SLAS Discovery's July Special Edition Drug Discovery Targeting COVID-19 Now Available

Oak Brook, IL – The July edition of *SLAS Discovery* is a Special Edition featuring the cover article, "Development of a High-Throughput Screening Assay to Identify Inhibitors of the SARS-CoV-2 Guanine-N7-Methyltransferase Using RapidFire Mass Spectrometry" by Lesley-Anne Pearson, Charlotte J. Green, Ph.D., De Lin, Ph.D., Alain-Pierre Petit, Ph.D., David W. Gray, Ph.D., Victoria H. Cowling, Ph.D., and Euan A. F. Fordyce, Ph.D., (Drug Discovery Unit, School of Life Sciences, University of Dundee, Dundee, UK).

In January 2021, a survey of immunologists, infectious-disease researchers and virologists found that 90% of respondents believe SARS-CoV-2 will become endemic, continuing to circulate in pockets of the global population for years to come. Even as vaccines are becoming more widely available, there are people who either do not respond to the treatment or are not suitable for vaccination. There is a critical need to develop small molecule inhibitors for this pathogen.

The cover article highlights the work of the Drug Discovery Unit at the University of Dundee (Dundee, Scotland, UK) reporting on the development of a high-throughput biochemical assay to assess the impact of small molecules on the methyltransferase activity of SARS-CoV-2 nonstructural protein 14 (nsp14). This enzyme is responsible for the N7-methylation of the cap at the 5' end of viral RNA and is critical in helping coronaviruses evade host defenses. The label-free MS-based assay developed was used to screen a library of 1771 FDA-approved drugs. The chemical hits that were identified may serve as starting points for drug discovery programs aimed at delivering therapeutics for the SARS-CoV-2 virus.

The July issue of *SLAS Discovery* includes four articles of original research.

These include:

- Development of a Novel Label-Free and High-Throughput Arginase-1 Assay Using Self-Assembled Monolayer Desorption Ionization Mass Spectrometry
- A Solid Supported Membrane-Based Technology for Electrophysical Screening of B0 AT1-Modulating Compounds

- Characterization of Transport Activity of SLC11 Transporters in *Xenopus laevis* Oocytes by Fluorophore Quenching
- High-Throughput Phenotypic Assay for Compounds That Influence Mitochondrial Health Using iPSC-Derived Human Neurons

Other articles include:

- Development of a High-Throughput Screening Assay to Identify Inhibitors of the SARS-CoV-2 Guanine-N7-Methyltransferase Using RapidFire Mass Spectrometry
- A High-Throughput Radioactivity-Based Assay for Screening SARS-CoV-2 nsp10-nsp16 Complex
- Label-Free Screening of SARS-CoV-2 NSP14 Exonuclease Activity Using SAMDI Mass Spectrometry
- A Quantitative Bioassay to Determine the Inhibitory Potency of NGF–TrkA Antagonists

Access to July's *SLAS Discovery* issue is available at https://journals.sagepub.com/toc/jbxb/current. For more information about SLAS and its journals, visit https://www.slas.org/publications/slas-discovery/ Access a "behind the scenes" look at the latest issue with *SLAS Discovery* Author Insights podcast. Tune in by visiting https://www.buzzsprout.com/1099559.

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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, 2019 Impact Factor 2.195. Editor-in-Chief Robert M. Campbell, Ph.D., Twentyeight-Seven Therapeutics, Boston, MA (USA).

SLAS Technology: Translating Life Sciences Innovation, 2019 Impact Factor 2.174. Editor-in-Chief Edward Kai-Hua Chow, Ph.D., National University of Singapore (Singapore).

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