

NoCass

NORWICH AND CAMBRIDGE
SCIENCE SYMPOSIUM 2024
for plant and microbial sciences

5th – 6th September 2024

John Innes Centre Conference Centre, Norwich, UK

10:30 - 11:30 *Registration*

11:30 - 11:45 *Conference Opening*

SESSION I **AUDITORIUM** **Chair** **AILEEN MAGILIN**

11:45 - 12:00 *Starch Trek - Exploiting natural variation in *Aegilops tauschii* to discover genetic factors influencing cereal endosperm starch.* **Rose McNelly**

12:00 - 12:15 *Unravelling the Molecular Basis of Plant Carbon Allocation to Arbuscular Mycorrhizal Fungi.* **Isobel Magrath**

12:15 - 12:30 *Cell Division as a Mechanical Regulator of Arabidopsis Growth.* **Emily Oren**

FLASH TALKS

*Host adjustment of the generalist herbivore *Myzus persicae* may be driven by transcriptional regulation of genes encoding candidate effectors.* **George Seddon-Roberts**

*Genetic basis of parallel bullseye pattern reduction in flowers of the *Trionum* Complex.* **May Yeo**

Comparing non-destructive technologies for predicting ripening in mango fruit. **Ciara O'Brien**

12:30 - 14:00 *Lunch and Odd Number Poster Session*

SESSION IIa **AUDITORIUM** **Chair** **LEE CACKETT**

14:00 - 14:15 *Transcriptional landscape of pre-symbiotic signalling in rice.* **Gabriel Ferreras Garrucho**

14:15 - 14:30 *Investigating effectors regulated by the pathogenicity MAP kinase Pmk1 during invasive growth of the rice blast fungus *Magnaporthe oryzae*.* **Mark Jave Bautista**

14:30 - 14:45 *An aphid effector suppresses plant immunity by redirecting EDS1 to processing bodies.* **Qun Liu**

SESSION IIb **G36/G37** **Chair** **CAROLINA OLAVE-ACHURY**

14:00 - 14:15 *Structural and biochemical basis of activation of an NLR immune receptor network.* **Mauricio Contreras**

14:15 - 14:30 *Understanding the evolution of LWY effectors in Phytophthora pathogens* **Yufei Li**

14:30 - 14:45 *Exploring the Functional Diversity of NLR Immune Receptors in Divergent Land Plant Lineages.* **Khong-Sam Chia**

14:45 - 15:10 *Coffee break*

KEYNOTE **AUDITORIUM** **Chair** **AMIRALI TOGHANI**

15:10 - 16:10 *Phage Therapy In Agriculture From Discovery To Application* **Dr Mojgan Rabiey**
University of Warwick

16:10 - 16:30 *Break*

16:30 - 17:30 *Careers Panel*

Dr Mojgan Rabiey	<i>Univeristy of Warwick</i>
Dr Sarion Bowers	<i>Sanger Institute</i>
Dr Sophie Vaud	<i>Colorifix</i>
Mr Nick Bird	<i>KWS</i>
Dr Christopher Surridge	<i>Nature</i>
Dr Emma Mitchell	<i>NEB</i>

17:30 - 22:00 *Reception and Pizza*

End of First Day

8:15 - 8:55

Breakfast

8:55 - 9:00

Opening Remarks

SESSION III

AUDITORIUM

Chair

9:00 - 9:15

AIMmapper: Discovery of novel ATG8 targets in plant autophagy-pathogen interactions via a custom AlphaFold2-multimer pipeline.

Andres Posbeyikian

9:15 - 9:30

Endogenous pararetroviruses (EPRV)-Derived 22nt sRNAs and Their Role in DICER2-Mediated Viral Immunity in Tomato Hybrids.

Pei Qin (Sabrina) Ng

9:30 - 9:45

Computational modelling coupling the cytoskeleton, nucleus and growth in Arabidopsis root hair cells.

Tamsin Spelman

9:45 - 10:00

FLASH TALKS

De Novo Genome Sequencing of Small Herbivorous Invertebrates through Trio Binning.

Matilda Gikonyo

A novel link between peroxide and metal ion resistance in Group B Streptococcus.

Sofie Fallingén

How do micro RNAs accelerate the floral development in rapid-cycling Brassica rapa cultivars?

Aileen Magilin

Data-driven mathematical modelling explains altered timing of EARLY FLOWERING 3 in wheat circadian oscillators.

Abhishek Upadhyay

10:00 - 10:30

Coffee break

SESSION IVa

AUDITORIUM

Chair

MANISHA SHARMA

10:30 - 10:45

From Arabidopsis to Brassica napus: Determining the regulatory control of floral transition.

Gurpinder Singh Sidhu

10:45 - 11:00

Shaping shoot organogenesis through ABA-controlled stem cell dynamics.

Sebastian Moreno

11:00 - 11:15

Characterisation of the cuticle striation patterns in Hibiscus trionum petals.

Humberto Herrera-Ubaldo

SESSION IVb **G36/G37** **Chair** **CHONGJING XIA**

10:30 - 10:45 *Genomic surveillance of epiphytic Pseudomonas syringae identifies highly virulent strains from phylogroup 2d widespread in UK cherry orchards.* **Ziyue Zeng**

10:45 - 11:00 *Using single-cell technologies to sort and sequence bacteria and yeast from a microbial community.* **Yash Bencil**

11:00 - 11:15 *Integrating natural language processing with genome analysis enables accurate bacterial phenotype prediction.* **Daniel Gomez Perez**

11:15 - 11:45 **Break**

SESSION V **AUDITORIUM** **Chair** **TAMSIN SPELMAN**

11:45 - 12:00 *HIPP-hopping between cells: A mobile fungal effector targets a plasmodesmal HIPP protein from Arabidopsis.* **Emma Turley**

12:00 - 12:15 *Fertiliser effect on the arbuscular mycorrhizal symbiosis at the sub-cellular scale.* **Martina Orvosova**

12:15 - 12:30
FLASH TALKS *Evidence for transgenerational control of seed physiology during development by ABA and nitrate, revealed by combining physiology with single cell technologies.* **William Bezodis**

Investigating the cell biology of plant infection by the rice blast fungus Magnaporthe oryzae. **Berlaine Quime**

Role of Strigolactones perception in Wheat Nitrogen Responsiveness. **Anusree Saha**

Exploring and exploiting a unique nutrient uptake system of a plant pathogen to protect crops. **Marta Wojnowska**

12:30 - 14:00 **Lunch and Even Number Poster Session**

SESSION VI **AUDITORIUM** **Chair** **THOMAS NAVARRO**

14:00 - 14:15 *A novel root hair mutant, *srh1*, affects root hair elongation and reactive oxygen species levels in wheat.* **Ian Tsang**

14:15 - 14:30 *Partial redundancy buffers deleterious effects of mutating DNA Methyltransferase 1-1 (*MET1-1*) in polyploid wheat.* **Delfi Dorussen**

14:30 - 14:45 *Vitellogenin-Cas9 protein chimeras for targeted germline gene editing of aphids.* **Reuben James**

14:45 - 15:00 *Time-resolved spatial transcriptomes and gene regulatory atlas of Medicago nodule organogenesis.* **Min-Yao Jhu**

15:00 - 15:30 *Coffee break*

15:30 - 16:30 *Science communication workshop.* **James Piercy**

16:30 - 17:00 *Closing Remarks and Poster Awards*

18:30 *Bus Leaving from Congregation Hall*

The End