

PHARMATHER HOLDINGS LTD.
INTERIM MANAGEMENT'S DISCUSSION AND ANALYSIS –
QUARTERLY HIGHLIGHTS

Three and Six Months Ended November 30, 2022

(Expressed in Canadian Dollars)

Dated: January 23, 2023

INTRODUCTION

PharmaTher Inc. ("PharmaTher") was incorporated under the Business Corporations Act (Ontario) on April 1, 2020. The registered head office of the Company is 82 Richmond Street East, Toronto, Ontario M5C 1P1.

PharmaTher Holdings Ltd. (formerly Newscope Capital Corporation) ("Newscope" or the "Company") was incorporated under the Business Corporations Act (British Columbia) on March 20, 2019. The registered head office of the Company is 1055 West Georgia Street, 1500 Royal Centre, P.O. Box 11117, Vancouver B.C. V6E 4N7, Canada.

On June 10, 2020, Newscope issued 47,240,000 common shares as consideration for acquisition of all the issued and outstanding common shares in the capital of PharmaTher (the "Acquisition"). In addition, Newscope issued an aggregate of 115,000 warrants in exchange for the issued and outstanding warrants of PharmaTher. Each warrant entitles the holder thereof to acquire one common share in the capital of Newscope at an exercise price of \$0.10 for a period of 24 months from the original date of issuance. The Acquisition was accounted for as a reverse takeover ("RTO") whereby PharmaTher was identified as the acquirer for accounting purpose and the resulting consolidated financial statements are presented as a continuance of PharmaTher and the comparative figures presented in the consolidated financial statements after the RTO are those of PharmaTher. After the RTO, the combined entity of Newscope and PharmaTher is referred to as the "Company" in this Interim MD&A (defined below).

PharmaTher is a specialty pharmaceutical company focused on developing and commercializing KETARX™ (racemic ketamine) delivered by intravenous and intramuscular injection, microneedle patch, and on-body pump for mental health, neurological and pain disorders.

The Canadian Dollar is the Company's functional and reporting currency. Unless otherwise noted, all dollar amounts are expressed in Canadian Dollars.

The following interim Management's Discussion & Analysis ("Interim MD&A") of the Company for the three and six months ended November 30, 2022, has been prepared to provide material updates to the business operations, liquidity, and capital resources of the Company since its last annual management's discussion & analysis, being the Management's Discussion & Analysis ("Annual MD&A") for the fiscal year ended May 31, 2022. This Interim MD&A does not provide a general update to the Annual MD&A, or reflect any non-material events since the date of the Annual MD&A.

This Interim MD&A has been prepared in compliance with section 2.2.1 of Form 51-102F1, in accordance with National Instrument 51-102 – Continuous Disclosure Obligations. This discussion should be read in conjunction with the Annual MD&A and audited annual consolidated financial statements of the Company for the years ended May 31, 2022 and 2021, together with the notes thereto, and unaudited condensed interim consolidated financial statements of the Company for the three and six months ended November 30, 2022, and 2021, together with the notes thereto. Results are reported in Canadian dollars, unless otherwise noted. The Company's financial statements and the financial information contained in this Interim MD&A are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board and interpretations of the IFRS Interpretations Committee. The unaudited condensed interim consolidated financial statements have been prepared in accordance with International Standard 34, Interim Financial Reporting. Accordingly, information contained herein is presented as of January 23, 2023, unless otherwise indicated.

Further information about the Company and its operations can be obtained from the offices of the Company.

CAUTIONARY NOTE REGARDING FORWARD LOOKING INFORMATION

This Interim MD&A contains forward-looking information and statements (“forward-looking statements”) which may include, but are not limited to, statements with respect to the future financial or operating performance of the Company. Forward-looking statements reflect the current expectations of management regarding the Company’s future growth, results of operations, performance and business prospects and opportunities. Wherever possible, words such as “may”, “would”, “could”, “will”, “anticipate”, “believe”, “plan”, “expect”, “intend”, “estimate” and similar expressions have been used to identify these forward-looking statements. These statements reflect management’s current beliefs with respect to future events and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause the actual results, performance or events to be materially different from any future results, performance or events that may be expressed or implied by such forward-looking statements, including, without limitation, those listed in the “Risk Factors” section of this Interim MD&A. Although the Company has attempted to identify important factors that could cause actual results, performance or events to differ materially from those described in the forward-looking statements, there could be other factors unknown to management or which management believes are immaterial that could cause actual results, performance or events to differ from those anticipated, estimated or intended. Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward-looking statements prove incorrect, actual results, performance or events may vary materially from those expressed or implied by the forward-looking statements contained in this Interim MD&A. These factors should be considered carefully, and readers should not place undue reliance on the forward-looking statements. Forward-looking statements contained herein are made as of the date of this Interim MD&A and the Company assumes no responsibility to update forward looking statements, whether because of new information or otherwise, other than as may be required by applicable securities laws.

