



PHARMADRUG INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE YEAR ENDED DECEMBER 31, 2021

Pharmadrug Inc.

Management's Discussion and Analysis
For the Year ended December 31, 2021

The following Management's Discussion and Analysis ("MD&A") is current to May 2, 2022 and constitutes management's assessment of the factors that affected the financial condition and results of operations of Pharmadrug Inc. ("Pharmadrug", "We" or the "Company") for the year ended December 31, 2021. This MD&A was written to comply with the requirements of National Instrument 51-102 – Continuous Disclosure Obligations. It is supplemental to and should be read in conjunction with the Company's audited consolidated financial statements and related notes for the years ended December 31, 2021 and 2020 (the "2021 Financial Statements"), prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board and interpretations of the IFRS Interpretations Committee. In the opinion of management, all adjustments considered necessary for a fair presentation have been included. All figures in this MD&A are reported in Canadian dollars ("\$\$") unless otherwise stated.

This MD&A contains forward-looking statements that are not historical in nature and involves risks and uncertainties. See "Cautionary Note Regarding Forward-Looking Statements" below.

Business Overview

Pharmadrug is a specialty pharmaceutical company focused on the research, development, and commercialization of controlled substances and natural medicines such as psychedelics, cannabis and naturally-derived approved drugs. The Company operates through three distinct divisions. These divisions are Pharmadrug Production GmbH ("Pharmadrug Production"), Interrobang Ltd. ("Interrobang" or "Super Smart") and Sairiyo Therapeutics Inc. ("Sairiyo"). The controlled substances that the Company is currently focusing on are THC, CBD, Psilocybin, Cepharranthine (PD-001), and N, N-Dimethyltryptamine ("DMT"). The Company's legacy subsidiaries, Aura Health Corp. and Green Global Properties Inc., do not currently engage in any activities.

The address of the Company's registered office is 77 King Street West, Suite 2905, Toronto, Ontario, M5K 1H1, Canada.

The Company's common shares are listed on the Canadian Securities Exchange under the trading symbol "PHRX". Its shares are also traded in the United States (the "U.S.") on the OTCQB under the ticker symbol "LMLLF", and in Germany on the Frankfurt exchange under the ticker "GIII.F".

Pharmadrug Production

Established in 1982, Pharmadrug Production is a German medical cannabis distribution company with over 20 years of operating history. In May 2019, the Company acquired an 80% equity interest in Pharmadrug Production and it acquired the remaining 20% equity interest in August 2021. Pharmadrug Production holds a Schedule I European Union ("E.U.") narcotics license, allowing for the importation and distribution of medical cannabis to pharmacies in Germany and throughout the E.U., if and when markets become legalized. Additionally, Pharmadrug Production has EuGMP certification, enabling the Company to third party manufacture narcotics and package them under its own brand. Pharmadrug Production passed its EuGMP inspection in 2021 and has secured its certification for another three years.

Pharmadrug does not produce cannabis. The Company purchases medical cannabis flower from the Office of Medical Cannabis ("OMC") in the Netherlands. The cannabis products are sourced from Bedrocan Cannabis Corp. ("Bedrocan"). Bedrocan is an EuGMP Licensed Producer ("LP") in the Netherlands that can only sell to the OMC. Pharmadrug Production imports and distributes the Bedrocan cannabis products to over 300 pharmacies in Germany. The Company's ability to grow its revenues and distribution network have been considerably limited by access to Bedrocan inventory. Over the past two years, Bedrocan itself has been experiencing supply issues, thereby further limiting Pharmadrug Production's access to inventory. These supply issues have resulted in a corresponding loss of market share to Bedrocan, but that void seems to have been filled by Aurora Cannabis Inc., Canopy Growth Corporation and Tilray, Inc. The Company did see the first shipment of medical cannabis in the first quarter of 2021 from a Canadian-based global LP, however, demand for the product was far lower than anticipated. The supplier also failed to co-operate adequately for the marketing initiatives that management deemed necessary.

Additional developments in the German market included the first introduction of natively grown medical cannabis. All of these elements have led to the beginning of margin erosion. The Company has been offered supply agreements from some of the other aforementioned players but has determined that the price is not attractive.

Management believes it needs to focus on its own supply chain where it can better control product margins, inventory supply and marketing initiatives. Consistent with this view, management has decided to shift its focus to the growing medical cannabis oil segment. While the Company plans to maintain its Bedrocan business, growth initiatives at this point will be focused on the burgeoning cannabis extracts and oils space.

Management estimated that the medical cannabis flower market was more than two times the size of the cannabis oil market in 2019 with approximately 90% of the oil market dominated by synthetic oils such as Dronabinol, a synthetic THC oil that currently dominates the medical cannabis oil market in Germany. By the first quarter of 2021, management estimated the oil market is within 15% of the flower market. The full extract market is continuing to gain ground on Dronabinol, nearly doubling its share of the total cannabis oil market. The

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German market's overall move towards oils is following the same trend seen in North America in the last five years. As such, the Company is planning to enter the oil market with Pharmadrug-branded offerings of Dronabinol, high THC oil and balanced THC/CBD oils.

Pharmadrug Production has signed a supply agreement with an emerging cannabis extractor in Denmark to produce cannabis oil under Pharmadrug's brand. The facility has already received EuGMP certification, and all licenses and approvals from the Danish government. We conducted the final inspection of the facility in October 2021. The visit was deemed successful with the newly operating cannabis oil extraction facility fulfilling all the necessary requirements to be able to supply GMP-calibre THC oils to the German medical cannabis market. The Company has registered the initial product with the regulator, and it has been added to its controlled substance license. The initial product will be a Pharmadrug-branded high THC oil. It is currently going through confirmatory stability testing with final results and certificates of analysis scheduled for May 2022. Once launched, Pharmadrug Production and its Danish supply partner have planned to introduce other oils including a balanced CBD / THC oil. The deal is a milestone event for Pharmadrug Production as it will allow it to have greater control over its supply while giving the Company the opportunity to establish a stronger role by launching our own brand in the German medical cannabis market.

