Special Issue

Recent Advances in the Modulation of Cholinergic Signaling

Message from the Guest Editor

Since acetylcholine-related functions are impaired in several disorders and pathological conditions, different pharmacological approaches have been explored in view of innovative therapeutic applications. Additional mechanisms of action and/or downstream responses have been more recently associated to receptor targets of the cholinergic system, i.e., nicotinic and muscarinic acetylcholine receptors (nAChRs and mAChRs), notably allosteric modulation (for both receptor families), biased signaling (for mAChRs) or silent agonism (for nAChRs). On the other hand, molecular fragments of cholinesterase (AChE and BChE) inhibitors are quite frequently incorporated in the structure of various hybrid ligands characterized by a dual or multitarget pharmacological profile, an approach aimed at improving their action on CNS disorders.

Contributions to this Special Issue, in the form of original research articles and short communications, may cover multidisciplinary aspects of the design, synthesis, and biological evaluation of novel small molecules affecting cholinergic neurotransmission as well as their therapeutic potential.

Guest Editor

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As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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