SMi presents the 16th annual

Pain Therapeutics

Capturing the latest developments and innovations to accelerate market access

HOLIDAY INN KENSINGTON FORUM, LONDON, UK



23rd - 24th MAY 2016



PLUS AN INTERACTIVE HALF-DAY POST-CONFERENCE WORKSHOP | WEDNESDAY 25TH MAY 2016, HOLIDAY INN KENSINGTON FORUM, LONDON, UK

Animal models for the study of compounds in pain therapy: From screening to translational models Hosted by: Dr Sigal Meilin, Chief Scientific Officer, MD Biosciences, Innovalora Ltd

8:30 - 12:30

www.pain-therapeutics.co.uk

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#painsmi

Pain Therapeutics Conference

Day One 23rd May 2016

- 8.30 **Registration & Coffee**
- 9.00 **Chairman's Opening Remarks**

Dr Steven Kamerling, Therapeutic Area Head for Pain & Inflammation, Zoetis

DRUG DEVELOPMENT & MECHANISMS

OPENING ADDRESS

9.10

- Pain Drug Discovery: Learnings over a decade?
 - Current treatments and gaps
 - What to target -enzymes? receptors?
 - Where to target central of peripheral?
 - New analgesics myth or reality?
 - Dr Neelima Khairatkar Joshi, Sr Vice President, **Glenmark Pharmaceuticals**

Understanding ligand recognition on the molecular level 9.50

- · Identification of NF770 as a potent and competitive antagonist for P2X2 (purinergic ion channel)
- Double mutant cycle analysis and protein-ligand interactions
- Protein modeling and simulation for compound design
- Dr Achim Kless, Associate Scientific Director,
- **Grunenthal GmbH**

Morning Coffee 10.30

MDB010506: Discovery of a novel, highly effective small 11.00 molecule compound for neuropathic pain; from phenotypic screening to full, preclinical lead validation

- The use of in vivo phenotypic screening for the identification of pharmaceutically relevant activity
- Description of the preclinical program for the development of the candidate compound MDB010506
- Summary of results

Dr Sigal Meilin, Chief Scientific Officer, mdblosciences. **MD Biosciences, Innovalora Ltd**

11.40 Challenges and opportunities in topical ibuprofen development

- Topical vs transdermal delivery
- Local tolerance and skin irritation
- Clinical models for investigating efficacy of topical analgesics Dr Ozgur Sancak, Global Medical Science Lead – Pain, RB

12.20 Networking Lunch

TRANSLATIONAL APPROACH

1.30 Current questions to animal models of pain

- Models
- Readouts
- Translation

Dr Thomas Christoph, Senior Director, Head of Pain Pharmacology, Grunenthal GmbH

Pain, Osteoarthritis & Translational Veterinary Medicine 2.10

- Medical management of osteoarthritis and pain in people and pets • What can be learned across species with regard to models and
- spontaneous diseases: translational veterinary medicine Focus on pharmaceutical and biopharmaceutical approaches

Dr Steven Kamerling, Therapeutic Area Head for Pain & Inflammation, Zoetis

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2.50 Afternoon Tea

3.20 Reproducibility of a battery of human evoked pain tests to determine the pharmacological profile of novel analgesic drugs

- A battery of human evoked pain tests that can be used to profile new analgesic drugs and to determine the active drug dose range in humans prior to phase II
- Unique profile for different reference analgesic compounds that was compatible with expected pharmacology
- Reproducibility of the pharmacological effects and pain test battery profile of different analgesic compounds that were used as positive controls in four phase I studies

Geert Jan Groeneveld, Research Director Neurology & Pain, **Centre for Human Drug Research**



- 4 00 Translational biomarker for studying target engagement of ion channels in peripheral nerve
 - Ion channels are crucial in controlling the excitability of peripheral nerves and action potential propagation.
 - Different subtypes of sodium channel are key for action potential propagation in different subtypes of sensory neurons
 - Potassium channels and hyperpolarization-activated cyclic nucleotide-gated contribute to firing pattern of axons
 - Nerve excitability profiling (NEP) allows study of these channels in rodents and primates including humans in vivo and in vitro
 - NEP can investigate the effect of sodium channel blockers on transient and persistent currents and state- and use-dependency and tonic blocks

Martin Koltzenburg, Chair of Clinical Neurophysiology, **University College London**

Human Tissue in pain research 4.40

- Human neuroma tissue in studies of neuropathic pain
- Human tooth pulp as a model of inflammatory pain
- · Correlation of clinical symptoms with specific markers
- Fiona Boissonade, Head of Neuroscience Research Group, The University of Sheffield

