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Plant Microbiome Webinar

11 April 2024
09:30-11:15



Welcome

- Please put any questions in the Q&A box
- Use the chat box to network and for any technical difficulties



Pedro Carvalho
Plants and Crops
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Gabriela Juarez Martinez
Pharma & MedTech
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Caroline Griffin
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Plant Microbiome Webinar - Agenda

- 9:30 - 9:40 **Introduction to the Event**, [Pedro Carvalho](#), IUK Business Connect
- 9:40 - 9:50 **IUK Business Connect Microbiome Innovation Advisory Group (MIAG)**, [Andrew Morgan](#), IUK Business Connect MIAG Chair and Professor in Practice at the University of Exeter
- 9:50 - 10:05 **The Importance of Microbes for Sustainable Crop Production**, [Sharon Zytynska](#), BBSRC David Phillips Research Fellow at the University of Liverpool
- 10:05 - 10:20 **Microbial Discovery Platform for biofungicides and biostimulants**, [Vijayalakshmi Gunasekaran](#), R&D Lead at FA Bio
- 10:20 - 10:35 **Guided Biotics® for Crop Health & Nutrition**, [Jason Vincent](#), Chief Development Officer – AgTech at FOLIUM Science (Flourish is a FOLIUM Science business)
- 10:35 - 10:50 **Microbiome engineering via M genes**, [Tomislav Cernava](#), Assoc Professor in Plant-Microbe Interactions at the University of Southampton
- 10:50 - 11:05 **Q & A**, [Gabriela Juárez Martínez](#) and [Caroline Griffin](#), IUK Business Connect
- 11:05 - 11:15 **Funding Opportunities and Close**, [Pedro Carvalho](#), IUK Business Connect



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About Us

Innovate UK Business Connect exists to connect innovators with new partners and new opportunities beyond their existing thinking – accelerating ambitious ideas into real-world solutions.



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We have deep expertise in AgriFood



**Livestock &
Aquaculture**



Plants and Crops



Food & Drinks



**Innovate
UK**

**Business
Connect**

How we can help



Make powerful connections



Secure funding



Get expert insight



Keep up to date



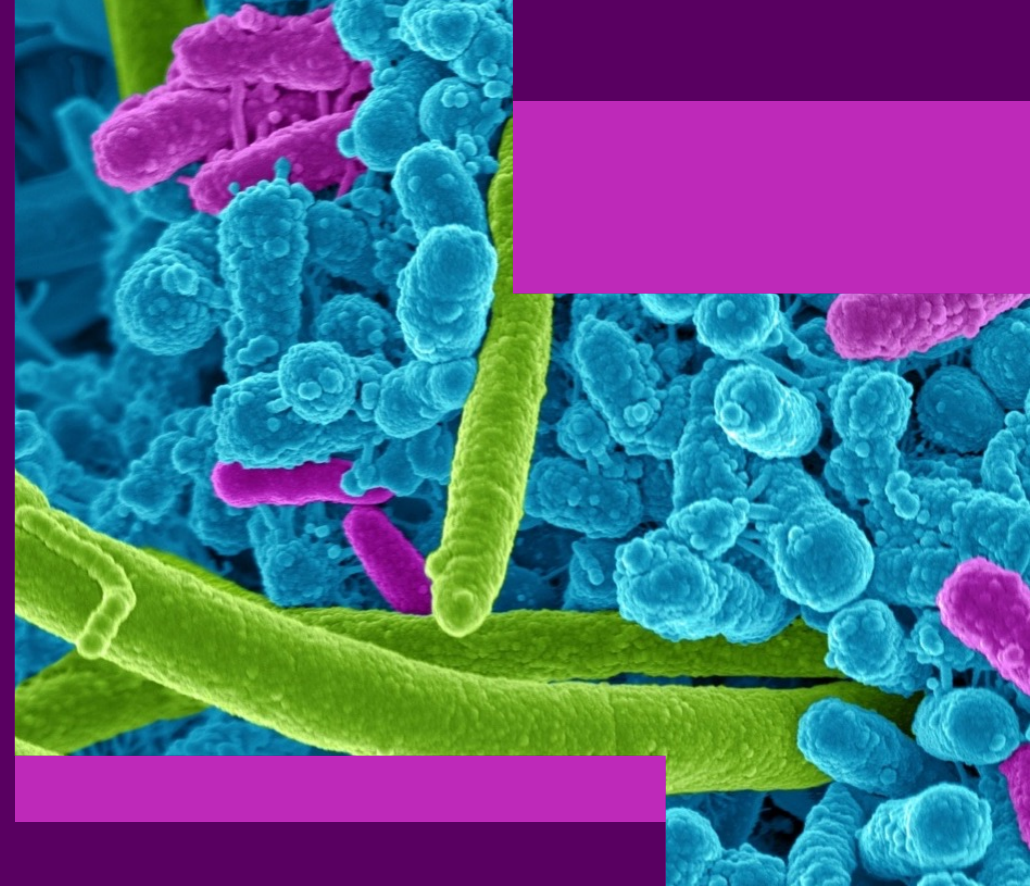
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IUK Business Connect Microbiome Innovation Advisory Group (MIAG)

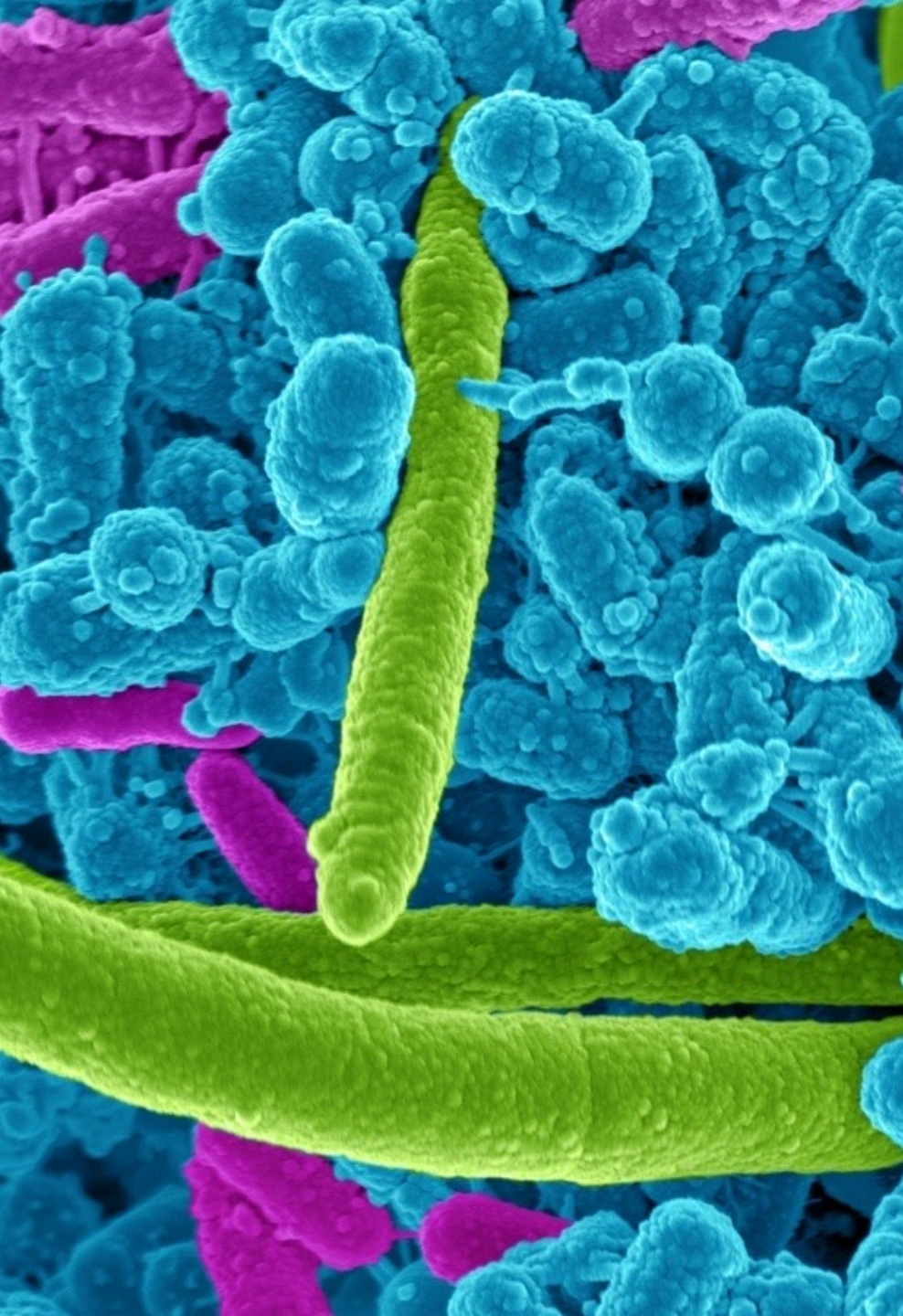
Dr Andrew Morgan

IUK Business Connect MIAG Chair and
Professor in Practice at the University of Exeter



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IUK Business Connect Microbiome Innovation Advisory Group (MIAG)

Dr Andrew Morgan, Chair

April 2024



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VISION:

UK to be recognised as a **world leader** in microbiome research and innovation.

GOALS:

- Developing a proactive, self-sustaining microbiome community
- Raising the visibility of the UK's world leading microbiome science
- Enabling microbiome innovation: entrepreneurs, start-ups, scale-ups & industry partnerships
- Enhancing access to and investment in UK microbiome science & innovation

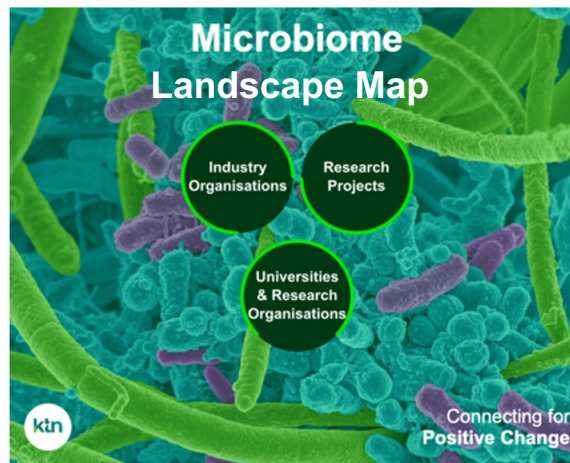
<https://iuk.ktn-uk.org/agrifood/microbiome/>

IUK Business Connect Microbiome Innovation Advisory Group (MIAG)

Established October 2019



IUK Business Connect MIAG – outputs so far...

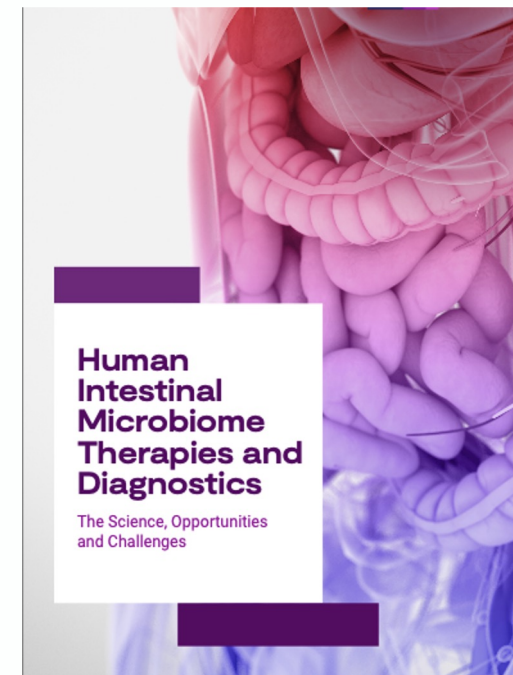


Microbiome One-Health Conference

Glasgow
23 & 24 March 2023

UKRI Innovate UK KTN

In partnership with: **UKRI** Biotechnology and Biological Sciences Research Council



The Importance of Microbes for Sustainable Crop Production

Dr Sharon Zytynska

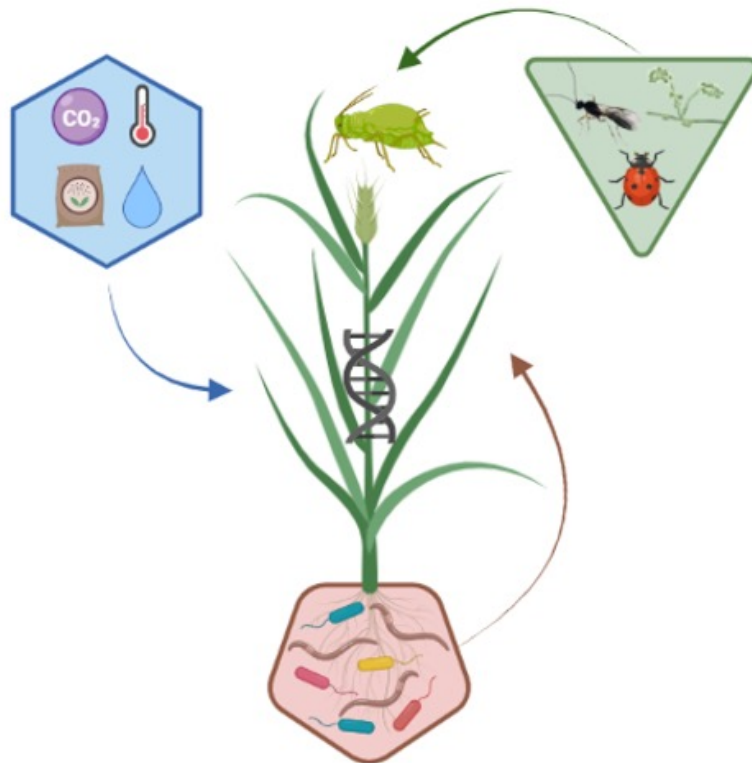
BBSRC David Phillips Research Fellow at the
University of Liverpool



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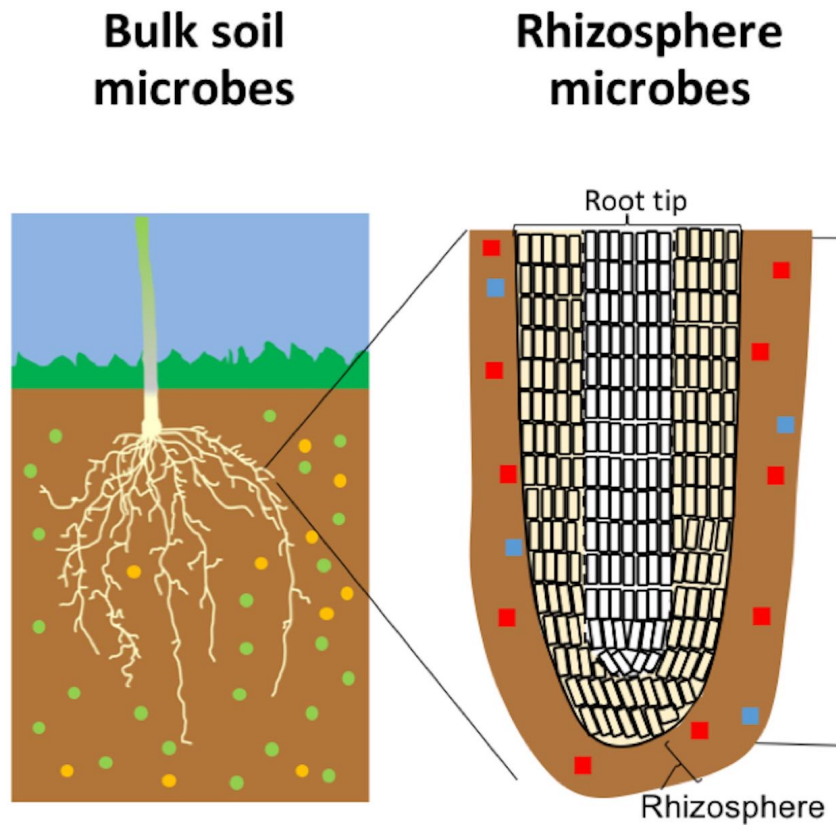
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The Importance of Microbes for Sustainable Crop Production

