK and internationally. Our strength lies in our gene to field approach, which combines science and strategic research, interdisciplinary teams and partnerships. Rothamsted is also home to three unique resources, open to researchers from all over the world: The Long-Term Experiments, Rothamsted Insect Survey and the North Wyke Farm Platform. We are strategically funded by the Biotechnology and Biological Sciences Research Council (BBSRC), with additional support from other national and international funding streams, and from industry. We are also supported by the Lawes Agricultural Trust (LAT).

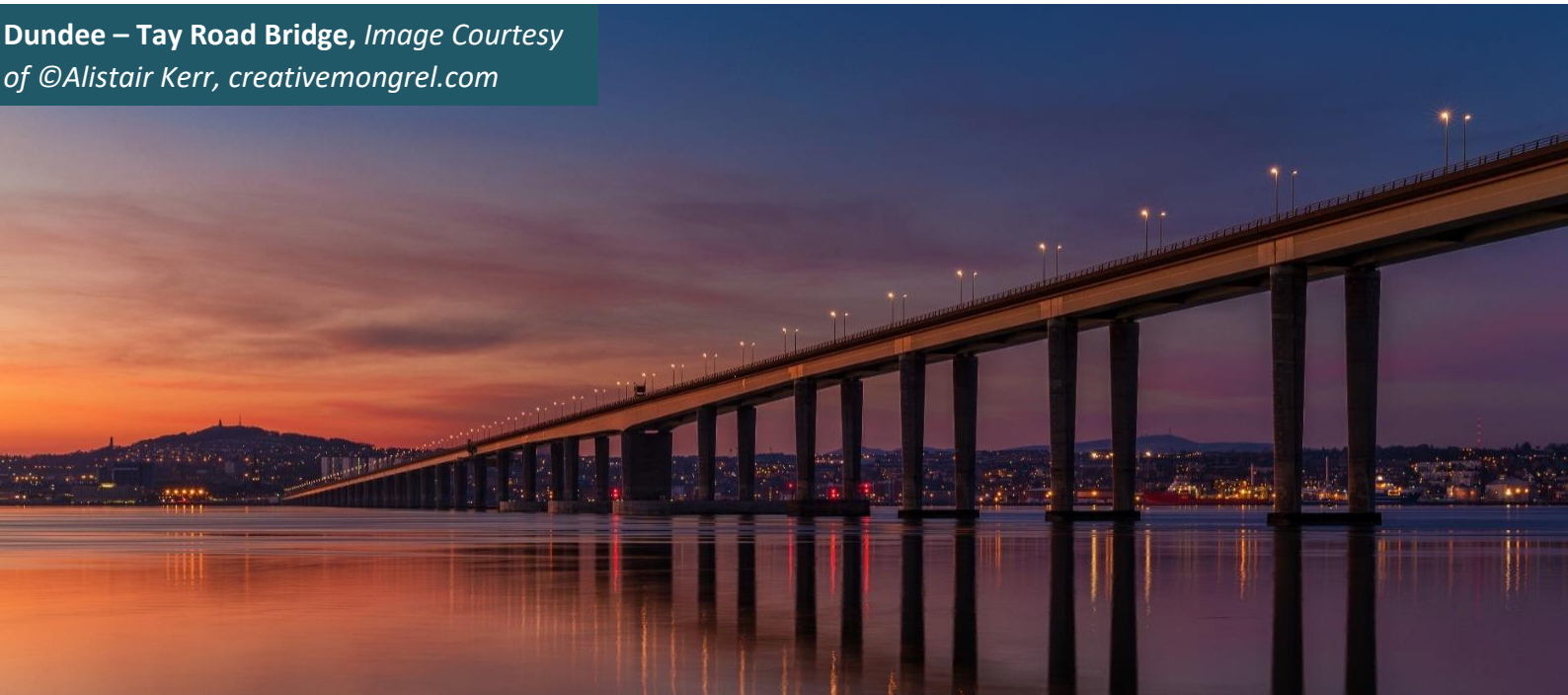
https://www.rothamsted.ac.uk | @Rothamsted

Scotland's Rural College (SRUC) was established in 2012 through the merger of the Scottish Agricultural College (SAC) with Barony, Elmwood and Oatridge Colleges. Through these institutions, we can trace our lineage back over 100 years.

SRUC is located across Scotland with six campuses, eight farms, 25 consulting offices, eight veterinary practices and six research centres. We have 1,300 staff, 5,000 students, and combine education, research, and consultancy (through SAC Consulting) to grow the natural economy.

