

# PharmaDrug Collaborates with PharmaTher for Development of DMT Transdermal Patch

## PharmaDrug is positioning to become a leader of DMT-based therapeutics for ocular disease and neuropsychiatric conditions

Toronto, Ontario--(Newsfile Corp. - February 22, 2023) - PharmaDrug Inc. (CSE: PHRX) (OTCQB: LMLLF) ("**PharmaDrug**" or the "**Company**"), a specialty pharmaceutical company focused on the research, development and commercialization of psychedelics and other naturally-derived approved drugs, is pleased to announce it has entered into a research collaboration agreement with PharmaTher Holdings Ltd. ("PharmaTher") to evaluate the delivery of N,N-Dimethyltryptamine (DMT) using PharmaTher's novel microneedle patch (MN-Patch) delivery technology.

Daniel Cohen, CEO and Chairman of PharmaDrug, commented, "We are excited to commence a collaboration with PharmaTher, a leader in microneedle patch delivery of psychedelics. We believe our combined programs and expertise in drug delivery and pharmacology, specifically relating to DMT, set the stage for the potential development of new treatment options for mental health conditions."

PharmaTher has completed a non-clinical research study with Terasaki Institute for Biomedical Innovation (TIBI) evaluating the delivery of its DMT MN-Patch. Research results from this study will be available in early Q2-2023 and will be used to support a potential human clinical study. Based on the results, PharmaDrug and PharmaTher will finalize a product and clinical development plan to initiate regulatory discussions for future clinical studies in various indications where DMT may have promise such as major depressive disorder. PharmaTher recently entered into a researcher collaboration agreement with its MN-Patch technology with [Revive Therapeutics Ltd.](#) to evaluate the delivery of 3,4-Methylenedioxymethamphetamine (MDMA).

In addition to developing cepharanthine for cancer and infectious diseases, PharmaDrug continues to build a specialty psychedelics program focusing on novel uses and delivery forms of DMT and other undisclosed psychedelic tryptamines as a potential treatment for ocular disease and neuropsychiatric conditions. The Company's DMT programs include:

- discovery of novel DMT-analogue and delivery device in partnership with TIBI for the treatment of primary open angle glaucoma;
- advancement of a clinical research collaboration with Johns Hopkins University to evaluate DMT in a Phase 1 Clinical Study under the direction of Dr. Frederick S. Barrett, PhD, Associate Professor of Psychiatry and Behavioral Sciences, and Co-investigators Dr. Sandeep Nayak and Dr. Roland Griffiths; all from the JHU Center for Psychedelic and Consciousness Research; and
- completion of foundational research aimed at understanding the role of endogenous DMT in collaboration with Dr. Jimo Borjigin, University of Michigan.

The collaboration will allow PharmaDrug to evaluate the results of PharmaTher's DMT MN-Patch. The Company believes that the DMT MN-Patch may enable flexible drug load capacity and combinations, controlled released delivery, and be able to present desired pharmacokinetic and safety profiles, which could potentially overcome obstacles associated with oral dosing.

### About the MN-Patch Technology

The microneedle patch delivery technology is based on novel biocompatible and biodegradable gelatin methacryloyl ("GelMA") material to deliver water-soluble and insoluble drugs with desirable release profiles safely. The GelMA-based microneedle patch can efficiently penetrate the stratum corneum layer

(outer layer of the skin), enable flexible drug load capacity and combinations, and control-release delivery. Microneedles are considered a promising way to achieve systemic effects by transdermal delivery of drugs, including psychedelics, and circumventing absorption and first-pass barriers typical for oral delivery. In addition, it aims to empower patients to self-dose safely and incorporates anti-tampering and anti-abuse features.

### **About PharmaTher Holdings Ltd.**

PharmaTher Holdings Ltd. is a specialty pharmaceutical company focused on developing and commercializing KETARX™ (racemic ketamine) for mental health, neurological and pain disorders. Learn more at [PharmaTher.com](http://PharmaTher.com).

### **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 100% 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 (including Covid-19) and rare cancers. Sairiyo is also conducting R&D in the psychedelics space for the treatment of non-neuropsychiatric conditions.

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*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*

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*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.sedar.com](http://www.sedar.com). 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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