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New Advancements in Assay Development Research

Assay quality metrics, fluorescence polarization assay use and more are included in the latest issue of SLAS Discovery

Oak Brook, IL – The July 2023 issue of *SLAS Discovery*, the open access journal focused on research progressing drug discovery, is now available. [Volume 28, Issue 5](#), contains one short communication and four full-length articles covering assay quality metrics, fluorescence resonance energy transfer (FRET) and small molecule glycomimetics and other high-throughput screening-related research.

Full-length articles

- [Mathematical relationships between control group variability and assay quality metrics](#)
Authored by early career researcher Andrew Lim, Ph.D. (ALBORADA Drug Discovery Institute), this article assesses the relationships between control group variability and assay quality metrics to understand the factors that improve assay quality metrics by identifying which variables are having the most impact.
- [Fluorescent probe for the identification of potent inhibitors of the macrophage infectivity potentiator \(Mip\) protein of *Burkholderia pseudomallei*](#)
In this study, a fluorescence polarization (FP) assay was established to enable the screening and effective development of *Burkholderia pseudomallei* macrophage infectivity potentiator (BpMip) inhibitors. The presented assay may potentially contribute to the development of novel therapeutics against melioidosis (Whitmore's disease) and other microbial diseases caused by Mip-bearing pathogens.
- [HTS driven by fluorescence lifetime detection of FRET identifies activators and inhibitors of cardiac myosin](#)
This team of researchers developed technology for high-throughput time-resolved fluorescence lifetime detection of fluorescence resonance energy transfer (FRET), which enables the detection of allosteric modulators by monitoring changes in protein structure.
- [Evaluating the affinity and kinetics of small molecule glycomimetics for human and mouse galectin-3 using surface plasmon resonance](#)
The researchers explored the use of surface plasmon resonance (SPR) for compound screening by comparing human and mouse galectin-3 affinity measures between FP and SPR assays.

Short Communications

- [Label-free high-throughput screening via acoustic ejection mass spectrometry put into practice](#)
The results of this study confirm that acoustic droplet ejection-open port interface-mass spectrometry (ADE-OPI-MS) is a suitable and effective method for identifying chemical starting points in high-throughput screening (HTS) lead generation projects.

Access to the July issue of *SLAS Discovery* is available at [https://www.slas-discovery.org/issue/S2472-5552\(23\)X0006-9](https://www.slas-discovery.org/issue/S2472-5552(23)X0006-9)

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., Redona Therapeutics, Watertown, MA (USA)

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