Our vision is to be Scotland's enterprise university at the heart of our sustainable natural economy. This is achieved by creating and mobilising knowledge and talent, and by partnering locally and globally to benefit Scotland's natural economy. A natural economy fuelled by responsible use of the world's natural resources, people, land, energy, water, animals and plants. By working in partnership, we focus on solving the "wicked challenges" facing the planet, including climate change, biodiversity and access to nutritious food and clean water. By focussing on the sustainable natural economy, SRUC strives to lead the way in delivering economic, social and environmental benefits for all, in Scotland, and beyond.

https://www.sruc.ac.uk/ | @SRUC



Dundee – Tay Road Bridge, *Image Courtesy of ©Alistair Kerr, creativemongrel.com*

Conference Programme

Monday 23rd May 2022

17:00 to 19:00	Optional set-up

Tuesday 24th May 2022

08:30 to 09:30	Arrival & Registration
09:30 to 09:45	Welcome Note Tim Mauchline, Rothamsted Research Institute
SESSION 1	**Plant microbiome assembly: control by host and environmental factors** **Chair: Tim Mauchline, Rothamsted Research** **Co-chair: Carmen Escudero-Martinez, Dundee**
09:45 to 10:15	**Keynote Presentation:** Invasion ecology of plant pathogens Thomas Bell, Imperial College London
10:15 to 10:35	Digging deep into *Arabidopsis thaliana* roots: quantifying the rhizosphere effect along a soil-to-root gradient **Sanne Poppeliers**
10:35 to 10:55	Cowpea ecological niche harboured microbial phyla of varied nutrient preferences and metabolic properties **Olubukola Oluranti Babalola**
10:55 to 11:25	***Break***
11:25 to 11:55	**Keynote presentation:** Insights into the rhizosphere microbiome: past and future perspectives Vanessa Nessner Kavamura, Rothamsted Research
11:55 to 12:15	Substantial variations in biological nitrification inhibition activity of different rice genotypes **Jasmeet Kaur-Bhambra**
12:15 to 12:35	Echoes of the potato seed tuber microbiome **Yang Song**
12:35 to 12:45	Poster pitches: 3-min each
	The identification of the potato cv. Sumi core rhizosphere microbiota and network. **Gye-ryeong Bak**
	Bacteria community inhabiting *Heterobasidion* fruit body and associated wood of different decay classes. **Ren Wenzi**
	Can microbiome profiles be used as an indicator of soil health to investigate the impacts from compaction and potato cropping? **Ashleigh Holmes**
	Exploiting the rhizosphere microbiome diversity in the wheat Moroccan agroecosystem. **Rodrigo Alegria Terrazas**

12:45 to 14:30	**Lunch**
SESSION 2	**Plant microbiome communication: microbe-microbe and plant-microbe** **Chair: Jacob Malone, JIC** **Co-chair: Siyu Song, University of British Columbia**
14:30 to 15:00	**Keynote Presentation:** Plant-pathogen-mutualist interactions in the rhizosphere microbiome Cara Haney, University of British Columbia
15:00 to 15:20	Rhizosphere communication by plants drives MiCRopbiome recruitment **Harro Bouwmeester**
15:20 to 15:40	Interplay between *Arabidopsis* defenses and root associated microbes **Ioannis Stringlis**
15:40 to 15:50	Poster pitches: 3-min each
	Exploring close-rotation microbiome dysbiosis in legumes. **Supakan Panturat**
	Signaling molecules in the root exudates of cucumbers shape the rhizosphere microbiome under herbivory stresses. **Sébastien Jaupitre**
	Myo-inositol metabolism enhances rhizosphere competence of root-associated *Pseudomonas*. **Juan José Sanchez-Gil**
	Exudate-microbiome interactions on Maize roots. **Klaus Schlaeppi**
15:50 to 16:30	**Break**
16:30 to 17:00	**Keynote presentation:** Origin of strains matters for SynCom-specific host responses in *Lotus japonicus* and *Arabidopsis thaliana* Kathrin Wippel, Max Planck Institute for Plant Breeding Research
17:00 to 17:20	Interruption of the life-cycle of the root parasitic weed *Striga hermonthica* by root-associated microbes **Mahdere Z Shimels**
17:20 to 17:40	Mapping and characterizing bacterial interactions in the *Arabidopsis* phyllosphere **Martin Schäfer**
18:00 to 20:00	**City Welcome Drinks Reception** Bonar Hall, Dundee

