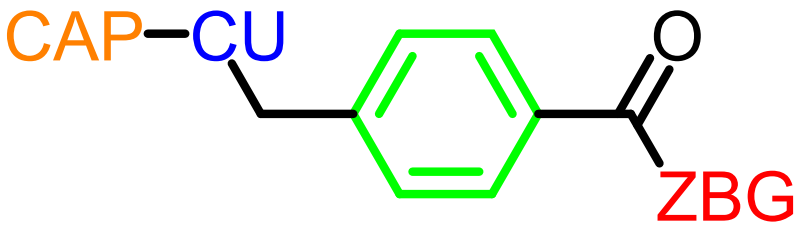
Marc Pflieger

Synthesis and biological evaluation of HDAC class I and HDAC 6 Histone deacetylase inhibitors



Pharmacophore model with CAP-Gruppe (lipophilic group, red), a *Connecting Unit* (CU, green), a Linker-region (blue) and a zink-bindending group (ZBG, orange).

Within the scope of this PhD project, benzyl linker type class I HDAC and HDAC6 inhibitors are developed using Autodock. Successfully prepared compounds are tested for in vitro activity. Known HDAC inhibitors consist of a zink binding group, a linker, a connecting unit and a CAP group. Benzyl linker based HDAC inhibitors obtain their HDAC1 or 6 isoform preference by suitable ZBGs or novel CAP groups. In this respect, aminoanilids as ZBG exhibit a preference for HDAC1, whereas primary hydroxamic acids are generally used for adressing HDAC6. Therefore, compounds with different ZBGs and CAP groups will be synthesized. Finally, novel compounds are tested for the corresponding isoform.

Marc Pflieger is working in the Institute of Pharmazeutical and Medical Chemistry (RG T. Kurz).

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