



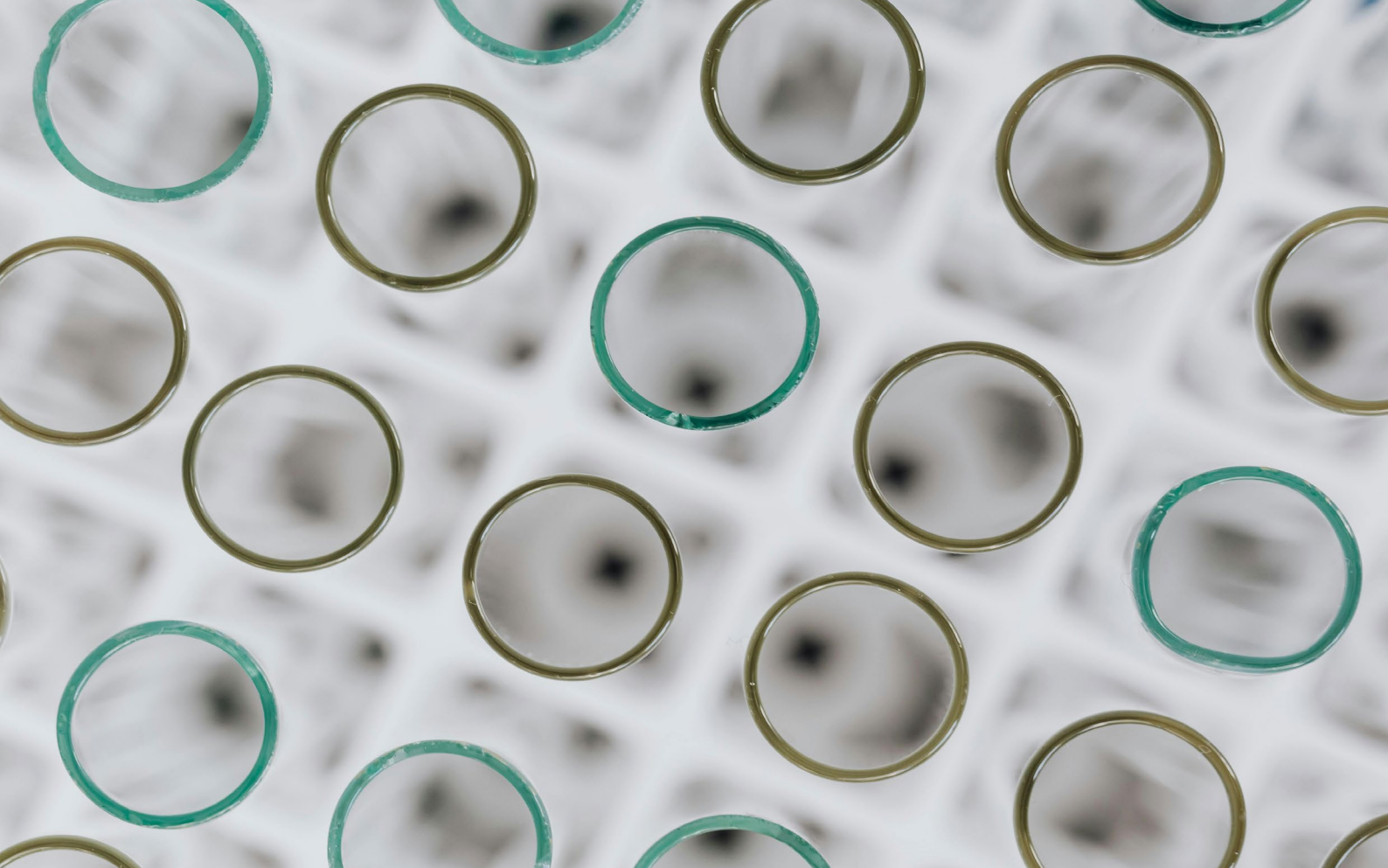
Microbial Interactions in Biofilms and Microbiomes: From Natural to Industrial Settings

