

PharmaDrug's Sairyo Therapeutics Announces Independent Screening Identifying Cepharanthine's Potential to Bind to Monkeypox (Mpox) Proteins

Toronto, Ontario--(Newsfile Corp. - August 21, 2024) - PharmaDrug Inc. (CSE: PHRX) (OTC Pink: LMLLF) ("**PharmaDrug**" or the "**Company**"), a specialty pharmaceutical company focused on the research, development and commercialization of controlled-substances and natural medicines such as psychedelics and previously approved drugs, is pleased to announce that an independent screening of drugs for monkeypox ("Mpox") highlighted cepharanthine's potential to bind to the virus's protein. The letter to the editor titled, "Highly accurate protein structure prediction and drug screen of monkeypox virus proteome," is non peer reviewed and published in *Journal of Infection* and can be found [here](#).

Sairyo Therapeutics Inc. ("Sairyo"), a company that is fifty-one percent (51%) owned by PharmaDrug and forty-nine percent (49%) owned by PharmaTher Holdings Ltd. (CSE: PHRM) (OTCQB: PHRRF) ("**PharmaTher**"), is focused on the clinical development of a patented reformulated version of oral cepharanthine ("PD-001") as a potential treatment for Medical Countermeasures and cancer.

Understanding of Mpox (monkeypox) proteins key to the function of the virus is limited. Identification of potential drugs/molecules that interact with Mpox proteins may help with treatment of Mpox virus infection. In a study by Yang et al (2023), 10 target proteins from the Mpox virus were selected due to their potential to be involved in essential functions and their potential to interact with other molecules. In the analysis aimed at screening drugs for Mpox, cepharanthine displayed significant binding affinities to all ten target proteins of Mpox. More specifically, cepharanthine showed high binding affinities to 4 of the predicted Mpox proteins (I1L, VITF3L, A42R, and E8L).¹ This predicted interaction may help enhance understanding of key mechanisms of viral entry and replication for potential treatments, such as cepharanthine, of Mpox infection.

Robert Steen, CEO of PharmaDrug commented, "We are of the opinion that the last several years has shown us that the world needs more anti-viral medications in its therapeutic arsenal. We believe that PD-001, with its patented enhanced cepharanthine bioavailability, can potentially serve as a multi-indication anti-viral. We look forward to further explore cepharanthine's therapeutic prospects for Mpox and other infectious diseases."

As announced in a press release dated August 19, 2024, Sairyo has received approval by the Australian Human Research Ethics Committee to initiate a first-in-human Phase 1 clinical study (the "Study") investigating a patented reformulated enteric coated version of oral cepharanthine ("PD-001") as a potential treatment for [Medical Countermeasures](#) and cancer. PD-001 was previously awarded a [\\$3.4 million contract from the Defense Threat Reduction Agency \(DTRA\) for the Ebola virus](#).²

The Company would like to make it clear that is not making any express or implied claims that its product (cepharanthine) has the ability to treat, eliminate or cure Monkeypox (Mpox) and/or other infectious diseases at this time.

About PD-001 (Enteric-coated Oral Cepharanthine)

Cepharanthine is a natural product and an approved drug used for more than 70 years in Japan to successfully treat a variety of acute and chronic diseases. In clinical research, cepharanthine has been shown to exhibit multiple pharmacological properties including anti-oxidative, anti-inflammatory, immunoregulatory, anti-cancer, anti-viral and anti-parasitic effects^{3,4}. However, historically cepharanthine's low oral bioavailability has represented a major obstacle to realizing its full clinical potential.

Compared to generic cepharanthine, PD-001 has been shown in rodent and non-rodent models to possess markedly improved oral bioavailability (more easily absorbed). These findings support the development of an orally administered formulation, and in so doing, removes the undesirable requirement for frequent intravenous dosing to maintain therapeutic levels of drug in circulation. Sairiyo endeavours to develop an efficacious oral therapeutic to potentially improve outcomes for infectious disease and oncology applications.

PD-001 is protected by [US Patent US10576077](#), with a patent expiration date of March 23, 2036.

About PharmaDrug Inc.

PharmaDrug is a specialty pharmaceutical company focused on the research, development and commercialization of controlled-substances and natural medicines such as psychedelics and previously approved drugs. PharmaDrug owns 51% of Sairiyo Therapeutics ("Sairiyo"), a biotech company that specializes in researching and reformulating established natural medicines with a goal of bringing them through clinical trials and the associated regulatory approval process in the US and Europe. Sairiyo is currently developing its patented reformulation of cepharanthine, a drug that has shown substantial third party validated potential for the treatment of infectious disease and rare cancers. Sairiyo is also conducting R&D in the psychedelics space for the treatment of non-neuropsychiatric conditions. PharmaDrug also owns 100% of SecureDose Synthetics Inc. ("SecureDose"), a pharmaceutical research and development company focused on the development of synthetic formulations of currently existing drugs for potential commercialization and distribution.

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This news release may contain forward-looking statements and information based on current expectations. These statements should not be read as guarantees of future performance or results of the Company. Forward-looking statements in this press release relate to the potential for cepharanthine as a treatment for Mpox and the development of the Company's business. Such statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from those implied by such statements.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information. Such risks and other factors may include, but are not limited to: general business, economic, competitive, political and social uncertainties; general capital market conditions and market prices for securities; the actual results of the Company's future operations; competition; changes in legislation affecting the Company; the ability to obtain and maintain required permits and approvals, the timing and availability of external financing on acceptable terms; lack of qualified, skilled labour or loss of key individuals..

A description of additional risk factors that may cause actual results to differ materially from forward-looking information can be found in the Company's disclosure documents on the SEDAR+ website at www.sedarplus.ca. Although the Company has attempted to identify important factors that could cause

actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. Accordingly, readers should not place undue reliance on forward-looking information. Readers are cautioned that the foregoing list of factors is not exhaustive. Readers are further cautioned not to place undue reliance on forward-looking information as there can be no assurance that the plans, intentions or expectations upon which they are placed will occur. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated.

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References:

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