

Organic Process Research & Development



**SCIENTIFIC
UPDATE**

We've got chemistry

A 3-day Conference and Exhibition

**The World Trade Center, Stockholm,
Sweden**

27-29 September 2017



PROGRAMME

Tuesday, September 26th 2017

7.30-9.30 **Speakers' Reception**

From 15.00 **Exhibition Set-up**

Wednesday, September 27th 2017

From 8.15 **Registration and coffee**

Morning Session Chairman: *Dr Will Watson | Scientific Update Ltd, UK*

8.55 **Opening Remarks**

9.00 **Dr Steve Han** | Boehringer Ingelheim Pharmaceuticals, Inc. USA
Research toward Practical Methods for the Synthesis of P-Stereogenic Chiral Phosphine Ligands and Applications to Asymmetric Synthesis of Drug Substances

9.45 **Dr Michael Depierro** | Dow Corning Corporation, Italy
Process Development for Organosilicon-Based Flame Retardants

10.30 **Coffee and Exhibition – Sponsored by: OPR&D an ACS Journal**

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11.15 **Dr Hansjoerg Lehmann** | Novartis Pharma AG, Switzerland
Diazomethane, Hazardous Intermediates and Continuous Flow: How to make risky reactions attractive again

12.00 **Dr Xianglin Shi** | Biogen, USA,
Two Birds, One Stone: Accomplishing the Capping in the Sulfurization Step for Phosphorothioate Oligonucleotide Manufacture

12.45 **Lunch and Exhibition**

Afternoon Session Chairman: Dr André de Vries | InnoSyn B.V., The Netherlands

- 2.00 **Dr Kilian Kobl**, | Ypso-Facto, France
Batch vs. Continuous Esterification Processes: How to select the most appropriate reactor
- 2.45 **Dr Fridtjof Schroeder** | Givaudan, Switzerland
Fragrances through Cyclopropylcarbinyl Rearrangement
- 3.30 **Coffee and Exhibition**
- 4.00 **Dr Gabriele Menges-Flanagan** | Fraunhofer ICT-IMM
Scalable Continuous Process for the Production of Grignard Reagents
- 4.45 **Dr Anna Minidis**, RISE Process and Pharmaceutical Development, Sweden
Direct Facile Methods for Catalytic Enantioselective Amination of Prochiral Ketones using Hydrogen
- 5.30 **Closing Remarks – Dr Magnus Larsson – CEO of RISE**
- 5.45 – 7.00 **Welcome Reception at the World Trade Centre – In Partnership with RISE**



- 7.00 for 7.30 – **Dinner & Cruise – Sponsored by Evonik**
10.30

The cruise boat will depart at 7.30pm sharp



Thursday, September 28th 2017

Morning Session Chairman: Dr Anna Minidis | RISE, Sweden

- 8.30 **Coffee**
- 8.55 **Opening remarks**
- 9.00 **Dr Simone Tortoioli** | Idorsia Pharmaceuticals, Switzerland
Challenges and Rewards in the Development of a Scaleable Synthesis of a Novel CXCR3 Antagonist
- 9.45 **Dr Francesco Fontana** | F.I.S. - Fabbrica Italiana Sintetici S.p.A., Italy
Process Development and Scale Up of API Intermediates: cross-couplings & friends
- 10.30 **Coffee and Exhibition – Sponsored by KOEI Chemical Company**
- 11.15 **Dr Damian Grainger** | Johnson Matthey, UK
Achiral Reductions Using Homogeneous Catalysis



12.00 **Dr Gair Ford** | AstraZeneca, UK
Challenges in the Development of Naloxegol Controlling Quality Through a 5 Stage Telescope

12.45 **Lunch and Exhibition**

2.00 – 5.30 **OPTIONAL SHORT COURSE –
Work Up and Product Isolation**

This short course will discuss the importance of designing simple, practical reaction quenches, work-ups and product isolations for a range of reaction and product types e.g. highly exothermic quenches, products with poor stability, removal of reagent by-products, consideration of impurities and meeting the needs of process intermediates as well as final products. The focus of this short course will be to design processes suitable for large scale operation and the importance of laboratory experimental design and execution to adequately model the large-scale process.

Tutor: Dr Will Watson

2.00-5.30 **OPTIONAL SITE VISIT to RISE**



Friday 29 September

Morning Session Chairman: *Dr Will Watson | Scientific Update Ltd, UK*

8.30 **Coffee**

8.55 **Opening remarks**

9.00 **Dr Mark Schilling**, GSK, UK
The Development of Losmapimod

9.45 **Dr. David Maillard** | Merck KgaA, Germany
Examples of useful PAT-Application (Process Analytical Technology) during Chemical Process Development

10.30 **Coffee and Exhibition**

11.00 **Dr Pablo Garcia Losada** | Eli Lilly and Company, Spain
Alternative Synthetic Technologies transforming traditional Synthetic Activities in Discovery Chemistry: Impact on scale-up for GLP material supply

11.45 **Dr André DeVries**, Innosyn, The Netherlands
Continuous Flow Catalytic Oxidations

12.15 **Short Presentation by SpinChem AB at end**
Rotating Bed Reactor - from screening to production

12.35 **Lunch**

1.30-4.30 **Work Shop – presented by Ed Jones, C-Tech Innovation**

‘Developing a validated technology platform for the application of oxygen dependent enzymes in synthesis’

Currently, the aerobic bio-catalytic oxidation reactions would have the biggest impact on the future uptake of industrial process biotechnology in Europe.

Chemical oxidation is both hazardous and has high environment impacts. Many oxidative bio-catalytic reactions and transformations have been identified in academic laboratories but only a very small number have been applied by industry to oxidize non-natural substrates.

In this project, we have developed the tools for implementation of bio-oxidation to synthesize alcohols in industry. This workshop will highlight:

- BioOx project summary and objectives
- Screening methodologies for the selection of oxygen dependent enzymes
- Continuous reactors for biocatalytic applications
- Co-flore ACR for the scale up of oxidase reactions

Coffee and demonstration

