Complex-selective HDAC inhibitors promote synaptic resilience for therapeutic treatment of neurological disorders

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Multiple studies have demonstrated that synaptic loss is a key event in many neurological disorders, including Alzheimer's disease, and synaptic pathology has been closely tied to disease symptoms. With the goal of improving synaptic resilience as a therapeutic intervention for neurological disorders with synaptic pathology, Rodin Therapeutics has designed complex-selective HDAC inhibitors with pro-synaptic effects. Importantly, these compounds have been optimized for CNS drug-like properties and decreased hematological toxicity, a key class-based safety concern. This profile enables treatment of neurological disorders with a chronic dosing paradigm, and represents a notable advance in the field of HDAC inhibition for treating these diseases. By enhancing the function of synapses critical for learning and memory in animal models, Rodin compounds have shown the potential to improve cognition, function, and other key endpoints in multiple neurodegenerative and neuropsychiatric diseases.