Funded by Wellcome

20 MAY 2026 - NOVOTEL CARDIFF CENTRE, UK

**Applied
Microbiology
International**





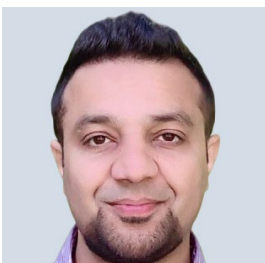
Conference Overview

MICROBIAL INTERACTIONS IN BIOFILMS AND MICROBIOMES: FROM NATURAL TO INDUSTRIAL SETTINGS

This one-day international conference brings together leading researchers in microbial ecology, biofilms, molecular microbiology, evolution and biotechnology. The meeting spans environmental, industrial and clinical biofilms and microbiomes; exploring how microorganisms organise, interact and adapt within complex communities.

The central focus is to understand the mechanisms of interspecies cooperation, competition and communication, and how these interactions shape community architecture, metabolic exchange, antimicrobial tolerance and ecological stability. Through invited plenaries, ECR presentations and poster sessions, the conference aims to promote a unified understanding of microbial interaction from fundamental processes to practical applications in healthcare, biotechnology and environmental sustainability.

Thank you to Wellcome for their funding and support of this event.



Dr Faizan Sadiq, Lecturer in Microbial Biofilms, Cardiff University, UK

Conference organiser

Invited Plenary Talks



Professor Christian Kost – Osnabrück University, Germany

Power from unity: On the formation of intercellular metabolic networks within microbial communities



Professor Jeremy Webb – National Biofilms Innovation Centre, University of Southampton, UK

Biofilm-Bacteriophage Interactions - Breaking and Building



Professor Karoline Faust – KU Leuven, Belgium

Alternative stable states in a synthetic human gut community



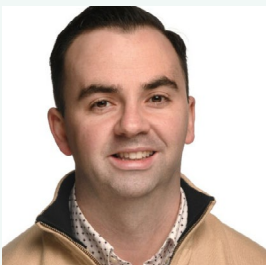
Professor Kevin Foster – University of Oxford, UK

Competition in bacteria and the human microbiome



Professor Mette Burmølle – University of Copenhagen, Denmark

Interspecific interactions in biofilms impact bacterial protection and functionality



Professor Ronan McCarthy – University of Southampton, UK

*Unravelling the signalling cascades that govern ecological versatility in *Acinetobacter baumannii**

Poster Session

An interactive poster exhibition showcasing novel findings and technical advances from early-career researchers and PhD students working across academic, industrial, environmental, and clinical microbiomes.

Early Career Researcher (ECR) Oral Presentations

Selected flash presentations from submitted abstracts, highlighting emerging research across:

- Microbial ecological interactions
- Biofilm organisation and adaptation
- Host–microbe and microbe–microbe dynamics
- AMR emergence and community resilience
- Synthetic communities, metabolic cross-feeding, modelling and engineering

NBIC and AMI Engagement

Applied Microbiology International (AMI) - Sponsored Session

A short-feature presentation introducing AMI, its Journals and membership benefits.

AMI Exhibition Table

Meet the AMI team, explore membership, publishing support, and professional development opportunities throughout the event.

National Biofilms Innovation Centre (NBIC) Exhibition Table

Meet the NBIC team and discover membership options, funding support, and professional development opportunities available.

Awards and recognitions

Outstanding scientific contributions will be formally recognised through a series of AMI-supported awards, presented during the closing session of the conference:

Letters in Applied Microbiology (LAM) Early Career Scientist Prize

The Exceptional ECR Prize will be awarded among the ECR oral presentations.