Wednesday 25th May 2022

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

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 Corné Pieterse, University of Utrecht
14:30 to 14:50	Has plant domestication decoupled beneficial plant-microbe interactions in wheat? **Tessa E. Reid**
14:50 to 15:10	Nitrogen starvation induced metabolic interactions between plants and microbes **Dong Lemeng**
15:10 to 15:30	Identifying plant genes shaping microbiota composition in the barley rhizosphere **Carmen Escudero-Martinez**
15:30 to 16:00	***Break***
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 Maddy Giles, The James Hutton Institute
16:30 to 16:50	The impact of soil microbiome diversity on rhizosphere microbial communities' assembly and plant health **Caroline S Nishisaka**
16:50 to 17:00	Poster pitches: 3-min each
	Biological fertilizer in sugarcane: physiological effects and stalk yield improvement. **Gabriela Siqueira**
	Use of Microgeo and different doses of phosphorus in soybean (Glycine max). **Luiz Floss**
	Microbe-dependent trait expression in wheat. **Rajiv Sharma**
17:00 to 18:00	Poster session
	Social Evening
19:00 to 20:00	***Social Drinks Reception*** RRS Discovery, Discovery Point, Discovery Quay, Dundee DD1 4XA (ticketed)
20:00 to late	***Social Dinner*** Malmaison Dundee, 44 Whitehall Cres, Dundee DD1 4AY (ticketed)

Thursday 26th May 2022

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

Speakers & Chairs

We are honoured to have the following speakers for 3rd Plant Microbiome Symposium

Thomas Bell,
Imperial College London

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W https://bellmicrobelab.wordpress.com/

Tom Bell is Professor of Microbial Ecology at Imperial College London. His research is focused on understanding how microbes interact in natural environments using an experimental approach. Prof Bell completed his doctoral degree at Oxford on the ecology of microbial communities inhabiting miniature aquatic ecosystems. He was departmental lecturer in the Department of Zoology at Oxford, after which he joined Imperial College on a Royal Society University Research Fellowship, where he has worked since 2011. He is Director of the Leverhulme Centre for the Holobiont, which will launch in autumn 2022.

Vanessa Nessner Kavamura,
Rothamsted Research

https://www.researchgate.net/profile/Vanessa-Nessner-Kavamura
https://www.linkedin.com/in/vanessa-nessner-kavamura-101b0622/

Vanessa Nessner Kavamura is a plant microbiome specialist based at Rothamsted Research in the UK. She is interested in understanding the role of the plant microbiome in promoting plant growth and development. For the last 13 years she has been interested in the rhizosphere, rich in signalling molecules and microbes that can benefit the host plant through growth promotion and abiotic and biotic stress protection. She uses both culture-dependent and culture-independent techniques to access the diversity and function of rhizosphere microbial communities. She hopes to identify the potential of optimising beneficial microbial interactions for sustainable agricultural production.

Cara Haney,
University of British Columbia

W www.haneylab.com

Dr. Cara Haney is an Associate Professor and Canada Research Chair in plant-microbiome interactions in the Department of Microbiology & Immunology at the University of British Columbia. She completed her PhD in 2011 from Stanford University focused on rhizobia-legume symbiosis. Prior to joining the UBC faculty in 2016, she was a postdoctoral fellow at Harvard Medical School with Dr. Fred Ausubel. Her lab uses Arabidopsis-Pseudomonas fluorescens as a genetically tractable model to identify the genetic basis of beneficial traits in plant-microbiome interactions. Her research focuses on elucidating basic mechanisms in host-microbiome interactions, and in finding sustainable solutions for agronomically important challenges.

Kathrin Wippel,
Max Planck Institute for Plant Breeding Research

Kathrin Wippel has a degree in Molecular Plant Physiology and has been working in the field of plant-microbe interactions for more than 10 years, exploring both pathogenic and mutualistic associations. In her most recent projects, she is focusing on the establishment and importance of host species-specific root-associated microbial communities. The concept of host preference in commensal bacteria and the underlying chemical and molecular mechanisms drive her curiosity.

Robert Jackson,
University of Birmingham

Rob Jackson completed an HND, BSc and PhD at Bristol Polytechnic/the University of the West of England (UWE), Bristol. His PhD examined the role plasmids in the virulence of the plant pathogenic bacterium *Pseudomonas syringae* pv. *phaseolicola* and he then did a postdoctoral post at the University of Oxford studying gene expression networks in beneficial bacteria. This was followed by a short fellowship at the University of Auckland, another short term post at UWE, and a two year postdoctoral post at the University of Bath. He took up a lectureship at the University of Reading, becoming an Associate Professor (2013) and Professor of Molecular Microbiology in 2016. He became the Head of School of Biological Sciences from 2017-2020. In 2020, he took up the post of Director of the Birmingham Institute of Forest Research (BIFoR) and BIFoR Chair in Tree Pathology at the University of Birmingham. He also took on the role as Deputy Head of School of Biosciences. He holds a Visiting Professorship at the University of Reading and Adjunct Professorship at the University of Akureyri, Iceland.