Forward-Looking Statements	Assumptions	Risk Factors
The Company’s (i) development of product candidates, (ii) demonstration of such product candidates’ safety and efficacy in clinical trials, and (iii) obtaining regulatory approval to commercialize these product candidates.	Financing will be available for development of new product candidates and conducting clinical studies; the actual results of the clinical trials will be favourable; development costs will not exceed the Company’s expectations; the Company will be able to retain and attract skilled staff; the Company will be able to recruit suitable patients for clinical trials; all requisite regulatory and governmental approvals to commercialize the product candidates will be received on a timely basis upon terms acceptable to the Company; applicable economic conditions are favourable to the Company.	Availability of financing in the amount and time frame needed for the development and clinical trials may not be favourable; increases in costs; uncertainties of COVID-19 pandemic; the Company’s ability to retain and attract skilled staff; the Company’s ability to recruit suitable patients for clinical trials; timely and favourable regulatory and governmental compliance, acceptances, and approvals; interest rate and exchange rate fluctuations; changes in economic conditions.
The Company’s ability to obtain the substantial capital it requires to fund research and operations.	Financing will be available for the Company’s research and operations and the results thereof will be favourable; debt and equity markets, exchange and interest rates and other applicable economic conditions are favourable to the Company.	Changes in debt and equity markets; uncertainties of COVID-19 pandemic; timing and availability of external financing on acceptable terms; increases in cost of research and operations; interest rate and exchange rate fluctuations; adverse changes in economic conditions.
Factors affecting pre-clinical research, clinical trials and regulatory approval process of	Actual costs of pre-clinical research, clinical and regulatory processes will be consistent with the Company’s current expectations; the Company will be able	The Company’s product candidates may require time-consuming and costly pre-clinical and clinical studies and testing and regulatory approvals

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

Forward-Looking Statements	Assumptions	Risk Factors
the Company's product candidates.	to retain and attract skilled staff; the Company will be able to recruit suitable patients for clinical trials; the Company will be able to complete pre-clinical research and clinical studies on a timely basis with favourable results; all applicable regulatory and governmental approvals for product candidates will be received on a timely basis with terms acceptable to the Company; debt and equity markets, exchange and interest rates, and other applicable economic and political conditions are favourable to the Company; there will be a ready market for the product candidates.	before commercialization; the Company's ability to retain and attract skilled staff; uncertainties of COVID-19 pandemic; the Company's ability to recruit suitable patients for clinical trials; adverse changes in regulatory and governmental processes; interest rate and exchange rate fluctuations; changes in economic and political conditions; the Company will not be adversely affected by market competition.
The Company's ability to commercialize on its own or find and enter into agreements with potential partners to bring viable product candidates to commercialization.	The Company will be able to commercialize on its own or to find a suitable partner and enter into agreements to bring product candidates to market within a reasonable time frame and on favourable terms; the costs of commercializing on its own or entering into a partnership will be consistent with the Company's expectations; partners will provide necessary financing and expertise to bring product candidates to market successfully and profitably.	The Company will not be able to commercialize on its own or find a partner and/or enter into agreements within a reasonable time frame; if the Company enters into agreements, these agreements may not be on favourable terms to the Company; costs of entering into agreements may be excessive; uncertainties of COVID-19 pandemic; potential partners will not have the necessary financing or expertise to bring product candidates to market successfully or profitably.
The Company's ability to obtain and protect the Company's intellectual property rights and not infringe on the intellectual property rights of others.	Patents and other intellectual property rights will be obtained for viable product candidates; patents and other intellectual property rights obtained will not infringe on others.	The Company will not be able to obtain appropriate patents and other intellectual property rights for viable product candidates; patents and other intellectual property rights obtained will be contested by third parties; no proof that acquiring a patent will make the product more competitive.
The Company's ability to source markets which have demand for its products and successfully supply those markets in order to generate sales.	The anticipated markets for the Company's potential products and technologies will continue to exist and expand; the Company's products will be commercially viable, and it will successfully compete with other research teams who are also examining potential products.	The anticipated market for the Company's potential products and technologies will not continue to exist and expand for a variety of reasons, including competition from other products and the degree of commercial viability of the potential product.
Future actions with respect to and potential impacts of pending claims.	The Company will be able to settle or otherwise obtain disposition of claims against it on favourable terms.	The Company may will not be able to settle pending claims on favourable terms; claims may be adjudicated in a manner that is not favourable to the Company.

Inherent in forward-looking statements are risks, uncertainties, and other factors beyond the Company's ability to predict or control. Please also refer to those risk factors referenced in the "Risk Factors" section below. Readers are cautioned that the above chart does not contain an exhaustive list of the factors or assumptions that may affect the forward-looking statements, and that the assumptions underlying such statements may prove to be incorrect. Actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking statements contained in this Interim MD&A.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance, or achievements to be materially different from any of its future results, performance or achievements expressed or implied by forward-looking statements. All forward-looking statements herein are qualified by this cautionary statement. Accordingly, readers should not place undue reliance on forward-looking statements. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking statements whether as a result of new information or future events or otherwise, except as may be required by law. If the Company does update one or more forward-looking statements, no inference should be drawn that it will make additional updates with respect to those or other forward-looking statements, unless required by law.

