

City University Distinguished Lecture Series

Speaker

Professor Herbert Waldmann

Director of Department of Chemical Biology, Max-Planck-Institute of Molecular Physiology Full Professor of Organic Chemistry at University of Dortmund

Hunting the Targets of Biologically Relevant Small Molecules

Monday, 25 March 2013 at 4:00 pm at

Peter Ho Lecture Theatre (LT10)
4/F Academic 1
City University of Hong Kong
Tat Chee Avenue, Kowloon

Abstract

Small molecule probes offer distinct opportunities to rapidly, reversibly and conditionally perturb protein function and biological systems. For the identification of such probes biological relevance is key. This condition is met by natural product inspired compound classes, selected in evolution.

We have developed the concept of Biology Oriented Synthesis (BIOS) which builds on relevance in nature to inspire compound synthesis. Investigation of BIOS-compound collections in cell-based assays and subsequent target identification and validation by means of chemical proteomics, molecular and cell biology revealed novel modulators of protein function and networks. Examples include Melophlin A which targets Dynamins, Centrocountin1 which targets Nucleophosmin and Crm1, Tubulexin A which targets Tubulin and Exportin 2 and Wntepane 1 which targets the van Gogh like 1 receptor.



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