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SLAS Technology June Issue Highlights Potential for AI to Solve Workflow Challenges and Open-Source Software Potential – Available Now

Oak Brook, IL – The June issue of SLAS Technology is now available Open Access on ScienceDirect.

The global pandemic caused by COVID-19 significantly affected every industry, causing weakened supply chains. Not only were individuals clambering for necessities, but the lack of vital supplies and emergency health and safety protocols even stunted laboratory operations. This created the complex task of organizing and managing an automated laboratory during a pandemic, while also generating new opportunities to find a solution for the dilemma. Artificial intelligence (AI) is being used to improve operations, and the research featured in "AI-driven laboratory workflows enable operation in the age of social distancing" by Marescotti, et al. leverages AI technology to solve the COVID-19 protocol complexity. By using a cloud-based laboratory management and automation platform, the researchers can simulate various conditions and scenarios to optimize the laboratory's operations while constrained by social distancing protocols. Access this article to see how Marescotti, et al. utilize the AI-driven laboratory workflow to demonstrate the potential for optimizing laboratory operations under COVID-19 protocols.

Science always operates at its best when there is a free and open flow of ideas. Scientific software that is open-source has exponentially gained popularity, unlocking new opportunities to conduct and perform research. In their article, "Rapid deployment of inexpensive open-source orbital shakers in support of high-throughput screening" Baillargeon, et al. provide insight on their experience obtaining, iterating and installing, an open-source design for a compact orbital shaker needed for a high-throughput suspension cell-based array. The lessons learned by the researchers serve as a template for how scientists can apply open-source technology to any need, use case or project.

The June issue of SLAS Technology includes the following articles:

- <u>Comparison Between Franz Diffusion Cell and a novel Micro-physiological System for In Vitro</u> <u>Penetration Assay Using Different Skin Models</u>
- High-throughput sample processing for methylation analysis in an automated, enclosed environment
- <u>Rapid deployment of inexpensive open-source orbital shakers in support of high-throughput</u>
 <u>screening</u>
- <u>Spleen in viral Hepatitis-B liver fibrosis patients may have a reduced level of per unit micro-</u> circulation: non-invasive diffusion MRI evidence with a surrogate marker
- Al-driven laboratory workflows enable operation in the age of social distancing
- An efficient and reliable chemical inventory system at a growing drug discovery company
- <u>Script-based automation of analytical instrument software tasks</u>
- Automation of hybridization and capture based next generation sequencing library preparation requires reduction of on-deck bead binding and heated wash temperatures
- <u>When Mosquito HV bites Biomark HD: An automated workflow for high-throughput qPCR</u> Life sciences discovery and technology highlights

Access to the June *SLAS Technology* issue is available at <u>https://slas-technology.org/issue/S2472-</u> 6303(22)X0004-6

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 Technology: Translating Life Sciences Innovation, 2020 Impact Factor 3.047. Editor-in-Chief Edward Kai-Hua Chow, Ph.D., National University of Singapore (Singapore).

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