BUSINESS OVERVIEW

PharmaTher is a specialty pharmaceutical company focused on developing and commercializing KETARX™ (racemic ketamine) delivered by intravenous and intramuscular injection, microneedle patch, and on-body pump for mental health, neurological and pain disorders. PharmaTher is advancing the clinical development of KETARX™ for anesthesia/sedation, complex regional pain syndrome, Parkinson's disease and Amyotrophic Lateral Sclerosis. The Company aims to leverage the U.S. Food and Drug Administration ("FDA") regulatory incentives for expedited approvals, such as the FDA 505(b)(2) regulatory pathway, orphan drug, and fast track designations. PharmaTher's patent portfolio includes granted and provisional patents on method of uses of KETARX™ and drug delivery systems. In addition, the Company actively seeks licensing, acquisition or partnership opportunities from industry and academia.

CORPORATE HIGHLIGHTS

On June 7, 2022, the Company announced positive results from an investigator-led observational study (the "Study") evaluating the impact of KETABET™, a patented drug combination of FDA-approved ketamine and betaine anhydrous, on the unwanted ketamine side effects seen post ketamine treatment for subjects with depression.

On June 29, 2022, the Company announced that it has successfully completed its research study evaluating the Company's patented hydrogel-forming microneedle patch, PHARMAPATCH™, to deliver ketamine and KETABET™ (ketamine and betaine anhydrous), which aims to prevent the potential side effects of repeated ketamine treatment for depression and other indications, including suicidal ideation, substance abuse, post-traumatic stress disorder, neurological disorders, and chronic pain.

On July 13, 2022, the Company announced that the United States Patent and Trademark Office ("USPTO") has provided a Notice of Allowance for patent application No. 15/574,346, titled "Compositions and Methods for Treating Motor Disorders", which includes claims intended to cover ketamine in the potential treatment of Parkinson's Disease and motor disorders that cause involuntary or uncontrollable movement or actions of the body.

On September 7, 2022, the Company announced that it has completed an IND-enabling pharmacokinetic and tolerability study of KETARX™ Ketamine Patch in minipigs.

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

On September 16, 2022, the Company announced Late-Breaking Abstract Presentation of Positive Efficacy and Safety Data from Phase 1/2 Clinical Study of Ketamine in the Treatment of Levodopa-Induced Dyskinesia in Parkinson's Disease at the MDS International Congress of Parkinson's Disease and Movement Disorders.

October 5, 2022, the Company announced that the United States Patent and Trademark Office ("USPTO") granted US Patent No: 11,426,366, titled "Compositions and Methods for Treating Motor Disorders," which includes claims intended to cover ketamine in the potential treatment of Parkinson's Disease and motor disorders that cause involuntary or uncontrollable movement or actions of the body.

On November 14, 2022, the Company announced that a poster presentation of the Phase 1/2 clinical study of ketamine in the treatment of levodopa-induced dyskinesia in Parkinson's disease was presented at Neuroscience 2022 by the Society for Neuroscience being held November 12-16, 2022, at the San Diego Convention Center in San Diego, California. In addition, the Company has engaged the FDA to establish the next steps for a planned Phase 3 clinical study to allow for the Company's proprietary ketamine intravenous product, KETARX™, approval for Parkinson's disease under the 505(b)(2) regulatory pathway.

On December 15, 2022, the Company announced that FDA has granted orphan drug designation for ketamine in the prevention of ischemia-reperfusion injury from organ transplantation.

On January 18, 2023, the Company announced that it has applied with the FDA to receive Orphan Drug Designation ("ODD") for ketamine to treat Rett Syndrome, a rare genetic neurological disorder. Ketamine has been subject to a Phase 2 clinical trial (NCT03633058) for Rett syndrome.

RESEARCH AND DEVELOPMENT

The Company is a specialty pharmaceutical company focused on developing and commercializing KETARX™ (racemic ketamine) delivered by intravenous and intramuscular injection, microneedle patch, and on-body pump for mental health, neurological and pain disorders. PharmaTher is advancing the clinical development of KETARX™ for anesthesia/sedation, complex regional pain syndrome, Parkinson's disease and Amyotrophic Lateral Sclerosis.

KETARX™

KETARX™ is the Company's Ketamine Hydrochloride injection USP product, or racemic ketamine, and is being developed for rare disorders, such as Parkinson's disease, Amyotrophic Lateral Sclerosis, complex regional pain syndrome, as well as larger unmet needs in anesthesia and procedural sedation. Ketamine is a rapid-acting, nonbarbiturate general anesthetic approved by the FDA in 1970 and is clinically used for analgesia, sedation, and anesthetic induction. Ketamine is a generic drug classified by the Drug Enforcement Agency ("DEA") as a Schedule III controlled substance. Published studies have demonstrated ketamine's potential in major depressive disorder, bipolar depression, depression with suicidal ideation, post-traumatic stress disorder, drug addiction, Parkinson's disease, and pain management.