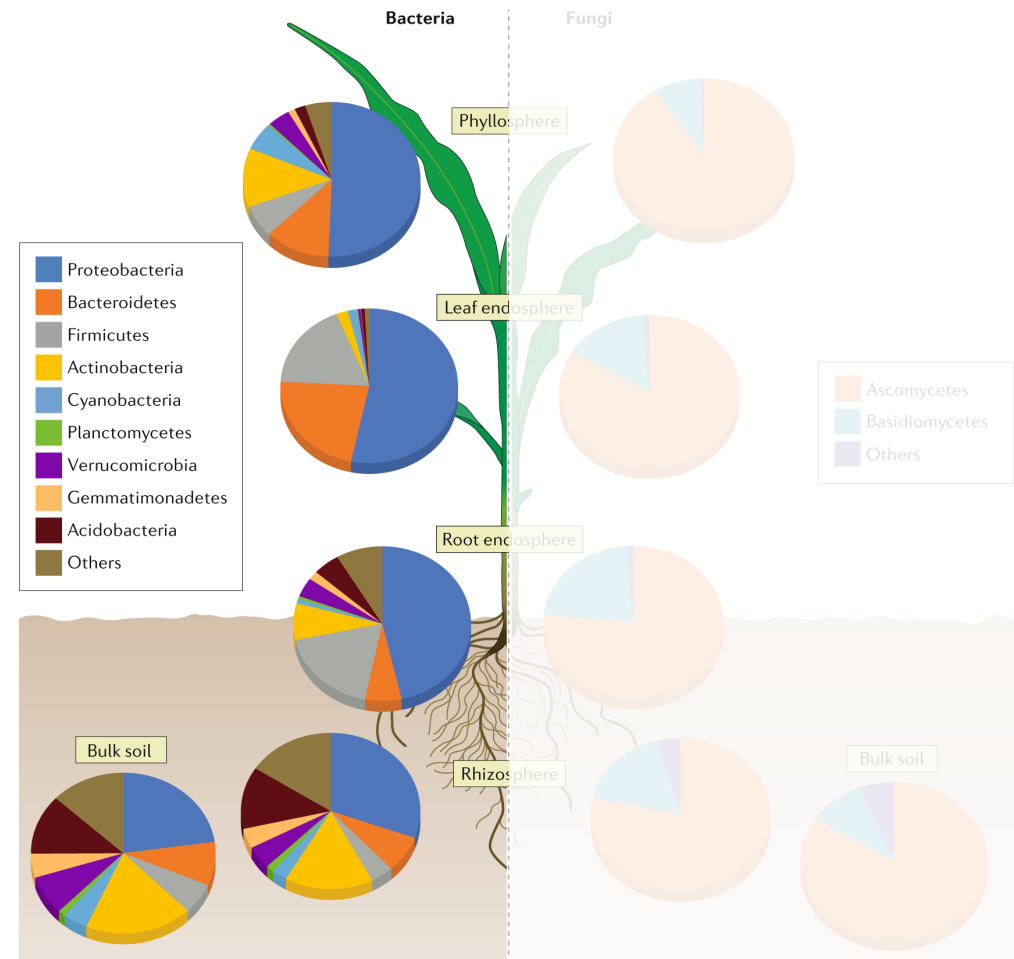


DR SHARON ZYTYSKA
BBSRC DAVID PHILLIPS FELLOW, LECTURER
DEPT OF EVOLUTION, ECOLOGY, AND BEHAVIOUR

Rhizosphere microbes for crop protection

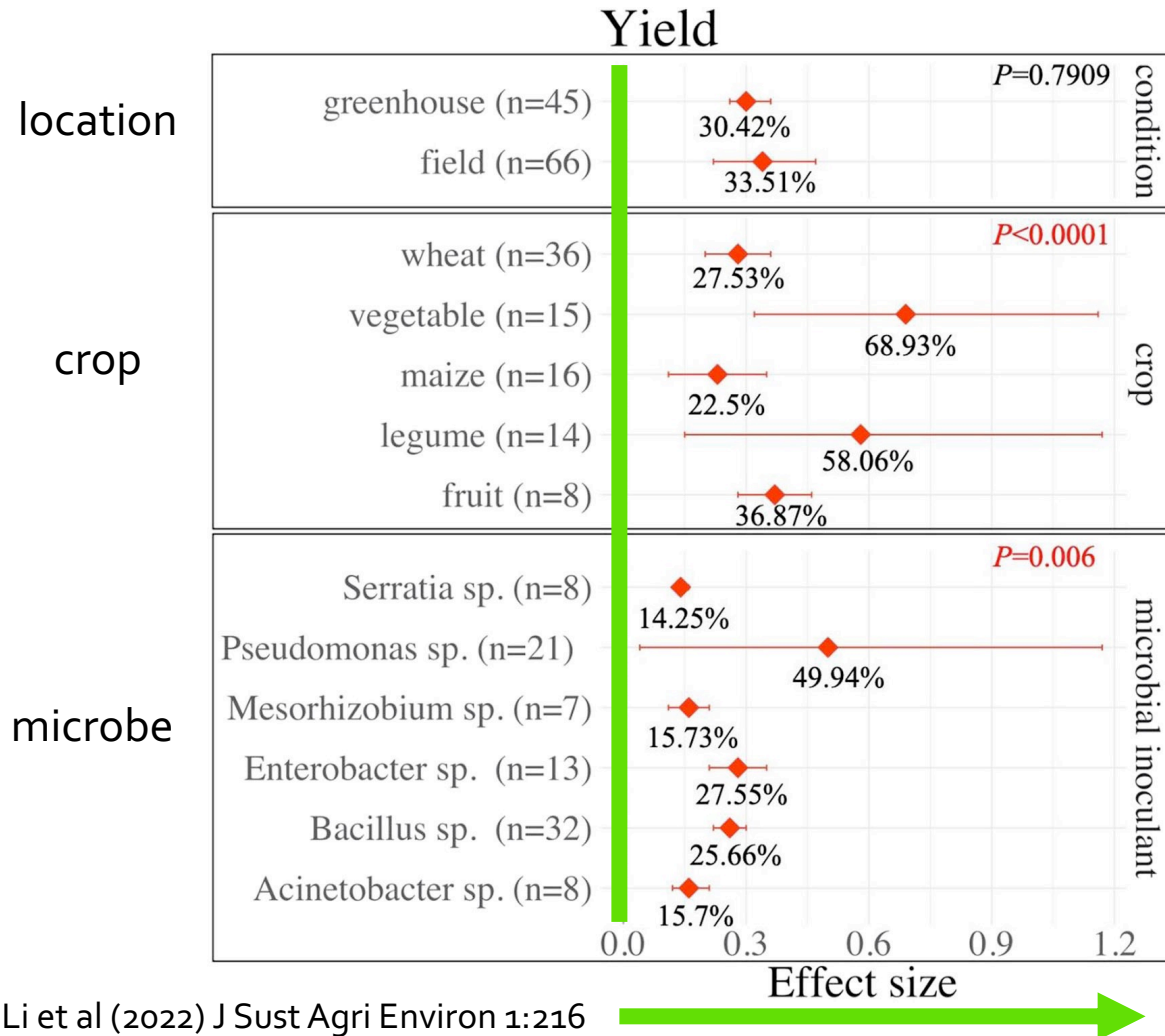


Backer et al (2018) Front. Plant Sci. 9:1473

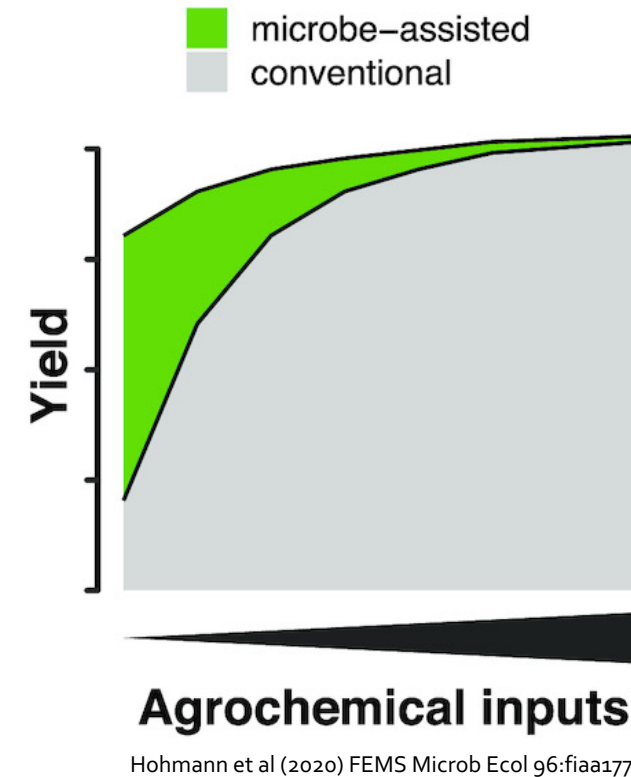


Trivedi et al (2020) Nat Rev Microbiol 18:607

Rhizosphere bacteria can increase crop yields



Li et al (2022) J Sust Agri Environ 1:216



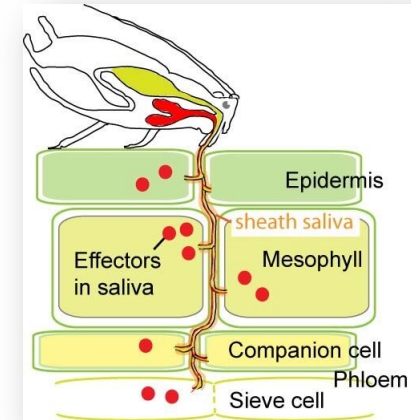
7 meta-analyses on plant effects (2017-2023)

Insects as crop pests

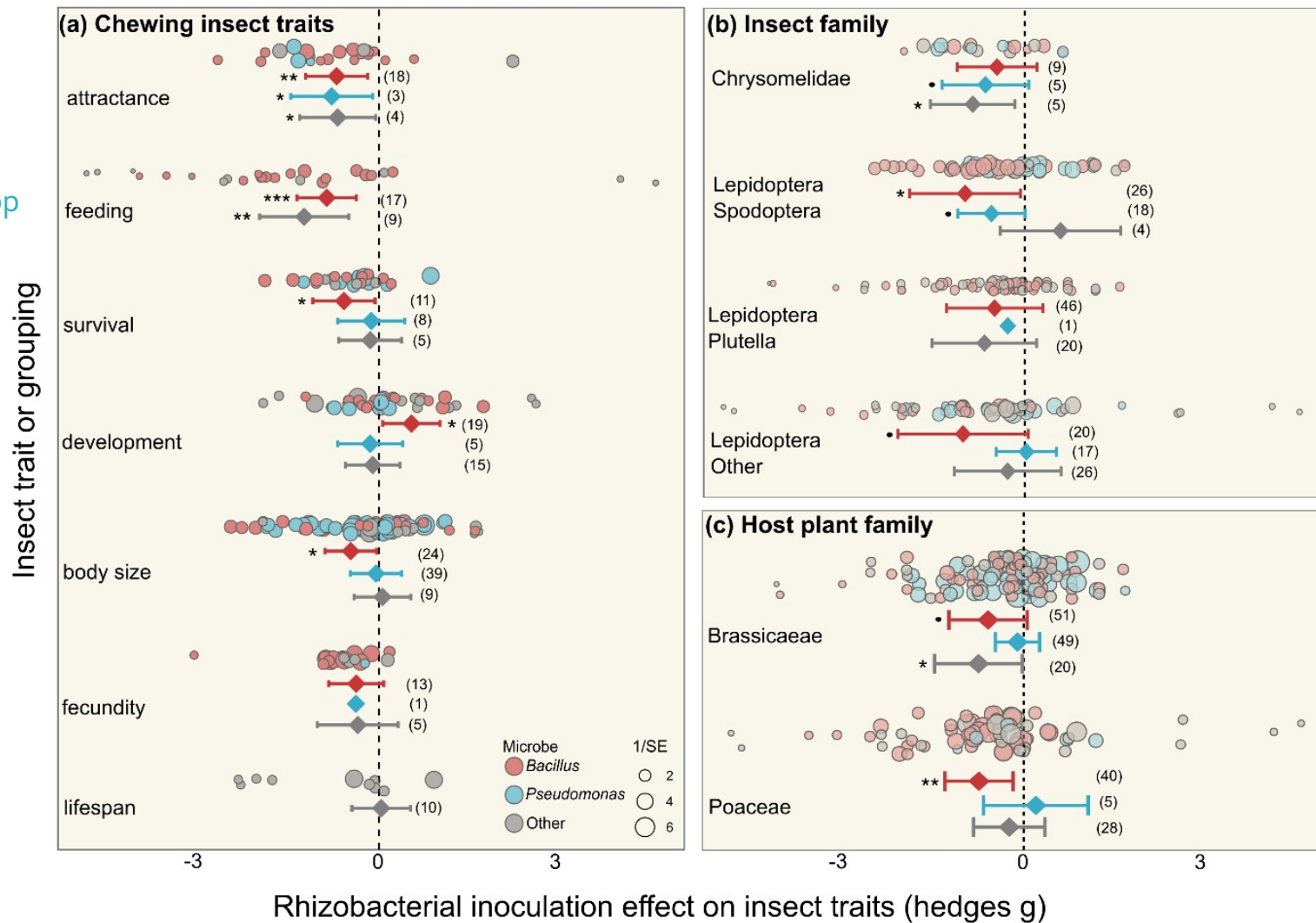
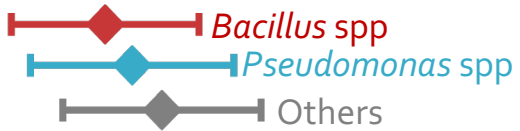
Intensive farming, monocultures, low-diverse crops
= perfect insect feeding conditions

Overuse of chemical pesticides:

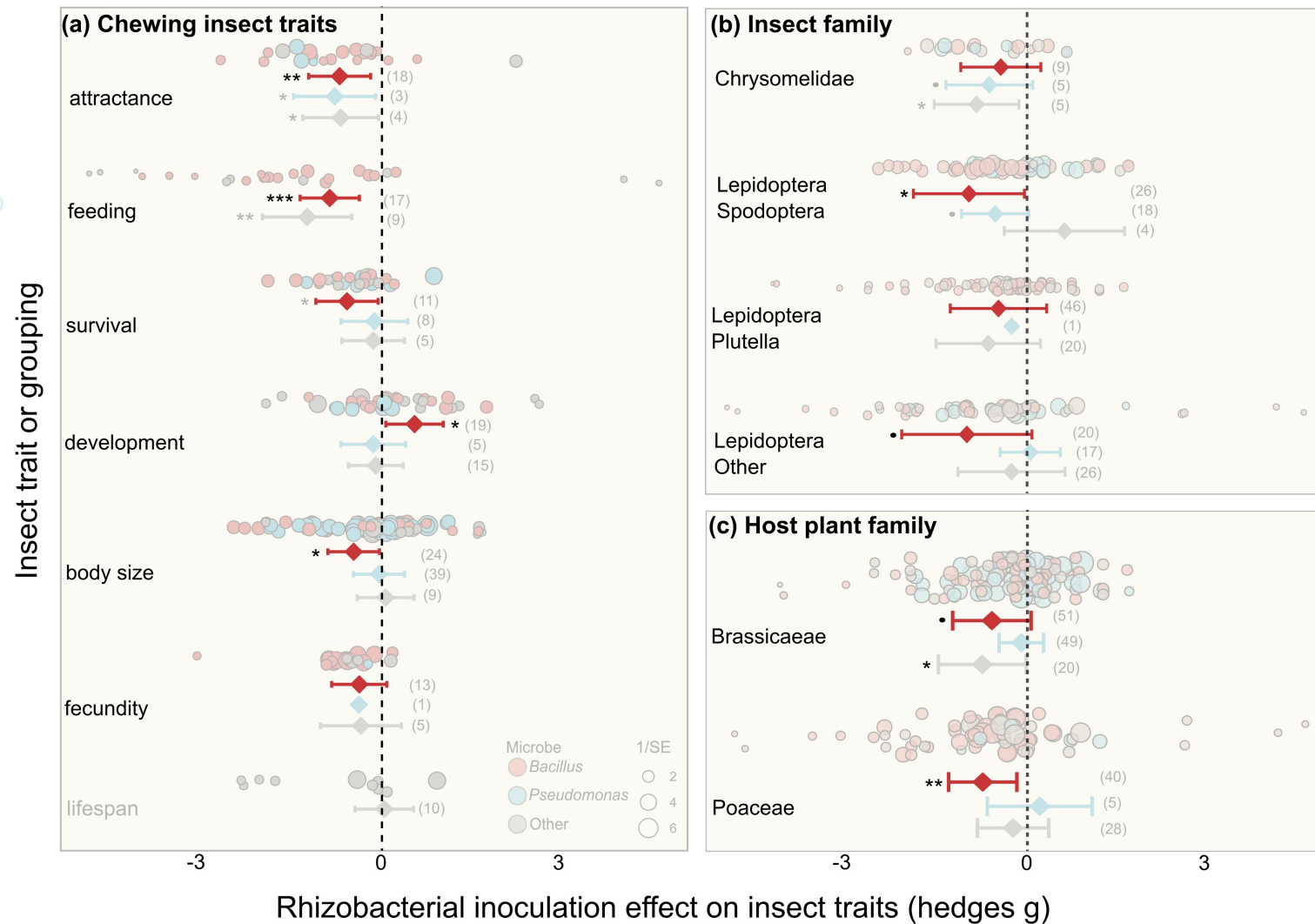
- pesticide resistance / resurgence of insect pests
- elimination / disruption of the food web
- environmental toxicity
- eventual reduced yields



Microbial inoculation of plants on insects



Microbial inoculation of plants on insects



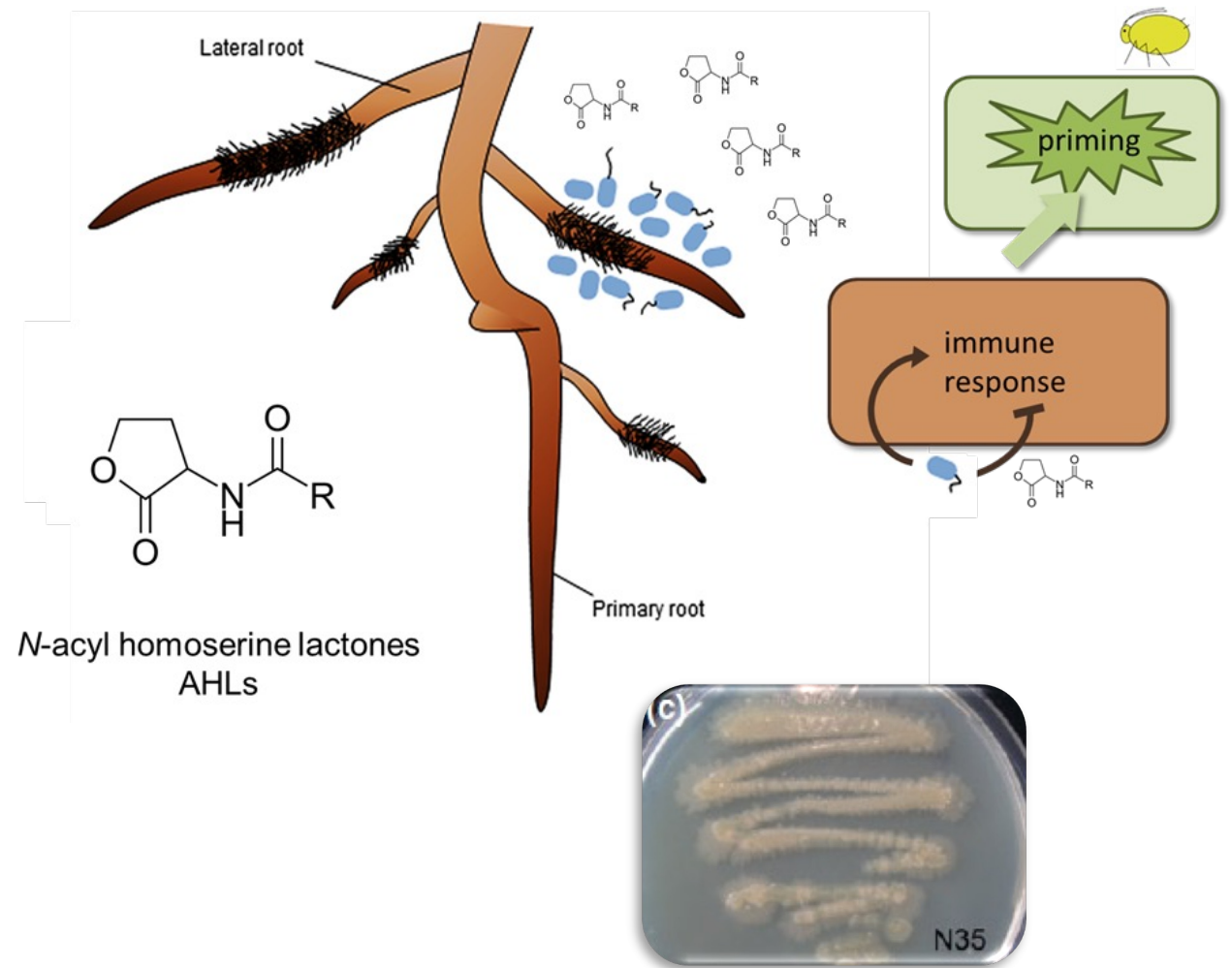
Acidovorax radidis N35 – Betaproteobacteria, Comamonadaceae

