

UK-SINGAPORE WORKSHOP

New Challenges in Synthesis for Pharmaceutical Products

Theatrette 4, Matrix Building, Biopolis

Monday 31 January 2005

08.30 Registration

09.00 Introduction and Outline of Workshop

Dr Keith Carpenter, Executive Director, Institute of Chemical and Engineering and Sciences

09.15 Welcome addresses by

David Campbell, Deputy British High Commissioner

Prof Chong Tow Chong, Executive Director, Science and Engineering Research Council Singapore

09.30 Plenary lecture

Simon Campbell, President, Royal Society of Chemistry
“Science, Art and Drug Discovery”

10.15 Coffee

10.30 Session 1 - Catalysis

John Blacker, Avecia
“Industrial Methods for Producing Chiral Alcohols and Amines”

Andy Hor, Singapore National Institute of Chemistry & National University of Singapore
“The Efficacy, Efficiency and Effectiveness of Suzuki Coupling”

Q&A

12.00 Networking Lunch

13.00 Session 1 – Catalysis (continued)

Steve Caddick, University College London

“Synthetic, Structural and Mechanistic Studies on Palladium Coupling Reactions Using N-Heterocyclic Carbene Ligands”

Selvasothi Selvaratnam, Institute of Chemical and Engineering Sciences

“Application of designer cyclopalladated complexes as reaction promoters”

Q&A

14.30 Tea

14.45 Session 2 – Biotransformations in synthesis

Andy Wells, AstraZeneca

“The Value of Biocatalysis in the Manufacture of Fine Chemicals”

Wu Jinchuan, Institute of Chemical and Engineering Sciences

“Organic-soluble Enzymes for Biotransformation and Enantioseparation”

Q&A

16.15 Session 3 - Enzyme Evolution and Inhibition

Nicholas Turner, University of Manchester

“Directed Evolution of Enzymes: New Biocatalysts for Asymmetric Catalysis”

Chris Abell, University of Cambridge

“Fragment-based Approaches to Enzyme Inhibition”

Q&A

17.45 Reception hosted by Royal Society of Chemistry

Tuesday 1 February 2005

09.00 Welcome by Dr Simon Campbell, President, Royal Society of Chemistry

09.05 Plenary Lecture

Thomas Keller, Deputy Director, Novartis Institute of Tropical Diseases, Singapore

“Drugs for neglected diseases – a chemistry perspective”

09.45 Session 4 - General synthetic methodology and total synthesis

Richard Taylor, University of York

“Tandem Oxidation Processes for the Preparation of Aliphatic and Heterocyclic Building Blocks”

Loh Teck Peng, National University of Singapore

“In Search of New Synthetic Methods and Concepts from the Total Synthesis of Natural Products”

Q&A

11.15 Coffee

11.30 Session 4 - General synthetic methodology and total synthesis (continued)

Ray Jones, University of Loughborough

“1,3 Dipoles, Tools for Heterocycle Assembly”

Christina Chai, Institute of Chemical and Engineering Sciences

“Quinonoid-based natural products as lead compounds”

Q&A

13.00 Networking Lunch

14.00 **Session 5 - Process Research & Development**

Brian Cox, AstraZeneca

“Physical Organic Chemistry and Process Development for Fine Chemical Manufacture”

Ilya Lyapkalo, Institute of Chemical and Engineering Sciences

“New Opportunities in the Chemistry of Carbonyl Compounds”

Q&A

15.30 Tea

15.45 **Session 5 - Process Research & Development (continued)**

David Lathbury, AstraZeneca

“Future Scientific and Regulatory Challenges for Process R&D”

Liow Kin Lian/Rodney Heng, Schering Plough (Singapore)

“Benefits of Early Stage Process Engineering in Pharmaceutical Technology Transfer”

Q&A

17.15 **Concluding remarks by Dr Keith Carpenter and Dr Simon Campbell**

17.45 End of workshop