KETARX™ for anesthesia and procedural sedation

The Company is developing a generic form of Ketamine Hydrochloride Injection USP multi-dose use. In the U.S., Ketamine Hydrochloride is indicated as an anaesthetic agent for diagnostic and surgical procedures that do not require skeletal muscle relaxation. The Company expects to form partnerships with research labs, ketamine clinics and pharmaceutical companies that are: seeking a secure supply of cGMP ketamine and ketamine products for

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

current portfolios; exploring alternative dose forms for multiple existing indications; and requiring support to develop and eventually commercialize specific ketamine products for new indications. In addition, the Company will enter the market with KETARX™ targeting ketamine's FDA approved label for anesthesia and procedural sedation. The Company will seek to file a supplemental Abbreviated New Drug Application for with the FDA and seek regulatory approvals for international markets.

KETARX™ for Parkinson's disease

Parkinson's disease is a debilitating disorder that affects over 1 million people in the U.S. and more than 7 million people worldwide. There is currently no cure for Parkinson's disease, although some drug combinations are used to treat the disease symptoms. Levodopa is the gold standard for Parkinson's disease treatment but features significant drawbacks, including the major side effect of dyskinesia and a loss of effectiveness over time. Approximately 50% of patients with PD will develop Levodopa-induced dyskinesia ("LID") 4-5 years after the initiation of levodopa therapy, and this number rises to 80% after 10-12 years of levodopa treatment. LID may interfere with motor function, cause or aggravate pain and is known to worsen the quality of life significantly. Individuals with Parkinson's disease may experience a host of non-motor symptoms such as autonomic dysfunction, psychiatric (depression), cognitive and sensory symptoms (pain). Therefore, there is an urgent need for alternative treatments and has been identified by the regulatory authorities, patient advocacy groups such as Michael J. Fox Foundation, and key opinion leaders as a substantial unmet medical need.

PharmaTher has entered into an exclusive license agreement with the University of Arizona for the development and commercialization of ketamine in the treatment of Parkinson's disease. Ketamine is an FDA-approved drug with a known safety profile. Prior clinical reports suggest that low-dose ketamine infusions are well tolerated and can improve pain and depression, both often comorbidities in Parkinson's disease patients. Inventors Dr. Scott Sherman and Dr. Torsten Falk, both associate professors at The University of Arizona College of Medicine – Tucson, are working with Tech Launch Arizona to patent the results from preclinical data and five case studies in Parkinson's disease patients showing that low-dose sub-anesthetic ketamine infusion indicates tolerability, safety, and the potential of long-term therapeutic benefit to reduce Levodopa-induced dyskinesia, improve on time, and reduce depression.¹⁻⁵

The FDA has approved the Company's Investigational New Drug application to proceed with a Phase 2 clinical trial to evaluate the safety, efficacy and pharmacokinetics of ketamine in the treatment of LID-PD. PharmaTher recently announced the presentation of a Phase 1/2 clinical study involving ketamine in the treatment of LID-PD. The data from this study demonstrated ketamine's safety and tolerability with clinically meaningful efficacy that supports further investigation in a proposed Phase 3 clinical study as a potential new treatment for LID-PD and the Company would seek FDA approval via the 505(b)(2) regulatory pathway.

KETARX™ for Amyotrophic Lateral Sclerosis

ALS is a progressive neuromuscular disease with a life expectancy of only two to six years after diagnosis. Currently, there is no known cure for ALS. ALS affects approximately 50,000 people in the U.S. and Europe, with over 5,000

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1. UA Clinical Trial to Repurpose Ketamine for Parkinson's Patients.
 2. US20190060254A1— Compositions and methods for treating motor disorders.
 3. Bartlett, et al, 2020. Preclinical evidence in support of repurposing sub-anesthetic ketamine as a treatment for L-DOPA-induced dyskinesia. *Experimental Neurology*. Volume 333.
 4. Bartlett, M.J., Joseph, R.M., LePoidevin, L.M., Parent, K.L., Laude, N.D., Lazarus, L.B., Heien, M.L., Estevez, M., Sherman, S.J., Falk, T., 2016. Long-term effect of sub-anesthetic ketamine in reducing L-DOPA-induced dyskinesias in a preclinical model.
 5. Sherman, S.J., Estevez, M., Magill, A.B., Falk, T., 2016. Case reports showing a long-term effect of subanesthetic ketamine infusion in reducing L-DOPA-induced dyskinesias. *Case Rep. Neurol.* 8, 53–58.

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

new cases diagnosed annually. As ALS advances, upper and lower motor neurons die, causing the brain to lose its ability to control muscle movement. ALS patients experience progressive loss of voluntary muscle action as an effect of the disease, resulting in the inability to speak, eat, move and, eventually, breathe. The FDA approved only three pharmaceuticals for the treatment of ALS: riluzole, edaravone, and Nuedexta (dextromethorphan HBr and quinidine sulfate). These drugs are effective against disease mechanisms of ALS but fail to have measurable effects on attenuating disease progression or improve survival. Therefore, there is an imperative need for new pharmacological therapies that can stop or slow the muscle decline associated with ALS progression and extend the life expectancy of the ALS patient.