First isolated from wheat roots in 2011, promotes root growth of wheat and barley

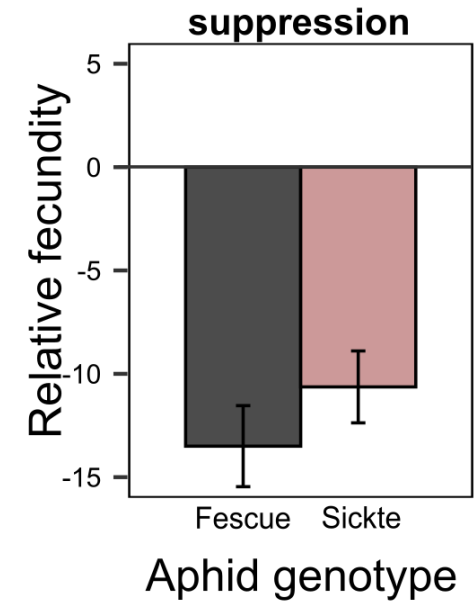
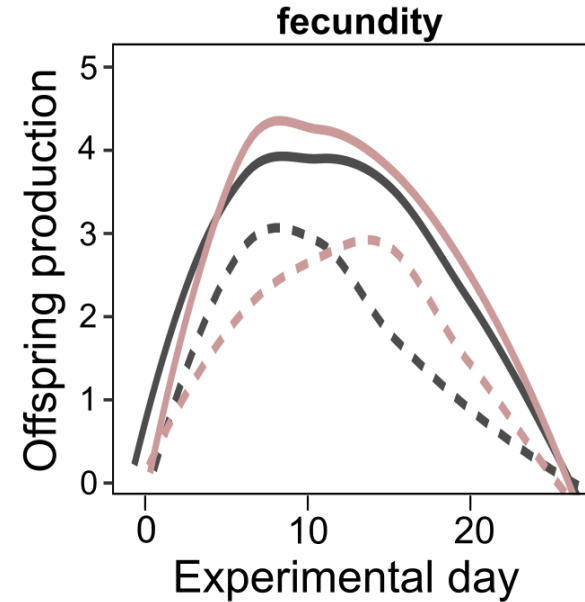
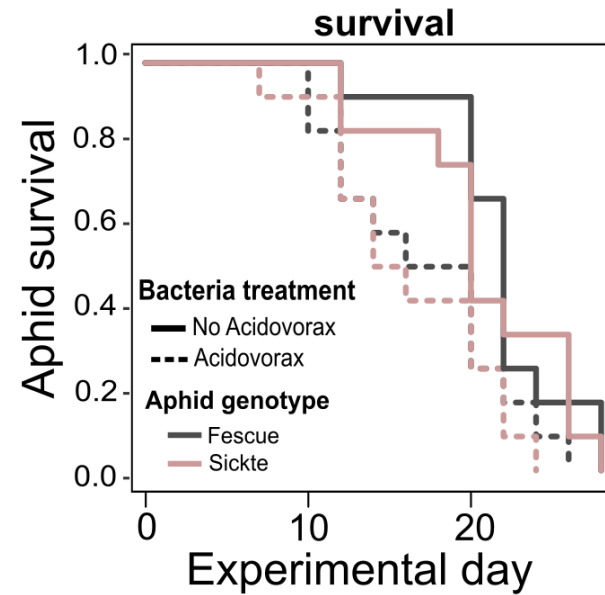
Colonises barley plants by forming biofilm-like structures on the roots

A. radidis produces AHL signalling molecules

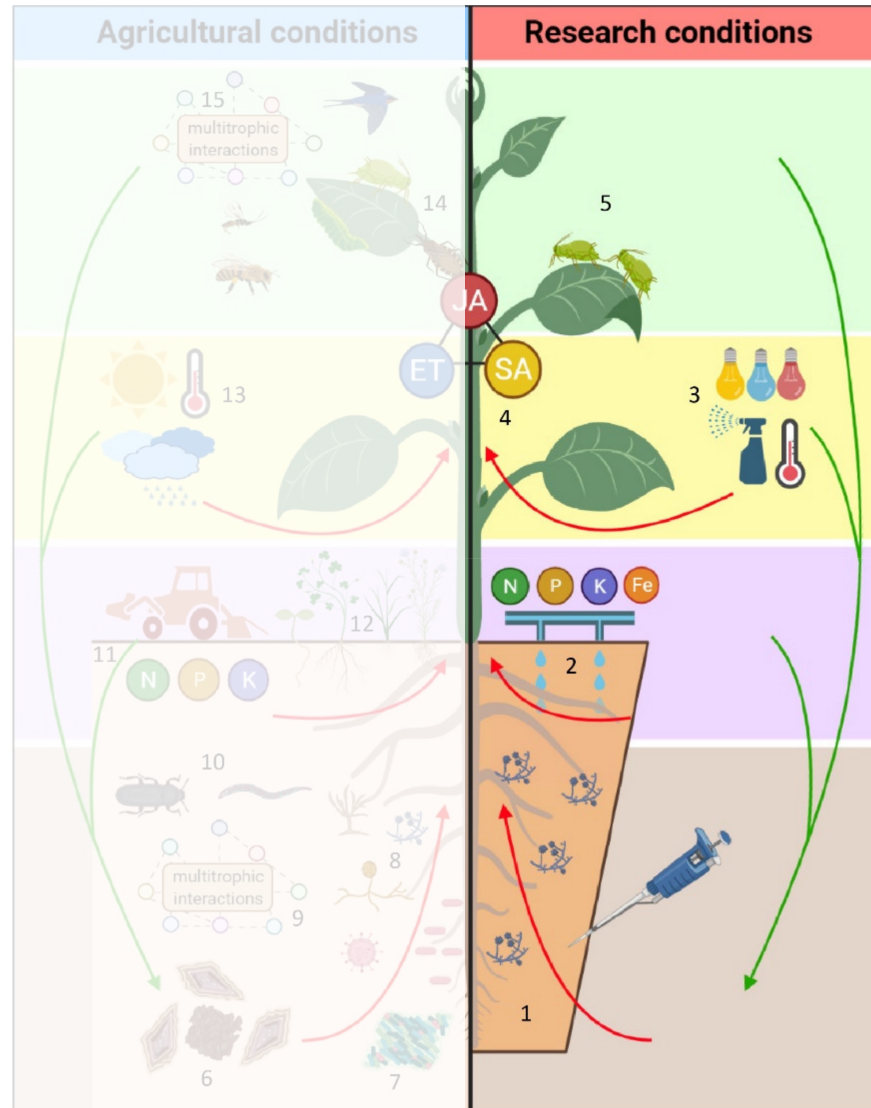
- bacteria-bacteria communication
- plant-induced defences



A. radialis reduces aphid survival and reproduction



Priming and induction of plant defences



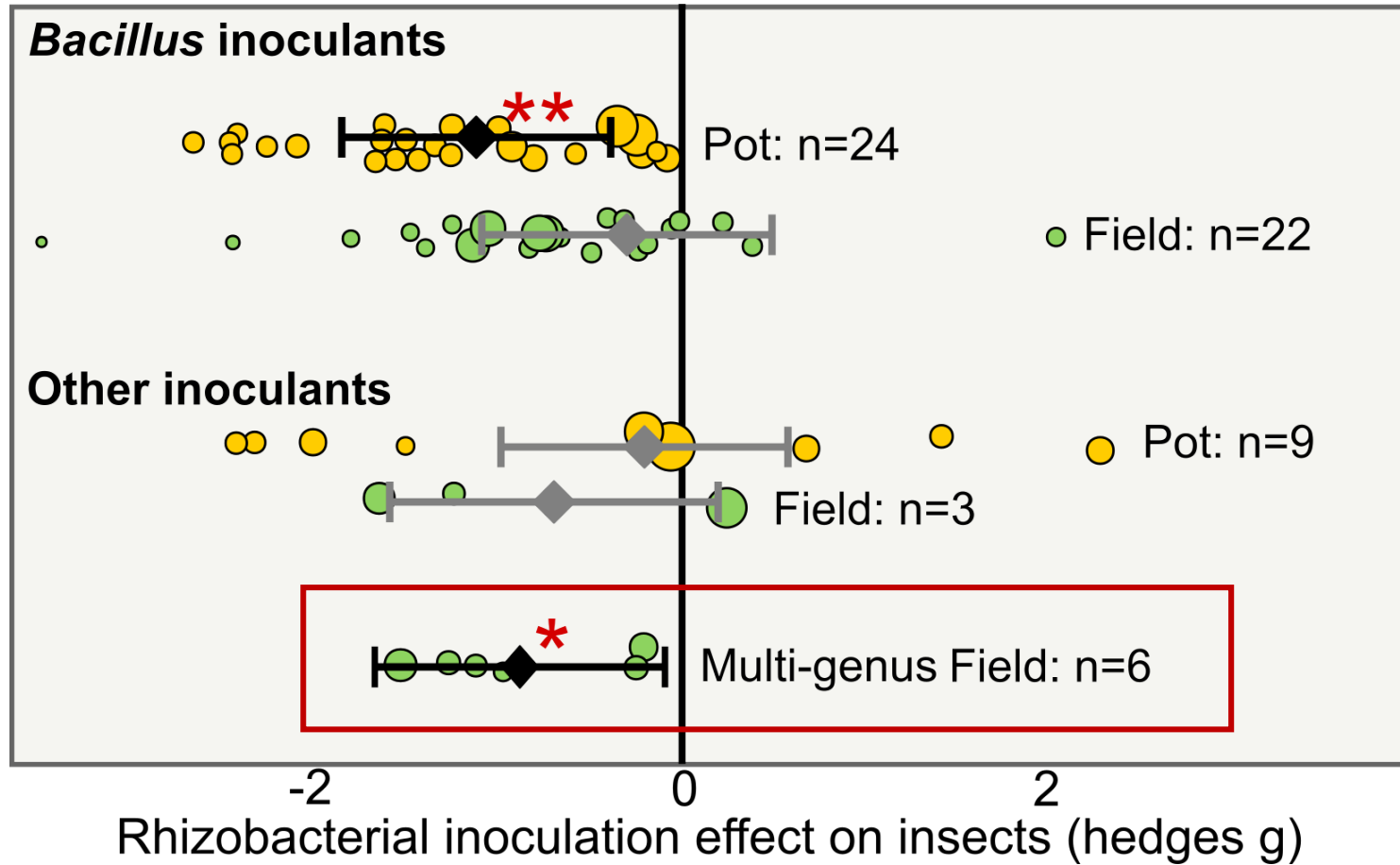
From: Lee Díaz, A.S.; Macheda, D.; Saha, H.; Ploll, U.; Orine, D.; Biere, A. Tackling the Context-Dependency of Microbial-Induced Resistance. *Agronomy* **2021**, *11*, 1293.

Transfer of knowledge to the field



Meta analysis of rhizobacteria effects (1997-2023)

