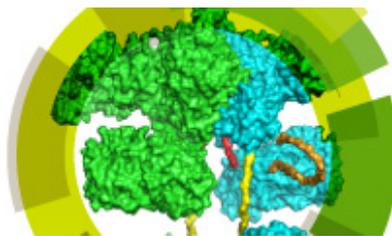


# Directing Biosynthesis V



22-24 March 2017  
Warwick, UK

## PROGRAMME

### Wednesday 22 March

08:45	Registration	
09:30	<b>Welcome and Introduction</b> Barrie Wilkinson – Conference Chair	
	<b>Session 1a: Enzymology and structural biology</b> Session Chair: TBC	
09:40	<b>Keynote</b> <b>Conformational changes that drive the nonribosomal peptide synthetase structural cycle</b> Andrew Gulick <i>Hauptnam-Woodward Institute, USA</i>	K01
10:20	<b>Offered Lecture</b> <b>Understanding Glycopeptide Antibiotic biosynthesis as a pathway to new antimicrobial agents</b> Max Cryle <i>Monash University, Australia</i>	O01
10:40	<b>Offered Lecture</b> <b>Visualizing the first steps of a megaenzyme making an antibiotic</b> <u>Janice Reimer</u> , Martin Alosie and T.Martin Schmeing <i>McGill University, Canada</i>	O02
11:00	Coffee Break	
11:30	<b>Keynote</b> <b>Multiple activities of polyketide synthase catalytic domains</b> Janet Smith <i>University of Michigan, USA</i>	K02
12:10	<b>Offered Lecture</b> <b>Novel chemical tools for the investigation of natural product assembly</b> Manuela Tosin <i>University of Warwick, UK</i>	O03
12:30	<b>Offered Lecture</b> <b>Characterisation of key enzymes from the biosynthetic pathways of unusual polyketides for chemoenzymatic synthesis</b> <u>Frank Hahn</u> , Gesche Berkhan, Steffen Friedrich, Franziska Hemmerling and Frederick Lindner <i>Univeristy of Bayreuth, Germany</i>	O04
12:50	Lightning Poster Session One	
13:20	Lunch	

<p><b>Session 1b: Natural products discovery – response to AMR</b>  Session Chair: Brad Moore  Sponsored by NPR</p> 		
14:20	<p><b>Keynote</b>  <b>Exploiting microbial diversity to deliver novel antibiotics</b>  Olga Genilloud  <i>Fundacion MEDINA, Spain</i></p>	K03
15:00	<p><b>Offered Lecture</b>  <b>Discovery and characterisation of biosynthetic novelty in RIPP pathways</b>  <u>Andrew Truman</u>, Javier Santos-Aberturas, William J.K. Crone, Natalia M Vior and Tom H. Eyles  <i>John Innes Centre, UK</i></p>	O05
15:20	<p><b>Offered Lecture</b>  <b>Streptomyces antibiotics: new approaches and the discovery of lugdunomycin</b>  <u>Gilles van Wezel</u>, Changsheng Wu, Helga van der Heul and Young H. Choi  <i>Leiden University, The Netherlands</i></p>	O06
15:40	<p><b>Keynote</b>  <b>Targeting a cell wall biosynthesis hot spot</b>  Tanja Schneider  <i>University of Bonn, Germany</i></p>	K04
16:20	Afternoon Tea	
<p><b>Session 1c: Pathway engineering</b>  Session Chair: TBC</p>		
16:50	<p><b>Keynote</b>  <b>Expanding the metabolic power of the mined nucleoside pathways</b>  Zixin Deng  <i>Shanghai Jiaotong University, China</i></p>	K05
17:30	<p><b>Offered Lecture</b>  <b>A new source of natural product diversity by accelerated evolution of modular gene clusters</b>  Matt Gregory  <i>Isomerase Therapeutics Ltd, UK</i></p>	O07
17:50	<p><b>Offered Lecture</b>  <b>Watasemycin biosynthesis in <i>Streptomyces venezuelae</i>: nonribosomal peptide C-methylation by a class B radical-SAM methylase</b>  <u>Yuki Inahashi</u>, Shanshan Zhou, Maureen Bibb, Lijang Song, Mahmoud Al-Bassam, Mervync Bibb and Gregory Challis  <i>Kitasato University, Japan</i></p>	O08
18:10	<p><b>Keynote</b>  <b>New synthetic platforms in plants for chemical diversification</b>  Chase Kempinski, Zuodong Jiang and <u>Joe Chappell</u>  <i>University of Kentucky, USA</i></p>	K06