He has more than 25 years' experience working on microbiology and plant pathology problems. He studied plasmids and type III secretion for his PhD research, discovering a major bacterial pathogenicity gene that can epistatically suppress the effects of avirulence effectors. Since then, his research topics include the study of bacterial pathogenesis, most recently in tree pathology studying Horse Chestnut, Oak and Cherry; gene regulation and regulatory networks in plant growth-promoting bacteria; the role of surfactants in bacterial motility and biocontrol; the identification and characterisation of bacteriophage for biocontrol; microbiome analyses of invasive alien plant species; and analysis of how bacteria can kill aphids. He collaborates widely in both the UK and globally, and has delivered teaching and research seminars in diverse locations abroad. He has previously served as an elected board member for the British Society for Plant Pathology in 2010-2013 and was involved in developing the Outreach Officer role for the society. He joined the board again in 2019 as Publicity Champion and is President-Elect in 2022. He is also a member of the American Phytopathology Society and served as Senior Editor for Phytopathology between 2012-2014. He has served as a Senior Editor for Molecular Plant Pathology from 2015-2021.

Matthew T. Agler,
Friedrich-Schiller University of Jena

Twitter: @aglernino
W https://sites.google.com/view/microbiosis

Matt Agler is a research group leader in the department of Microbiology at Friedrich Schiller University of Jena. He mostly attends Zoom meetings, while his group (known as the Plant Microbiosis Lab) works to understand the microbial interactions that underlie stability in leaf microbiomes – particularly the ecological stories happening right in our backyard. Their work could be described as functional microbial ecology: As they move between the field and the lab, they use diverse techniques like metabolomics, genomics and metagenomics to understand when, how and why microorganisms interact and how this affects their evolutionary trajectory and host health. When not on Zoom or in the lab, he likes to garden and hike the hills of Jena with his family.

Corné Pieterse,
University of Utrecht

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W http://www.uu.nl/staff/CMJPieterse

Corné Pieterse (1964) is professor Plant-Microbe Interactions and scientific director of the Institute of Environmental Biology of the Faculty of Science. His research group investigates how the plant immune system protects plants against microbial pathogens and insect herbivores, and how beneficial microbes in the plant root microbiome stimulate plant growth and health. Current research is focused on plant-beneficial functions that are encoded by the root microbiome, the role of plant genes and metabolites (coumarins) that aid in maximizing profitable functions from the root microbiome, and crosstalk between plant defense hormones. With his research he aims to contribute to grand societal challenges, such as food security and sustainable agriculture.

Corné Pieterse studied Plant Breeding and Plant Molecular Biology at the Wageningen University where he graduated *cum laude* in 1988. As part of his studies he visited MSU-DOE Plant Research Laboratory in 1988 where he spent 6 months in the lab of Natasha Raikhel. Subsequently, he performed his PhD research in Wageningen on the molecular basis of pathogenicity of the potato late blight pathogen *Phytophthora infestans.* After obtaining his PhD degree in 1993, he moved to Utrecht University to join the lab of Prof. Kees van Loon. First as a post-doctoral fellow, and between 1998 and 2004 as an assistant professor in molecular phytopathology at the department of Biology. In 2004 he was appointed as full professor Plant-Microbe Interactions. In 2010, he was awarded an ERC Advanced Investigator grant by the European Research Council. His research group pioneered research on unravelling the rhizobacteria-induced systemic resistance signalling pathway and the role of phytohormone crosstalk in the regulation of plant immunity. In 2013 he was elected as a member of the Royal Netherlands Academy of Arts and Sciences (KNAW). Since 2014 he is an ISI Highly Cited Researcher (World's top 1% in the field). Besides heading the Plant-Microbe Interactions group at the Department of Biology, Corné Pieterse is scientific director of the Institute of Environmental Biology of the Faculty of Science at Utrecht University.

Maddy Giles,
The James Hutton Institute

Maddy is a soil microbial ecologist and biogeochemist at the James Hutton Institute whose main research interests focus on the microbial ecology of soil C and N cycling. In 2020 she was appointed as a permanent researcher at JHI. Prior to this she was a postdoc at the University of Essex investigating the interaction between algae, bacteria and C cycling in Arctic freshwater lakes. She gained her PhD from the University of Aberdeen looking at soil N cycling and functional communities.