PANEL DISCUSSION

5.20	Medical incidents in experimental drug trials • Clinical trial methodology
	Challenges facing the current methods
	Medical exams procedure
	Reviews and recommendation
	Moderator: Steven Kamerling, Therapeutic Area Head for Pain,
	Inflammation and Oncology, Zoetis
	Panelists:
	Thomas Christoph, Senior Director, Head of Pain Pharmacology,
	Grunenthal GmbH
	Chao Chen, Therapy Area Head, Glaxosmithkline
	Fiona Boissonade, Head of Neuroscience Research Group,
	The University of Sheffield
	Martin Koltzenburg, Chair of Clinical Neurophysiology,
	University College London

6.00 Chairman's Closing Remarks and Close of Day One

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Pain Therapeutics Conference

Day Two 24th May 2016

- 8.30 Registration & Coffee
- 9.00 Chairman's Opening Remarks Dr Stephen Doberstein, Senior Vice President and Chief Scientific

Officer, Nektar Pharmaceuticals

OPIOID DEPENDENCE

OPENING ADDRESS

- 9.10 NKTR-181, A Novel mu-opioid Analgesic Designed for Inherent Low Abuse Liability
 - Engineering brain entry rate of MOR agonists to reduce euphoria and abuse liability
 - Maintaining mu-opioid receptor activity while modulating brain entry rate
 - Preclinical to clinical translation of opioid characteristics

Dr Stephen Doberstein, Senior Vice President and Chief Scientific Officer, Nektar Pharmaceuticals

9.50 Strategies to minimise risk for opioid dependence

- The review of current strategies
- The use of prescription monitoring programmes
- Alternatives to opioid therapy

Prof Remigiusz Lecybyl, Consultant in Chronic Pain, University Hospital Lewisham*

CLINICAL TRIALS & MODELS

10.30 Morning Coffee

11.00 Voltage gated sodium channels... new pain therapies

- Preclinical and clinical development of selective sodium channel blockers – Part 2
- What has been achieved since the last year?
- Results update from assessment of PF-05089771 in painful diabetic neuropathy
- Discussion of next steps in development

Dr Richard Butt, Senior Director, Research Project Leader, Clinical Research, Pfizer

11.40 Small fibre neuropathy and channelopathy: from pain relief to disease modification

- Overview of clinical presentations, advanced diagnostic techniques, and current pain treatments
- Clinical translation success in Phase II trials for pain and itch: p38 MAP kinase inhibitor Dilmapimod, Angiotensin II Type 2 receptor antagonist EMA401, and Trk A inhibitor CT327
- Use of capsaicin 8% patch Qutenza for pain relief and disease modification

Prof Praveen Anand, Professor of Clinical Neurology and Head, Centre for Clinical Translation, Imperial College London

12.20 Networking Lunch

1.30 Treatment of moderate to severe chronic pain

- Epidemiology of moderate to severe chronic pain
- Treatment options for treatment of moderate to severe chronic pain
- Emerging treatment options for treatment of moderate to severe chronic pain

Dr Catherine Stehman-Breen, VP Clinical Sciences, Regeneron

2.10 Design and Interpretation of Clinical Proof-of-Concept Trials for Pain Drugs

- Clinical proof of concept informs major investment decisions
- Conventional design and analysis reflect improvement opportunities
- Principles and examples will be presented to explore these opportunities
- Dr Chao Chen, Therapy Area Head, Clinical Pharmacology Modelling & Simulation, GSK

PATIENT MONITORING

2.50 Afternoon Tea

3.20 Clinical trial population: Defining patients recruitment strategy

- Optimal population sample
- Study observations
- Post-study outcomes

Speaker will be announced shortly

	PANEL DISCUSSION
1.00	Alternative approach in pain therapeutics
	Quantitative predictive analysis
	Pain threshold level
	Drug interaction mechanisms
	Moderator: Dr Stephen Doberstein, Senior Vice President and Chief
	Scientific Officer, Nektar Pharmaceuticals
	Panelists:
	Sigal Meilin, Scientific Director, MD Biosciences
	Achim Kless, Associate Scientific Director, Grunenthal Gmbh
	Catherine Stehman-Breen, VP Clinical Sciences,
	Regeneron Pharmaceuitcals Inc

4.40 Chairman's Closing Remarks and Close of Day Two

*Subject to Final Confirmation

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HALF-DAY POST-CONFERENCE WORKSHOP Wednesday 25th May 2016 Holiday Inn Kensington Forum, London, UK

8.30am – 12.30pm

Animal models for the study of compounds in pain therapy: From Screening to Translational Models

Hosted by: Dr Sigal Meilin, Chief Scientific Officer,

MD Biosciences, Innovalora Ltd

mdb i o s ciences.