18:50	Poster Session and Wine Reception <i>Sponsored by NPRONET - Natural products discovery and bioengineering network, a BBSRC NIBB</i>
	
19:30	Close of Sessions

### Thursday 23 March

<b>Session 2a: Natural products discovery – response to AMR</b> Session Chair: TBC		
08:30	<b>Keynote</b> <b>New antibiotics from nature – reach for the sky!</b> Esther Schmitt <i>Novartis Institutes for BioMedical Research, Switzerland</i>	K07
09.10	<b>Offered Lecture</b> <b>Exploring novel peptide ligase orthologs – Discovery and biosynthetic studies of carbonylmethylene-containing pseudotripeptides ketomemcins</b> <u>Yashushi Ogasawara</u> , Junpei Kawata, Taiki Naoe, Michiko Fujimori and Tohtu Dairi <i>Hokkaido University, Japan</i>	O09
09:30	<b>Offered Lecture</b> <b>Mining genomes for antibiotics and signaling molecules</b> <u>Bo Li</u> , Andrew Chan, Ashley Krestch, Gina Morgan, Kevin Santa Maria and Anthony Shiver <i>University of North Carolina at Chapel Hill, USA</i>	O10
09:50	<b>Keynote</b> <b><i>Sponsored by Warwick Antimicrobial Interdisciplinary Centre</i></b> <b>New antimicrobial compounds from human microbiomes</b> Andreas Peschel <i>University of Tübingen, Germany</i>	K08
10.30	Morning Tea	
<b>Session 2b: Enzymology and structural biology</b> Session Chair: TBC		
11.00	<b>Keynote</b> <b>Understanding biochemical mechanism in natural product biosynthesis</b> Tomohisa Kuzuyama <i>Univeristy of Tokyo, Japan</i>	K09
11.40	<b>Offered</b> <b>Overcoming evolution to generate a designer biocatalyst</b> Dominic Campopiano, Menglu Wang, Lucile Moynié, Peter J. Harrison, Van Kelly, Andrew Piper and James H. Naismith <i>University of Edinburgh, UK</i>	O11
12:00	<b>Offered</b> <b>Investigation of direct oxidative carbon–nitrogen bond formation</b>	O12

	<b>by cytochrome P450 enzyme in teleocidin biosynthesis</b> <u>Hitomi Nakamura</u> , Takahiro Mori, Takayoshi Awakawa, Mirka Alblova and Ikuro Abe <i>University of Tokyo, Japan</i>	
12:20	Lightning Poster Session Two	
12.50	Lunch and Poster Session	
	<b>Session 2c: Enzymology and structural biology</b> Session Chair: TBC	
13:50	<b>Keynote</b> <b>Mechanisms of antimicrobial peptides binding to lipid II, the bacterial cell wall precursor</b> John Vederas <i>University of Alberta, Canada</i>	K10
14:30	<b>Offered Lecture</b> <b>Aminoacyl-tRNA-dependent enzymes involved in natural product biosynthesis</b> <u>Muriel Gondry</u> , Mireille Moutiez and Pascal Belin <i>Institut de Biologie Intégrative de la Cellule (I2BC), France</i>	O13
14.50	<b>Offered Lecture</b> <b>Mechanism of subunit interaction at ketosynthase-dehydratase junctions in trans-AT polyketide synthases</b> <u>Matthew Jenner</u> , Simone Kosol, Daniel Griffiths, Panward Prasongpholchai, Lucio Manzi, Andrew Barrow, John Moses, Neil Oldham, Jozef Lewandowski and Gregory Challis <i>University of Warwick, UK</i>	O14
15:10	<b>Offered Lecture</b> <b>Unusual terpene cyclization in plants</b> <u>Hajo Kries</u> , Franziska Kellner and Sarah E. O'Connor <i>Leibniz Institute for Natural Product Research and Infection Biology (HKI), Germany</i>	O15
15:30	<b>Offered Lecture</b> <b>Nitric oxide dependent nitration in natural product biosynthesis</b> Sarah Barry <i>King's College London, UK</i>	O16
15.50	Afternoon Tea	
	<b>Session 2d: Enzymology and structural biology</b> Session Chair: TBC	
16:20	<b>Keynote</b> <b>Evolutionary diversity and economy in <math>\beta</math>-Lactam antibiotic biosynthesis: A full house</b> Craig Townsend <i>John Hopkins University, USA</i>	K11
17:00	<b>Offered Lecture</b> <b>Discovery of a new multifunctional monooxygenase from the biosynthetic pathway of bacterial pyrrolizidine alkaloids</b> Hai Deng <i>University of Aberdeen, UK</i>	O17
17:20	<b>Offered Lecture</b> <b>Structural analysis of vicenistatin biosynthetic enzymes for elucidating the <math>\beta</math>-amino acid incorporation mechanism</b> <u>Akimasa Miyanaga</u> , Fumitaka Kudo and Tadashi Eguchi <i>Tokyo Institute of Technology, Japan</i>	O18