Marnix Medema,
University of Wageningen

Twitter: @marnixmedema

Marnix is an Assistant Professor of Bioinformatics at Wageningen University. His research group develops and applies algorithms for the (meta)genomic identification and functional prediction of microbial biosynthetic pathways, with the aim to unravel the chemical language of microbiomes. He built and co-coordinates the development of the antiSMASH software for identification of biosynthetic gene clusters and developed various additional algorithms to chart their diversity and identify their functional roles in microbiomes. Medema is recipient of NWO Rubicon and Veni fellowships and an ERC Starting Grant, and has coordinated several international consortia studying bacterial specialized metabolites. He received several prizes for his work, including the NBIC Young Investigator Award. He is editorial board member of Natural Product Reports, mSystems and FEMS Microbes, senior editor of ISME Communications, and member of the scientific advisory board of Hexagon Bio. From 2020-2022, he also serves as Van der Klaauw visiting professor of theoretical biology at Leiden University.

Laura Lehtovirta Morley,
University of East Anglia

W: https://www.lehtovirta-morleylab.com/

Laura is a Royal Society Dorothy Hodgkin Research Fellow and an Associate Professor at University of East Anglia. She did my PhD and postdoctoral work at the University of Aberdeen, with research visits to Oregon State University and the University of Alberta in 2013-2014. She moved to University of East Anglia in 2017. The research in my group focuses on the physiology and ecology of ammonia oxidising archaea.

Matthew Ryan,
CABI

E: M.Ryan@cabi.org

Matthew is the research lead for Biological Resources and curator of CABI's microbial culture collection. He currently leads research into ensuring the genomic and functional stability of fungi and bacteria through the development of novel cryopreservation protocols. More recently, I have played an active role in various international activities to ensure that collection and biobanking infrastructure are developing to meet the needs of the microbiome research community, especially in the areas of Agri-food.

He is the project manager of the UK BBSRC crop microbiome cryobank and a collaborator on the EU Microbiome Support project and inputs into CABI's projects related to mycology, biological resources and Agri-food. He has several national and international roles including the KTN Microbiome Innovation group, as a board member of the International Alliance for Phytobiomes Research and as a committee member for the US culture collection network (USCCN).

Conference chairs & ECR co-chairs

The scientific committee is delighted that early career researchers are joining as co-chairs, and we are grateful for their willingness to participate and help with each of the sessions.

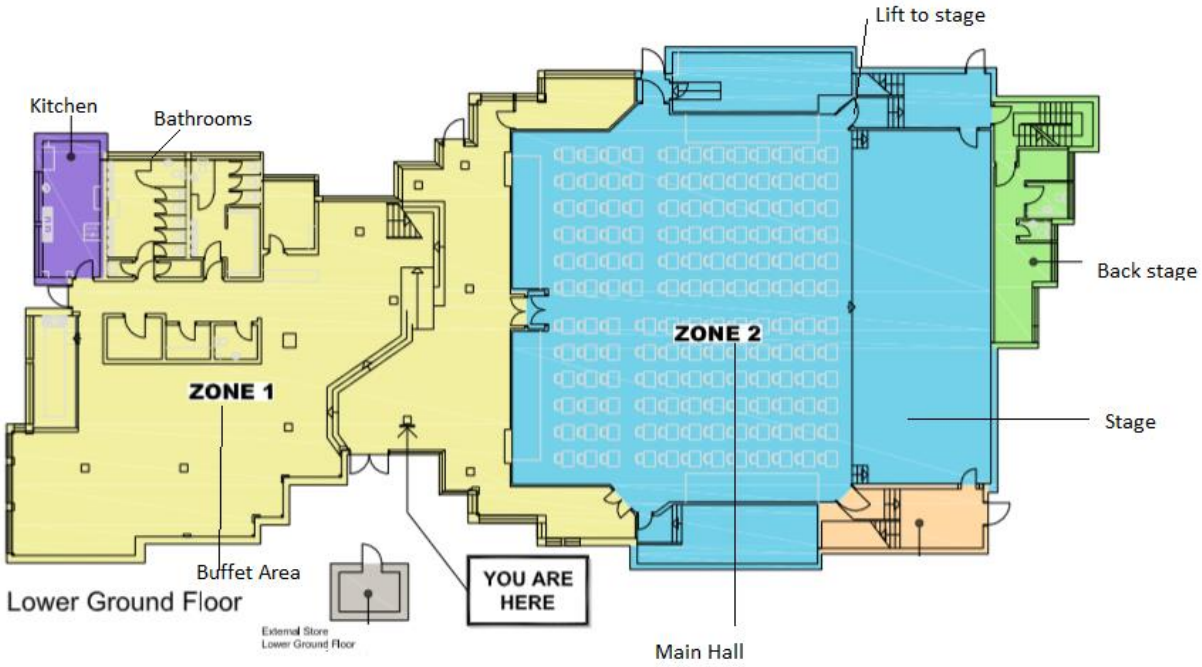
Conference Venue

Venue: Bonar Hall, Park Place Dundee DD1 4HW

The venue is situated on Campus Grounds. Originally conceived as part of an ambitious plan to create a combined theatre and arts centre for the city, funding shortages meant that Bonar Hall was built separately as an exhibition and events centre for the University, designed by Gillespie Kidd & Coia and named after Sir Herbert Bonar. It opened in 1977, with the separate building for Dundee Rep Theatre eventually built adjacent to it in 1979-82.