The prize package includes:

- £100 cash prize
- Free 1-year AMI membership
- Free registration to the LAM–ECS Symposium (18 June 2026)
- Travel bursary of up to £200 to support attendance at the LAM-ECS Symposium 2026

Journal of Applied Microbiology (JAM) Poster Prizes

Two outstanding poster presentations will each receive:

- £100 cash prize
- Free 1-year AMI membership

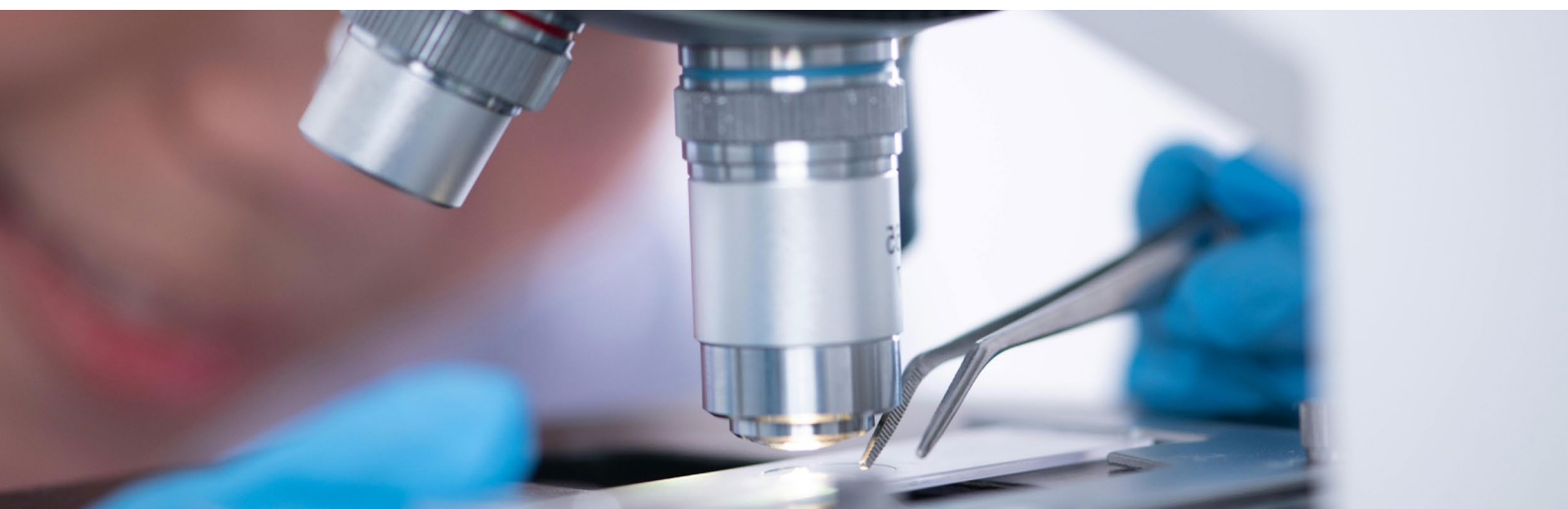
Awards will be presented during the closing session.

PCR Biosystems Poster Prize

PCR Biosystems will provide a £100 prize for one flash talk presentation.

AMI Poster Prizes

AMI will provide first and second prizes for two poster presenters.



Draft Programme Outline

8:30 - 09:15 Registration

Session 1: Metabolic Cooperation and Alternative States in Microbial Communities

Chair: Dr Faizan Sadiq and Professor David Thomas

09:15 - 09:20 Welcome from the conference organiser
Dr Faizan Sadiq and Professor David Thomas, Cardiff University, UK

09:20 - 09:30 Welcome from Applied Microbiology International (AMI)
Kathryn Spiller, Director of Publishing, Applied Microbiology International

09:30 - 10:00 Plenary Talk
Power from unity: On the formation of intercellular metabolic networks within microbial communities
Professor Christian Kost - Professor of Ecology, Osnabrück University, Germany
(25-minute talk + 5-minute Q&A)

10:00 - 10:30 Plenary Talk
Alternative stable states in a synthetic human gut community
Professor Karoline Faust - Associate Professor in Microbiological Bioinformatics, KU Leuven, Belgium
(25-minute talk + 5-minute Q&A)

