

14th Winter Conference on Medicinal & Bioorganic Chemistry

January 27th - 31st 2019

Steamboat Springs Resort, Colorado

Organised in collaboration with:



Provisional Program



Sunday 27th January 2019

- 1.00 – 5.00pm Registration**
- 4.00 – 5.00 Welcome Coffee and Cookies**
- 5.00 – 5.15 Welcome and Opening Remarks – Professor Anthony GM Barrett, Conference Chair**
- 5.15 – 8.00 pm Drug Hunting**
Chair: *Dr Daniel Flynn, Deciphera Pharmaceuticals*
- 5.15 Dr Petr Vachal, Merck**
The Invention of MK-8262, a CETP Inhibitor Backup to Anacetrapib (with best in class properties)
- 5.55 Dr Kevin Freeman-Cook, Pfizer**
Targeting the Cell Cycle for the Treatment of Cancer
- 6.35 Dr Sandra Filla, Eli Lilly**
Lasmiditan: The Long Road Home for a Novel Therapy for Acute Migraine Treatment
- 7.15 Dr Daniel Flynn, Deciphera Pharmaceuticals**
Drug Hunter Award Introduction and Prize
- 7.20 Dr Josh Bilenker, LOXO (Drug Hunter Award)**
TRK Inhibitor LOXO-101 and back up LOXO-195
- 8.00 – 10.00 pm Welcome Networking Reception in the Exhibition Area**

Monday 28th January 2019

7.00 – 8.00 am Good Morning Buffet Breakfast

8.00 - 11.00 am **Immuno-oncology**

Chair: Dr Wes Trotter, Merck

8.00 Dr Jared Cumming, Merck

Novel STING Agonists for Immuno-oncology

8.45 Dr Paul Scola, BMS

Discovery of a Macrocyclic Peptide Inhibitor of Programmed Death-Ligand 1 (PD-L1)

9.30 Dr Cynthia Parrish, GSK

Targeting the Adenosine Pathway with Non-Nucleoside Inhibitors of CD73

10.15 Dr Brendan Parr, Genentech

Design of Selective, Heme-binding Inhibitors of Tryptophan-2,3-dioxygenase (TDO)

11.00 End of session

4.00 - 5.00 pm Back from the Slopes – Coffee and Cookie Break

5.00 – 8.00 pm **Structural and in-Silico Chemistry**

Chair: Dr Georgia McGaughey, Vertex

5.00 Dr Meihua Tu, Pfizer

The Role of Water Molecule in Ketohexokinase Inhibitor Design

5.45 Professor Tudor Oprea, UNM Department of Internal Medicine

Fundamentals of AI-driven Drug Discovery

6.30 Dr Clara Christ, Bayer

Five years of Binding Free Energy Calculations at Bayer: Impact and Future Directions

7.15 Dr Ed Sherer, Merck

Impact of Computational Chemistry Post Candidate Selection and Translating Lessons Learned back into Discovery

8.00 End of session

Tuesday 29th January 2019

7.00 – 8.00 am Good Morning Buffet Breakfast

8.00 – 11.00 am Chemical Biology for Drug Discovery

Chair: *Dr Paola Castaldi, AstraZeneca*

8.00 Professor Laura Kiessling, MIT

Glycans in Health and Disease

8.45 Professor Christina Woo, Harvard

Mapping Binding Site Hotspots in the Global Proteome by Photo-affinity Labeling Mass Spectrometry

9.30 Dr Ron Tomlinson, AstraZeneca

Chemical Degraders for Target Validation: Revealing Biology on the Oncogenic Transcription Factor BCL6

10.15 Dr Andy Phillips, C4 Therapeutics

Targeted Protein Degradation

11.00 End of session

4.00 - 5.00 pm Back from the Slopes – Coffee and Cookie Break

5.00 – 8.00 pm Potential New Therapies for the Treatment of Chronic Pain

Chair: *Dr Sarah Skerratt, Vertex*

5.00 Dr Sarah Skerratt, Vertex

Overview of Current Therapies for the treatment of Pain

5.30 Dr Mark Layton, Merck

Breathe Easy: Mechanistic Insights Enable a Path Forward for Highly Selective Nav1.7 Inhibitors

6.00 Professor Laura Bohn, Scripps

Harnessing Opioid Receptor Signaling to Improve Pain Therapeutics

6.30 Dr Brendan Crowley, Merck

Discovery And Optimization Of A Novel CGRP Receptor Antagonist Chemotype For The Treatment of Migraine

7.00 Dr Leena Otsomaa, Orion

TRPA1: A Pain Target or a Painful Target?

7.30 Dr Steven McKerrall Genentech

Structure-Based Drug Discovery in the Search for Nav1.7 Inhibitors

8.00 End of Session

Wednesday 30th January 2019

7.00 – 8.00 am Good Morning Buffet Breakfast

8.00 – 11.00 am Recent Advances in Targeting Autophagy

Chair: *Professor Jay Debnath (UCSF)*

8.00 Professor Jay Debnath, UCSF

Complexities of Targeting Autophagy to Treat Human Disease

8.45 Professor Kevan Shokat, UCSF

Targeting the Autophagy initiating Kinase ULK1

9.30 Professor Martin McMahon, University of Utah

Combined Targeting of MAP Kinase Signaling and Autophagy for the Future Therapy of Cancers Driven by the RAS Pathway

10.15 Professors Ravi Amaravadi & Jeffrey Winkler, University of Pennsylvania

Advances in Targeting Lysosomotropic Agents

11.00 End of session

4.00 - 5.00 pm Back from the Slopes – Coffee and Cookie Break

5.00 – 8.10 pm Advances in Synthesis and Medicinal Chemistry

Chair: *Professor Darren Dixon, University of Oxford*

5.00 Dr Zhi-Cai Shi, Merck

Enabling the Application of Photoredox Catalysis in Medicinal Chemistry

5.20 Professor James Barrow, Lieber Institute for Brain Development

Discovery of Novel Treatments for Visceral Pain via GABA Signaling

5.40 call for abstracts

6.00 call for abstracts

6.20 call for abstracts

6.40 call for abstracts

7.00 call for abstracts

7.20 Dr Dominic Reynolds, H3 Biomedicine

Complex Natural Product Derivative Synthesis

7.40 Professor Darren Dixon, University of Oxford

Title to be confirmed

8.00 End of session

Thursday 31st January 2019

7.00 – 8.00 am Good Morning buffet breakfast

8.00 – 11.00 am Photoredox Catalysis

Chair: *Dr Dan DiRocco, Merck*

8.00 Dr Dani Schultz, Merck

Recent Advances in the Remote Functionalization of Aliphatic C-H Bonds via Decatungstate Photocatalysis

8.35 Dr Thomas Knauber, Pfizer

Enablement of Photoredox Csp2-Csp3 Cross Coupling Reactions

9.10 Dr Kaid Harper, Abbvie

Scaling Catalytic Photochemistry with Lasers

9.45 Professor Corey Stephenson, University of Michigan

Photoredox Catalysis – An Enabling Platform for Discovery and Development

10.20 Dr Tomislav Rovis, University of Columbia

New Tools for Catalysis

11.00 End of session

4.00 – 5.00 pm Back from the Slopes – Coffee and Cookie Break and visit the Posters

5.00 – 6.00

Chair: *Professor Victor Snieckus, Queen's University*

5.00 – 6.00 pm

Keynote Speaker: Professor Phil S. Baran, The Scripps Research Institute
Translational Chemistry

6.00 – 7.30

Networking Session
Pre-Dinner Drinks & Poster Session

7.30 - 9.30

Conference Dinner

9.30

Conference Closes