PharmaTher entered into an exclusive license agreement with The University of Kansas to develop and commercialize the intellectual property of ketamine to treat ALS. Ketamine has the potential to effectively increase the life expectancy of those with ALS at any stage and slow the progressive loss of muscle associated with poor outcomes of the disease. The University of Kansas Medical Center researchers and inventors of the potential use of ketamine to treat ALS, Dr. Richard J. Barohn, M.D., John A. Stanford, Ph.D., and Dr. Matthew Macaluso, D.O., have made the promising discovery that ketamine can be administered as an effective treatment for ALS. Unpublished and patent-pending preclinical research has shown that the administration of ketamine preserves muscle function in advancing ALS and increases life expectancy when given in the early stages of muscle decline. Ketamine works by blocking the action of the ionotropic glutamate receptor, the NMDA receptor. Unlike other inhibitors of NMDA receptor function, such as riluzole, ketamine dampens NMDA receptor-related glutamate excitotoxicity indirectly. Further, ketamine can lower D-serine concentrations intracellularly and also partially activates dopamine receptors. Collectively, these mechanisms of ketamine contribute in part to the drug's neuroprotective effects, which may extend to the motor neurons targeted in ALS.

The FDA has accepted an investigator-initiated investigational new drug application to proceed with a Phase 2 clinical trial evaluating ketamine in the treatment of ALS. Assuming the study is positive, the Company will request a meeting with the FDA to discuss its plan and obtain an agreement to move to a Phase 3 clinical study and accelerated marketing approval. The Company will seek regulatory approval under the FDA 505(b)(2) regulatory pathway.

KETARX™ Microneedle Patch

The Company is developing KETARX™ (racemic ketamine) microneedle patch, for mental health, neurological and pain disorders. KETARX™ microneedle patch aims to empower patients to dose their medication remotely, safely and conveniently rather than being under supervision by a healthcare provider at a certified medical office. KETARX™ microneedle patch has the potential to incorporate anti-tampering and anti-abuse features because of the combined presence of ketamine and betaine and the delivery format of the product that would parallel the approach used for the tamper-resistant transdermal fentanyl patch. In a research project with The Queen's University of Belfast, led by Professor Ryan Donnelly, the Company has successfully completed the evaluation of a patented hydrogel-forming microneedle patch to deliver KETARX™. This de-risking milestone supports the Company's expansion in finalizing IND-enabling studies and the clinical manufacturing scale up with LTS Lohmann, a leader in transdermal delivery systems, to support FDA and international regulatory submissions.

KETARX™ On-body Pump

PharmaTher aims to commercialize KETARX™ On-body Pump (subcutaneous racemic ketamine) for the maintenance of general anesthesia for diagnostic and surgical procedures. The Company believes that subcutaneous infusion of racemic ketamine via the on-body pump device has several advantages for ketamine procedural sedation, including decreased requirement for skilled personnel for its administration, reduction in pain and irritation associated with administration, and a reduced risk of systemic infection and other complications seen

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

with IV administration. The Company has partnered with CC Biotechnology Corporation, a leader in the design and manufacturing of wearable, pen and auto injectors, for the development of the KETARX™ On-body Pump solution for mental health, neurological and pain disorders. The Company believes that in the natural evolution of chronic disease management, a logical progression from IV and IM to wearable injection systems could increase the convenience, compliance, and dose flexibility for both caregivers and patients.

KETABET™

PharmaTher entered into an Exclusive Worldwide License Agreement with the National Health Research Institutes (“NHRI”) for the development and commercialization of a patented combination formulation of FDA-approved ketamine and betaine (“KETABET™”) as a potential next-generation ketamine treatment for mental health, neurological and pain disorders. KETABET™ has shown in clinical research to enhance the antidepressant effect while having the potential to significantly reduce the known negative side effects of ketamine.⁶ Side effects such as hallucinations, confusion, memory loss and abuse liability compromise the compliance and potential therapeutic value of ketamine.

Betaine anhydrous (CYSTADANE®) was approved by the FDA in 1996 for the treatment of homocystinuria to decrease elevated homocysteine blood concentrations. There is growing evidence that betaine plays a critical role in regulating brain functions and has an antidepressant-like effect.⁷ Betaine has been reported to prevent seizures in rodents⁸, to improve symptoms of Rett syndrome⁹, and to delay the onset of neurologic impairment due to vitamin B12 deficiency¹⁰ clinically. Furthermore, betaine attenuates memory deficits induced by homocysteine.¹¹

Based on preclinical studies that supported the granted patent (Taiwan patent: I648049) and patent applications International Publication Number: WO2017205666A1) of KETABET™, the combination of ketamine and betaine produced more robust antidepressant-like responses than their individual effects and that the combination blocked the psychotomimetic effects of ketamine.⁶ This suggests that betaine can be considered as an add-on therapy to ketamine or as a fixed-dose combination therapy for treatment-resistant depression, treatment-resistant bipolar disorder, post-traumatic stress disorder, obsessive-compulsive disorder and chronic pain.

