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A Potential Screening Method to Support Drug Development for Dementia Treatment Featured in the December Issue of *SLAS Discovery*

As human lifespans increase, so does general memory impairment – calling for the need to expand research for dementia treatment. The key to this expansion is the center focus of the *SLAS Discovery* featured article, "A neuronal cell-based reporter system for monitoring the activity of HDAC2" by Unemura, et al.

By knocking out the protein-coding gene histone deacetylase 2 (HDAC2), results have shown a significant increase in memory. While this makes HDAC2 an ideal drug target, current HDAC inhibitors are detrimental as they inhibit both HDAC1 and HDAC2, which has a toxic effect on cells.

The authors of this study worked to create a neuronal cell reporter system that would enable them to identify compounds that inhibit HDAC2 while having a minimal effect on HDAC1. As a result of this study, the newly developed method for screening HDAC2-specific inhibitors shows promise in aiding future dementia drug development. Read this original research article to learn how the downstream target gene was identified and the reporter cell line generated, along with more research articles in the December issue of *SLAS Discovery*.

The December issue of *SLAS Discovery* includes these additional articles:

- A perspective on the discovery of enzyme activators
- Discovery of hit compounds for methyl-lysine reader proteins from a target class DNA-encoded library
- Development and use of a high-throughput screen to identify novel modulators of the corticotropin releasing factor binding protein
- High-throughput mechanistic screening of non-equilibrium inhibitors by a fully automated data analysis pipeline in early drug-discovery
- Robustness of NanoBiT luciferase complementation technology in the presence of widely used kinase inhibitors

Access to the December issue of *SLAS Discovery* is available at https://www.slas-discovery.org/issue/S2472-5552(22)X0010-5

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SLAS Discovery reports how scientists develop and use novel technologies and/or approaches to provide and characterize chemical and biological tools to understand and treat human disease. The journal focuses on drug discovery sciences with a strong record of scientific rigor and impact, reporting on research that:

- Enables and improves target validation
- Evaluates current drug discovery technologies
- Provides novel research tools
- Incorporates research approaches that enhance depth of knowledge and drug discovery success

SLAS (Society for Laboratory Automation and Screening) is an international professional society of academic, industry and government life sciences researchers and the developers and providers of laboratory automation technology. The SLAS mission is to bring together researchers in academia, industry and government to advance life sciences discovery and technology via education, knowledge exchange and global community building.

SLAS Discovery: Advancing the Science of Drug Discovery, 2021 Impact Factor 3.341. Editor-in-Chief Robert M. Campbell, Ph.D., Twentyeight-Seven Therapeutics, Watertown, MA (USA)

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