17:40	<b>Offered Lecture</b> <b>Chemoenzymatic platforms for the discovery of new peptide therapeutics</b> <u>Albert A. Bowers</u> , Jonathan W. Bogart, Walter J. Wever and Paul M. Himes <i>University of North Carolina at Chapel Hill, USA</i>	O19
18:00	Poster Session and drinks reception <i>Sponsored by NPRONET - Natural products discovery and bioengineering network, a BBSRC NIBB</i>	
		
19:00	Close of sessions	
19:15	Conference Dinner (including evening lecture) - Panorama Suite, Rootes Building	

### Friday 24 March

	<b>Session 3a: Targets for antimicrobials/chemical ecology</b> Session Chair: TBC	
08:30	<b>Keynote</b> <b>Mining metabolic novelty for peptide engineering</b> Joern Piel <i>ETH Zurich, Switzerland</i>	K12
09:10	<b>Keynote</b> <b>Gram-negative bacteria outer membrane biogenesis and the potential for the development of novel antibiotics</b> Chang-jiang Dong <i>University of East Anglia, UK</i>	K13
09:50	<b>Offered Lecture</b> <b>The dimeric anthraquinone cladofulvin: elucidating its biosynthesis and biological functions in the tomato fungal pathogen <i>Cladosporium fulvum</i></b> <u>Jerome Collemare</u> , S Griffiths, CH Mesarich, B Saccomanno, E Overdijk, A Vaisberg, PJGM De Wit and R Cox <i>INRA, France</i>	O20
10:10	<b>Keynote</b> <b>Starving bacteria to find new antibiotics</b> Eric Brown <i>McMaster University, Canada</i>	K14
10:50	Morning Tea	
	<b>Session 3b: Pathway engineering</b> Session Chair: TBC	
11.20	<b>Keynote</b> <b>Molecular breeding of medicinal crops and discoveries along the way</b> Ian Graham	K15

	<i>University of York, UK</i>	
12:00	<b>Offered Lecture</b> <b>Engineering biosynthetic gene clusters to deliver novel antibiotics</b> Chris Willis <i>University of Bristol</i>	O21
12:20	<b>Offered Lecture</b> <b>(Bio-)synthetic strategies towards structurally complex polycyclic natural products</b> Tobias A.M Gulder <i>TU Munich, Germany</i>	O22
12:40	<b>Keynote</b> <b>Directing RiPP biosynthesis</b> Wilfred van der Donk <i>University of Illinois at Urbana-Champaign, USA</i>	K16
13.20	<b>Closing Remarks</b> Barrie Wilkinson <i>Conference Chair</i>	
13:30	<b>Close of meeting and lunch</b>	

Presenting authors are indicated in the programme by an underline. The affiliation is for the presenting author. If the presenting author of your paper has changed since abstract selection please email [events@rsc.org](mailto:events@rsc.org). Please note that this is a draft programme and timings may change.