Workshop overview:

Advances in preclinical animal models will be discussed to offer participants a view to different models, advantages and limitations of each model, examples of compounds being studied in such preclinical models. Highly predictive, translational pig models, developed at MD Biosciences will be presented to the audience using examples of compounds that succeeded in rodent models and either failed or succeeded in later human trials.

Why you should attend:

- The advantages and limitations of different animal models in the preclinical development phase for pain therapy
- Differentiation of compounds for the treatment of acute pain versus chronic or neuropathic pain
- Biomarkers and histology in pain models
- Advances in predictive, translational models in pain therapy; avoiding costly clinical phase trials

Agenda

8.30 Registration & Coffee

9.00 Opening remarks and introductions

9.10 Contribution of animal models to the research and understanding of pain

- Important milestones in the development of current animal models
- Differentiation of reflexive withdrawal response and general animal behavior in pain studies

9.50 Advantages and limitations of animal models in the development process for drug candidates in the area of pain

- Studies comparing systemic vs. topical painrelief drugs using animal models
- How do rodent studies predict the PK/PD ratio in human application

10.30 Morning Coffee

11.00 The application of molecular markers in the study of drug candidates in pain

- Contribution of biomarker analysis to the understanding of the cross-talk between neuronal and other pathways, including the immune system
- The use of biomarkers for the better understanding of pain mechanism and the discovery of new targets for pain therapy
- 11.40 The application of swine models in studying drug candidates for the topical and/or local treatment of pain
 - Translational, predictive swine models in the study of pain and pain therapy
 - Presentation of a post-operative pain model in the swine

12.20 Closing remarks

12.30 End of workshop

About the workshop host:



Dr Meilin is a 25 year veteran of preclinical drug discovery and development in the area of neurological diseases, neuro-degeneration and pain. As Chief Scientific Officer at MD Biosciences, Innovalora, Dr Meilin developed leading expertise

in the preclinical area through the study of many different compound classes, both small molecules and biologicals, in different disease models, applying advanced approaches to early stage drug discovery and development. Dr Meilin leads the collaborative drug discovery and development programs at MD Biosciences Innovalora.

About the organisation:

MD Biosciences, Inc., is a leading development partner in the area of neurodegenerative diseases and pain therapeutics. With nearly 20 years of preclinical experience, MD Biosciences is experienced in all aspects of preclinical development, model development, the use of advanced biomarkers and predictive studies. The company has developed numerous methodologies, such as proprietary, translational models and histology techniques to support the successful development of candidate drugs through the preclinical phase into clinical phases.

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Parallel Trade 8th - 9th February Holiday Inn Kensington Forum, London, UK Advances and Progress in Drug Design 15th - 16th February Holiday Inn Kensington Forum, London, UK RNAi Therapeutics 15th - 16th February Holiday Inn Kensington Forum, London, UK

MARCH

Superbugs & Superdrugs - A Focus on Antibacterials 16th - 17th March Holiday Inn Kensington Forum, London, UK Paediatric Clinical Trials 16th - 17th March Holiday Inn Kensington Forum, London, UK

APRIL

Asthma & COPD 11th - 12th April Holiday Inn Kensington Forum, London, UK Controlled Release 18th - 19th April Holiday Inn Kensington Forum, London, UK Adaptive Designs 18th - 19th April Holiday Inn Kensington Forum, London, UK Pre-Filled Syringes East Coast 25th - 26th April

Renaissance Woodbridge, New Jersey, USA Lyophilization USA

27th - 28th April Renaissance Woodbridge, New Jersey, USA

MAY

Alzheimer's

10th - 11th May Holiday Inn Kensington Forum, London, UK Clinical Trial Logistics 18th - 19th May Holiday Inn Kensington Forum, London, UK Pain Therapeutics 23rd - 24th May Holiday Inn Kensington Forum, London, UK ADC Summit 2016 23rd - 24th May Holiday Inn Kensington Forum, London, UK

JUNE

Pre-Filled Syringes West Coast 6th - 7th June Hyatt Regency Mission Bay, San Diego, USA ADMET 13th - 14th June

Holiday Inn Kensington Forum, London, UK Immunogenicity

13th - 14th June Holiday Inn Kensington Forum, London, UK BioBanking

20th - 21st June Holiday Inn Kensington Forum, London, UK

JUL

Lyophilisation Europe 4th - 5th July Holiday Inn Kensington Forum, London, UK Allergies 6th - 7th July Holiday Inn Kensington Forum, London, UK Peptides 6th - 7th July

Holiday Inn Kensington Forum, London, UK

PAIN THERAPEUTICS CONFERENCE

Conference: Monday 23rd & Tuesday 24th May 2016, Holiday Inn Kensington Forum, London, UK Workshop: Wednesday 25th May, London

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