

## Tentative Outline Special Issue for CURRENT DRUG TARGETS

*Guest Editors: Massimiliano Tognolini & Alessio Lodola*

### SMALL MOLECULES AND PEPTIDES TARGETING THE EPH-EPHRIN SYSTEM

#### **Aims & Scope:**

The Eph receptors are the largest family of tyrosine kinase and play a primary role in tissue differentiation during embryogenesis. Since its discovery, the Eph-ephrin system has been extensively studied for its role in physiology and pathology in the adult as well. A number of evidence has correlated deregulation of the Eph-ephrin system in cancer and tumor blood vessels to a poor prognosis. Moreover, the Eph-ephrin system modulates glucose balance and synaptic connections plasticity. Taken together, these data highlight an important role of the Eph-ephrin system in pathological processes, and the opportunity of targeting this system for therapy. Different tools have been developed to modulate Eph receptor and ephrin activity in different pathological processes. In fact, Eph kinase inhibition appear to be useful for tumor angiogenesis whereas stimulation could be suitable in tumors where Akt is activated. Finally, diabetes therapy could take advantage of ephrin reverse signaling activation.

#### **Key words:**

Kinases; cancer; diabetes; angiogenesis; neurodegeneration.

#### **Subtopics:**

Himanen JP, et al: Eph-ephrin interaction: from structural biology to cell functions

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Nevado C and Caflisch A, et al: Targeting Eph system with selective kinase inhibitors

Department of Biochemistry, University of Zurich, Zurich, Switzerland

Lodola A, Tognolini M, et al: Targeting the Eph system with protein-protein inhibitors

Department of Pharmacy, University of Parma, Parma, Italy

Pasquale EB, et al: Targeting the Eph system with peptides and peptide conjugates

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#### **Schedule:**

Manuscript submission deadline:	October 2014
Peer Review Due:	November 2014
Revision Due:	December 2014
Notification of acceptance by the Guest Editor:	January 2015
Final manuscripts due:	January 2015