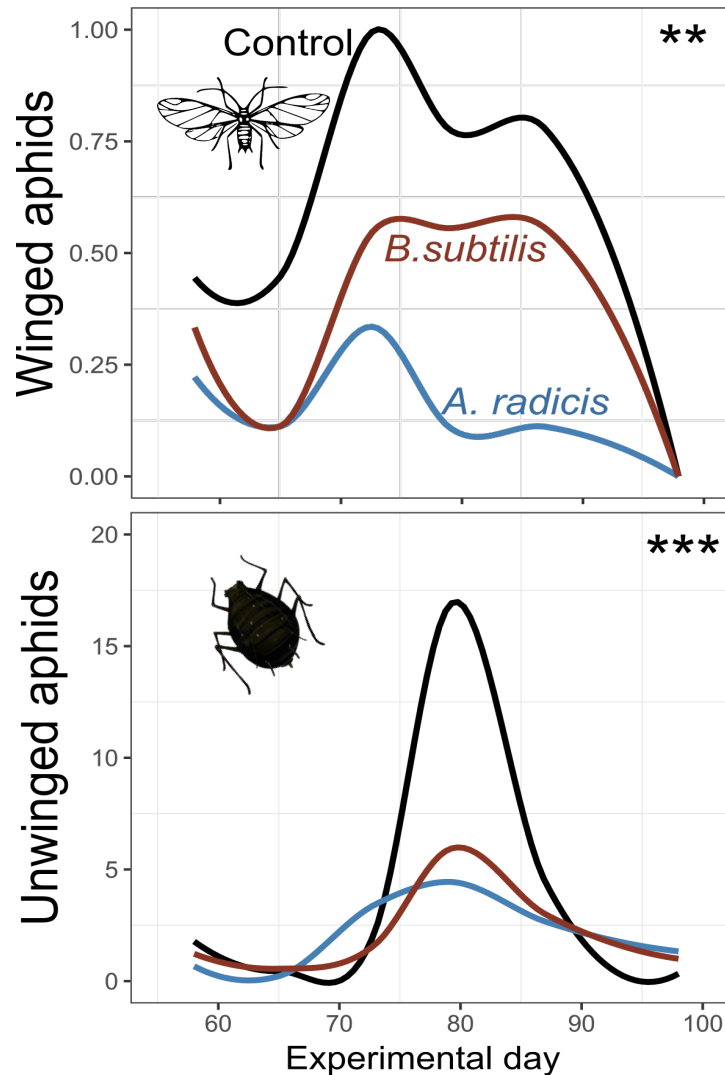
- Pot experiments
- Field trials



From the lab to the field



Field inoculation has community wide effects

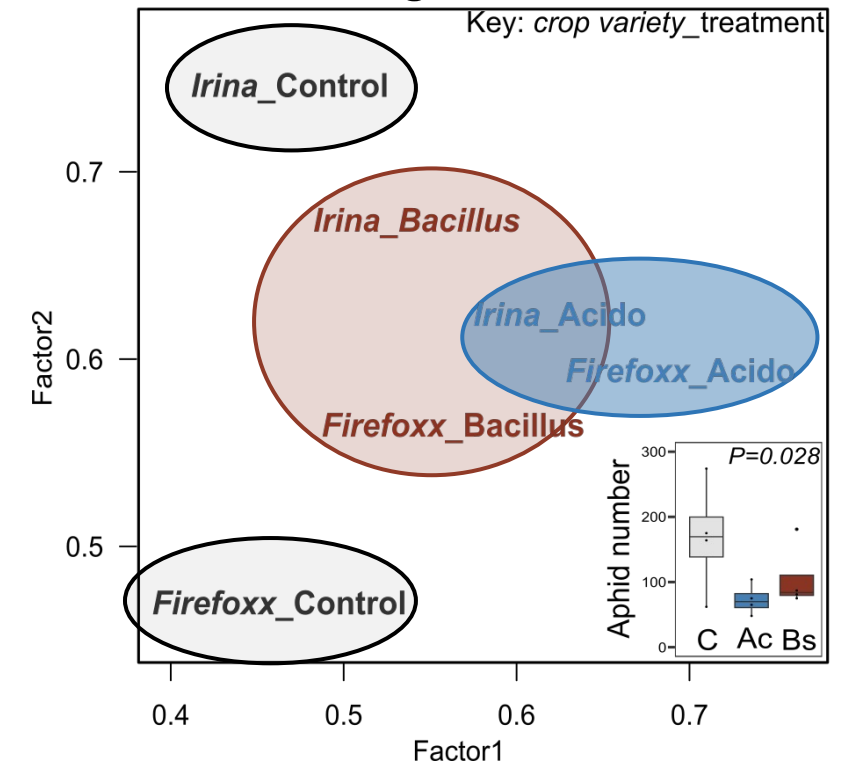


C: Control

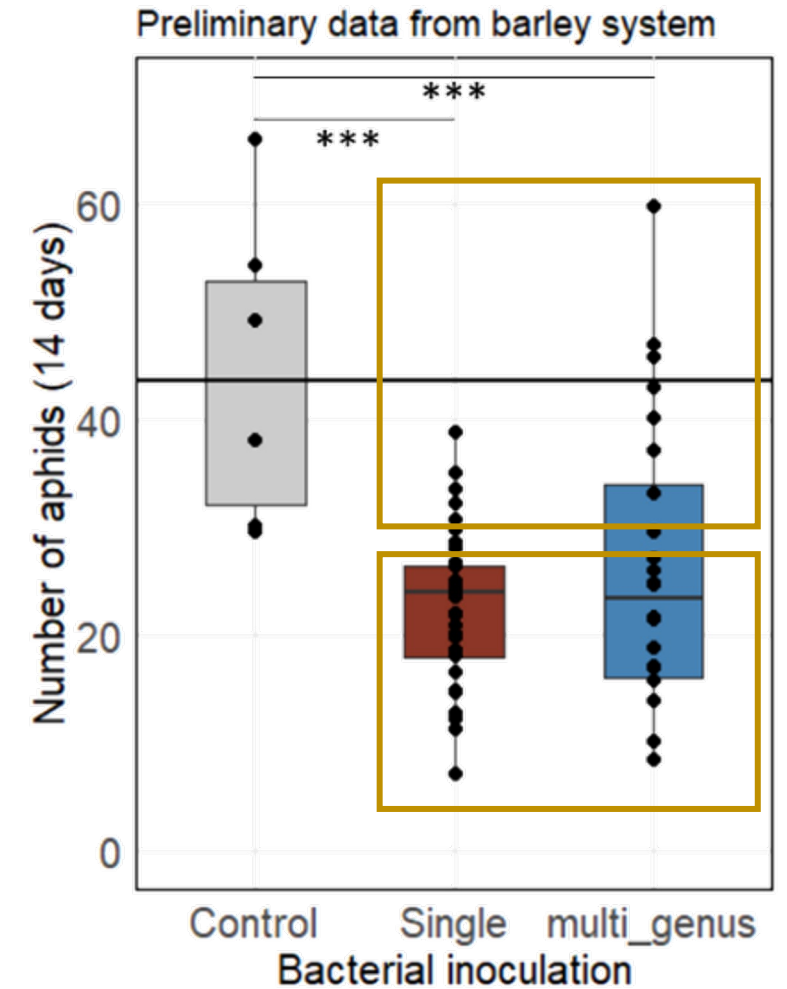
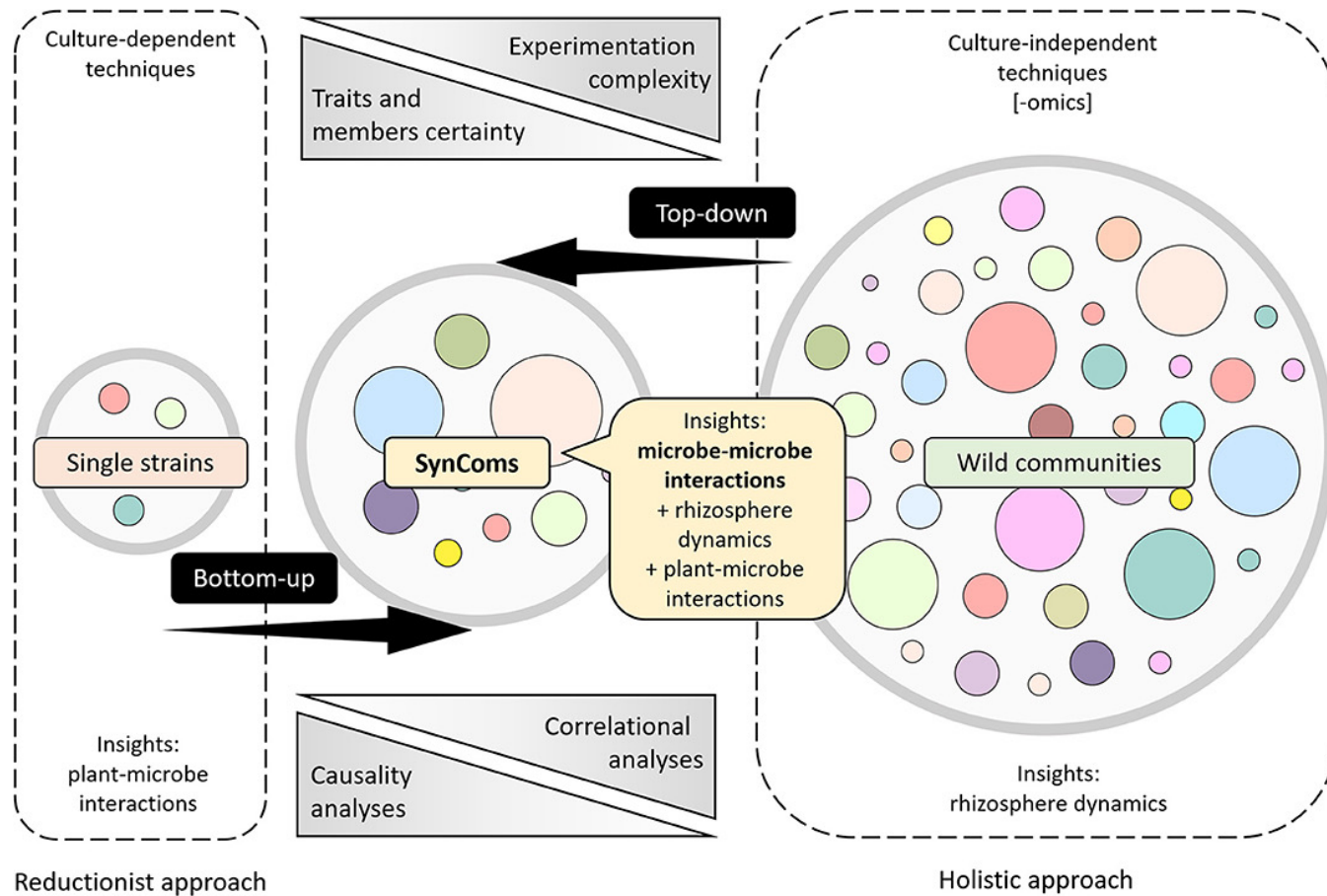
Ac: *Acidovorax radicis*

Bs: *Bacillus subtilis*

Plant belowground microbiome



Development of microbial synthetic communities

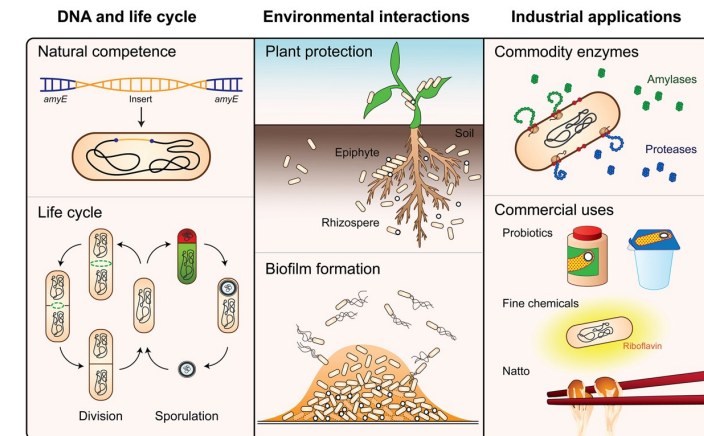


From: Marín, O., González, B. & Poupin, M.J. (2021) From Microbial Dynamics to Functionality in the Rhizosphere: A Systematic Review of the Opportunities With Synthetic Microbial Communities. *Frontiers in plant science*, 12 650609.

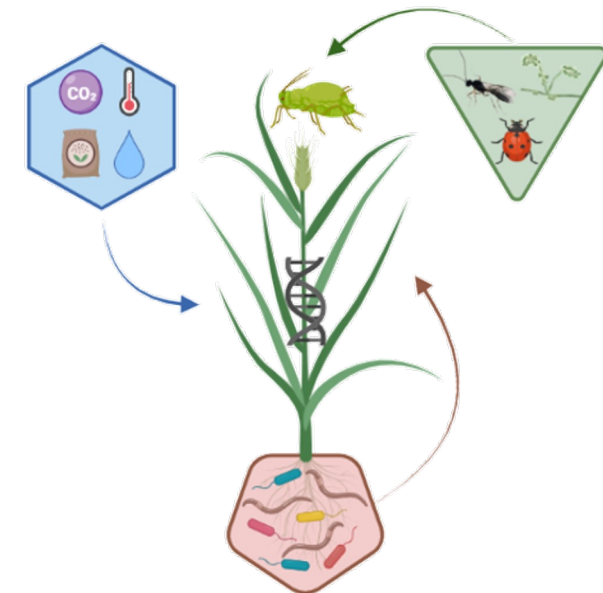
Zytynska et al. (unpub)

Summary

- Rhizosphere bacteria are recruited by plants to enhance growth and defence
- Microbial strains can be isolated and inoculated to deliver key plant benefits
 - For plant growth and insect defence, often both simultaneously
- Level of success dependent on microbe type and strain
 - Reduction of insect feeding behaviour and fitness (survival, growth, reproduction)
- Variability in field trials highlights context dependency
 - Need consistency to exploit full potential of microbes in agriculture
- Designed SynComs aim to use stable functional networks of microbes for enhanced effect across variable environments



Bacillus subtilis. Errington and van der Aart (2020) *Microbiology*

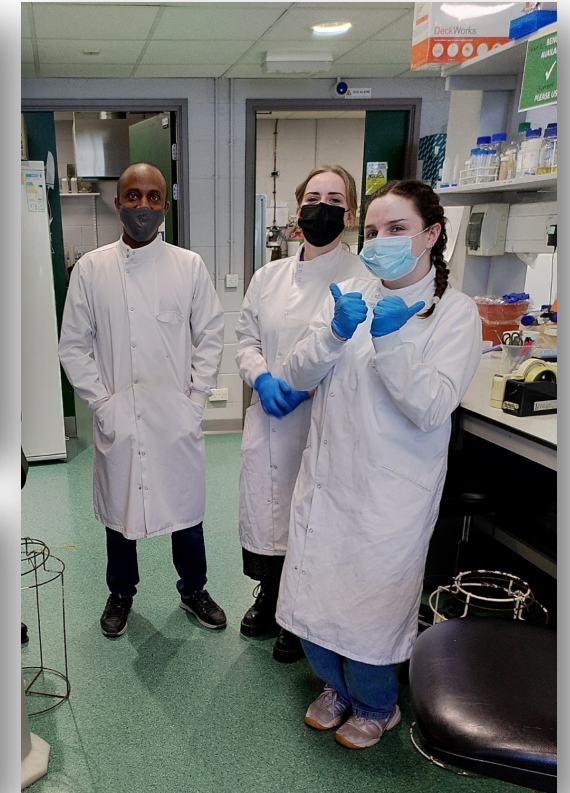


Inoculating crops with beneficial bacteria can promote plant yield and health

Thank you!

Xinqiang Xi
Crispus Mbaluto
Megan Parker
Edward Cairns
Andrea Ceribelli
Harri Walters
Daniel Leybourne
Sophie Blenkinsopp
Milo Henderson
Jen Banfield-Zanin
Joe MacLeod
Sara Adam

Oriana Sanchez
Robin Heinen
Sarah Sturm
Wolfgang Weisser
Sophia Klink
Mike Rothballer



HelmholtzZentrum münchen
Deutsches Forschungszentrum für Gesundheit und Umwelt



Natural Environment Research Council

THE ROYAL SOCIETY



@SZytynska

Microbial Discovery Platform for biofungicides and biostimulants

Dr Vijayalakshmi Gunasekaran
R&D Lead at FA Bio



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Microbial Discovery Platform for biofungicides and biostimulants



Dr. Vijayalakshmi Gunasekaran

Research and Development Lead

Plant Microbiome webinar

April 11, 2024



FA-Bio's Mission

To increase crop yields sustainably whilst reducing agriculture's environmental impact by discovering superior microbial active ingredients for the development of robust bioproducts.



Innovation and
Creative Thinking



Environmental
Sustainability



Diversity and Inclusion



Growth



Collaboration

OUR JOURNEY to OUR MISSION



2015	2016	2017	2018	2019	2020	2021	2022	2023	2024..
<ul style="list-style-type: none"> • Founded FungiAlert Ltd 	<ul style="list-style-type: none"> • Initial funding • Set-up own lab and office @ Rothamsted Research 	<ul style="list-style-type: none"> • IUK grant awarded (I) • Additional funding • MVP validated • Patent granted 	<ul style="list-style-type: none"> • Team growth • Commercial field trials using SporSenZ • 2 patents national phase + 1 PCT stage 	<ul style="list-style-type: none"> • IUK grant awarded (II) • Sales SporSenZ microbial analysis service • ISO9001:2015 	<ul style="list-style-type: none"> • Launch Microbial Discovery Platform • Patents granted 	<ul style="list-style-type: none"> • Rebrand to FA Bio • Pre-Seed Round closed • Biofertiliser & biocontrol product developments • 3 partnerships for product development 	<ul style="list-style-type: none"> • Winner of Radicle Growth Diversity & Inclusion Challenge • Product development of biofertilizer & biocontrol leads • Commercial license signed 	<ul style="list-style-type: none"> • Team growth • IUK grant awarded (III) • Fermentation, stable formulation, seed coating • UK wheat field trials 	<ul style="list-style-type: none"> • Team growth • Funding round closed • UK wheat & maize field trials • EU maize trials

Where do we make a difference

In the past 50 years, **70% of biodiversity was lost**, a leading cause of soil degradation.

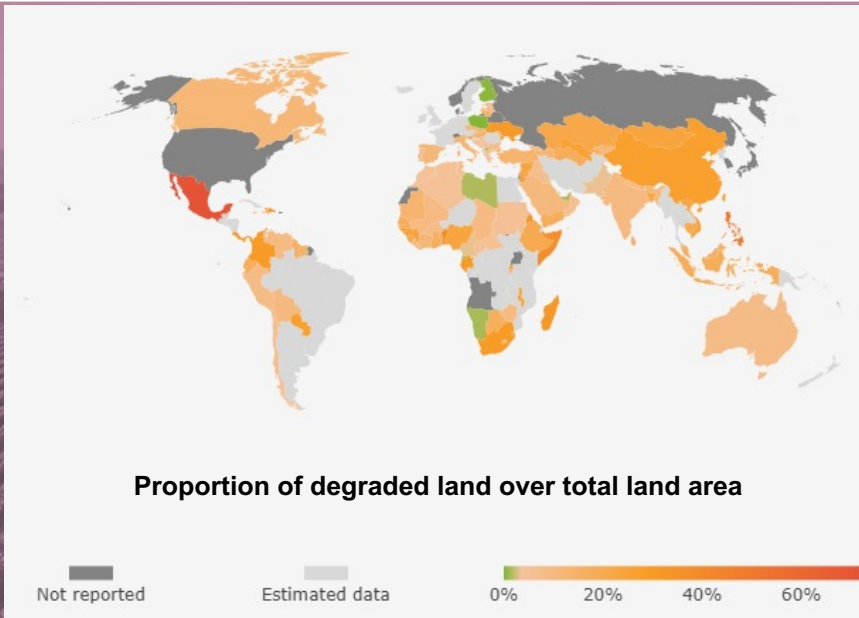
Between 2015 and 2019, at least **100 million hectares of productive land** were degraded every year, affecting food and water security globally. The loss is equivalent to twice the size of Greenland.

One of the factors affecting soil degradation



Usage of synthetic fertilisers, pesticides, herbicides

*Conventional Agrochemical Market:
Global market value of \$250 bn,
4.3% CAGR*



We make a difference through the Discovery & development of effective microbial biocontrol, biostimulant & biofertilizer products

Biopesticides, biostimulants, biofertilisers
Sustainable Biologicals Market:
\$10.6 bn,
15% CAGR.

KEY DRIVERS OF REGENERATIVE AGRICULTURE



Regulations



Consumers



Health



Environmental

Microbial Discovery Platform

What makes us unique

Targetted *SporSenz* sampling

- Target crops: cereals and horticultural crops

How does it work?

- Sporsenz attracts active dominant microbes in field
- Has components that mimics plant root exudates
- Target geographies: USA, UK, Europe, LATAM



Patented SporSenz technology

The SporSenz is a unique tool to decipher soil microbes

Microbial Discovery Platform

WE CAN CUT THE DISCOVERY PHASE FROM YEARS TO MONTHS



Success Rate	
6%	→ 25%
Timeframe	
5 years	→ 18 months





THANK YOU



Dr. Vijayalakshmi Gunasekaran

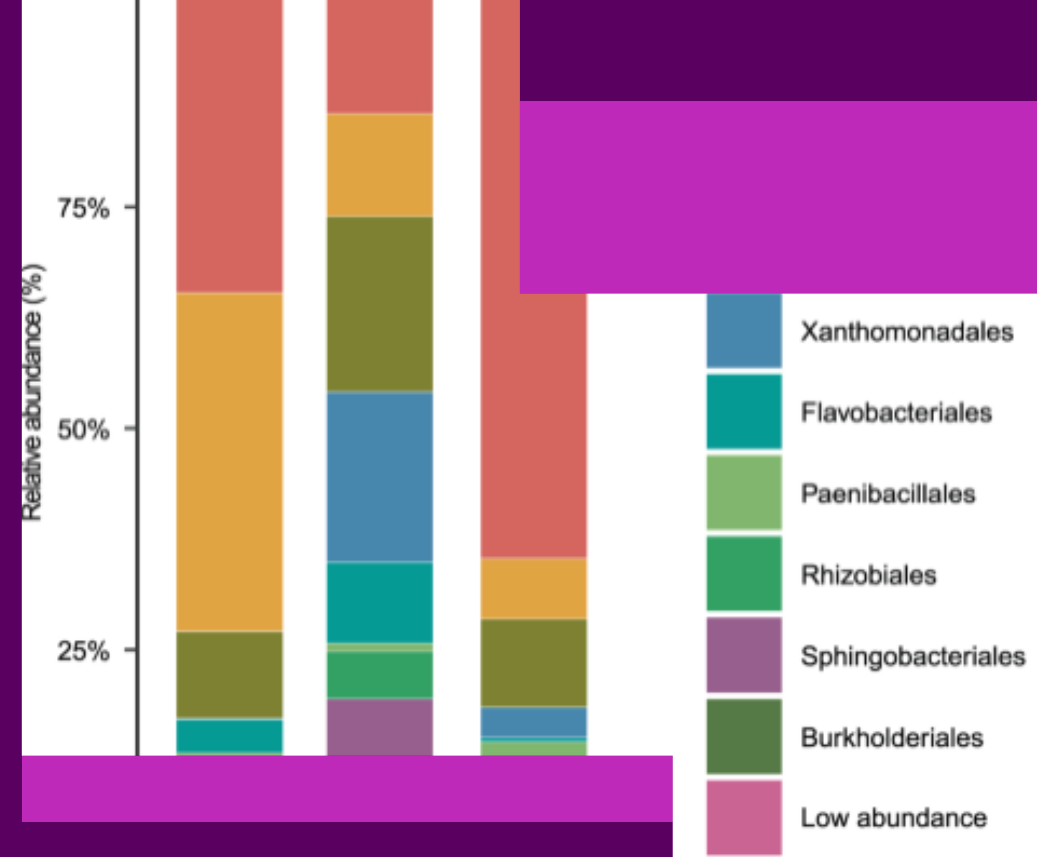
Research and Development Lead

Revolutionising REGENERATIVE agriculture
with the DISCOVERY of superior microbes

Microbiome engineering via M genes

Dr Tomislav Cernava

Associate Professor in Plant-Microbe Interactions
at the University of Southampton



