

Symposium Sponsorships:

We are extremely grateful for the generous financial support of this symposium provided by our international sponsors listed below. Their financial contributions have made it possible to conduct this symposium 100% free of charge for all students and postdocs and at a very low cost (DKK 2.000 / € ~270) for all other industry and academic symposium participants.

Thank you once again – we could not have done this without you!

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SAI Life Sciences
India

Organic chemistry in the pharmaceutical, agrochemical and contract manufacturing industries

November 11-15, 2019

University of Copenhagen, Denmark

Symposium vision:

To give organic chemistry students of today more detailed knowledge about the different industry careers that are available to them once they leave university. Basically, an attempt to expand on all the industrial knowledge I have gathered myself since leaving Harvard University in 2007 – with the excellent help of our highly distinguished plenary lecturer Prof. Dr. Klaus Müller in addition to 23 different industry speakers from Denmark, Switzerland, Sweden, United Kingdom and USA.

*Dr. Lisbet Kvaerno (Symposium Organizer), Head of Synthetic Chemistry,
Hypha Discovery Ltd, UK*

Plenary Lecturer: Prof. Dr. Klaus Müller

Selected career highlights:

- Senior Research Associate at ETH Zürich since 2016
- Research at Roche in Basel 1982-2015 (retired 2009)
- KGF-SCS Distinguished Industrial Investigator Award 2013
- RSC Organic Industrial Chemistry Award 2011
- Overton and Meyer Award of the Prous Institute 2010
- 'Robert B. Woodward Visiting Scholar' Harvard University 2006
- Promoted to Roche Distinguished Scientist in 2005
- Extraordinary Professor at the University of Basel since 1991
- Bürgenstock Conference Organizing Committee Member 1982-2008
- Initiation and Management of the Roche Postdoc Fellowship Program 2009-2015





Symposium Programme:

Monday: Introduction, Structural Properties, and Small-Molecule Medicinal Chemistry

Chairman: Dr. Karin Briner, Vice President, Head of Global Discovery Chemistry, **Novartis Institutes for BioMedical Research (NIBR)**, USA

09:00-09:10: *Symposium introduction*, Dr. Lisbet Kvaerno (Main Symposium Organizer), Head of Synthetic Chemistry, **Hypha Discovery Ltd**, UK

09:10-10:10: *Four Decades in Pharmaceutical Research*, Prof. Dr. Klaus Müller, ETH-Zürich, formerly **Roche** Distinguished Scientist, Switzerland

10:30-11:30: *Conformational Caveats and Opportunities in Molecular Design*, Prof. Dr. Klaus Müller, ETH-Zürich, formerly **Roche** Distinguished Scientist, Switzerland

11:45-12:45: *PDE2 Inhibitors. Novel Therapies for CNS Disorders? Medicinal Chemistry Highlights*, Dr. Morten Jørgensen, Research Fellow, Department of Medicinal Chemistry, **H. Lundbeck A/S**, Valby, Denmark

13:45-14:45: *LMW Inhibitors of the Guanine Nucleotide Exchange Factor VAV1*, Dr. Philip R. Skaanderup, Senior Investigator, Chemical Biology and Therapeutics, **Novartis Pharma AG**, Basel, Switzerland

15:00-16:00: *New Synthetic Methods in Drug Discovery*, Dr. Giulia Bergonzini, Medicinal Chemistry, Research and Early Development Cardiovascular, Renal and Metabolism, BioPharmaceuticals R&D, **AstraZeneca**, Gothenburg, Sweden

16:15-17:00: *Reflections on Selected Challenges and Opportunities in Pharmaceutical Research*, Dr. Karin Briner, Vice President, Head of Global Discovery Chemistry, **Novartis Institutes for BioMedical Research (NIBR)**, USA

Tuesday: Small Molecule Process Chemistry in the Pharmaceutical Industry

Chairman: Dr. Hans-Jürgen Federsel, Director of Science, Senior Principal Scientist, **AstraZeneca**, Sweden & UK (retired)

09:00-09:10: *Introduction*

09:10-10:10: *Battling with Triple-O-Seven – Route Scouting and Early Scale-up*, Dr. Martin Juhl, Lead Specialist, Route Design, Process Chemistry, **H. Lundbeck A/S**, Valby, Denmark

