

NovAliX Conference 2013

Biophysics in Drug Discovery

Programme

Tuesday October 15, 2013

13:00 Registration

14:00 Social Programme

16:45 Welcome Address

Chair

Dr Takaaki MIURA
(CHUGAI PHARMACEUTICAL, Kanagawa, Japan)

17:00 KN01 - Biophysical Methods and Fragment Based Drug Discovery: Targeting Protein-Protein Interactions in Cell Regulatory Systems

Prof. Sir Tom BLUNDELL
(UNIVERSITY OF CAMBRIDGE, Cambridge, United Kingdom)

18:00 Welcome Reception

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Wednesday October 16, 2013

08:30 Registration

1st Session - Biophysical Characterisation

Chair

Dr Johannes OTTL
(NOVARTIS INSTITUTE OF BIOMEDICAL RESEARCH, Basel, Switzerland)

09:00 PL01 - Binding of Drug Substances to Molecular Targets Investigated by Biophysical Methods

Dr Michael HENNIG
(F. HOFFMANN-LA ROCHE LTD., Villigen, Switzerland)

09:40 PL02 - Enabling GPCR Drug Discovery Through Structural and Biophysical Insights

Dr Rob COOKE
(HEPTARES, Hertfordshire, United Kingdom)

10:20 Coffee Break

10:50 OC01 - Biophysical Investigations of the Synergistic Activities of Antimicrobial Peptides: New Strategies to Fight Multiresistance

Prof. Burkhard BECHINGER
(UNIVERSITY OF STRASBOURG, Strasbourg, France)

11:15 OC02 - X-Ray Crystallography, Kinetic Target-Guided Synthesis and NMR to Unravel the Mode of Action of Insulin Degrading Enzyme Modulators

Prof. Rebecca DEPRez-POULAIN
(UNIVERSITY OF LILLE, Lille, France)

11:40 PL03 - Biophysics to Drive Lead Discovery

Dr Matthias FRECH
(MERCK, Darmstadt, Germany)

12:20 Lunch and Networking

2nd Session - Mechanistic Analysis

Chair

Prof. Helena DANIELSON
(UPPSALA UNIVERSITY, Uppsala, Sweden)

14:00 PL04 - Protein Methyltransferase Inhibitors as Personalised Cancer Therapeutics: DOT1L and EPZ-5676

Dr Ann BORIACK-SJODIN
(EPIZYME, Cambridge, United States)

14:40 PL05 - Investing in Knowledge: Combining Biophysical Data in Fragment-Based Drug Discovery

Dr Glyn WILLIAMS
(ASTEX PHARMACEUTICALS, Cambridge, United Kingdom)

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- 15:20** **OC03 - Residence and Recognition Time and their Use for Structure Kinetic Relationships and for Judging Efficacy of Lead Series**
Dr Markku HÄMÄLÄINEN
(GE HEALTHCARE BIO-SCIENCES, Uppsala, Sweden)
- 15:45** **OC04 - Pharmacokinetics and the Drug-Target Residence Time Concept**
Dr Göran DAHL
(ASTRAZENECA, Mölndal, Sweden)
- 16:10** **Coffee Break**
- 16:45** **OC05 - Bringing Light into Antibody Binding Characteristics in Crude Extracts by Means of FCCS**
Dr Frank BECKER
(INTANA BIOSCIENCE GMBH, Planegg, Germany)
- 17:10** **PL06 - Can we Use Kinetics and Thermodynamics to Guide Drug Discovery?**
Dr Geoff HOLDGATE
(ASTRAZENECA, Macclesfield, United Kingdom)
- Chair**
Dr Geoff HOLDGATE
(ASTRAZENECA, Macclesfield, United Kingdom)
- 17:50** **KN02 - Molecular Mechanism of Action (MMOA) in Drug Discovery**
Dr David SWINNEY
(IRND3, Mountain View, United States)
- 20:00** **Entertainment (optional & subject to prior registration)**

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Thursday October 17, 2013

3rd Session - Emerging Technologies

Chair

Dr Matthias FRECH
(MERCK, Darmstadt, Germany)

09:00 PL07 - Label-Free, Immobilisation-Free Interaction Studies Using Microscale Thermophoresis

Dr Stefan DUHR
(NANOTEMPER, Munich, Germany)

09:40 PL08 - Backscattering Interferometry: An Enabling Drug Development Technology

Dr Darryl BORNHOP
(VANDERBILT UNIVERSITY, Nashville, United States)

10:20 OC06 - Detection and Analysis of Proteins with an Electro-Switchable DNA Chip

Dr Ralf STRASSER
(DYNAMIC BIOSENSORS GMBH, Martinsried, Germany)

10:45 Coffee Break

11:15 OC07 - Binding Rate Constants Measured on Microliter Volume Using On-Chip Temperature Modulation and Fluorescence Lock-In Detection

Dr Charlie GOSSE
(CNRS, Marcoussis, France)

11:40 OC08 - CRYO-TEM: The Way to Answer Real Biological Questions through Unraveling the 3D Mechanistic of Protein

Dr Thomas WOHLFARTH
(FEI, Eindhoven/Acht, The Netherlands)

12:05 PL09 - Towards Personalised Cancer Medicine with New NMR Tools to Probe Small GTPase Proteins

Dr Chris MARSHALL
(UNIVERSITY OF TORONTO, Toronto, Canada)

12:45 Lunch and Networking

14:25 Poster Session

15:55 Coffee Break

16:25 Round-table discussion on hot topics, emerging trends, and new techniques & approaches; sharing of experience and questions from the audience to a panel of experts

Moderator

Dr Glyn WILLIAMS
(ASTEX PHARMACEUTICALS, Cambridge, United Kingdom)

17:10 Poster Prizes

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Dr Michael HENNIG
(F. HOFFMANN-LA ROCHE LTD., Villigen, Switzerland)

17:25 **KN03 - Combining X-Ray Crystallography and Single-Molecule Methods to Probe Antibiotic Inhibition of Translation**

Prof. Jamie CATE
(UNIVERSITY OF CALIFORNIA, Berkeley, United States)

20:00 **Conference Dinner (optional & subject to prior registration)**

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Friday October 18, 2013

4th Session - Biophysical Methods for Identifying Hits and Leads

Chair

Dr Herbert NAR
(BOEHRINGER INGELHEIM, Biberach, Germany)

09:00 PL10 - Application of SPR Biosensors Throughout the Drug Discovery Process

Prof. Helena DANIELSON
(UPPSALA UNIVERSITY, Uppsala, Sweden)

09:40 PL11 - Finding Active Ligands to kRAS Using Solution State NMR

Dr Till MAURER
(GENENTECH, South San Francisco, United States)

10:20 Coffee Break

10:50 OC09 - Identification and Validation of Small Molecule Inhibitors of G Protein Beta 1 Gamma 2

Dr Preeti BAKRANIA
(MRC TECHNOLOGY, London, United Kingdom)

11:15 OC10 - Fragments at UCB: Implementation of Non-Covalent Mass Spectrometry and ¹⁹F NMR as Orthogonal Screening Techniques

Dr Hannah MAPLE
(UCB, Slough, United Kingdom)

11:40 PL12 - Biophysics in Pharmaceutical Lead Discovery

Dr Johannes OTTL
(NOVARTIS INSTITUTE OF BIOMEDICAL RESEARCH, Basel, Switzerland)

12:20 Closing Remarks and Departure