# Protein-Protein Interactions 2016

# Monday 5 - Tuesday 6 December 2016, SCI, London, UK

Organised by SCI's Fine Chemicals Group and RSC's BMCS in association with PPI-Net

#### **Synopsis**

Virtually all vital cellular processes are controlled by protein-protein interactions (PPIs) including gene expression, proliferation, intracellular communication and apoptosis. Thus, understanding and manipulating PPIs represents a key objective in being able to understand healthy and disease biology. Achieving this goal will lead to probes of cell signalling pathways or, systems biology and next generation molecular therapeutics. However, to date, only a few PPIs have been the subject of a drug discovery initiative by the pharmaceutical industry.

Owing to the potential opportunities that being able to modulate PPIs would bring, the past decade has seen this field gain increasing scientific interest, and stimulated significant academic and industrial innovation. This meeting will address recent advances in the characterisation and identification of new PPI inhibitors. Topics will include: *in silico* assessment of PPI druggability, assay screening technologies for PPIs, structural biology approaches and fragment-based drug design. Speakers from industry and academia will describe strategies for addressing these challenges whilst showcasing the opportunity for creativity and innovation.

#### Attendees

The event is aimed at all scientists (students, post-docs, academics, industrialists) engaged in PPI research, alongside those interested in finding out more about this topic. The meeting programme will appeal to chemists, biologists and the wider drug-discovery community. SCI Members can claim CPD points for attending this conference.

#### Sponsorship

To enquire about sponsorship opportunities, please contact **clarice.williams@soci.org** for further information and costs.

#### Registration

#### Book today! www.soci.org/events

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# Programme

## Monday 5 December

#### 09.30 Plenary talk

**Cooperativity in multiprotein assemblies over space and time: implications for cell signalling and druggability** Sir Tom Blundell, University of Cambridge, UK

#### 10.30

Targeting protein-protein interactions in the brain Prof Hans Michael Maric, University of Copenhagen, Denmark

11.00 Refreshments, poster and exhibition viewing

#### 11.30

Targeting aggregating proteins in drug discovery Dr Lewis Vidler, Eli Lilly & Co, UK

#### 12.00

Using the kinase ATP binding site to inhibit PPIs Prof Richard Bayliss, University of Leeds, UK

12.30 Lunch, poster and exhibition viewing

#### 13.30

Folded fragment approach for target-directed development of protein-protein interaction inhibitors Prof Dr Mr Tamás Martinek, University of Szeged, Hungary

#### 14.00

**Characterising PPI interfaces and assessing druggability using mixed-solvent simulations** Dr Davide Branduardi, Schrodinger, UK

#### 14.30

Discovery and characterization of small molecule fragments that bind and inhibit the ubiquitin specific protease 7 (USP7) Dr Paola Di Lello, Genentech, USA

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15.00 Refreshments, poster and exhibition viewing

#### 15.30

**Inhibiting PPIs: a structural biologist's perspective** Dr Thomas Edwards, University of Leeds, UK

16.00 Flash poster presentations

- 16.30 Wine reception and poster viewing
- 19.00 Conference Dinner

#### **Organising Committee**

- > Dr Nicola Chessum, SCI/ The Institute of Cancer Research
- > Dr Stephen East, SCI/ Evotec (UK) Ltd
- > Dr Jason Tierney, SCI/ Charles River
- Prof Simon Ward, RSC BMCS/ University of Sussex
- Prof Andrew Wilson, PPI-Net/ University of Leeds

## Tuesday 6 December

#### 09.30 Plenary talk

**Discovery of Mcl-1 inhibitors using fragment-based methods and structure-based design** Prof Steve Fesik, Vanderbilt University Medical Centre, USA

#### 10.30

**ProMs: A construction kit for small-molecule inhibitors of protein-protein interactions involving proline-rich motifs** Prof Dr Hans-Guenther Schmalz, University of Cologne, Germany

11.00 Refreshments, poster and exhibition viewing

#### 11.30

Highly potent cell-penetrant inhibitors of the KEAP1-NRF2 protein-protein interaction via X-Ray fragment screening

Dr Tom Heightman, Astex Pharmaceuticals, UK

#### 12.00

The discovery of NVP-HDM201: identification of a next generation HDM2 inhibitor with superior characteristics Dr Andrea Vaupel, Novartis, Switzerland

**12.30** Lunch, poster and exhibition viewing

#### 13.30

Protein-fragment complementation and semi-rational design: engineering specific antagonists of proteinprotein interactions

Dr Jody Mason, University of Bath, UK

#### 14.00

Small molecule inhibition of PCSK9-LDL receptor binding: a summit too high? Dr Kim McClure, Pfizer, USA

#### 14.30

Targeting the SCL-LMO2 interaction: a structure-guided approach to T-ALL drug discovery Dr Leanne Harris, University of Sussex, UK

15.00 Refreshments, poster and exhibition viewing

#### 15.30

### Inhibition of FGFR2 oncogenic activity by its C-terminal tail

Dr Chi-Chuan Lin, University of Leeds, UK

#### 16.00

Antibody-enabled small molecule drug discovery Dr Alastair Lawson, UCB, UK

#### 16.30

#### Talk title to be announced Dr Jon Winter-Holt

- 17.00 Closing remarks
- **17.30** Meeting close