PHARMAPATCH™

PHARMAPATCH™ is the Company's microneedle patch technology solution, such as its hydrogel-forming delivery system and its gelatin methacryloyl delivery system, for psychedelics (i.e., ketamine, psilocybin, DMT, LSD and MDMA, etc) and infectious diseases. The Company seeks to develop and partner these programs with life sciences companies.

Hydrogel-Forming Microneedle Delivery

PharmaTher entered into an exclusive worldwide patent and know-how license agreement with The Queen's University of Belfast (“QUB”) to develop and commercialize a patented hydrogel-forming microneedle patch delivery technology developed by Professor Ryan Donnelly to support PharmaTher's product and clinical development

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6. J.-C. Lin, M.-Y. Lee, M.-H. Chan, Y.-C. Chen, H.-H. Chen, Betaine enhances antidepressant-like, but blocks psychotomimetic effects of ketamine in mice, *Psychopharmacology (Berl)*. 233 (2016) 3223–32
 7. Freed 1984;
 8. Kim et al. 2013; Di Pierro et al. 2015;
 9. Percy and Lane 2005;
 10. Van der Westhuyzen and Mertz 1984;
 11. Chai. Et al 2013

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

initiatives involving ketamine. The patented microneedle patch delivery system consists of hydrogel-forming microneedle arrays and an accompanying reservoir which will overcome any limitations by the quantity of drug that can be loaded into the needles or onto the needle surfaces. The microneedle patch can significantly increase drug permeating through the microneedle array and into the skin.

Most recently, Professor Donnelly's lab successfully completed research and published a paper titled "Hydrogel-forming microneedle arrays as a therapeutic option for transdermal esketamine delivery," validating the delivery of esketamine, the S(+) enantiomer of ketamine, in a novel microneedle patch which may overcome the drawbacks associated with ketamine administration in an intravenous or nasal spray format.

PharmaTher entered into a sponsored research agreement with QUB to further develop the hydrogel-forming microneedle delivery system.

Gelatin Methacryloyl Microneedle Delivery System for Psychedelics

PharmaTher entered into an exclusive license agreement with BioRAE, Inc., for the development and commercialization of a novel biocompatible and biodegradable gelatin methacryloyl microneedle ("GelMA-MN") delivery technology developed at the University of California, Los Angeles ("UCLA") for use with psychedelic pharmaceuticals, including, but not limited to Psilocybin, Ketamine, LSD, MDMA, DMT, and Cannabinoids.

The GelMA-MN delivery technology was invented and developed by the members of the Khademhosseini Lab at UCLA. Studies have shown that GelMA can be used for the fabrication of MN arrays and the delivery of both water-soluble and insoluble drugs with desirable release profiles. GelMA is derived from the natural polymer gelatin with cross linkable methacrylate group making it an ideal candidate for MN fabrication and various other biomedical applications. The GelMA-MNs are biocompatible and biodegradable, can efficiently penetrate the stratum corneum layer (outer layer of the skin), enable flexible drug load capacity and combinations, and control-release delivery. MNs are considered as a promising way to achieve systemic effects by transdermal delivery of drugs. In addition to applications on the skin, MNs may be applied in other organs and tissues like the eyes and mucosal surfaces. MNs are minimally invasive, painless, and may overcome the potential drawbacks of oral administration, subcutaneous injections and other transdermal delivery systems.

PharmaTher entered into a sponsored research agreement with the Terasaki Institute to further develop the GelMA MN patch for the delivery of psilocybin, DMT, MDMA and LSD.

TRENDS AND ECONOMIC CONDITIONS

(a) Management regularly monitors economic conditions and estimates their impact on the Company's operations and incorporates these estimates in both short-term operating and longer-term strategic decisions.

(b) Due to the worldwide COVID-19 outbreak, material uncertainties may come into existence that could influence management's going concern assumption. Management cannot accurately predict the future impact COVID-19 may have on:

- The severity and the length of potential measures taken by governments to manage the spread of the virus, and their effect on service provider availability;
- Purchasing power of the Canadian dollar; or
- Ability to obtain funding.

At the date of this Interim MD&A, the Canadian government has not introduced measures which impede the activities of the Company. Management believes the business will continue and accordingly the current situation bears no

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

impact on management's going concern assumption. However, it is not possible to reliably estimate the length and severity of these developments and the impact on the financial results and condition of the Company in future periods.

(c) Apart from these and the risk factors noted under the heading "Risk Factors" and "Cautionary Note Regarding Forward-Looking Information", management is not aware of any other trends, commitments, events or uncertainties that would have a material effect on the Company's business, financial condition or results of operations.

FINANCIAL RESULTS

The Company reported a net loss of \$4,068,225 for the six months ended November 30, 2022, which is comprised of unrealized loss on investment of \$2,100,000, research of \$1,582,777, consulting fee of \$213,365, general, and administrative of \$152,164, shareholder information and filing fees of \$37,208 and professional fees of \$66,852. The Company is maintaining reporting issuer status while moving forward in its research initiatives as outlined under "Research and Development" above.