10:30 - 11:00 Selected Early Career Researcher Presentations (2)
• 10:30 - 10:45 Nathalie Laforge - Institut Pasteur, France.
Construction and Directed Evolution of Bacillus subtilis Synthetic Consortia
• 10:45 - 11:00 Anna Schwarzenbach - University of Oxford, UK
Evolving Pathogen-Killing Bacteria as Live Biotherapeutics

11:00 - 11:15 Flash Poster Presentations (5)
Chair: Dr Natalia Romo Catalan, National Biofilms Innovation Centre
Each presentation: 2-minute talk + 1-minute Q&A

11:15 - 11:35 Refreshments, exhibition and poster viewing

Session 2: Interaction Dynamics & Microbial Community Function

Chair: Dr Katja Hill

11:35 - 12:05 Plenary Talk
Competition in bacteria and the human microbiome
Professor Kevin Foster, Chair of Microbiology, University of Oxford, UK
(25-minute talk + 5-minute Q&A)

12:05 - 12:35 Plenary Talk
Interspecific interactions in biofilms impact bacterial protection and functionality
Professor Mette Burmølle, Professor of Microbiology, University of Copenhagen, Denmark
(25-minute talk + 5-minute Q&A)

12:35 - 12:55 Research Talk
Unravelling co-occurrence patterns and ecological interactions in chronic wound biofilms
Dr Faizan Sadiq, Lecturer in Microbial Biofilms, Cardiff University, UK

- 12:55 - 13:25** Selected Early Career Researcher Presentations (2)
- 12:55-13:10 Seána Duggan - University of Exeter, UK
A Copper Economy Governs Mutualism in Cross-Kingdom Biofilms
 - 13:10-13:25 Eléonore Pourcelot - Institut Pasteur, France
A Model Community of Fluorescently-Tagged Yeast for Investigating Microbial Interactions in Wine Fermentation
- 13:25 - 13:40** Flash Poster Presentations (5)
Chair: Paul Sainsbury, Applied Microbiology International
Each presentation: 2-minute talk + 1-minute Q&A
- 13:40 - 14:40** Lunch, exhibition and poster viewing
- Session 3: Ecological Stress, Signalling Cascades and Microbial Adaptability**
Chair: Professor Brad Spiller
- 14:40 - 15:10** Plenary Talk
Biofilm – Bacteriophage Interactions – Breaking and Building
Professor Jeremy Webb, Professor of Microbiology and Co-Director at the National Biofilms Innovation Centre, University of Southampton, UK
(25-minute talk + 5-minute Q&A)
- 15:10 - 15:30** Research Talk
Plasmid adaptation drives mcr-1 persistence in Escherichia coli in the absence of colistin selection
Dr Katja Hill, Senior Lecturer in Oral Microbiology Cardiff University, UK
- 15:30 - 15:50** Research Talk
Silence is Golden: Manipulating Microbial Interactions to Combat Biofilm Defences
Dr Nihal Bandara, Associate Professor in Molecular Microbiology, University of Bristol, UK
- 15:50 - 16:10** Research Talk
Oral Candida biofilms and human infection
Professor David Williams, Professor of Oral Microbiology, Cardiff University, UK
- 16:10 - 16:30** Research Talk
Epoxytiglyane induced disruption of established biofilm matrices facilitates immune cell penetration into gram-negative biofilms
Dr Lydia Powell, Lecturer in the Microbiology and Infectious Disease, Swansea University, UK
- 16:30 - 17:00** Plenary Talk
Unravelling the signalling cascades that govern ecological versatility in Acinetobacter baumannii
Professor Ronan McCarthy, Professor in Microbial Biofilms, University of Southampton, UK
(25-minute talk + 5-minute Q&A)
- 17:00 - 17:15** Refreshments, networking and poster viewing
- 17:15 - 17:30** Closing remarks and awards
Professor David Thomas and Dr Faizan Sadiq



FOR FURTHER INFORMATION, PLEASE CONTACT:
BIOFILMS-MICROBIOMES@CARDIFF.AC.UK

Thank you to wellcome for funding this event