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Deciphering the Parameters Impacting Drug Susceptibility in Intracellular *T. cruzi* Assay

CHICAGO – A new report in the February 2017 issue of *SLAS Discovery* (formerly the *Journal of Biomolecular Screening)* provides insight from Institut Pasteur Korea and the Drugs for Neglected Diseases *initiative* (DND*i)* into developing intracellular assays and interpreting results.

To better understand the assay outcomes of drug candidates in *in vitro* intracellular *T. cruzi* assays, the authors conduct a series of experiments to compare image-based and colorimetric assay protocols in the early phase of antitrypanosomal drug discovery. Their results should interest scientific communities involved in drug discovery of Chagas disease and other intracellular pathogens, such as Tuberculosis and *Leishmania*.

In the initial comparison with 31 antitrypanosomal compounds, the activity outcome between image-based and colorimetric assays is very different as noted by an R2 value of 0.005. Based on a series of comparison studies that switched the experimental factors of image-based assay to that of colorimetric assay, the authors identify that cell seeding schemes and compound incubation times play critical roles in determining the activity of tested compounds.

Chagas disease, also known as American trypanosomiasis is a parasitic disease caused by *Trypanosoma cruzi* with 6 ~ 7 million current infections mostly localized in Latin America. Because the treatments for this devastating disease are highly toxic to patients, there is an urgent need to develop safer and more efficacious drugs.

Visit *SLAS Discovery* Online at http://journals.sagepub.com/toc/jbxb/22/2 to read "**Deciphering the Parameters Impacting Drug Susceptibility in Intracellular *T. cruzi* Assay**." *SLAS Discovery* is one of two MEDLINE-indexed scientific journals published by SLAS. For more information about SLAS and its journals, visit www.slas.org/publications/scientific-journals.

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SLAS Discovery: *2015 Impact Factor 2.218. Editor-in-Chief Robert M. Campbell, Ph.D., Eli Lilly and Company, Indianapolis, IN (USA). SLAS Discovery (Advancing Life Sciences R&D) was previously published (1996-2016) as the Journal of Biomolecular Screening (JBS).*

SLAS Technology: *2015 Impact Factor 1.297. Editor-in-Chief Edward Kai-Hua Chow, Ph.D., National University of Singapore (Singapore). SLAS Technology (Translating Life Sciences Innovation) was previously published (1996-2016) as the Journal of Laboratory Automation (JALA)*