In-Bead Screening of Hydroxamic Acids for the Identification of HDAC Inhibitors

A one bead–one compound screening format is presented. Following solid-phase synthesis on a photolabile linker, library compounds were readily released and screened inside polymer beads. The release of screening compounds was readily controlled by varying photolysis time and light intensity. Dose-response experiments were carried out to effectively distinguish high- and low-affinity ligands. A library containing 55800 compounds was synthesized and screened in a fluorometric assay, thereby identifying potent HDAC inhibitors with IC\textsubscript{50} values in the nanomolar range.