Special Issue

Next Generation Histone Deacetylase (HDAC) Inhibitors

Message from the Guest Editors

Histone deacetylases (HDACs) are clinically validated epigenetic drug targets for the treatment of cancer. Thus far, four histone deacetylase inhibitors (HDACi) have been approved by the FDA to combat certain types of lymphoma or multiple myeloma. Furthermore, there is growing evidence that HDACi have therapeutic potential in several diseases beyond cancer, such as inflammation, HIV, and parasitic and neurodegenerative diseases. First-generation inhibitors are non-selective HDACi that target multiple isoforms which might lead to serious side effect. In the field of cancer, it is currently under debate whether class- or isoform-selective HDACi can provide improved risk-benefit profiles compared to first-generation pan-inhibitors. In the field of non-oncology diseases, it is evident that the use of pan-HDACi is limited due to their side effects. The aim of this Special Issue is to highlight recent efforts in the design, synthesis, and pharmacological evaluation of next-generation histone deacetylase inhibitors. We welcome original articles and short communications as well as review articles.

Guest Editors

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