

Tentative outline
Special issue for CURRENT PHARMACEUTICAL DESIGN
Guest Editors: Luciana Scotti, Marcus T. Scotti

Polypharmacology in drug discovery

The basic principle of action of a drug is based on model lock and key, where is desirable the highest possible affinity for a target avoiding no side effects. For many years it was desirable 'one drug for one target for one disease', however the researchers observed that complex diseases are best addressed when treated with drugs multi-targets. However, in the recent years the researches try find polypharmacology- drugs that act on multiple rather than single targets against complex diseases, such as oncology, psychiatry and antiinfectives. Examples are: the fluoroquinone that inhibits two of the multiple penicillin-binding proteins to induce cell death; anti-psychotic drugs exhibit activities in serotonin and dopamine receptors; the protein kinase inhibitors, including sunitini (Sutent) and imatini (Gleevec) against cancer. In the searches, new drugs against a specific target of one disease have been found to be active against another target of a different disease and/or reduce the resistance. All additional activities of these drugs should be explored in repositioning them for new therapeutic application. This special issue will be dedicated to multi-target chemicals (drugs, organic compounds, nanoparticles), including (but limited to) those with dual (or multiple) mechanisms of action. The manuscripts should be focused in evaluations of activities/toxicities of chemicals against two or more biological targets (proteins and/or enzymes, cells, microorganisms, etc).

Schedule:

Manuscript submission deadline: October 10, 2015

Peer review due: November 10, 2015

Revision due: November 31, 2015

Notification of acceptance by the Guest Editor: December 05, 2015

Final Manuscript Due: December 15, 2015