International Journal of Endocrinology

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Special Issue on

Small Organic Molecules in Research and Treatment of Endocrine Diseases

CALL FOR PAPERS

Due to their unique advantages compared to genetic approaches, that is, rapid onset of action, transient and usually reversible mode of action, and convenience in dose control, chemicals have been widely employed in exploring the mechanism and pathology of endocrine and related diseases. In contrast to stapled peptides, macrocycles, and other giant chemical tools, small molecules (molecular weight < 500) are superior regarding cell permeability, metabolic stability, and commercial or synthetic accessibility and thus are more effective and convenient as chemical interventions in biological and medical research. These small molecule chemical probes employed were, in many cases, subsequently developed into innovative therapies after being optimized to improve potency, selectivity, and toxicological, physicochemical, and pharmacokinetic properties. Despite the success in this field denoted by the recent approval of various classes of drugs, such as sodium/glucose cotransporter 2 inhibitors (diabetes), dipeptidyl peptidase 4 inhibitors (diabetes), proprotein convertase subtilisin/kexin type 9 inhibitors (hyperlipidemia), and cytochrome P450 17A1 inhibitors (prostate cancer), medical needs in endocrine and related areas remain to be fully met. More efforts towards development of novel chemical probes to explore innovative therapies are urgently needed and are of profound significance.

Authors are invited to submit original research articles describing such efforts, including use of small molecules to explore pathological mechanism, as well as to identify and validate novel drug targets, and optimization of chemical probes to study biological activity and drug-likeness leading to drug candidates. Review articles describing the state of the art on drug discovery in this field are also welcome.

Potential topics include but are not limited to the following:

- Roles of AMP-activated protein kinase (AMPK) in metabolic homeostasis and therapeutic potential of its inhibition
- Interference of adrenal/gonadal steroidogenesis to treat hormone-dependent diseases like PCOS, breast cancer, prostate cancer, and so forth
- Novel approaches for treating diabetes via targeting G protein-coupled receptor 119 (GPR119) and renal glucose reabsorption
- Innovative treatments of osteoporosis via interfering sclerostin and receptor activator of nuclear factor kappa-B ligand (RANKL)
- Impact on overall steroid hormone network (steroid hormones and related biosynthetic enzymes and receptors) after interfering with a single node, using advanced genomics and metabolomics as well as classical approaches

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/ije/crte/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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