



**Donnelly Centre**  
for Cellular + Biomolecular Research  
UNIVERSITY OF TORONTO



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## Donnelly Seminar Series

# “Structural Systems Pharmacology: the role of 3D structures in next generation drug development”



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Barcelona, Spain

Thursday, June 18, 2015 | 11:00 a.m.  
Donnelly Centre Red Seminar Room

### Abstract:

Structural systems pharmacology offers a novel way of approaching drug discovery by considering the global physiological environment of protein targets, and the effects derived of tinkering with them, without losing the key molecular details. In this talk I will highlight some recent advances in the structural annotation of cell networks and discuss their potential impact on some of the hottest areas of drug development. In particular, I will analyse recent structure-based strategies to target networks, protein interaction interfaces and allosteric sites, and how they will help in the development of more potent and specific treatments. Finally, I will show how the mapping genetic variations onto protein networks, beyond the pharmacological targets, can rationalize inter-individual variability in drug response, giving valuable hints to advance towards personalized medicine.

**Host: Dr. Fritz Roth**