

# **Inhibitors of NAD<sup>+</sup>-dependent lysine deacylases (Sirtuins) as chemical probes and potential drugs**

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Sirtuins are classified as class III histone deacetylases and depend in their catalytic activity on the cofactor NAD<sup>+</sup>. They have been shown to also accept many non-histone proteins as substrates and to cleave longer acyl chains such as myristoyl groups. The talk will cover the structure based discovery and optimization of inhibitors of the human Sirtuins Sirt1 and 2 as well as smSirt2 from the pathogenic worm *Schistosoma mansoni*. Those inhibitors are potential candidates for the treatment of cancer respectively neglected tropical diseases and also have served as a platform to develop chemical tools to probe sirtuin cellular biology.