Chemify and Prepaire Labs Partner to Apply Chemistry AI-Robotics to Accelerate Discovery of Non-Addictive Opioids

Partnership unveils ground-breaking technology to radically improve efficiency of drug development.

MASDAR CITY, ABU DHABI, UNITED ARAB EMIRATES, January 18, 2024 /EINPresswire.com/ -- Chemify and Prepaire™ Labs today announced to expand their partnership with an additional program to tackle the ongoing Opioid crisis and develop a novel class of digitally discovered non-addictive Opioids as pain modulators, as well as drugs tackling Opioid addiction directly by combining Chemify's breakthrough programmable chemistry platform with Prepaire's integrated novel open collaboration drug discovery platform. The project, named Toxifree, comes in response to the FDA's Center for Drug Evaluation and Research (CDER) requesting drugmakers and researchers to develop treatments for stimulant use disorder, hoping to address a major gap in the addiction crisis response.

After a successful initial partnership, Chemify and Prepaire are now aiming to leverage Chemify's Chemputation technology which enables the automated and integrated design, discovery, and synthesis of complex molecules on demand using a chemical programming language and Prepaire's advanced open-architecture drug development platform.

Under the terms of this partnership, Chemify will design and discover novel compounds to identify Opioid-derived hits and develop them further into candidates. Chemify will receive at least USD $30 million in payments and pre-negotiated, success-driven clinical and regulatory milestones for each developed molecule, as well as single digit royalties on any resulting products.

Lee Cronin, Chemify's Founder and CEO and Regius Professor of Chemistry at the University of

Glasgow has extensive experience leading research efforts to develop solutions for the opioid crisis. Cronin lead a team that won several NIH-prize challenges including winning the grand runner up prize for the design, discovery and automated synthesis of next generation, safer and non-addictive drug-candidates to help address the opioid crisis.

"We are extremely excited to combine Chemify's technology for molecular design, discovery and synthesis with the integrated Prepaire platform to expand our collaboration and create a fully integrated, digitally driven drug discovery approach. With this partnership we are breaking ground on a new pain modulation discovery program that aims to tackle the global need for better and non-addictive pain medication. With our unique design approach guided by Chemputation, we are utilizing an evolutionary approach to discovering novel compounds to solve this devastating and critical healthcare need," said Professor Lee Cronin, Chemify's Founder and CEO.

"Our partnership with Chemify allows our discovery platform to integrate directly with Chemify's chemical space exploration approach, enabling us to access novel chemical matter that would have otherwise been inaccessible. As we progress our collaboration, we are aiming to build an integrated approach that can be used for many more indications beyond novel pain modulators. There aren't any approved treatments to help address addiction to opioids, whose use has surged in recent years. The purpose of this FDA guidance is to assist in the clinical trial designs for the development of novel drugs to support indications for treatment of moderate to severe cocaine use disorder, treatment of moderate to severe methamphetamine use disorder, or treatment of moderate to severe prescription stimulant use disorder," said Dr Vicent Ribas, Prepaire’s Co-Founder.

About Chemputation
Digital chemistry applies principles of computation to chemistry for programable chemistry and Chemify has developed the underpinning infrastructure to make this possible for chemical discovery and synthesis. Like a computer program, digital chemistry programs can automatically run chemical experiments, make new molecules, and ensure that complex chemical recipes are always accessible and perfectly reproducible. Chemical programs are precise pieces of code that allow fully transparent and reliable operation allowing the implementation of AI and other techniques with full audit and safety.

About Chemify
Based in Glasgow, Chemify is a pioneering company digitizing chemistry to provide world-leading pharmaceutical, biotechnology, and industrial partners access to an exponentially growing space of novel molecules and materials. By leveraging decades of chemistry experience, hardware robotics, and artificial intelligence, Chemify's Chemputation technology enables companies to access an end-to-end workflow for drug discovery, molecule synthesis, and materials discovery. Chemify was founded by CEO Lee Cronin based on conceptual advancements from Cronin's Digital Chemistry Laboratory at the University of Glasgow in Scotland. By building the infrastructure to digitize chemistry, Chemify is reimagining chemical research, discovery and

manufacturing to benefit all of humanity by accelerating advances across chemistry with a focus on medicine and functional materials. To learn more about Chemify, visit Chemify.io.

About Prepaire Labs
Prepaire Labs is a pioneering healthcare technology company focused on revolutionizing drug discovery and precision medicine. Through the integration of deep learning and biology, Prepaire Labs builds predictive models grounded in genetic, phenotypic, and clinical data. These models form a view to the underlying architecture and biology of diseases. Prepaire Labs utilizes patient-derived induced pluripotent stem cells (iPSCs), genome editing, high-content cellular phenotyping, and machine learning to create in vitro disease models that optimize genetics, cell-type, environment, and multidimensional data collection for increased predictability of human clinical outcomes. A state-of-the-art BSL3 lab is opening in May 2024, located at Masdar City, Abu Dhabi, UAE. This will serve as the new fully automated LAAS (Lab As A Service) hub and provide clinical trials on a chip using latest microfluidic devices combined with the ability to print organoid bio-networks. Visit www.prepaire.com to learn more.

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