

Come Transform Research™

**For Immediate Release:**

December 28, 2015

**Contact Information:**

Tom Manning, Director of Marketing Communications

Telephone: +1.630.256.7527, ext. 103

E-mail: [tmanning@slas.org](mailto:tmanning@slas.org)

**A New Perspective in the Field of Cardiac Safety Testing  
through the Comprehensive In Vitro Proarrhythmia Assay (CiPA) Paradigm**

**CHICAGO** – A new review article published in the January 2016 issue of the *Journal of Biomolecular Screening* (JBS) discusses a novel public-private initiative that supports proarrhythmia risk assessment of candidate drugs early in the drug discovery and development continuum.

According to lead author Bernard Fermini, Ph.D., of the Department of Global Safety Pharmacology at Pfizer (Groton, CT) and colleagues from the Ion Channel Working Group (composed of members from pharma industry, universities and contract research organizations), the current approach suffers from acknowledged limitations. While it provides a regulatory framework for the detection of delayed cardiac repolarization by focusing on the inhibition of a single, essential, cardiac ion channel (hERG), and in vivo assessment of QT prolongation, it doesn't assess the endpoint of clinical concern (namely ventricular arrhythmias), and needs revision.

Termed **Comprehensive in vitro Proarrhythmia Assay (CiPA)**, this novel initiative represents one of the most important revisions to happen in cardiovascular safety since the implementation of the current international regulatory guidelines more than a decade ago. It is based on the fundamental mechanistic understanding of the integrated role of ion channels in ventricular repolarization and alterations leading to cardiac instability and arrhythmogenesis. It comprises two distinct series of tests: 1) in vitro evaluation of drug effects on multiple ion channels (not just hERG), and incorporation of these effects in an in silico model of a human ventricular action potential, and 2) confirmation of these results using cardiomyocytes derived from human induced pluripotent stem cells.

This initiative is the next logical step following the review and analysis of a decade of data obtained using current guidelines related to hERG inhibition and QT prolongation. It represents a visionary strategy that will likely require several years of testing before coming to fruition, but may revolutionize cardiovascular risk assessment.

JBS is one of two MEDLINE-indexed scientific journals published by the Society for Laboratory Automation and Screening (SLAS). Visit JBS Online at <http://jbx.sagepub.com/content/21/1> to read "A New Perspective in the Field of Cardiac Safety Testing through the Comprehensive In Vitro Proarrhythmia Assay Paradigm." For more information about SLAS and its journals, visit [www.slas.org/jala-jbs](http://www.slas.org/jala-jbs).

\* \* \* \* \*

**SLAS GLOBAL HEADQUARTERS**

100 Illinois Street, Suite 242  
St. Charles, IL 60174, USA  
P: +1.630.256.7527  
US Toll Free: +1.877.990.SLAS (7527)  
[slas@slas.org](mailto:slas@slas.org)  
[www.SLAS.org](http://www.SLAS.org)

**SLAS ASIA OFFICE**

[asia@slas.org](mailto:asia@slas.org)  
[www.Asia-SLAS.org](http://www.Asia-SLAS.org)

**SLAS EUROPE OFFICE**

[europe@slas.org](mailto:europe@slas.org)  
[www.Europe-SLAS.org](http://www.Europe-SLAS.org)

**The Society for Laboratory Automation and Screening (SLAS)** is an international community of more than 15,000 individual scientists, engineers, researchers, technologists and others from academic, government and commercial laboratories. The SLAS mission is to be the preeminent global organization providing forums for education and information exchange and to encourage the study of, and improve the practice of life sciences discovery and technology. For more information, visit [www.SLAS.org](http://www.SLAS.org).

SLAS publishes two internationally recognized, MEDLINE-indexed journals, now in their 20<sup>th</sup> year of publication. **The Journal of Laboratory Automation (JALA)** and **Journal of Biomolecular Screening (JBS)** uniquely serve laboratory science and technology professionals who work primarily in life sciences discovery and technology. Together, JALA and JBS address the full spectrum of issues that are mission-critical to this important audience, enabling scientific research teams to gain scientific insights, increase productivity, elevate data quality, reduce lab process cycle times and enable experimentation that otherwise would be impossible.

Specifically, **JALA** explores ways in which scientists adapt advancements in technology for scientific exploration and experimentation. In direct relation to this, **JBS** reports how scientists use adapted technology to pursue new therapeutics for unmet medical needs, including assay development, identification of chemical probes and target identification and validation in general.

**Journal of Biomolecular Screening (JBS):** 2013 Impact Factor 2.423. Editor-in-Chief Robert M. Campbell, Ph.D., Eli Lilly and Company, Indianapolis, IN (USA).

**Journal of Laboratory Automation (JALA):** 2013 Impact Factor 1.879. Editor-in-Chief Edward Kai-Hua Chow, Ph.D., National University of Singapore (Singapore).