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Microbiome engineering via *M* genes

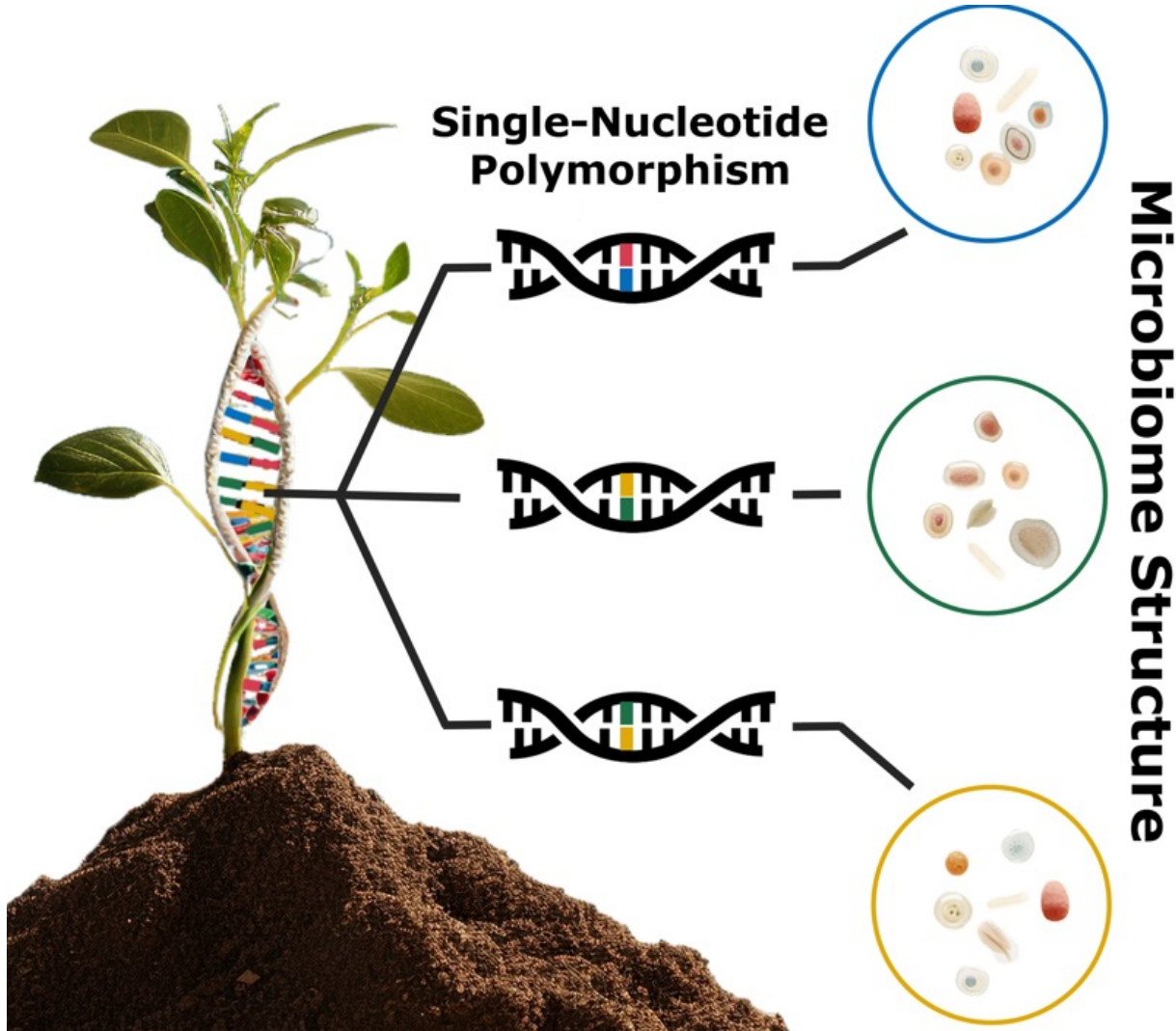
Tomislav Cernava
11 April 2024

Plant Microbiome Webinar
hosted by Business Connect



@TomiSci1

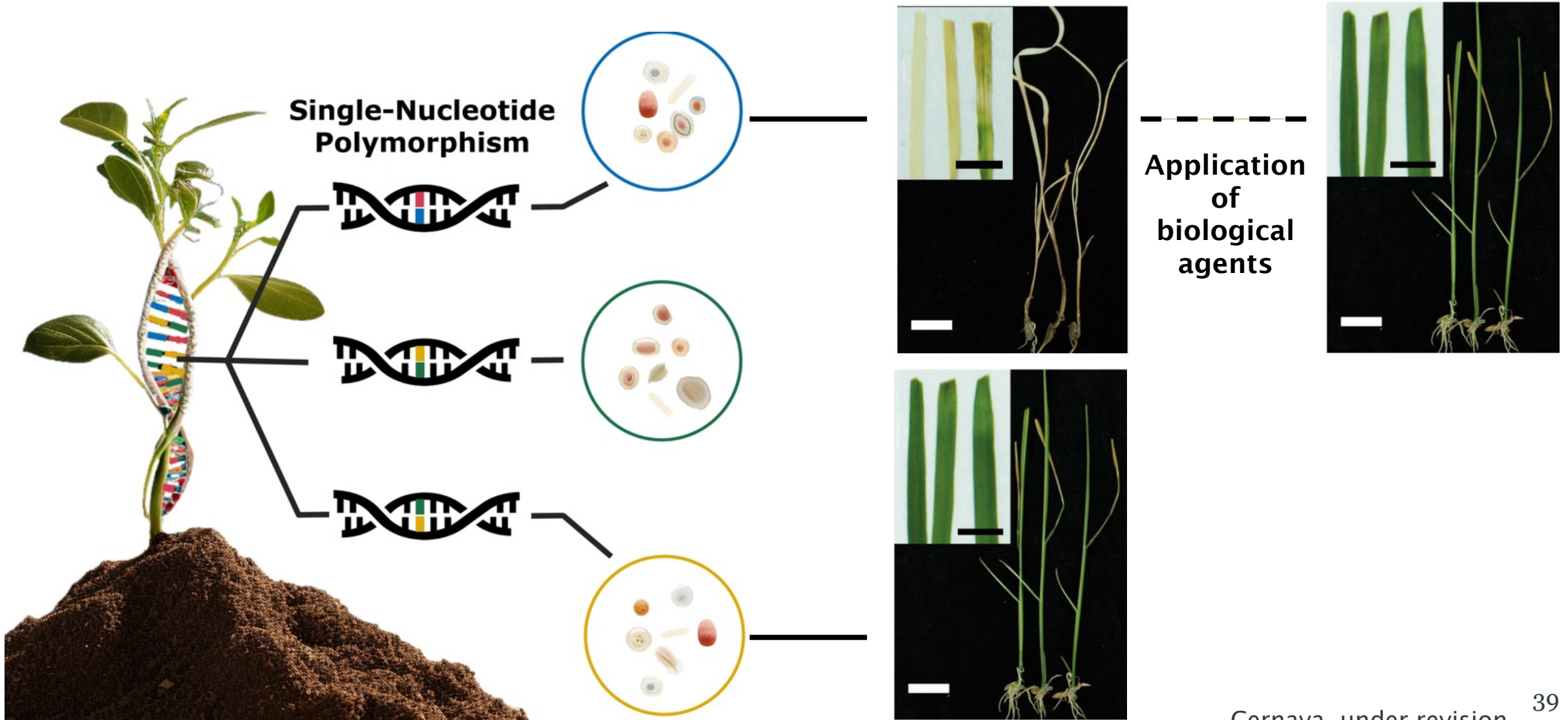
Microbiome genes – *M* genes



The plant microbiome is under genetic control of the host.

Host genetic variation is reflected in the microbiome whenever *M* genes are involved.

Microbiome genes – *M* genes



Microbiome genes – *M* genes



Nature Plants
@NaturePlants

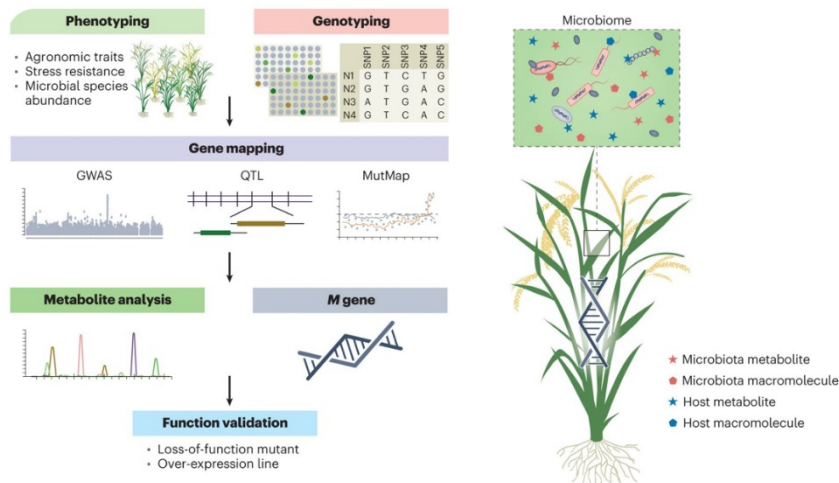
Follow



News&Views: "Microbiome-mediated immunity: Disease resistance through M genes" rdcu.be/dzFOP

A comment on this paper: rdcu.be/dzFQi

After R(esistance) and S(usceptibility) genes, here come the M(icrobiome) genes.



- The term was recently introduced to highlight the intrinsic link between plants and their microbiome.
- This link is key for plant health and productivity.
- A framework for *M* gene breeding is being established.

Soil-plant microbiome interface

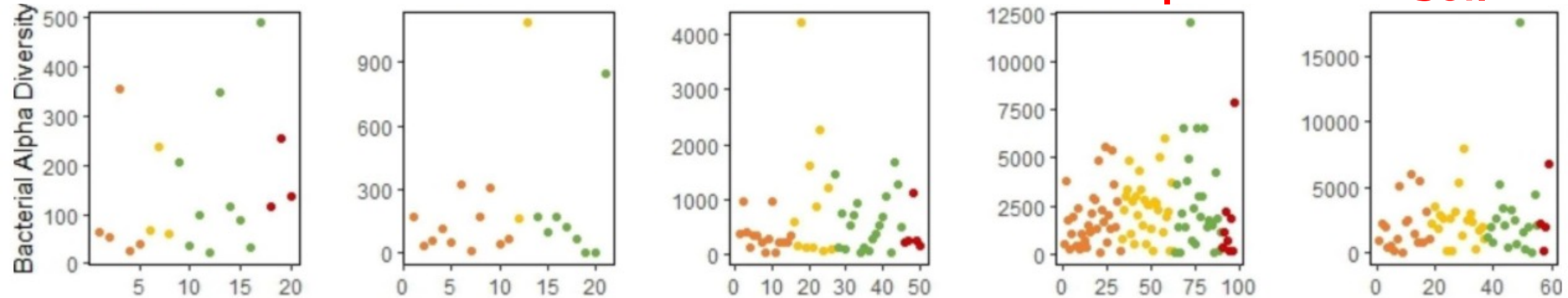
Microbial diversity gradient:

Seeds

< Leaves

< Root endo. < Rhizosphere

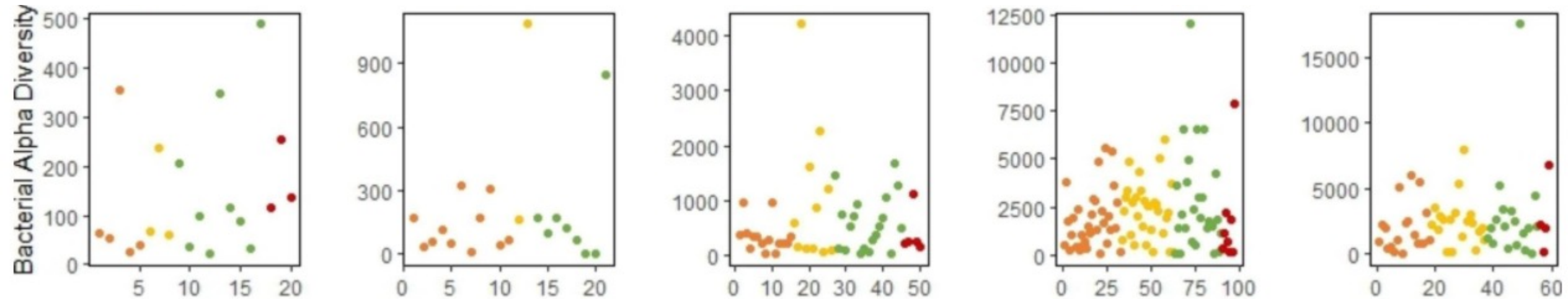
< Soil



Healthy soils harbour highly diverse bacterial and fungal populations. Plants can actively recruit beneficial microbes from them. **We are beginning to understand the underlying principles.**

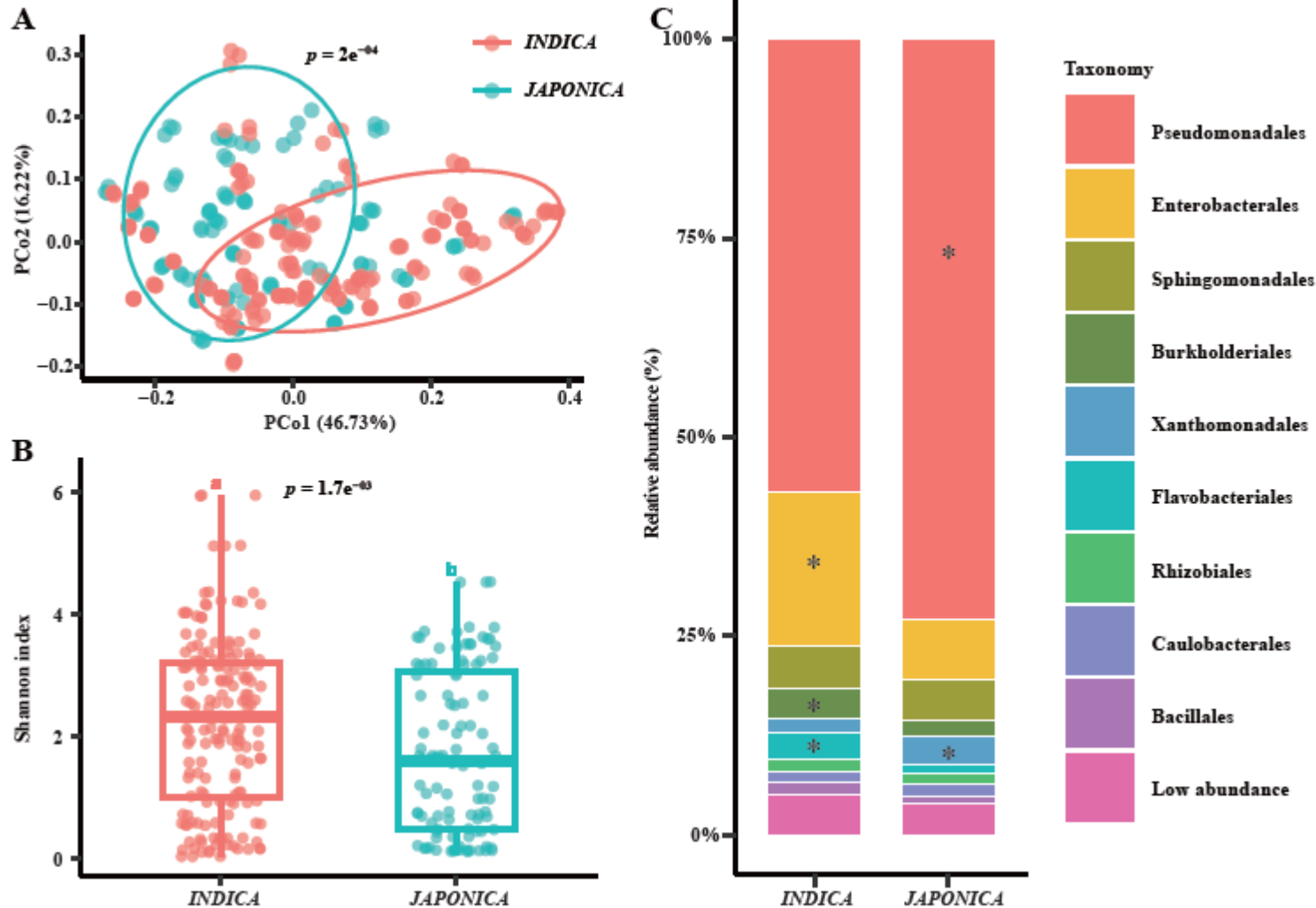
Soil-plant microbiome interface

Leaves



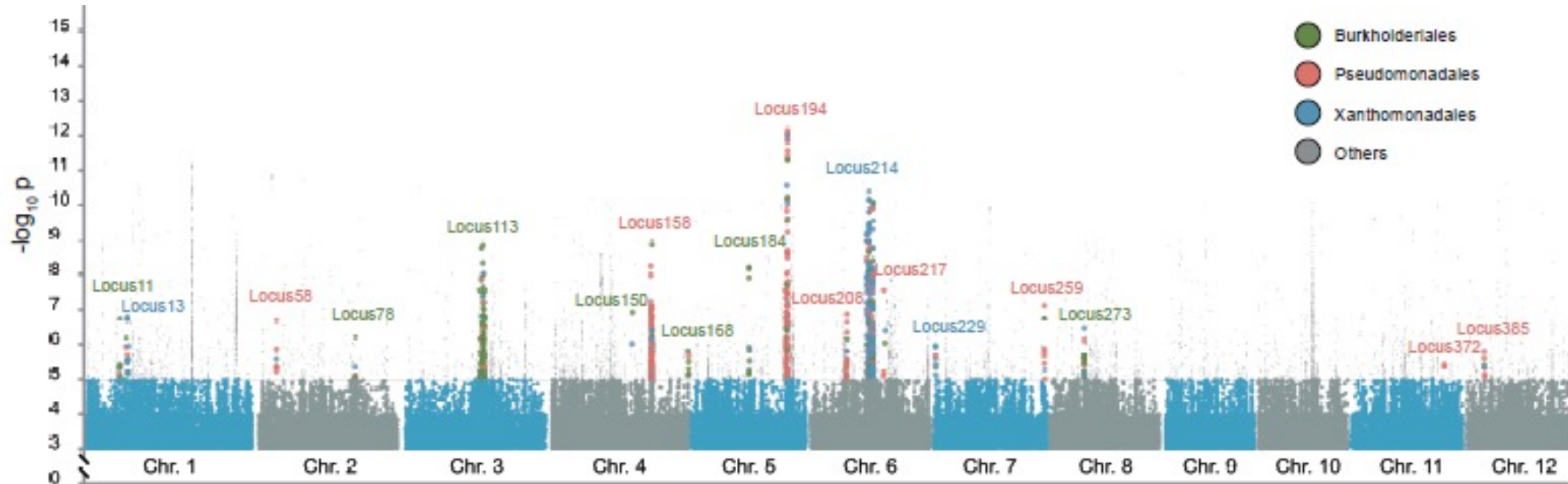
Plant leaves are colonized by microbes that are selected and enriched via host metabolites and play a pivotal role in protection against phytopathogens.

