

PROVISIONAL PROGRAMME
Directing Biosynthesis 2010: Discovery, Evolution, Function
15 - 17 September 2010, Durham University, UK

Wednesday 15 September

11:00	Registration
12:30	Lunch
13:45	Welcome and Introduction Scientific Committee Chair: Russell Cox, <i>University of Bristol, UK</i>
Session 1A	Discovery of New Natural Products and Pathways Session Chair: Mervyn Bibb, <i>John Innes Centre, UK</i>
14:00	The chemistry underlying bacterial symbioses Jon Clardy, <i>Harvard Medical School, USA</i>
14:45	<i>Oscillatoria</i> PCC 6506 secondary metabolism: from genome sequencing to cyanotoxin biosynthesis Annick Méjean, Stéphane Mann, Rabbia Mazmouz, Olivier Ploux*, Florence Hugon and Valérie Pichon, <i>ENSCP, France</i>
15:10	Biosynthesis of the polyketide antibiotic thiomarinol by marine bacteria Daisuke Fukuda, Anthony Haines, Annabel Murphy, Zhongshu Song, Joanne Hothersall, Carl Ward, Elton Stephens, Russell Cox, John Crosby, Chris Willis, Thomas J. Simpson and Christopher M. Thomas* <i>University of Birmingham, UK</i>
15:35	Afternoon Tea
Session 1B	Discovery of New Natural Products and Pathways Session Chair: Greg Challis, <i>University of Warwick, UK</i>
16:00	Genome mining of secondary metabolites and their biosynthesis pathways in <i>Aspergillus nidulans</i> Clay C. C. Wang*, Nancy Keller and Berl Oakley <i>University of Southern California, USA</i>
16:25	The rapamycin/FK506 biosynthetic enzymes RapK/FkbO are chorismatases required for starter unit synthesis Steven Moss, <i>Biotica, UK</i>
16:50	Genome mining towards a comprehensive accounting of triterpenoid biosynthesis in <i>Arabidopsis thaliana</i> Seiichi Matsuda <i>Rice University, USA</i>
17:35	Poster Session
19:30	Free Evening Dinner is not provided

Thursday 16 September

Session 2A	Pathway Engineering Session Chair: Jason Micklefield, <i>University of Manchester, UK</i>
09:00	Engineering the Biosynthesis of Novel Lipopeptide Antibiotics Related to Daptomycin Richard Baltz, <i>Cubist, USA</i>
09:45	Total-, Semi- and Mutasynthesis – three faces of one medal Andreas Kirschning, <i>University of Hannover, Germany</i>
10:10	Genetic and Biochemical Analysis of Precursor Supply in Secondary Metabolite Biosynthesis W. Wohlleben*, K. Laiple, Y. Mast, K. Schad, E. Schinko, E. Stegmann and T. Weber, <i>Eberhard-Karls Universität Tübingen, Germany</i>
10:35	Morning Coffee
Session 2B	Pathway Engineering Session Chair: Dominic Campopiano, <i>University of Edinburgh, UK</i>
11:00	Challenges and Opportunities in Natural Product Glycosylation Jon Thorson, <i>University of Wisconsin-Madison, USA</i>
11:45	Modular Thinking – Explorations in Activity and Function Michael Burkart, <i>University of California, San Diego, USA</i> Winner of the 2010 OBC Lecture Award
12:30	Lunch

Session 3A	Structural Biology and Directed Evolution Session Chair: Anne Osbourn, <i>John Innes Centre, UK</i>
14:15	Peeling Back the Layers of Time: Reconstructing the Evolutionary History of Nature's Biosynthetic Toolbox Joseph Noel, <i>The Jack H. Skirball Center for Chemical Biology and Proteomics, USA</i>
15:00	Deciphering interdomain communication in modular PKS Kira Weissman, <i>University of Saarland, Germany</i>
15:25	Engineering Plant Polyketide Synthases Ikuro Abe, <i>The University of Tokyo, Japan</i>
15:50	Afternoon Tea
Session 3B	Structural Biology and Directed Evolution Session Chair: Peter Leadlay, <i>University of Cambridge, UK</i>
16:15	Convergent evolution of oxygen activation mechanisms in three different enzyme families of polyketide biosynthesis Gunter Schneider, <i>Karolinska Institutet, Sweden</i>
16:40	Reengineering the Nonribosomal Peptide Andrimid Bradley S. Evans*, Yunqiu Chenc, Huimin Zhaod and Neil L. Kelleherc, <i>University of Illinois, Urbana, USA</i>
17:05	Molecular Origami in Nature: The Cyclization Specificity of Polyketide Synthase Sheryl Tsai, <i>University of California, Irvine, USA</i>
17:50	Close of Session

19:30	Pre-dinner Drinks – Grey College
20:00	Conference Banquet – Grey College

Friday 17 September

Session 4A	Biosynthesis and Enzymology Session Chair: Barrie Wilkinson, <i>Biotica, UK</i>
09:00	Natural product biosynthesis - Inspiration for novel chemistry and enzymology Ben Shen, <i>University of Wisconsin-Madison, USA</i>
09:45	The genetic and biochemical basis for napyradiomycin biosynthesis via V-dependent chloroperoxidases Bradley Moore, <i>University of California, San Diego, USA</i>
10:10	Cytochrome P450-Catalysed Regiospecific Nitration of L-Tryptophan in thaxtomin biosynthesis S. M. Barry* and G. L. Challis, <i>University of Warwick, UK</i>
10:35	Morning Coffee
Session 4B	Biosynthesis and Enzymology Session Chair: Chris Willis, <i>University of Bristol, UK</i>
11:00	Highly unusual iterative use of NRPS involved in the biosynthesis of saframycin Kento Koketsu, Kenji Watanabe, Hiroki Oguri and Hideaki Oikawa*, <i>Hokkaido University, Japan</i>
11:25	Mechanistic studies of sesquiterpene synthases for an expansion of the terpenome Juan A. Faraldos, Veronica Gonzalez-Gonzalez, Amang Li, David J. Miller, Fanglei Yu and Rudolf K. Allemann*, <i>Cardiff University, UK</i>
11:50	Leader Peptide Directed Biosynthesis: Engineering of Lantibiotics Wilfred van der Donk, <i>University of Illinois-Urbana/Champaign, USA</i>
12:35	Close of Session Lunch is not provided

* Denotes presenting author to whom affiliation applies