



8-9 July 2025

Early Career Researcher Conference
Engineering Biology for
Environmental Sustainability

Conference Programme

Venue

The University of Edinburgh

[Pentland Suite, John McIntyre Conference Centre, University of Edinburgh, EH16 5AY](#)

Day 1 | Tuesday 8 July 2025

9:00 – 10:00	Welcome and Registration
Opening session	
10:00	Opening Remarks Prof Frederic Coulon, Director, Environmental Biotechnology Innovation Centre.
10:20	Keynote Liz Fletcher , Director of Business Engagement and Operations, IbioIC, UK. Mapping the journey from lab bench to marketplace for (environmental) biotechnologies.
11:05	Poster session & Tea/Coffee Break
Session 1 - Engineering tools & traceability	
11:25	Muhammad Yasir Akbar, Newcastle University. Deciphering <i>Picosynechococcus pcc 7002</i> genome to identify neutral sites for synthetic barcode integration.
11:45	Dr Marcos Valenzuela Ortega, The University of Edinburgh. Engineering microbes to transform PET plastic into nylon precursors.
12:05	Dr Rachel Samson, Cranfield University. Advancing Water Safety: Insights into Coliphage Viromics Across Drinking Water Treatment Using Nanopore Sequencing.
12:25	Dr Amanda Hopes, University of East Anglia. Generating mutant strains for the EBIC: developing standardised cloning and transformation systems for a wide range of species and applications.
12:45	Q&A / Session Wrap-up.
12:50 -13:50	Lunch Break
Session 2 - Bioremediation and biodegradation	
13:50	Dr Prabhakar Srivastava, Bangor University. Harnessing catalytic potential of marine bacteria for bioremediation of recalcitrant organic pollutants.
14:10	Dr Anil Kumar, University of Nottingham. Towards sustainable resource recovery through integrated bioleaching and electro dialysis.
14:30	Dr Yasmin Meeda, Cranfield University.

	Engineering biology for metaldehyde biodegradation in drinking water using <i>Sphingobium sp</i> and <i>Acinetobacter sp</i> .
14:50	Hairong Ma, Bangor University. Discovery and engineering of microbial carboxylesterase for potential applications in polyester recycling.
14:10	Q&A / Session Wrap-up.
15:15 - 16:00	Poster Session & Tea/Coffee Break
Session 3 – Engineering biology for metal-contaminated wastes	
16:00	Dr Maria Magliulo, Natural History Museum. Exploring microbial diversity in mine waste: a roadmap for bioengineering technologies.
16:20	Dr Natalie Byrd, The University of Manchester. Hydrogenase Mediated Biosynthesis of Catalytically Active Cu Nanoparticles.
16:40	Christine Paul Vazhathara, University of Nottingham. Bioelectrochemical Recovery of Platinum Group Metals from Spent Car.
17:05	Q&A / Session Wrap-up.
17:05	Keynote Dayal Saran, Vice-President Research, Allonia, USA. From Lab to Field: Overcoming Deployment Barriers and Leading Safe, Scalable Biological Solutions for a Cleaner Future
17:50	Networking Drinks Reception
19:00	Conference Dinner

