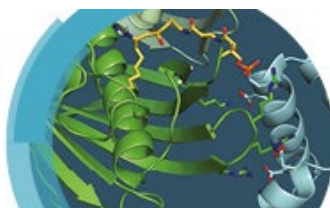


Directing Biosynthesis VI




27-29 June 2022
Edinburgh, UK
and Online

Monday 27 June 2022 (all timings are BST)





11:00	Registration and refreshments (Lunch available from 12:00)	
12:50	Welcome and introduction Greg Challis <i>University of Warwick</i>	
Session 1: Fungal natural products Session chair: Kira Weissman		
13:00	Genome Mining for Unknown Unknowns in Fungi Yi Tang <i>UC Los Angeles, USA</i>	K01
13:40	Structural studies of transient and higher-order interactions in polyketide synthases Timm Maier <i>University of Basel, Switzerland</i>	K02
14:20	Identification and Characterization of Bifunctional Fungal Terpene Synthases Jaclyn Winter <i>University of Utah, USA</i>	C01
14:40	Flash poster presentations	
15:10	Poster session and refreshments	
Session 2: Peptide Biosynthesis Session chair: Hajo Kries		
16:20	Structures and functions of nonribosomal and non-nonribosomal peptide synthetases Martin Schmeing <i>McGill University, Canada</i>	K03
17:00	Structure and Function of a Peptide Crosslinking P450 from Biarylptide Biosynthesis Max Cryle <i>Monash University, Australia</i>	C02
17:20	Iterative Peptide Backbone N-Methylation in Borosin RiPP Biosynthesis Michael Freeman <i>University of Minnesota, USA</i>	C03
17:40	Investigating the mechanisms of lanthipeptide biosynthesis using structural mass spectrometry Chris Thibodeaux <i>McGill University, Canada</i>	C04
18:00	Poster session and wine reception	
19:00	Close of sessions	

Tuesday 28 June (all timings are BST)

Session 3: Biosynthetic engineering I		
Session chair: Sacha Pidot		
09.00	Repurposed Biocatalysts for the Assembly of Antibiotics and Toxins Christian Hertweck <i>Leibniz Institute for Natural Product Research and Infection Biology (HKI), Germany</i>	K04
09.40	Engineering of Polyketide Synthase Leads to 'low-fat' Stambomycins Su Li** <i>Max-Planck-Institute for Terrestrial Microbiology, Germany</i>	C05
10.00	CRISPR-Cas9 in vivo editing enables rapid engineering of a complex antibiotic assembly line Wei Li Thong <i>University of Manchester, UK</i>	C06
10.20	Towards new more efficient and clinically relevant lincosamide antibiotics Zdenek Kamenik <i>Institute of Microbiology Czech Acad Sci, Czech Republic</i>	C07
10.40	Refreshments Kindly sponsored by: <div style="text-align: center;">  </div>	
Session 4: Unusual C-C bond forming enzymes		
Session chair: Sarah Barry		
11.10	Title TBC Squire Booker <i>Pennsylvania State University, USA</i>	K05
11.50	Biosynthesis of the unusual carbon skeleton of nocuolin A Teresa Patricia Martins <i>CIIMAR, Portugal</i>	C08
12.10	Enzymatic assembly of the salinosporamide gamma-lactam-beta-lactone anticancer warhead Katherine Bauman <i>University of San Diego, USA</i>	C09
12.30	Flash poster presentations	
13:00	Poster session and lunch Session to include any online-only posters in addition to in-person	
Session 5: Polyketide biosynthesis in Gram-negative bacteria		
Session chair: Jeroen Dickschadt		
15.00	Combining organic synthesis and synthetic biology to explore and exploit polyketide biosynthesis Chris Willis <i>University of Bristol, UK</i>	K06
15:40	Unveiling the iterative programming of the zeamine II enzymatic assembly line Sophie Dekimpe <i>KU Leuven, Belgium</i>	C10
16:00	Modular α-hydroxylation in trans-AT PKSs Franziska Hemmerling <i>ETH Zürich, Switzerland</i>	C11
16.20	Refreshments	

Session 6: Plant natural products		
Session chair: Stefan Schulz		
16:50	TBC David Craik <i>University of Queensland, Australia</i>	K07
17:30	Deciphering quassinoid biosynthesis in the invasive tree of heaven (Ailanthus altissima) Jakob Franke <i>Leibniz University Hannover, Germany</i>	C13
17:50	Omics approaches to harness daphniphyllum alkaloid diversity Benjamin Lichman <i>University of York, UK</i>	C14
18:10	Close of sessions	
18:30	Coaches leave for Conference Dinner	
19:00	Conference dinner – Royal Botanic Garden Edinburgh	

Wednesday 29 June (all timings are BST)

Session 7: Discovery and biosynthesis of nitrogenous metabolites		
Session chair: Hai Deng		
9:00	NAD as a Building Block in Natural Product Biosynthesis Ikuro Abe <i>University of Tokyo, Japan</i>	K08
9:40	TBC Ren Xiang Tan** <i>Nanjing University, China</i>	K09
10:20	Exploring new biocatalysts for the sphingolipid synthesis in Actinobacteria Gustavo Perez-Ortiz <i>The University of Edinburgh, UK</i>	C15
10:40	Pseudomonas pan-genomic analysis informs the discovery of plant pathogen inhibitors Andrew Truman <i>John Innes Centre, UK</i>	C16
11:00	Refreshments	
Session 8: Biosynthetic engineering II		
Session chair: Dom Campopiano		
11:30	Enzymatic Routes to the Next Generation Therapeutics Anna Fryszkowska <i>Merck Sharp & Dohme, USA</i>	K10
12:10	Simulation-guided redesign of terpene synthase product outcome Marc Van der Kamp <i>University of Bristol, UK</i>	C17
12:30	Enzymatic methylation in engineered biosynthetic pathways as a tool for product diversification Kristina Haslinger <i>Rijksuniversiteit Groningen, Netherlands</i>	C18
12.50	Fatty acid synthases (FASs) enable access to new-to-nature compounds Martin Grninger <i>Goethe University Frankfurt, Germany</i>	C19
13.10	Lunch	
13:40	Round table discussions for early-career researchers Informal discussions over lunch focusing on career directions, different systems, challenges and skills, with advice from scientists in academia and industry	
Session 9: New frontiers		
Session chair: Greg Challis, University of Warwick		
14:40	Biosynthesis of unusual functionalities in natural products Wenjun Zhang <i>UC Berkeley, USA</i>	K11
15:20	Closing remarks and presentation of poster prizes Greg Challis <i>University of Warwick</i> <i>Kindly sponsored by:</i>	
	   	
15:30	Close	

** presenting online