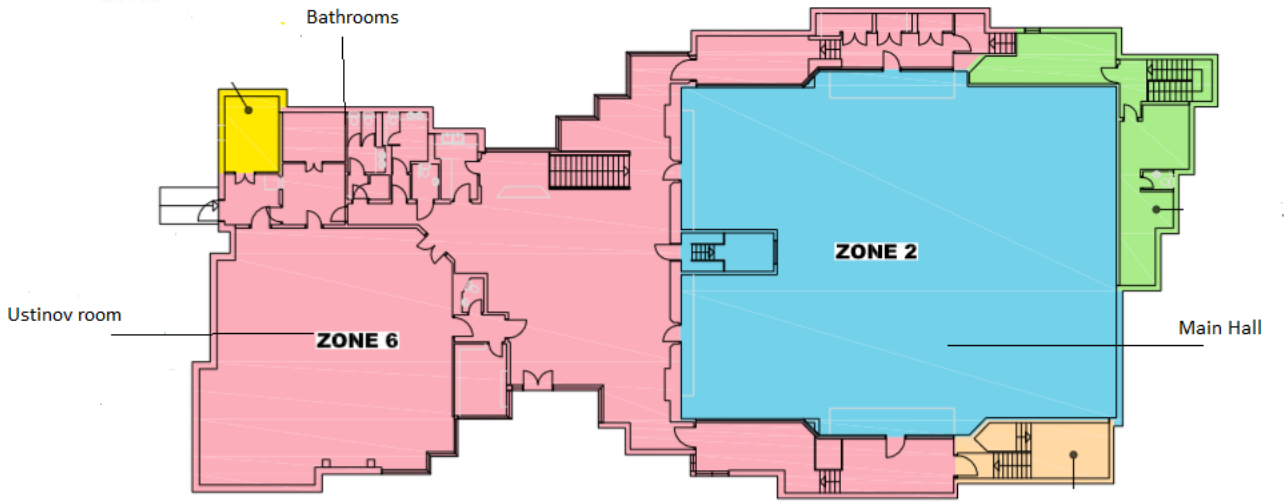
View detailed accessibility information at AccessAble

Ground Floor



Upper Floor

Main Hall (Zone2) accessible from the ground floor only



Social Programme

City Welcome Drinks Reception on Tuesday 24 May 2022

Venue: Bonar Hall

Time: 18:00 - 20:00

Join us at the City Welcome Drinks Reception on Tuesday 24th May 2022 at Bonar Hall, it is a great networking opportunity for catching up with old friends and making new ones. We will also have the opportunity to Meet the Head Chef at Bonar Hall.

Kevin is responsible for all the food produced and served within the DUSA building and some satellite operations on campus. Together with his team, he also caters for events and functions across campus including Bonar Hall. One of his key objectives is to produce and provide quality, appropriate and affordable menus within all outlets whilst constantly striving to improve and enhance the dining experience for our students and customers.

Kevin's career in hospitality started in his teenage years in a small local café, where he worked as a waiter after school. Helping out the kitchen team in the café led to lifelong love for food and over twenty years long career as a chef. As a part of DUSA's leadership team Kevin collaborates with the rest of the organization and University of Dundee seeking to reduce food waste and promote healthy lifestyle. Currently, he is working on DUSA community garden, where kitchen team together with student population are going to plant and grow organic herbs and vegetables, which Kevin is planning to use in producing high quality food in DUSA outlets.

Kevin O'Neil, Head Chef

Registration to 3rd Plant Microbiome Symposium includes entry to the Welcome Drinks Reception.

Looking for somewhere to relax with friends after .... VisitDundee has a great selection of places to eat and drink.

Social Evening on Wednesday 25 May 2022

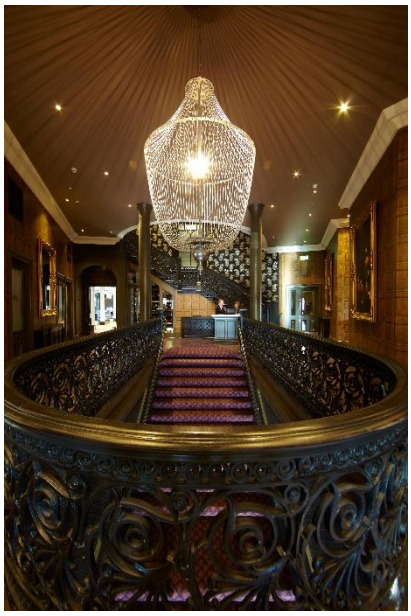
This is a ticketed event and must be pre-booked.