10:30-11:30: *Application of State-of-the-art Technologies in the Manufacture of a Key Intermediate of Entresto*, Dr. Florian Kleinbeck, Research Fellow, Process Chemistry, **Novartis Pharma AG**, Basel, Switzerland

11:45-12:45: *Modularity in Ligand Design – From Well-Established to Modern Catalysis*, Dr. Jürgen Rotzler, Head Operations BU Ligands & Specialty Products, **Solvias AG**, Basel, Switzerland

13:45-14:45: *Turning Data Into Results and 30 kg RG7834*, Dr. Georg Wuitschik, Senior Scientist, Pharma Technical Development, **Roche**, Basel, Switzerland

15:00-16:00: *Control Strategy Thinking – from Development to Commercial Drug Substance Manufacture*, Dr. Robert Woodward, Principal Scientist On-Market Technical, Process Development, **AstraZeneca**, Macclesfield, UK

Wednesday: Protein Chemistry, Biopharmaceuticals, and Agrochemicals

Chairman: Dr. Hans Ulrich Blaser, Chief Technology Officer at **Solvias AG** (retired)

09:00-09:10: *Introduction*

09:10-10:10: *Modified Proteins and Peptides for Biopharmaceutical Drug Development*, Dr. Carsten Behrens, Principal Scientist in Research Chemistry III, **Novo Nordisk A/S**, Måløv, Denmark

10:30-11:30: *Peptide and Protein Chemistry Development at Novo Nordisk*, Dr. Per Vedsø, Team Leader Chemical Process Development, CMC API Development, **Novo Nordisk A/S**, Bagsværd, Denmark

11:45-12:45: *Process Development and Manufacturing of Antibody Drug Conjugates, a Promising Class of Targeted Anti-Cancer Drugs*, Dr. Bernhard Stump, Head of Process Development Bioconjugates, **Lonza** Custom Development, Visp, Switzerland

13:45-14:45: *Process Safety Management*, Dr. Steen Saaby, Ronland Technology Implementation Manager, **FMC Chemicals**, Cheminova A/S, Harbøre, Denmark



15:00-16:00: *Research in the Agrochemical Industry: the Discovery of a Novel Insecticide*, Dr. André Jeanguenat, Senior Team Leader, Research Chemistry INS, **Syngenta Crop Protection AG**, Stein, Switzerland

Thursday: The Biotech Industry and Contract Manufacturing Organizations

Chairman: Dr. Lisbet Kvaerno, Head of Synthetic Chemistry, **Hypha Discovery Ltd**, UK

09:00-09:10: *Introduction*

09:10-10:10: *Academic Entrepreneurship: Experiences from Founding UNION Therapeutics*, Prof. Dr. Morten Sommer, DTU Biosustain and Chief Scientific Officer at **UNION Therapeutics**, Hellerup, Denmark

10:30-11:30: *Locked Nucleic Acid: A Biotech and Technological Perspective*, Dr. Troels Koch, VP and Head of Research, **Roche Innovation Center Copenhagen**, Denmark (until January 2019)

11:45-12:45: *From Molecule to a Marketed Product*, Dr. Umar Hayat, **HP Consulting**, San Francisco, USA

13:45-14:45: *How to Create a Niche Business in a Globalized Competitive Industry? Do Things That Others Don't*, Dr. Thomas Fessard, Chief Executive Officer, **SpiroChem AG**, Basel, Switzerland

15:00-16:00: *Scaling up Biotransformations*, Prof. Dr. Tom Moody, Vice President, Technology Development and Commercialisation, Arran Chemical Company and **Almac Sciences**, Craigavon, UK

16:15-16:45: *Molecular Modeling in Pharmaceutical Development*, Prof. Dr. Per-Ola Norrby, Principal Scientist, Pharmaceutical Sciences, **AstraZeneca**, Gothenburg, Sweden

Late Thursday afternoon and evening:

- **Student/postdoc poster session including poster prizes**
- **Informal symposium dinner / Pizza & Beers (= 100% pure Danish "hygge"!)**
- **Drinks and socializing**

Poster prize committee:

- Prof. Dr. Per-Ola Norrby (**Chairman**, Principal Scientist, Pharmaceutical Sciences, AstraZeneca, Gothenburg, Sweden)
- Dr. Martin Juhl (Lead Specialist, Route Design, Process Chemistry, H. Lundbeck A/S, Valby, Denmark)
- Prof. Dr. David Tanner (Professor, Department of Chemistry, Technical University of Denmark, Denmark)
- Prof. Dr. Mads H. Clausen (Professor, Department of Chemistry, Technical University of Denmark, Denmark)
- Prof. Dr. Michael Pittelkow (Associate Professor, Department of Chemistry, University of Copenhagen, Denmark)

Friday: Solid State Properties, Analytical Development, Human Degradation of Drug Candidates, and Take-Home Messages and Outlook

Chairman: Dr. Victor Diaz Perez, Head of Physical Sciences, **Almac Sciences**, UK

09:00-09:10: *Introduction*

09:10-10:10: *Solid State Characterization of New Drug Molecules. What is That and Why is it so Important?*, Heidi Lopez de Diego, Chief Specialist in Solid State Characterization, **H. Lundbeck A/S**, Valby, Denmark

10:30-11:30: *Preparation for First in Human Clinical Trials - From an Analytical Point of View*, Henrik Nicolaisen, Analytical Development Specialist, **H. Lundbeck A/S**, Valby, Denmark

11:45-12:45: *Human Degradation of Drug Candidates – The Need For Synthesizing and Investigating Human Metabolites*, Dr. Lisbet Kvaerno, Head of Synthetic Chemistry, **Hypha Discovery Ltd**, Slough, UK

Chairman: Dr. Hans-Jürgen Federsel, Director of Science, Senior Principal Scientist, **AstraZeneca**, Sweden & UK (retired)

13:45-14:45: *Take-Home Messages and Outlook*, Prof. Dr. Klaus Müller, ETH-Zürich, formerly **Roche** Distinguished Scientist, Switzerland

15:00-16:00: *Conclusions FDA (From Different Angles)*, Prof. Dr. Klaus Müller, ETH-Zürich, formerly **Roche** Distinguished Scientist, Switzerland

16:00-16:15: *Concluding Remarks and Announcement of OCPACMI2020*, Dr. Lisbet Kvaerno, Head of Synthetic Chemistry, **Hypha Discovery**, UK



Practical Information:

Who should attend:

- Organic chemists at all career stages
- Scientists with an active interest in the pharmaceutical, agrochemical and contract manufacturing industries

Venue: University of Copenhagen, Denmark

Address:

Auditorium 1
H.C. Ørsted Institute
Universitetsparken 5
2100 Copenhagen Ø

Registration:

http://pittelkow.kiku.dk/index_ocpacmi.htm

Registration will close on **Monday, October 21 at 22:00**
– or when the lecture hall is full

Attendee slots will be assigned on a first-come first-served basis!

PhD course:

The symposium is registered as a PhD course at University of Copenhagen. Students can earn 5 ECTS points for their symposium attendance (including pre-&post-reading).

Register here for this PhD-course:

<https://phdcourses.ku.dk/DetailKursus.aspx?id=106298&sitepath=NAT>

Call for student and postdoc posters:

Presentation of a student or postdoc poster is voluntary but strongly encouraged, to engage in detailed project discussions with all the other symposium participants.

Posters can be put up throughout the day Thursday, November 14th

No pre-registration of poster title or poster abstract is necessary

Conference Hotel: <https://www.71nyhavnhotel.com/>



25% symposium discount: **Hotel Nyhavn 71** (<https://www.71nyhavnhotel.com/>)
To get the discount, call or email the hotel directly. Use conference code: **1635575**
Online room bookings via the hotel webpage will not give the 25% discount

Symposium fees:

- PhD-, MSc- or BSc-student, or postdoc: **FREE OF CHARGE**
- Industry or academic participant (non-student):
DKK 200 per lecture (~27 Euros) or DKK 2,000 (~270 Euros) for the entire week

Please note that the symposium is a 100% non-profit event. All attendee fees will be used to cover symposium expenses. Additional symposium sponsors are most welcome

Symposium organizers:

- **Dr. Lisbet Kvaerno** (Main Symposium Organizer), Head of Synthetic Chemistry, Hypha Discovery Ltd, United Kingdom
- **Prof. Dr. Michael Pittelkow** (University of Copenhagen Symposium Organizer), Department of Chemistry, H.C. Ørsted Institute, University of Copenhagen, Denmark