PharmaDrug Advances Psychedelics Pharmaceutical Program Focused on DMT and DMT Analogues

- *PharmaDrug completes all necessary research on lead DMT-analogue to support filing of provisional patent describing novel therapeutic and delivery device for treatment of glaucoma in Q4, 2022*
- *PharmaDrug extends contract with investigators at Johns Hopkins University in support of forthcoming (Q4, 2022) FDA IND Application for a Phase 1 clinical study to investigate persistent effects of DMT*
- *PharmaDrug extends contract with investigator at University of Michigan in anticipation of forthcoming scientific publication (Q4, 2022) aimed at describing the mechanisms and consequences of endogenous DMT production*
- *PharmaDrug is positioning to become a leader of DMT-based therapeutics for ocular disease and neuropsychiatric conditions*

Toronto, Ontario--(Newsfile Corp. - August 25, 2022) - 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 that the Company continues to successfully execute on key objectives related to its multiprong psychedelics research and development strategy by generating potential shareholder value through a diversified approach to foundational research, drug development, and near-term translation into clinical studies. The Company's complimentary efforts in psychedelic research all focus on N,N-Dimethyltryptamine (DMT) and undisclosed analogues thereof. Specifically, PharmaDrug continues to capitalize on its formal engagement and collaborative efforts with leading researchers and translational scientists at Johns Hopkins University (JHU), Center for Psychedelic and Consciousness Research, Terasaki Institute for Biomedical Innovation (TIBI) and University of Michigan, through advancement of drug development efforts, human clinical studies, and strengthening of its patent portfolio.

Daniel Cohen, CEO and Chairman of PharmaDrug commented, "With a focused biotech strategy now in place, PharmaDrug can accelerate its push forward in its psychedelic programs. Utilizing bottom up fundamental research and innovation fueled by world class collaborations, the Company plans to continue to find novel uses and unique delivery forms of DMT to treat unmet medical needs."

Collaborative Research Agreement with Terasaki Institute Leads to Discovery of Potential New Treatment for Glaucoma

Based on promising research conducted at Terasaki Institute for Biomedical Innovation (TIBI) the Company is pleased to announce that it has selected its final lead drug candidate from a short list of six DMT analogue molecules and intends to submit a provisional patent in Q4, 2022 detailing the novel uses and dosage forms of its lead candidate, and medical device for the treatment of primary open angle glaucoma (POAG). Lead candidate selection derives from the demonstration of superiority as it relates to *in vitro* potency in two predictive bioassays, a favorable toxicity profile as well as physical, chemical, and metabolic properties necessary to fabricate a proprietary medical device capable of conveniently delivering sub-psychedelic levels of drug to the front of the eye over a sustained period. With efforts related to discovery and candidate selection now complete, the Company intends to advance its program in POAG by finalizing details of a second sponsored research collaboration with TIBI to undertake 1) mechanism of action studies, 2) optimization of medical device drug release

characteristics, 3) *in vitro* host-species justification studies, 4) evaluation of drug efficacy in an IND-enabling study of POAG with the goal of providing all necessary support to file an investigative new drug (IND) application with the United States Food and Drug Administration (the "FDA") to conduct clinical studies. Under the terms of the existing agreement, the Company owns or co-owns all resulting intellectual property that arises and has an exclusive option to obtain a worldwide, royalty-bearing commercialization license to all rights and title that result from studies conducted within the scope of the sponsored research agreement.

Clinical Research Collaboration with Johns Hopkins University to Evaluate DMT in a Phase 1 Clinical Study

The potential of psychedelic drugs to treat various neuropsychiatric indications is currently being explored in several human clinical trials. The Center for Psychedelic and Consciousness Research located at Johns Hopkins University (JHU) houses one of the largest and most recognized collections of psychedelics researchers in the world. In August of 2021 the Company announced that it had entered into a Clinical Research Collaboration with JHU to investigate the acute and potentially persisting effects of DMT and an undisclosed psychoactive comparator drug. By way of update, the Company is pleased to announce that excellent progress has been made in preparation of the clinical drug supplies and drafting of the IND application is underway and planned for Q4, 2022 submission to the FDA. Consistent with these developments, the Company has opted to extend its clinical research program with principal investigator 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.