Host regulation of *Pseudomonas* in the rice phyllosphere microbiome



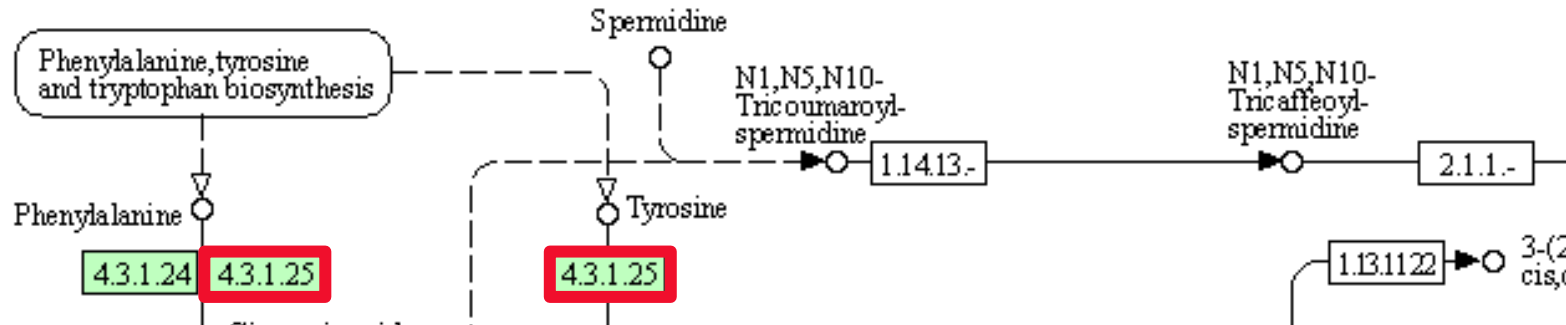
Pseudomonadales (mainly represented by *Pseudomonas*) abundance differs between **indica** and **japonica** rice subgroups.

Genome-wide associations between rice host and microbiome



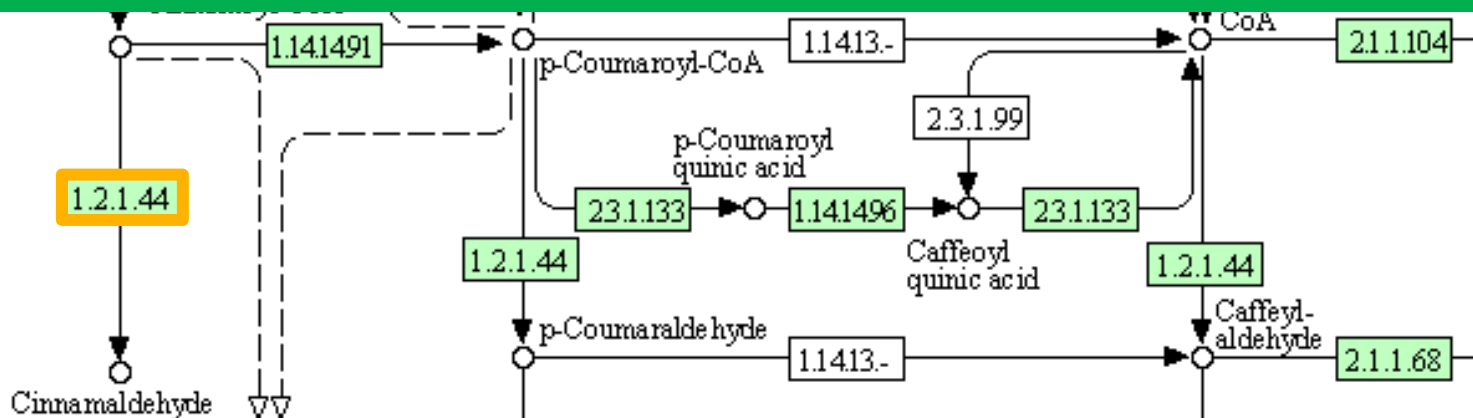
More than 300 metagenomes were implemented to identify rice genome loci associated with specific bacteria.
Implementation of a GWAS-based approach with SNP resolution.

One biosynthetic pathway in rice included multiple GWAS hits

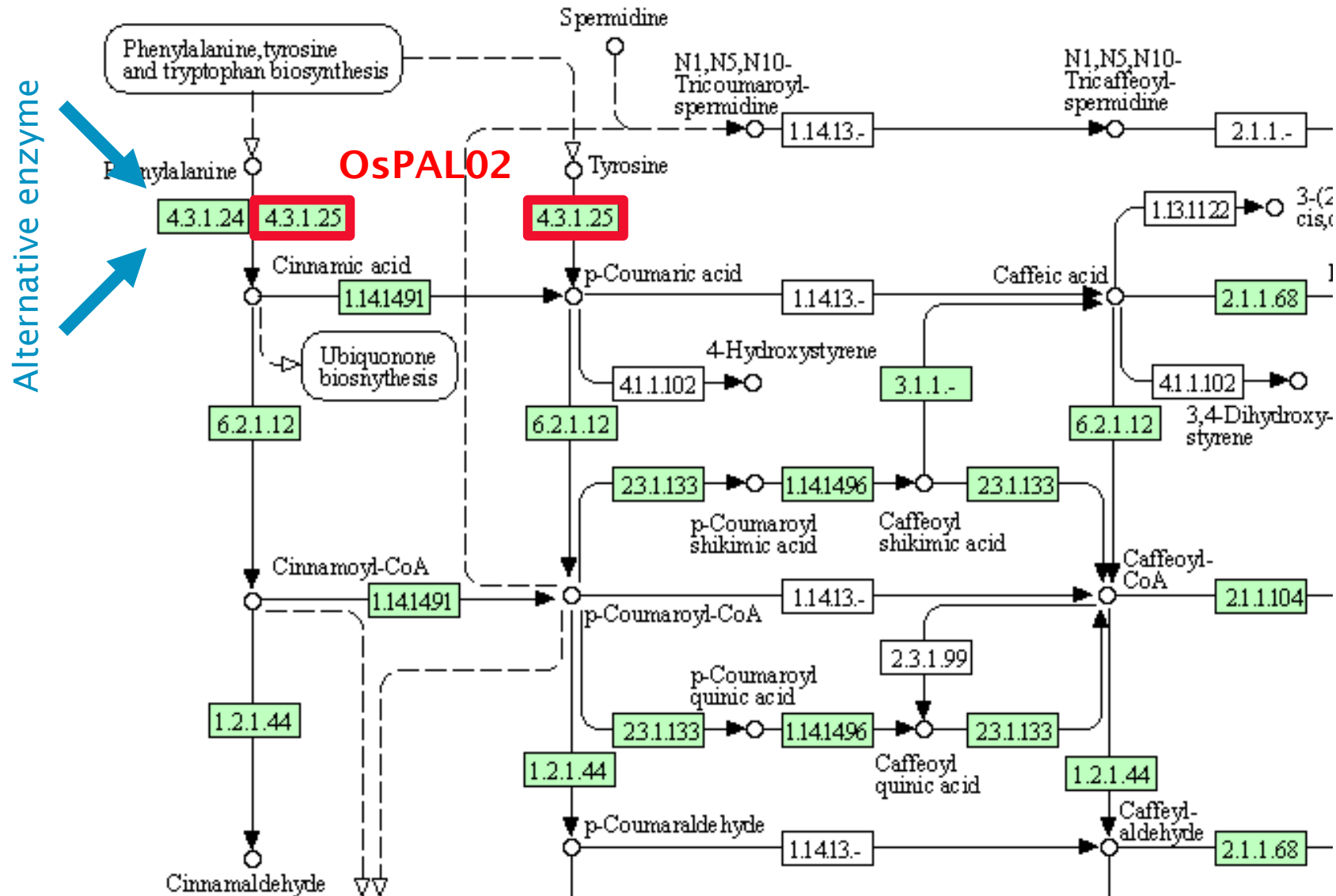


Lignin biosynthetic pathway

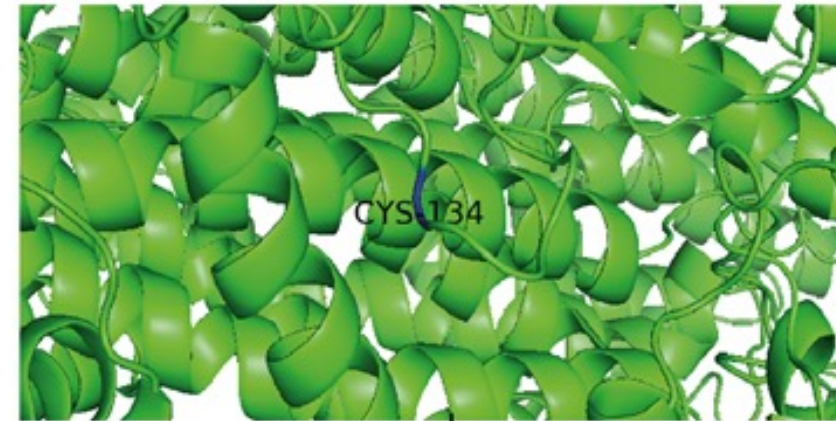
Typical lignin content in plant dry mass: 5 - 35%



One biosynthetic pathway in rice showed multiple GWAS hits



Two prevalent *OsPAL02* haplotypes occur in rice

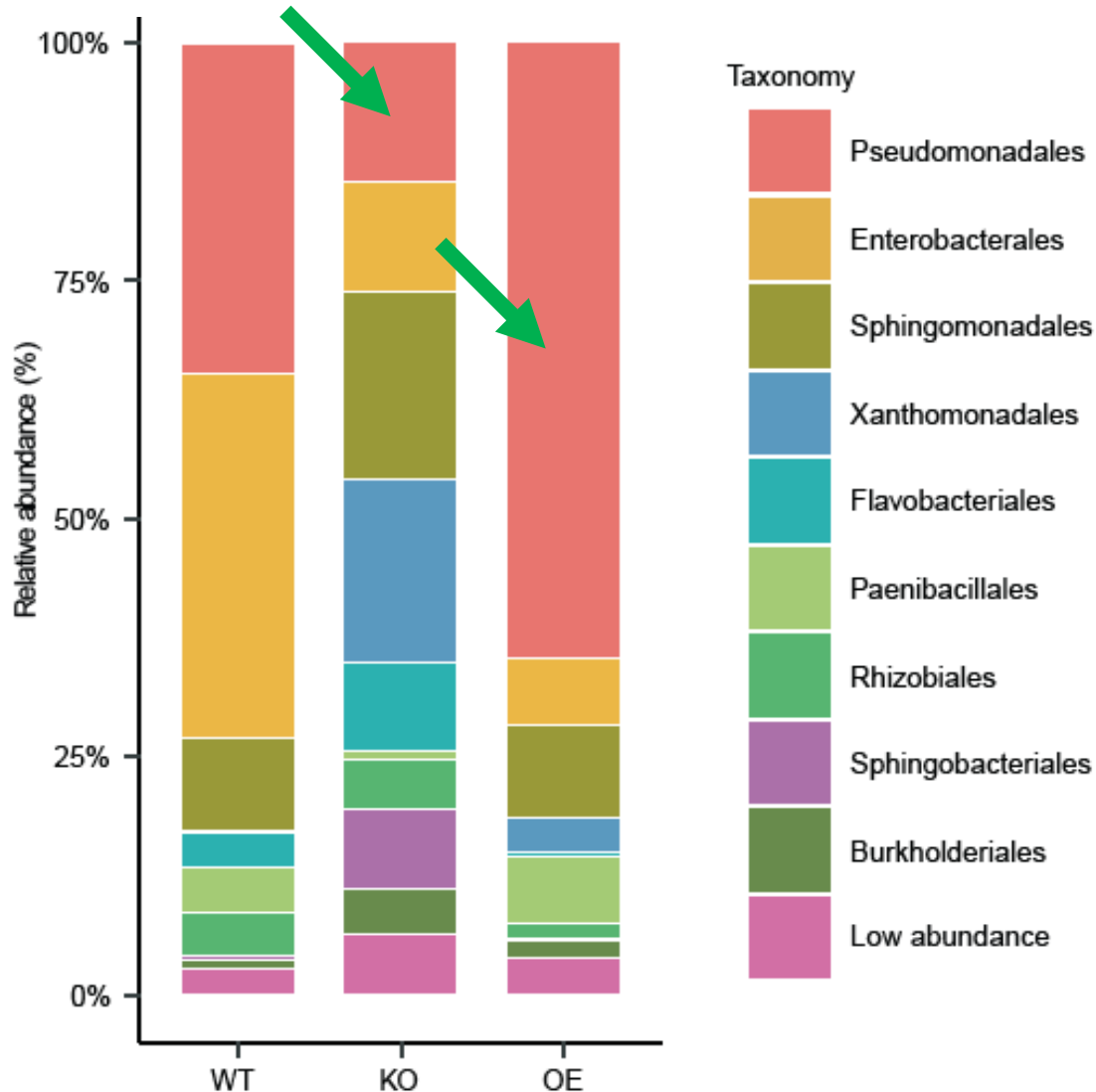


Prevalent *INDICA* haplotype



Prevalent *JAPONICA* haplotype

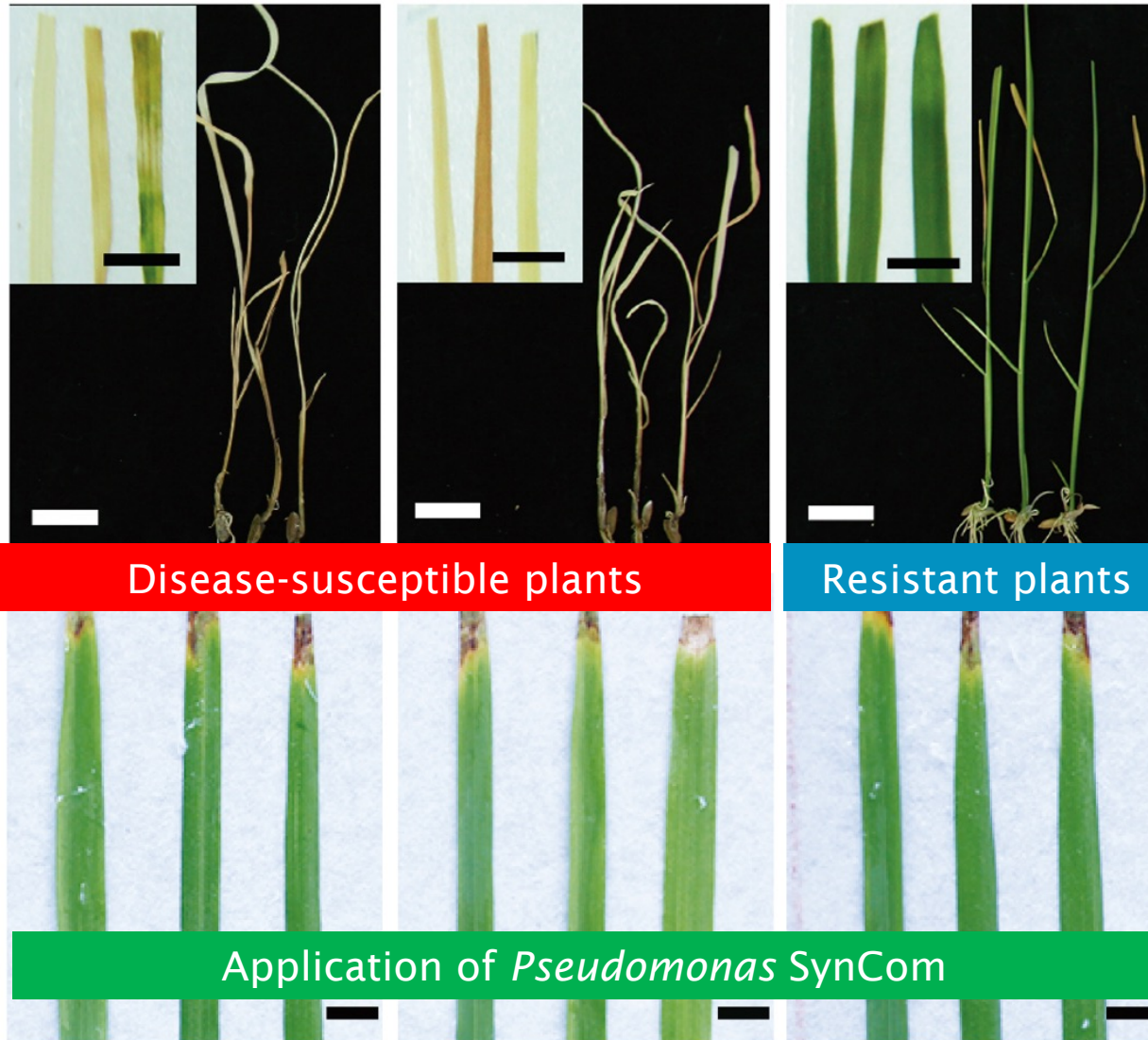
Phyllosphere microbiome engineering via *OsPALO2* mutants



OsPALO2 knockout mutants resulted in reduced *Pseudomonadales* abundance.