The Company reported a net loss of \$1,051,553 for the six months ended November 30, 2021, which is comprised of unrealized gain on investment of \$500,000, research of \$706,480, consulting fee of \$373,196, general, and administrative of \$65,301, stock-based compensation of \$168,779, shareholder information and filing fees of \$120,235 and professional fees of \$117,562.

The Company reported a net loss of \$2,279,890 for the three months ended November 30, 2022, which is comprised of unrealized loss on investment of \$1,533,333, research of \$555,284, consulting fee of \$118,818, general, and administrative of \$91,222, shareholder information and filing fees of \$26,978 and professional fees of \$38,396. The Company is maintaining reporting issuer status while moving forward in its research initiatives as outlined under "Research and Development" above.

The Company reported a net loss of \$137,079 for the three months ended November 30, 2021, which is comprised of unrealized gain on investment of \$900,000, research of \$527,447, consulting fee of \$173,424, general, and administrative of \$23,359, stock-based compensation of \$168,779, shareholder information and filing fees of \$67,533 and professional fees of \$76,537.

LIQUIDITY AND CAPITAL RESOURCES

The Company's approach to managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due. The Company's liquidity and operating results may be adversely affected if the Company's access to the capital market is hindered, whether because of a downturn in stock market conditions generally or because of conditions specific to the Company. The Company regularly evaluates its cash position to ensure preservation and security of capital as well as maintenance of liquidity. As the Company does not presently generate revenue to cover its costs, managing liquidity risk is dependent upon the ability to secure additional financing. The recoverability of the carrying value of the assets and the Company's continued existence is dependent upon the achievement of profitable operations, or the ability of the Company to raise alternative financing, as necessary. While management and the Board have been successful in raising the necessary capital, it cannot provide assurance that it will be able to execute on its business strategy or be successful in future financing activities.

As of November 30, 2022, the Company had a cash balance of \$7,146,928 to settle current liabilities of \$325,634. The Company has deficit of \$5,436,798 as of November 30, 2022.

As of November 30, 2022, based on current projections, the Company's working capital of \$7,765,327, which is comprised of current assets less current liabilities, is sufficient to meet its planned development activities for the financial year ending May 31, 2023.

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

The table below outlines the comparison of the Company's actual and planned uses of working capital from June 1, 2021 to November 30, 2022:

Use of Capital	Estimated Cost	Spent to November 30, 2022 (approx.)	Remaining Funds to Spend or (excess)
General and administrative ⁽¹⁾	\$750,000	\$347,000	\$403,000
Sales and marketing	\$150,000	\$38,000	\$112,000
Research and development ⁽²⁾	\$2,500,000	\$1,583,000	\$917,000
Total	\$3,400,000	\$1,968,000	\$1,432,000

Notes:

- (1) This figure is for a forecasted period from June 1, 2022 to May 31, 2023 and is comprised of consulting fees in the amount of approximately \$400,000, professionals' fees in the amount of approximately \$150,000, transfer agent and regulatory fees in the amount of approximately \$50,000, and insurance and office expenses in the amount of approximately \$150,000.
- (2) This figure is for a forecasted period from June 1, 2022 to May 31, 2023 and is comprised of anticipated costs of \$1,000,000 in connection with the development and production of KETARX™ for regulatory submission and future clinical studies, anticipated costs of \$1,000,000 in connection with the development and production of KETARX™ microneedle patch and on-body pump for future clinical studies and anticipated costs of \$500,000 for general research, development, and clinical studies.

Unallocated funds will be deposited in the Company's bank account and added to the working capital of the Company. Based on the Company's cash flow requirements, management will determine the appropriate level of liquidity required for operations and will draw down such funds as necessary.

There may be circumstances, where for business reasons, a reallocation of funds may be necessary for the Company to achieve its stated business objectives. To date, the COVID-19 pandemic has not had an impact on the Company's available funds or the anticipated use of such funds.

The Company had negative cash flow from operating activities for the three and six months ended November 30, 2022. The Company cannot guarantee it will have a cash flow positive status from operating activities in future periods. As a result, the Company continues to rely on the issuance of securities or other sources of financing to generate sufficient funds to fund its working capital requirements and for corporate expenditures. The Company may continue to have negative cash flow from operating activities until sufficient levels of sales are achieved. To the extent that the Company has negative cash flow from operating activities in future periods, the Company may need to use a portion of proceeds from any offering to fund such negative cash flow.

RELATED PARTY TRANSACTIONS

- (a) Related party balances and transactions

Related parties include the directors of the Company, close family members and enterprises which are controlled by these individuals as well as persons performing similar functions.