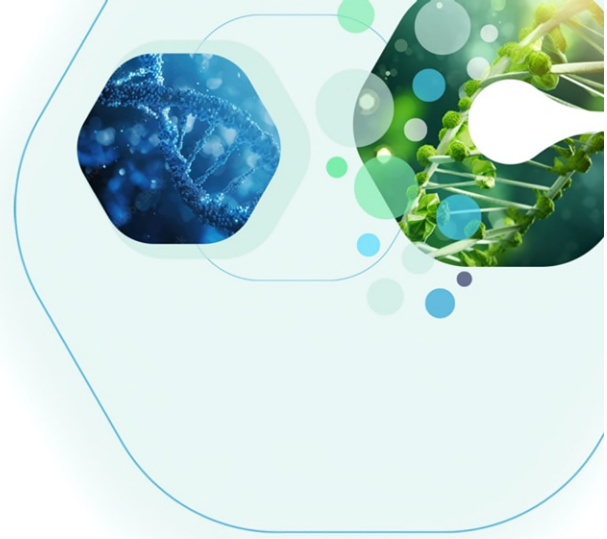
Day 2 | Wednesday 9 July 2025

Day 2 - Welcome and opening	
09:00	<p>Keynote</p> <p>Beatrix Ellis, CEO, GitLife, UK. Securing Investment and Building Resilience from Pre-Seed to Series A in UK Bio Startups</p>
9:45 -10:00	Poster Session & Tea/Coffee break
Session 4 - Biocatalysis and bioengineering	
10:00	<p>Gwion Williams, Bangor University. Mining the plastisphere: diverse cold-active enzymes from seawater metagenomes.</p>
10:20	<p>Dr Tejasvi Shivakumar, Imperial College London Cell-free synthetic biology for sustainable biomanufacturing.</p>
10:40	<p>Kawinharsun Dhodduraj, Cranfield University Sustainable production of 2,3-butanediol using renewable feedstock.</p>
11:00	Q&A / Session Wrap-up.
11:05 -11:30	Poster Session & Tea/Coffee break
Session 5 - Water and waste management & resource recovery	
11:30	<p>Dr Dominic Quinn, University of Glasgow. Validated molecular quantification of intact pathogens following propidium monoazide treatment in drinking water.</p>
11:50	<p>Dr Kyle Parker, The University of Edinburgh. Suitability & Feasibility of Synthetic Biology in the UK Water Sector.</p>
12:10	<p>Dr Fabien Cholet, University of Glasgow Effect of temperature on microbial assembly and activity in Granular Activated Carbon drinking water biofilters.</p>
12:30	<p>Dr Danting Chen, University College London Material/Substance Flow Analysis of biomass ash in the United Kingdom.</p>
12:50	Q&A / Session Wrap-up.

12:55	<p>Science Creates – Engineering Biology Accelerator</p> <p>Dr Lucy McGowan, Innovation Manager, Science Creates.</p>
13:00	<p>Closing Remarks & Presentation Awards sponsored by the Environmental Biotechnology Network (EBNet)</p> <p>Prof Frederic Coulon, Director, Environmental Biotechnology Innovation Centre Em. Prof Sonia Heaven, The University of Southampton, EBNet.</p>
13:25 -14:25	Lunch
Skills Development for Early Career Researchers	
14:25 - 16:25	<p>Workshop</p> <p>The why, how, and impact of research commercialisation</p> <p>Lissa Herron, Deputy Director & Head of Enterprise, Converge.</p>
16:25 – Main Conference Close – thank you all for joining us!	
16:30 – 17:30	<p>EBIC ECR Challenge</p> <p>Proposed by EBIC Operational Board (Prof. Bruce Jefferson & Em Prof. Sonia Heaven)</p> <p>Group challenge session for EBIC funded ECR only.</p> <p><i>From Laboratory to Applied Environmental Solutions: Development of Protocols and a Testing Facility for Environmental Biotechnologies.</i></p>

Poster Presentations

ID	Name	Poster Title
#1	Dr Hannah Adams University of Essex	Engineering Hydrocarbon Biodegradation Pathways.
#2	Amulyasai Bakshi University of Nottingham	Enzymatic degradation of rubber with latex clearing proteins
#3	Dr Christopher Egan-Morriss University of Manchester	Biorecovery of Platinum group metals as nanocatalysts
#4	Dr Andrea Gallio University of Bristol	Sensing heme: a systems approach to understanding heme-regulated cellular function
#5	Miss Rachael Giles Cranfield University	Identifying opportunities for biological coagulant recovery in drinking water and wastewater treatment processes
#6	Magdalena Howe Brunel University of London	Exploring plastic degradation amongst Acinetobacter species
#7	Manuel Lera Ramirez University College London	OpenCloning: a credible Open Source alternative to SnapGene and Benchling that supports automation and integration with research software
#8	Harry Maguire University of East Anglia	Development of high-throughput systems for environmental bacterial mutant construction
#9	Cathal O'Reilly University of Manchester	Utilising ML and AI tools to understand difficult-to-engineer enzymes
#10	Dr Giuliano Pechar University of York	Engineering plant-mediated metal solubilisation in the rhizosphere.
#11	Mrs Naja'atu Shehu Hadi Cranfield University	Bioengineering of Plastic-Degrading Bacterial Biofilms for Enhanced Microplastic Removal in Wastewater Treatment Systems.
#12	Dr Tatiana Spatola Rossi Heriot-Watt University	Metabolic engineering in Pseudomonas putida for the production of rhamnolipids
#13	Freya Thornley Newcastle University	Vegetation strips and Rivers in England; pesticide selection using a risk-based prioritisation method and the potential of soil microbiome engineering in pesticide remediation.
#14	Miriam Watafua Heriot-Watt University	Soil Remediation: Biochar as a Carrier for Acinetobacter calcoaceticus in Hydrocarbon Degradation
#15	Dr Joe Weaver Newcastle University	Agent-Based Models as predictive, strategic, and exploratory tools for engineering biology
#16	Dr Jinxin Xie University of Manchester	Biorecovery of gold nanoparticles from industrial wastewaters by Shewanella oneidensis



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**With special thanks to our prize
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