Overexpression mutants resulted in an enrichment and increased host resistance against *Xanthomonas oryzae*.

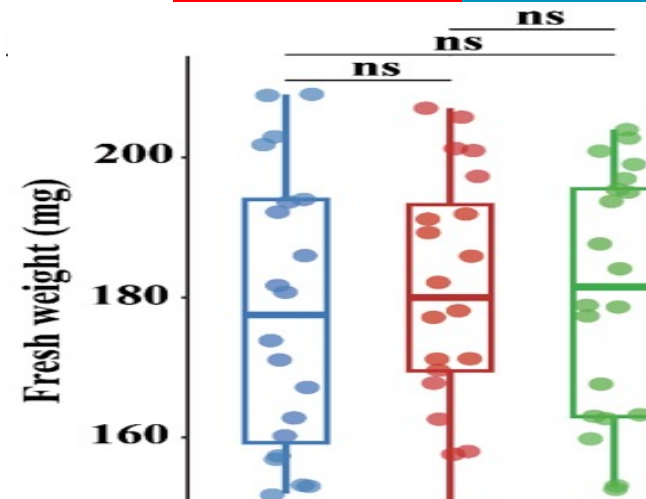
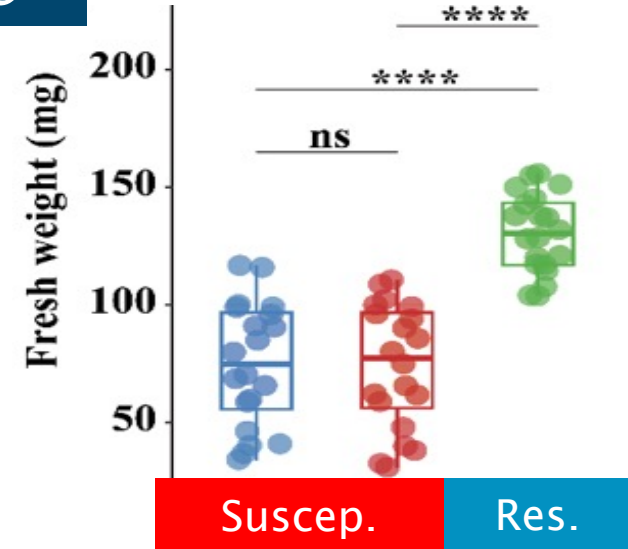
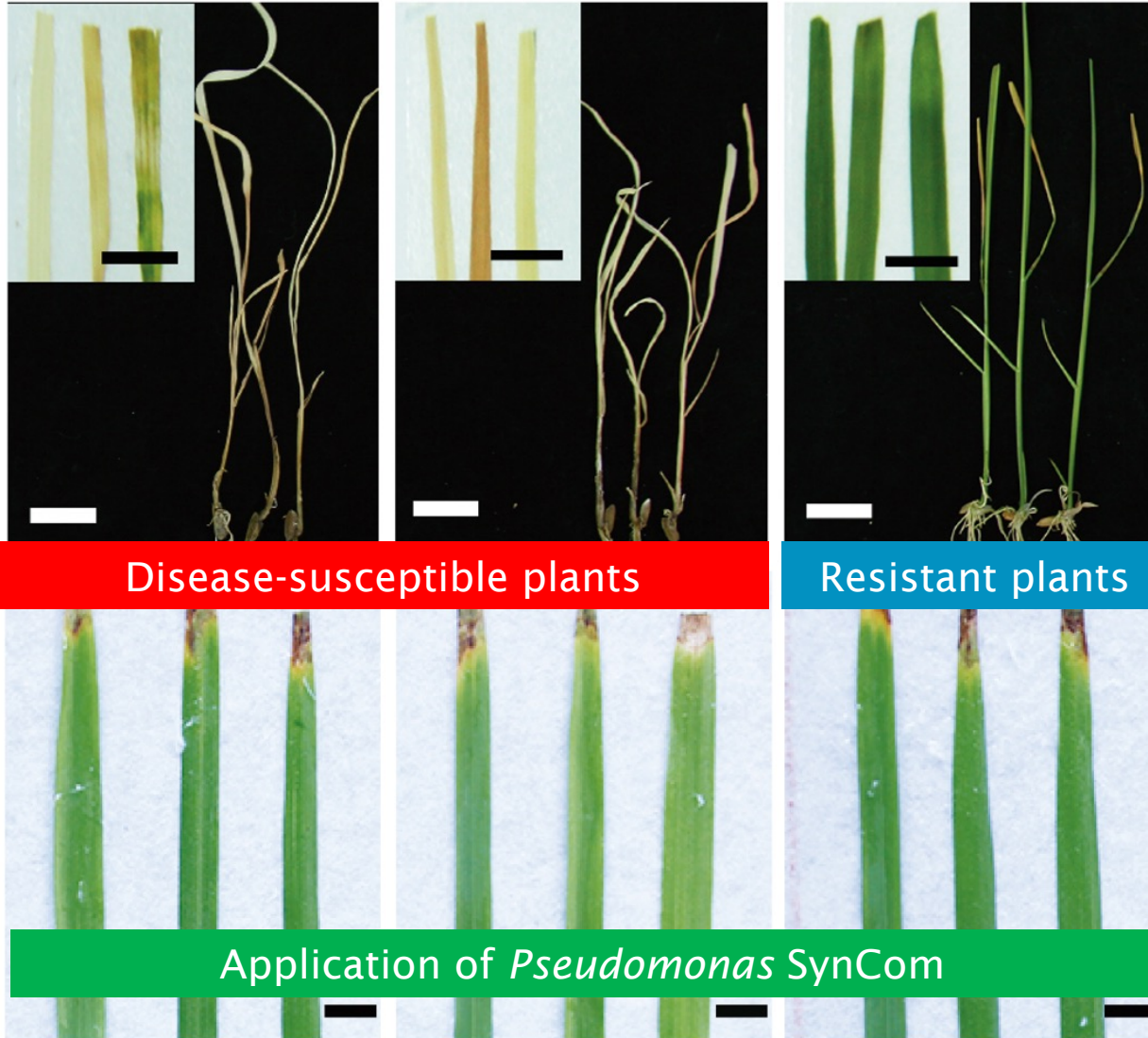
Importance of *Pseudomonas* in the rice phyllosphere microbiome



Application of *Pseudomonas* SynCom in WT and KO plants substantially reduces bacterial blight symptoms in rice.

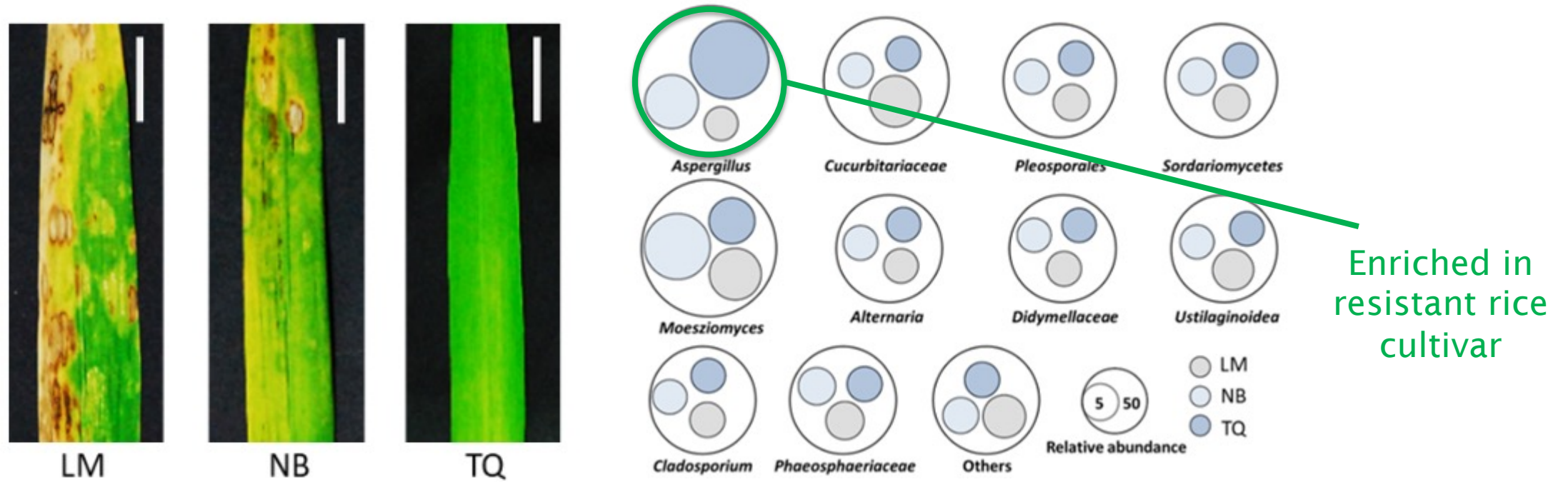
WT phenotype can also be restored by external application of synthetic p-coumaric acid.

Importance of *Pseudomonas* in the rice phyllosphere microbiome



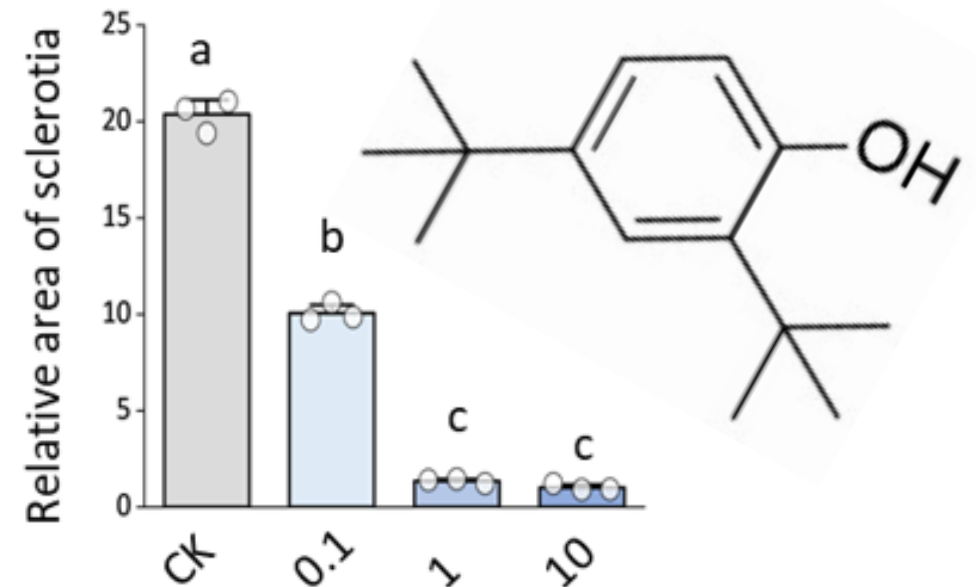
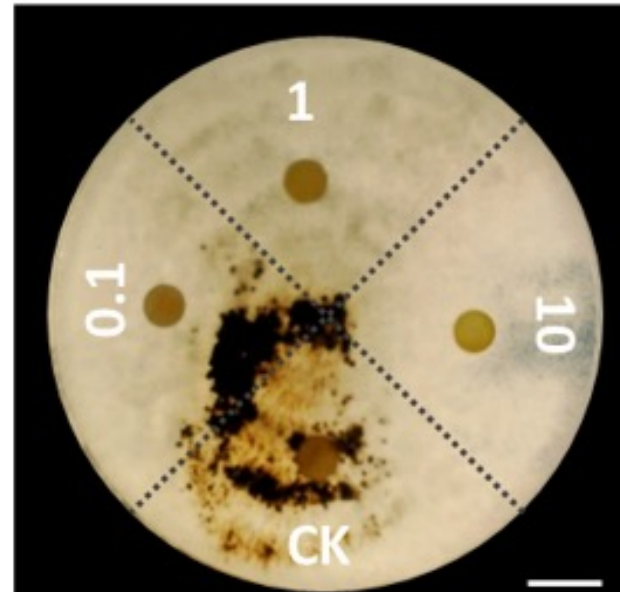
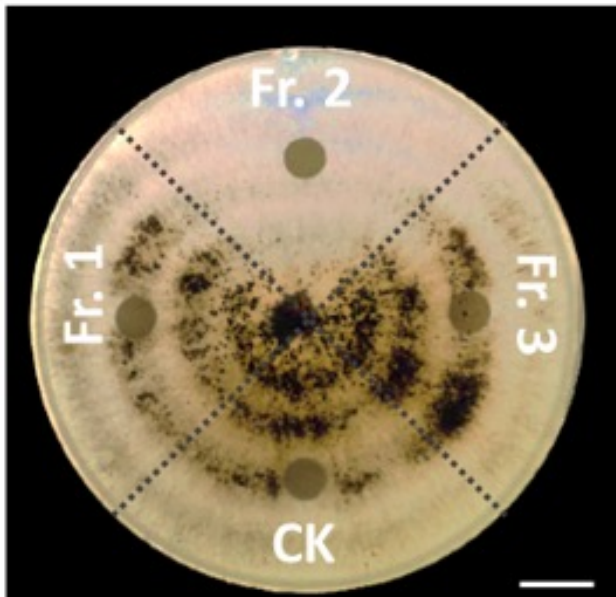
Application of *Pseudomonas* SynCom

M gene-based regulation of fungal communities – to be confirmed



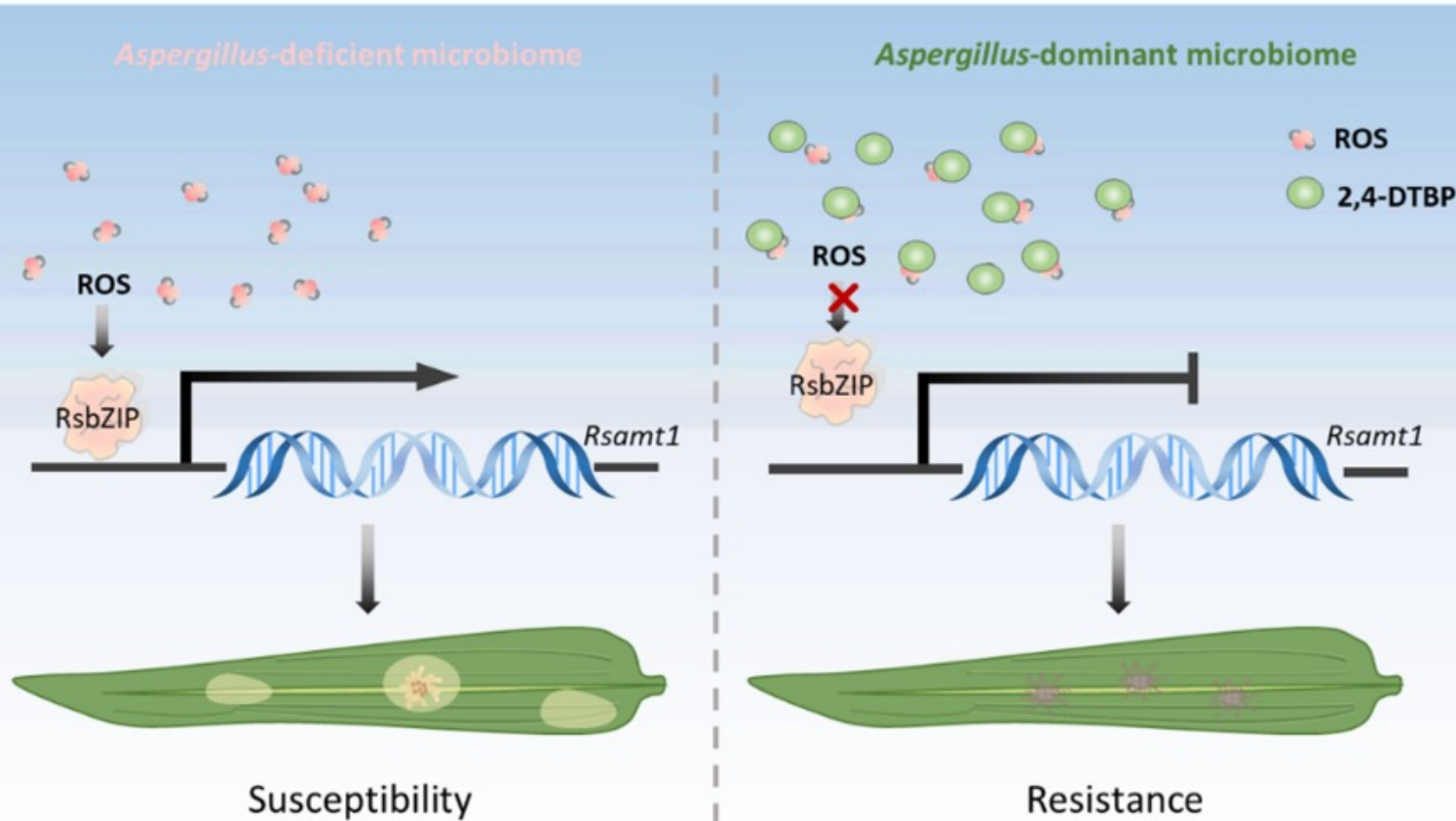
- Phyllosphere microbiomes of rice cultivars with differing resistance towards *Rhizoctonia solani* were profiled
- *Aspergillus* was found to be enriched in resistant rice cultivar TQ

Interference is based on small molecule produced by *Aspergillus*



- The phyllosphere colonizer *Aspergillus cvjetkovicii* interferes with sclerotia formation of the pathogen *R. solani*.
- The small molecule 2,4-di-tert-butylphenol was identified as the bioactive compound.

Proposed mode of action



- 2,4-DTB interferes with ROS-dependent activation of transcriptional regulator
- Reduced formation of sclerotia
- Involvement of *M* genes in *Aspergillus* enrichment?