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

Names	Three Months Ended November 30, 2022 \$	Three Months Ended November 30, 2021 \$	Six Months Ended November 30, 2022 \$	Six Months Ended November 30, 2021 \$
Fabio Chianelli (i)	80,000	75,000	140,000	120,000
Marrelli Support Services Inc. ("MSSI") (ii)	16,964	17,175	30,710	27,414
DSA Corporate Services Inc. ("DSA") (iii)	18,819	23,297	22,119	37,079
Larnic Inc. (iv)	55,000	72,000	130,000	112,000
Marrelli Trust Company Limited ("Marrelli Trust") (v)	4,665	4,295	5,205	5,315
Total	175,448	191,767	328,034	301,808

(i) Fees are related to services of Fabio Chianelli to act as the Chief Executive Officer ("CEO") of the Company. Fabio Chianelli is the owner of Fabiotech Inc. As at November 30, 2022, \$nil (May 31, 2022 - \$nil) was owed to the CEO.

(ii) Fees are related to services of Carmelo Marrelli to act as the Chief Financial Officer ("CFO") of the Company. Carmelo Marrelli is the Managing Director of MSSI. Services were incurred for bookkeeping, accounting and CFO services. As at November 30, 2022, MSSI was owed \$2,318 (May 31, 2022 - \$1,463) and this amount was included in accounts payable and accrued liabilities. This amount is unsecured and non-interest bearing.

(iii) The CFO of the Company is an officer of DSA and the Corporate Secretary of the Company is an employee of DSA. Fees are related to corporate secretarial and filing services provided by DSA. As at November 30, 2022, DSA was owed \$4,803 (May 31, 2022 - \$3,277) and this amount was included in accounts payable and accrued liabilities. This amount is unsecured and non-interest bearing.

(iv) During the three and six months ended November 30, 2022, the Company incurred consulting fees of \$55,000 and \$130,000, respectively (three and six months ended November 30, 2021 - \$72,000 and \$112,000, respectively) to a company controlled by the spouse of the CEO and the consulting fees have been included in research expenses, which services supported aspects of the product and clinical development, regulatory and market research of the Company's product pipeline. As at November 30, 2022, the company controlled by the spouse of the CEO was owed \$nil (May 31, 2022 - \$nil).

(v) The CFO of the Company is a director of Marrelli Trust. Marrelli Trust provided stock transfer services to the Company. As at November 30, 2022, Marrelli Trust was owed \$2,142 (May 31, 2022 - \$nil) and this amount was included in accounts payable and accrued liabilities. This amount is unsecured and non-interest bearing.

(vi) During the year ended May 31, 2021, one of the officers of the Company paid research and development expenses in the amount of \$2,608 on behalf of the Company. As at November 30, 2022, the Company owed \$2,702 (May 31, 2022 - \$2,540) to the officer.

(b) Remuneration of directors and key management

In accordance with IAS 24, key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Company directly or indirectly, including any directors

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

(executive and non-executive) of the Company. During the three and six months ended November 30, 2022 and 2021, the Company incurred no remuneration of management.

(c) Major shareholders

To the knowledge of the directors and senior officers of the Company, as at November 30, 2022, no person or corporation beneficially owns or exercises control over common shares of the Company carrying more than 10% of the voting rights attached to all common shares of the Company other than Mr. Fabio Chianelli who owns 17.45% of the Company. The holding can change at any time at the discretion of the owners.

None of the Company's major shareholders have different voting rights compared to holders of the Company's common shares.

The Company is not aware of any arrangements the operation of which may at a subsequent date result in a change in control of the Company. To the knowledge of the Company, it is not directly or indirectly owned or controlled by another corporation, by any government or by any natural or legal person severally or jointly.

RISK FACTORS

An investment in the securities of the Company is highly speculative and involves numerous and significant risks. Such investment should be undertaken only by investors whose financial resources are sufficient to enable them to assume these risks and who have no need for immediate liquidity in their investment. Prospective investors should carefully consider the risk factors that have affected, and which in the future are reasonably expected to affect, the Company and its financial position. Please refer to the section entitled "Risk Factors " in the Company's Annual MD&A for the year ended May 31, 2022.

Additional Disclosure for Venture Issuers Without Significant Revenue

Office expenses

	Three Months Ended November 30, 2022 (\$)	Three Months Ended November 30, 2021 (\$)	Six Months Ended November 30, 2022 (\$)	Six Months Ended November 30, 2021 (\$)
Research	555,284	527,447	1,582,777	706,480
Professional fees	38,396	76,537	66,852	117,562
Consulting fees	118,818	173,424	213,365	373,196
General and administrative	91,222	23,359	152,164	65,301
Stock-based compensation	nil	168,779	nil	168,779
Shareholder information and filing fees	26,978	67,533	37,208	120,235
Total	830,698	1,037,079	2,052,366	1,551,553

PharmaTher Holdings Ltd.
Interim Management's Discussion and Analysis – Quarterly Highlights
Three and Six Months Ended November 30, 2022
Dated – January 23, 2023

Research and development

	Three Months Ended November 30, 2022 (\$)	Three Months Ended November 30, 2021 (\$)	Six Months Ended November 30, 2022 (\$)	Six Months Ended November 30, 2021 (\$)
Ketamine	5,515	281,683	4,508	337,344
Microneedle	205,486	153,907	778,943	228,079
Other	205,486	153,907	778,943	228,079
Total	555,284	527,447	1,582,777	706,480