As previously detailed, the planned clinical study will consist of two parts. The first part will examine dose effects of DMT and the other undisclosed test article. During the second part of the study, healthy subjects will be exposed to a maximum tolerated dose of each drug (as determined in part 1 of the study). During both parts of the study, investigators will characterize any acute and persisting subjective, affective, cognitive, and neural dose-dependent effects for both drugs being evaluated. Much debate exists around the relative potential benefits of micro vs macro-doses for psychedelic compounds. Using a highly controlled approach, the currently planned clinical trial will go some way to answering this important question. Employing an extensive battery of psychological assessment tools, coupled with state-of-the-art functional MRI and EEG the JHU researchers endeavour to develop a more fulsome understanding of how DMT acts in the brain of healthy volunteers; with the ultimate goal of being able to apply this knowledge in tailoring the treatment of serious neuropsychiatric conditions. Under the terms of the agreement, the Company has an exclusive option to obtain worldwide, royalty-bearing commercialization license to all rights, title, and interest that JHU may have or obtain in any invention that results from the clinical study.

This clinical research collaboration builds upon PharmaDrug's existing strategy of focusing on establishing a better understanding of the basic mechanisms by which DMT exerts its effects in the brain and elsewhere in the body. By supporting world class talent with distinct expertise in early discovery and clinical use the Company will be optimally positioned to identify novel applications for DMT and unlock its full therapeutic potential.

PharmaDrug Supports Foundational Research Aimed at Understanding Role of Endogenous DMT

Rounding out the third component of the Company's psychedelic strategy in DMT research and development, PharmaDrug is pleased to announce that it has formally extended its collaboration with Dr. Jimo Borjigin, University of Michigan. Dr Borjigin, in collaboration with the Company has undertaken experiments that aim to provide fundamental understanding related to the mechanisms that regulate the synthesis of endogenous DMT and the potential roles of endogenous DMT in normal, diseased, and altered states of consciousness in a newly created animal model. Notably, Dr. Borjigin was the first to show that the rat brain is capable of synthesizing and releasing DMT at concentrations comparable to

known monoamine neurotransmitters and to raise the possibility that similar mechanisms may be operational and vital in human brains. Investing in the foundational research of endogenous DMT production, the Company hopes to leverage expertise and findings to develop novel therapeutic strategies that can be translatable and clinically relevant.

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. The Company also owns 100% of Super Smart, a company building a vertically integrated retail business with the goal to elevate the use of functional mushrooms as natural based medicines.

For further information, please contact:

Daniel Cohen, Chairman and CEO
dcohen@pharmadrug.co
(647) 202-1824

Caution Regarding Forward-Looking Information:

THE CANADIAN SECURITIES EXCHANGE HAS NOT REVIEWED NOR DOES IT ACCEPT RESPONSIBILITY FOR THE ADEQUACY OR ACCURACY OF THIS RELEASE.

This press release contains "forward-looking information" within the meaning of applicable securities legislation. All statements, other than statements of historical fact, included herein are forward-looking information. Generally, forward-looking information may be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "proposed", "is expected", "budgets", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases, or by the use of words or phrases which state that certain actions, events or results may, could, would, or might occur or be achieved. In particular, this press release contains forward-looking information in relation to: the Company's ability to continue to find novel uses and unique delivery forms of DMT to treat unmet medical needs, the Company plans to advance its program in POAG , the results of the Company's research and development in the psychedelics space. This forward-looking information reflects the Company's current beliefs and is based on information currently available to the Company and on assumptions the Company believes are reasonable. These assumptions include, but are not limited to the ability of the Company to successfully execute on its plans for the Company and its affiliated entities; the ability to obtain required regulatory approvals and the Company's continued response and ability to navigate the COVID-19 pandemic being consistent with, or better than, its ability and response to date.

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; risks related to the COVID-19 pandemic including various recommendations, orders and

measures of governmental authorities to try to limit the pandemic, including travel restrictions, border closures, non-essential business closures, service disruptions, quarantines, self-isolations, shelters-in-place and social distancing, disruptions to markets, economic activity, financing, supply chains and sales channels, and a deterioration of general economic conditions; and a deterioration of financial markets that could limit the Company's ability to obtain external financing.

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. 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.

The Company's securities have not been registered under the U.S. Securities Act of 1933, as amended (the "U.S. Securities Act"), or applicable state securities laws, and may not be offered or sold to, or for the account or benefit of, persons in the United States or "U.S. Persons", as such term is defined in Regulations under the U.S. Securities Act, absent registration or an applicable exemption from such registration requirements. This press release shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the securities in the United States or any jurisdiction in which such offer, solicitation or sale would be unlawful.

Forward-looking information contained in this press release is expressly qualified by this cautionary statement. The forward-looking information contained in this press release represents the expectations of the Company as of the date of this press release and, accordingly, are subject to change after such date. However, the Company expressly disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as expressly required by applicable securities law.