UNIVERSITY OF
Southampton

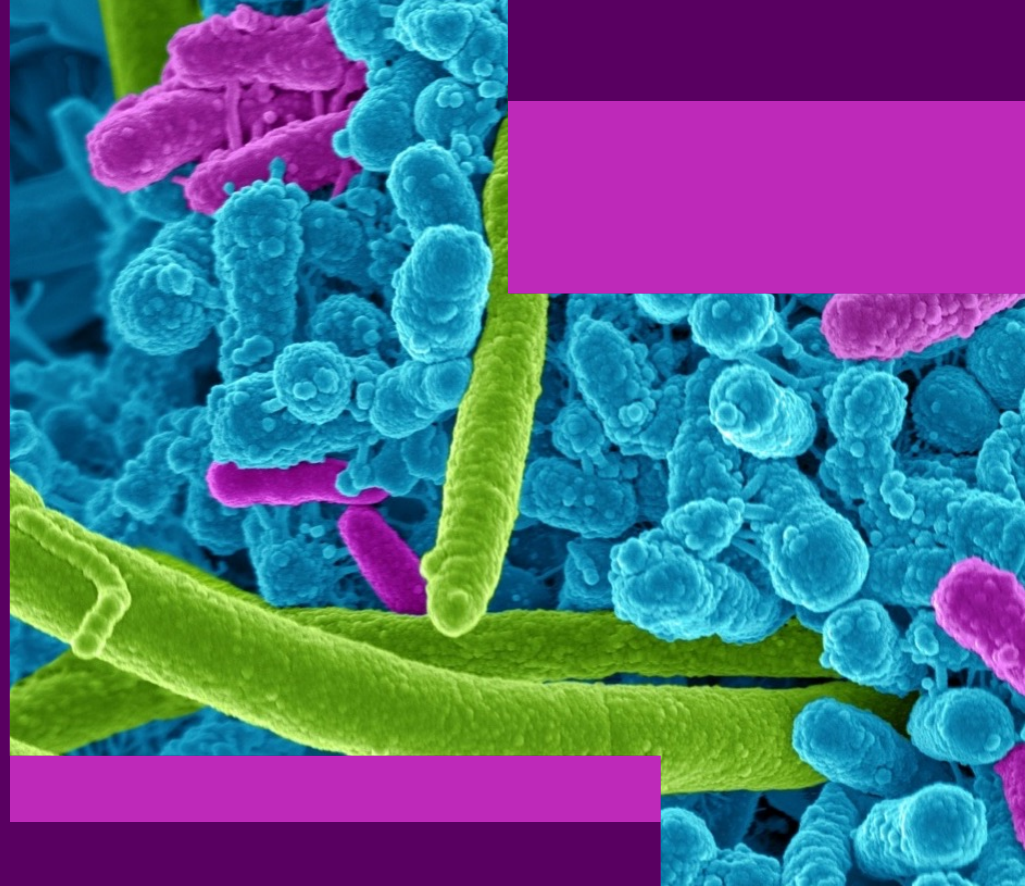


Berg group - Graz University of Technology



Q&A

Dr Gabriela Juarez Martinez & Dr Caroline Griffin
Innovate UK Business Connect



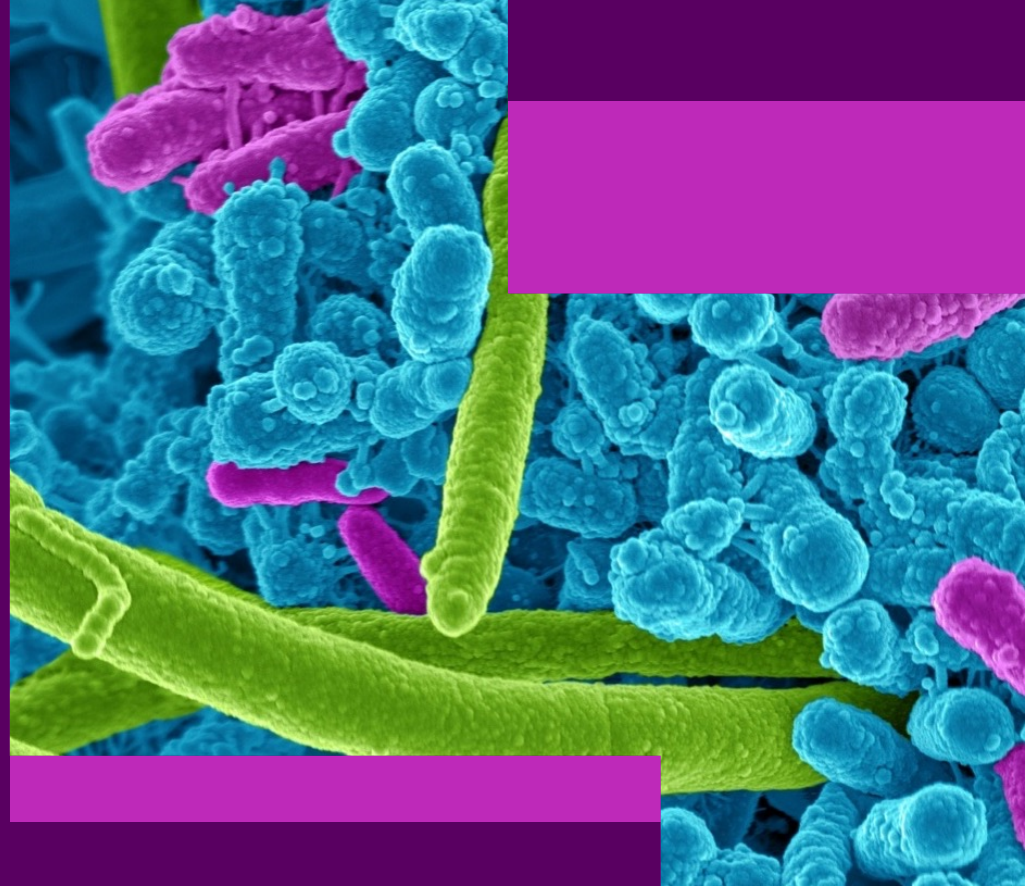
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Funding Opportunities

Dr Pedro Carvalho

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The Farming Innovation Programme (FIP)

- Part of **Defra's Agricultural Transition Plan**
- **£270M** of grant funding for R&D through to 2028/29
- To **enhance productivity, environmental sustainability and resilience** in England's farming sectors
- Funding is awarded on a competitive basis to high quality, innovative projects
- Collaborative **projects must benefit farmers, foresters, and growers in England**

The **Farming Innovation Programme** offers a range of opportunities for farmers, growers, businesses and researchers to collaborate on industry-led research and development:



Small **Research Starter Projects** where farmers, growers & foresters can explore a new idea, or **Projects to Accelerate Adoption** (ADOPT coming soon) where farmers and growers can trial new innovation on their farms.



Feasibility projects where businesses can check if a research idea works in practice.



Small/Large Partnership Projects, where businesses can further develop a new farming product or service towards commercialisation.



Themed competitions (Farming Futures R&D Fund), where businesses and researchers can work on longer-term innovation focussing on issues like: **Climate Smart Farming, Sustainable Farm-based Proteins, Automation and robotics, Environmental Resilience.**



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Farming Innovation Programme: Competition Schedule

Competition name	Opens	Closes	Status
Farming Futures R&D – Nutrient Management, Part 1	Spring 2024	Spring 2024	Upcoming
Farming Futures R&D – Nutrient Management, Part 2	Autumn 2024	Autumn 2024	Upcoming
Small R&D Partnerships (round 4)	Autumn 2024	Autumn 2024	Upcoming
Feasibility Studies (round 4)	Autumn 2024	Autumn 2024	Upcoming
Farming Futures R&D – Net Zero Farming	Autumn 2024	Autumn 2024	Upcoming

<https://farminginnovation.ukri.org>



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FIP: Accelerating Development of Practices and Technologies (ADOPT)

Summary:

These grants are focused on providing groups of **farmers, growers and foresters in England** with support to **conduct on-farm experiments and trials**.

ADOPT will help de-risk farmers' participation in research and innovation.

There will be a total of **£45 million grant funding** available up until 2028/29.

Dates:

Coming in summer 2024.

<https://defrafarming.blog.gov.uk/2024/03/12/grants-available-in-2024/>



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BridgeAI

£100m Innovate UK funded programme to encourage AI innovation and adoption in UK business over the next 2 years.

Mission statement

To empower businesses in high-growth sectors within the UK, including agriculture, construction, creative, and transport industries, to harness the power of AI in a responsible and ethical manner, driving productivity and unlocking their full potential.

<https://iuk.ktn-uk.org/programme/bridgeai/>



BridgeAI: Opportunities

<p>Turing Way Practitioners Hub – become an Expert in Residence</p> <p>Opens: 15/03/2024 Closes: 30/05/2024</p> <p>The Turing Way Practitioners Hub is inviting Expressions of Interest to join their second cohort of Experts in Residence</p> <p>More Information →</p>	<p>BridgeAI Standards Community</p> <p>Opens: 06/03/2024 Closes: 31/03/2025</p> <p>Harness the power of AI responsibly through standards support</p> <p>More Information →</p>	<p>Feasibility studies for Artificial Intelligence solutions: Series 2</p> <p>Opens: 27/03/2024 Closes: 08/05/2024</p> <p>UK registered businesses can apply for a share of up to £5m to use Artificial Intelligence (AI) to address business challenges and opportunities.</p> <p>More Information →</p>	<p>Live course: Operationalising ethics in AI</p> <p>Opens: 06/11/2023 Closes: 23/05/2024</p> <p>Join our free live training course on operationalising ethics for AI in transport, agriculture and construction.</p> <p>More Information →</p>	<p>Bespoke AI and Data Science Advice for SMEs from The Alan Turing Institute</p> <p>Opens: 19/02/2024 Closes: 30/04/2024</p> <p>Get personalised AI advice for your small to medium-sized business from The Alan Turing Institute's team of independent scientific advisors.</p> <p>More Information →</p>	<p>The Turing Way Handbook The Alan Turing Institute</p> <p>Opens: 19/10/2023 Closes: 31/12/2024</p> <p>Discover The Turing Way Handbook on data science, an Innovate UK BridgeAI programme resource. The project offers a series of openly developed onli...</p> <p>More Information →</p>	<p>BridgeAI: Operationalising Ethics in AI The Alan Turing Institute</p> <p>Opens: 01/05/2023 Closes: 31/12/2024</p> <p>Learn how to incorporate ethical AI principles into your organisation's systems design process with the self-paced e-learning course 'Operationalisin...</p> <p>More Information →</p>	<p>BridgeAI: Introduction to Transparent Machine Learning The Alan Turing Institute</p> <p>Opens: 01/05/2023 Closes: 31/12/2024</p> <p>Learn to implement transparent machine learning systems and processes in a real-world setting with The Alan Turing Institute's free and open-source self-pace...</p> <p>More Information →</p>
<p>Live course: Assessing and mitigating bias and discrimination in AI</p> <p>Opens: 09/02/2024 Closes: 28/05/2024</p> <p>Join our live training course to explore the impact, legislative contexts, and practical mitigation of bias in AI development across the agriculture, construction,...</p> <p>More Information →</p>	<p>Discover Digital Transformation Training Programme</p> <p>Opens: 04/12/2023 Closes: 04/02/2025</p> <p>Explore the potential of your business with the Discover Digital Transformation Training Programme by STFC Hartree Centre.</p> <p>More Information →</p>	<p>AI Adoption Assessment Toolkit from Digital Catapult</p> <p>Opens: 01/11/2023 Closes: 31/12/2024</p> <p>If your organisation is diving into AI adoption but feels uncertain, our toolkit is your guide.</p> <p>More Information →</p>	<p>High Performance Computing (HPC) Innovation Voucher</p> <p>Opens: 16/10/2023 Closes: 30/04/2024</p> <p>Gain access to £5,000 vouchers for the Hartree Centre's powerful high-performance computing (HPC) platforms. Explore faster simulations, efficient projects,...</p> <p>More Information →</p>	<p>Access to Hartree Centre Training Portal from Science and Technology Facilities Council</p> <p>Opens: 04/09/2023 Closes: 31/12/2024</p> <p>Accelerate your digital expertise with the Hartree Centre Training Portal as part of Innovate UK's BridgeAI programme.</p> <p>More Information →</p>	<p>BridgeAI: Turing Commons The Alan Turing Institute</p> <p>Opens: 01/05/2023 Closes: 31/12/2024</p> <p>Learn how The Alan Turing Institute's 'Turing Commons' can guide you in designing, developing, and using data-driven technologies responsibly...</p> <p>More Information →</p>	<p>BridgeAI: How Data Lies The Alan Turing Institute</p> <p>Opens: 01/05/2023 Closes: 31/12/2024</p> <p>Gain practical, actionable support to identify and address data issues, while becoming a responsible data scientist with The Alan Turing Institute's 'How...</p> <p>More Information →</p>	<p>BridgeAI: Assessing and Mitigating Bias and Discrimination in AI The Alan Turing Institute</p> <p>Opens: 01/05/2023 Closes: 31/12/2024</p> <p>Register for the BridgeAI self-paced e-learning course on assessing and mitigating bias in AI with The Alan Turing Institute. Learn about multiclass...</p> <p>More Information →</p>

https://iuk.ktn-uk.org/opportunities/?_sft_areas=bridgeai



BridgeAI - Feasibility studies for Artificial Intelligence solutions: Series 2

Opens 27th March 2024 - Closes 8th May 2024

UK registered businesses can apply for a share of up to £5m to use Artificial Intelligence (AI) to address business challenges and opportunities.

Sectors:

- **Agriculture and food processing**
- Construction
- Creative industries (*excluding marketing and advertising*)
- Transport, including logistics and warehousing

- **Project size: £25k to £50k**
- **Project length: 4 to 6 Months**
- Carry out its project work in the UK
- Intend to exploit the results from or in the UK
- Start by 1 October 2024/ End by 31 March 2025
- **Lead: Micro, SME**
- **Partners: Micro, SME, Academic**

Other Funding opportunities

Innovate UK SMART Grants: January 24 (opens 18 Jan 2024 - closes 24 Apr 2024)

Smart is Innovate UK's responsive grant funding programme. It supports SMEs and their partners to develop disruptive innovations with significant potential for rapid, economic return to the UK.

Innovation Loans Future Economy: Round 14 (opens 7 Mar 2024 - closes 1 May 2024)

Loans to micro, small and medium - sized enterprises (SMEs), to support innovative projects with strong commercial potential to significantly improve the UK economy.

Knowledge transfer partnerships (KTP)

Partnership between a business and academic partner, with knowledge transfer via a recent graduate.



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Microbiome One health Conference 2024



UNIVERSITY OF
LIVERPOOL

10th – 11th September 2024

The conference, will bring together **academics, industry scientists, entrepreneurs and funders** interested in microbiome research and innovation from a wide range of sectors including **human, animal, plant and environment.**



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AgriFood Funding, Events & News



AgriFood Funding, Events & News



Horticulture funding opportunities for UK growers

Horticultural growers, by their very nature are an innovative bunch. This is often made necessary by challenges like renting land, unpredictable weather, changes in regulation for crop protection products, managing dwindling labour forces and competition from imports. We take a look at the challenges horticulture faces and funding opportunities for growers with innovative ideas.

[READ MORE](#)

Latest News



Improving food security in Africa via innovation in soil health and crop nutrition

Experts at our recent webinar gave an overview of innovations that could be used to boost soil health and crop nutrition in Africa, and how these could be incorporated into farming systems more effectively. They discussed biological solutions, investment and capacity building for farmers. Read our round up here.



Key insight into Earth Observation Technologies in Africa

We recently explored how the adoption of Earth Observation (EO) technologies can help to improve African agriculture economically and environmentally during a webinar. Speakers raised three key points to ensure EO technologies deliver impact for users and leads to positive change.

A Journey through wool Innovation and circularity

We have brought together a group of innovators from across the wool supply chain to develop a Circular Action Plan for UK wool. Find out about innovative uses for wool.

Q&A - Farming Innovation Programme - Small R&D Partnership Projects R3

If you have a new farming product or service that could improve farming methods and help the environment and you want to find out about funding to develop it, watch our Q&A on replay.

Driving innovation in industrial biotechnology and engineering biology

We explore the role Industrial Biotechnology and Engineering Biology can play in moving towards producing chemicals and materials from alternative, sustainable feedstocks.

Boosting productivity in AgriFood using AI – Take our short survey

Innovate UK is seeking new ideas to improve productivity using Artificial Intelligence in a range of sectors including AgriFood, as part of the BridgeAI project.

[VIEW MORE NEWS](#)

Latest Funding & Opportunities

Farming Innovation Programme - Small R&D Partnership Projects - Round 3

UK registered businesses can apply for a share of up to £9.8 million to develop a new farming product or service that could improve farming methods and help the environment.

Farming Innovation Programme - Feasibility Study - Round 3

UK businesses can apply for a share of up to £4.5m to explore the potential of a new farming product or service that could improve farming methods and help the environment.

Showcase your innovation to ministers, businesses, government officials, and influencers

The new Department for Science, Innovation and Technology (DSIT) is marking its six-month anniversary with an invite to businesses and organisations to exhibit within its new headquarters.

Got an innovative way to increase shelf life for perishables goods?

The Fresh Produce Exporters Association of Kenya is looking for innovative ways to transport fresh produce and flowers from Kenya to Europe. Get up to £25k funding to work with them.

Innovate UK Smart grants: June 2023

UK registered organisations can apply for a share of up to £25 million for game changing and commercially viable R&D innovations that can significantly impact the UK economy.

Industry Fellowships for academic and industrial researchers

The scheme enables talented scientists and engineers from industry and academia to move between the sectors thanks to funded secondments. Apply before 28 September.

Sustainable aquaculture partnerships for innovation

UK research organisations can apply for funding to bring academia and industry together to develop solutions to challenges impacting the sustainable growth of UK aquaculture.

Funding for research partnerships between businesses and academic institutions

Apply for funding to support established or high-potential research partnerships between business and academia. Your project can be up to five years.

Sign up for IUK KTN AgriFood newsletters and funding alerts:

<https://r1.dotdigital-pages.com/p/2VFU-7B5/agrifood-mailing-list>



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Find out more

<https://ktn-uk.org/>
<https://ktn-uk.org/agrifood/>

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Why not get the Innovate UK Business Connect
[AgriFood Newsletter](#) each month?

<https://iuk.ktn-uk.org/>



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