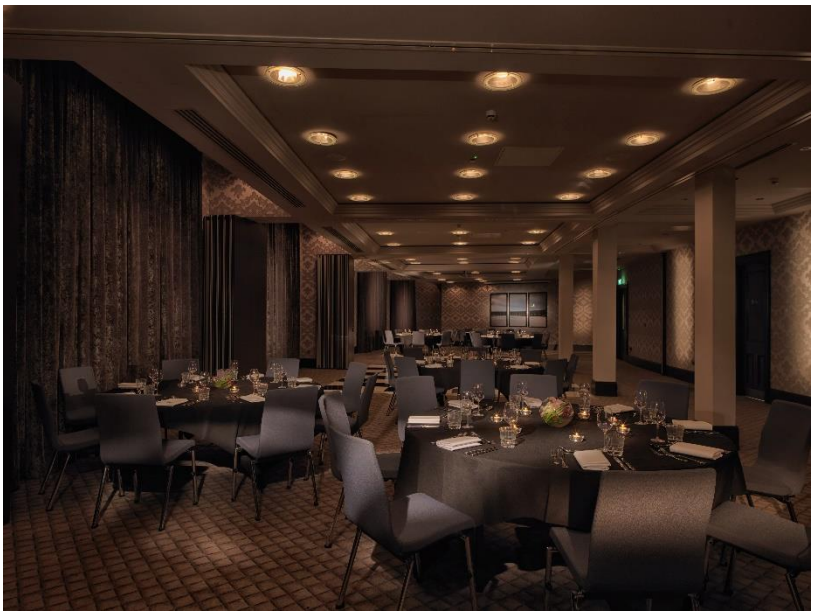
Drink Reception on board Royal Research Ship Discovery followed by **dinner** served at Malmaison Dundee

Time: Drink Reception 19:00 to 20:00 | Dinner 20:00 to late

The evening will start at 19:00 with a drinks reception on board Captain Scott's historic ship RRS Discovery and the opportunity to explore and follow in his footsteps. Built in Dundee in 1901, Royal Research Ship Discovery was designed specifically for the first scientific research expedition to Antarctica.

At 20:00 we will take a short walk to Malmaison Dundee for dinner. Malmaison Dundee is situated in the old Mather Hotel, they carefully restored the original features in the beautiful 120-year-old hotel, including the original wrought-iron staircase, and grand, domed ceiling. The hotel is just a two-minute walk from RRS Discovery and Discovery Point.





Images courtesy of Dundee & Angus Convention Bureau

Abstracts

View our Abstracts here

Sustainability

Microbiome Symposium aims to minimise the environmental impact of the meeting and contribute towards a safe and healthy environment.

3rd Plant Microbiome Symposium supports the sustainability statement of the conference venue, Bonar Hall and other partners and suppliers.

Organiser

- We focus on digital communication and do without a printed programme booklet.
- We select local suppliers to avoid long distance transport of goods and people.
- We avoid printing and aim for an almost paperless event experience.
- Encourage our sponsors/exhibitions to provide digital information.
- We use digital signage, where possible in effort to reduce single-use signage options.
- Work with our conference venue to select seasonal and regional food for the catering and order carefully to avoid food waste.

Industry - exhibitors and partners

- Use recyclable or reusable material for the stand construction.
- Avoid materials containing PVC.
- Integrate energy-saving measures in your stand design.
- Less is more –rethink the number of printed brochures and flyers or change to a digital version.
- Rethink your give-aways and offer sustainable versions.
- Use reusable tableware for your catering at the stand space. Choose local partners for your needs.

Delegates and visitors

- Analyse the carbon footprint associated with your travel to and from Dundee by using this calculator.
- Offset the carbon footprint by compensating unavoidable emissions through
- acknowledged projects, for example The UN Carbon Offset Platform.
- Get active out and about in Dundee city. A compact city bursting with places of interest history, and things to see, it is so easy to get around. Dundee's active travel routes in and around the city have been developed over the last few years with a key objective to encourage travel through walking, cycling and public transport, and deploy sustainable alternatives to decarbonise transport.
- When using a taxi you might think of sharing it with one of your fellow delegates.
- Select a hotel that supports sustainability activities where possible.
- Consider selecting a hotel in the vicinity of the conference venue so you can walk to the venue or use a bike.
- Only use the air conditioning if it is really necessary.
- Turn off the lights and TV when leaving the room.
- Select the type and amount of food during meals sensibly in order to avoid food waste.
- Consider bringing your own reusable water bottle and refilling it.
- Only pick up printed marketing and information material that you are really interested in and that you will use.

