EDITORIAL

Functional Peptides and Small Molecules in Medicinal Chemistry-Part II

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The first part of this issue mainly focuses on medicinal developments driven by functional peptides. This part is the continuation of drug discovery and design, but this time with emphasis on developments driven by functional molecules, especially drugs or their derivatives from natural products. The selected reviews are summarized as follows:

As a common mental disorder that mainly occurs in 60 years old or elderly people, Alzheimer’s disease (AD) is a major threat to public health system. In the review regarding AD treatment, Wu et al. comprehensively summarized newly reported natural products with anti-AD activities, including acetylcholine-related natural products, Aβ and tau protein related natural products, antioxidants, anti-inflammatory and other neuroprotective natural products, as well as NMDA receptor antagonists [1]. Although some natural products show promising preliminary results in AD treatment, they are still a long way from clinical transformation.

A Chinese scientist Youyou Tu won the 2015 Nobel Prize in Physiology or Medicine because of the outstanding contribution to the discovery of antimalarial drug artemisinin that is extracted from an herbal prescription. Although artemisinin and its derivatives were primarily developed as antimalarial agents, later extensive studies have witnessed other pharmaceutical potentials beyond malaria. Thus, the paper of Liu et al. highlights new pharmaceutical effects of artemisinin derivatives with a focus on the antitumor and antivirus activity [2].

Due to the therapeutic potential of histone deacetylases (HDACs) as one of promising drug targets in cancer, HDAC inhibitors have been intensively investigated over the last few decades. In the last review, Li et al. explored the developed synthetic and natural HDAC inhibitors according to different zinc binding groups (ZBGs) and discussed their binding mode with zinc ion in detail, to point the way forward for the design and development of HDAC inhibitors with novel ZBGs [3].

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REFERENCES


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