Local Information

Visitor Information Centre

Located within the V&A Dundee, Welcome Desk, 1 Riverside Esplanade, Dundee (8 mins walk from conference venue, Apex City Quay Hotel)

- Opening hours: 10am – 5pm (closed Tuesdays and Wednesdays)
  Tel: +44 (0)1382 527 527
  Email: Dundee@visitscotland.com

- Dundee City Centre Map

- Explore Dundee Places to eat, shop, visit and local information

- Explore Angus Explore and extend your stay

Getting Around

- **Active Travel** Dundee's active travel routes in and around the city have been developed over the last few years with a key objective to encourage active travel through walking, cycling and public transport, and deploy sustainable alternatives to decarbonise transport

- **Electric Cars - Community Car Share**
  - Community car share - for more information visit Co-Wheels Car Club
  - Electric charging posts, visit https://www.drivedundeeelectric.co.uk/map-of-charging-posts

- **Cycling**
  - Embark Dundee - e-bike sharing is an electric bike hire scheme with over 150 bikes, and is easy and quick to sign up. View list of bike stations
  - Electric Bikes Scotland - wide range of bikes available for hire
  - Spokes Cycles - bike hire
  - Green Circular Cycle Route - over 25 miles through the city from the country park at Camperdown to the water front at Broughty Ferry to the city centre

- **Walking Dundee**
  There is a wide range of tours, trails and interesting walks on our Tours and Trails in Dundee.

- **Public Transport**
  - **Edinburgh Airport Xpress**
    Xplore More provides coach travel between Edinburgh Airport and Dundee. The Edinburgh Airport Xpress service runs non-stop between Dundee City Centre and Edinburgh Airport. Pick-up and drop-off place is just opposite entrance to Malmaison (in front of car park). For more information on how to book, visit Xplore Dundee.
  - **Ember – Electric Coach Service**
    Fast, comfortable travel by electric bus. Frequent services between Edinburgh, Dundee, Perth and Kinross. Low fares, live tracking and zero emissions. For **Edinburgh Airport,** they stop at Ingliston Park & Ride which is right next to the airport. From Ingliston Park & Ride you can take a two minute tram to the airport, a five minute bus or even walk in around 15 minutes. Coaches are wheelchair accessible – you can reserve your space at the time of booking. View their timetable, book tickets, view live map and FAQs on the Ember.to website.

- **Taxi service:**
  - Tele Taxis - Tel: 01382 825 825 | 01382 889 333
    Book Tele Taxis online
  - Dundee City Taxis - Tel: 01382 20 40 60
    Book Dundee City Taxis online
  - Tay Taxis - Tel: 01382 450 450

Inclusive Dundee

- AccessAble - for detailed route guides from Dundee Station to Slessor Gardens, The McManus, V&A Dundee and Verdant Works and detailed accessibility guides of venues
- Changing Places Toilets - view the Changing Places Toilet Map for all locations and important information, such as opening times and facilities
- Euan's Guide - for disabled access reviews of venues and locations and more information about accessibility
- Shopmobility - is a scheme that loans out mobility scooters, power and manual wheelchairs
- Download Euan's Guide - Dundee & Angus Accessible Highlights Guide

Emergency & Non- Emergency Contacts

Should anyone require assistance during their stay, please contact the following:

- Visitor Information Centre: +44 (0)1382 527 527
- Pharmacist: Boots Chemist: +44 (0) 1382 221 756
- Shopmobility (hire of mobility equipment): +44 (0)1382 228 525
- Doctors (NHS 24): 111 (non-emergency medical number)
- Ninewells Hospital & Medical School: +44 (0)1382 660 111
- Dundee Dental Hospital: +44 (0)1382 660 111 (daytime)
- Police, Fire Rescue & Ambulance: 999
- Police: 101 (non-emergency number)

View over Dundee and River Tay from Law Hill
Image Courtesy of ©Kenneth Malcolm Photography

Acknowledgments

Meeting Organisers

Tim Mauchline	Rothamsted Research Institute, United Kingdom
Nicola Holden	Scotland's Rural College, United Kingdom
Jacob Malone	John Innes Centre, Norwich, United Kingdom
Jos Raaijmakers	NIOO-KNAW, the Netherlands
Rodrigo Mendes	Embrapa Environment, Brazil
Gemma Noble	SRUC Events Team
Kirsteen Lambe	SRUC Events Team

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Sponsors & Partners

We are delighted by the generous support and collaboration we have received from our Sponsors & Partners.

Our thanks go to everyone involved.

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