The Company announced at the end of October 2021 that it has signed a supply agreement with Eurox Pharma GmbH ("Eurox") for Dronabinol. It is Eurox-branded and the Company sells it as a wholesaler to pharmacies, which in turn sell it to patients with prescriptions. Pharmadrug Production has already added the product to its license and the first shipment was received at the start of November 2021. Initial sales and deliveries have already commenced. Management believes the selling of Dronabinol will serve to increase sales volume, and also help increase its pharmacy distribution network beyond its current levels. Dronabinol is a third-party product and Pharmadrug Production acts as a distributor much like its Bedrocan business. The Company is in advanced discussions with two separate manufacturers to be able to supply Dronabinol on a white label basis to be branded as a Pharmadrug product.

While the Company recently made the decision to focus its growth on cannabis oils and extractions, management believes the outcome of the recent election in Germany and the increased likelihood of legalized recreational adult use cannabis on the horizon may require a renewed focus on cannabis flowers. Recent trends have indicated that cannabis oil growth is accelerating and is on a path to potentially overtake flowers at some point in the future. That being said, the introduction of legalized recreational adult use cannabis could reignite the flower market. As such, the Company has resumed discussions to introduce a unique brand of flower to the German market. Such a product can either take the form of a third-party brand with an exclusive relationship and marketing sovereignty or a unique white label product that will carry the Pharmadrug brand. Management will wait to receive more clarity from the new German government in terms of the proposed framework and timeline for the legalization of recreation adult use cannabis before taking on any new flower product. Notwithstanding the foregoing, there is no certainty that the cannabis will be legalized for recreational use in Germany.

Management has also made significant advancements towards launching a hemp derived CBD line. The Company has received its initial shipment of Pharmadrug-branded CBD oils. Management is contemplating several different distribution channels and is currently selling directly on an e-commerce platform. The Company will continue to test the market out and will determine its strategy for CBD oils in Germany and potential other Eurozone countries over the coming months.

The Company will seek to use its controlled substance import and distributor license to build a pharmaceutical psychedelics business in the Eurozone if and when jurisdictions in the E.U. legalize psychedelics, and pharmaceutical psychedelics pass through clinical testing. Germany's Federal Institute for Drugs and Medical Devices ("BfArM") recently approved a study on the use of Psilocybin in Treatment-Resistant Depression, demonstrating the broadening acceptance towards psychedelics. Notwithstanding the foregoing, there is no certainty that jurisdictions in the E.U. will legalize psychedelics.

Interrobang/Super Smart

In June 2020, the Company acquired Interrobang doing business as Super Smart. The Company was focused on consolidating the fragmented "smartshop" market in the Netherlands, with a particular focus on psychedelic-based products. Super Smart purchased its first psychedelic retail store in the town of Tiel, Netherlands in October 2020. The Tiel location provided a platform to build out and refine the retail business model for psychedelics. Super Smart's plan was to continue adding smartshops in the Netherlands, with a flagship store targeted to open in Amsterdam. All of the Company's operations and e-commerce platforms operate under the "Slim Winkel" brand. "Slim Winkel" is the Dutch word for Smartshop.

With the novel coronavirus ("COVID-19") pandemic lasting much longer than management initially expected, the Company made the decision to pivot from its initial plans and put the development of its brick-and-mortar strategy on hold. In the meantime, the Company decided to develop its brand and business by establishing an online retail strategy under its Slim Winkel brand. Super Smart launched two separate e-commerce platforms: one in Europe and one in the U.S. The European Slim Winkel online store sells psilocybin truffles as well as functional mushrooms in the Netherlands. The website will also service other parts of Europe, but without access to psilocybin truffles. Launching the online smart shop enabled the Company to establish and build its brand and business.

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Super Smart also opened a separate Slim Winkel e-commerce platform in the U.S. that sells functional mushrooms. Slim Winkel is expected to not just act as a retail channel but will carry its own branded products. Management's plan was to establish its own product line and to launch it in 2021. The initial focus continued to remain on functional mushrooms but with the establishment of a strong brand in the U.S., it can be used for psilocybin truffles as well should their use ever get legalized in the U.S.

Following the launch of the U.S. platform, an e-commerce director with specific experience in the functional mushroom industry was hired and a major overhaul of the U.S. site was initiated. It was quickly determined that the cornerstone of a successful business would require the development of an in-house product that can adequately match the quality and technical specifications that the Company strived for. The Company announced in September 2021 that Super Smart would be launching its own premium blend of functional mushrooms. The product line is branded as MycoWeR with the first product being named MycoWeR Infinite. The product initially debuted for sale in the U.S. with the first commercial lot of products being received in October 2021, with initial sales and deliveries taking place in November 2021.

MycoWeR Infinite has been positioned as a premium brand in a rapidly growing marketplace primarily occupied by high price, low potency functional mushroom products. Although it is still early and sales are still modest, initial feedback is positive with users touting the quality of the product, the approach in terms of transparency of ingredients as well as a noted impact in efficacy. Super Smart has launched programs with influencers and micro influencers with a plan to increase digital marketing campaigns with an educational focus.

Initial revenue has been modest to date, but the Company has been developing three distinct sales channels. The first has been via the Slim Winkel platform with the help of online marketing and social influencers. The second has been a brick-and-mortar approach. The Company has placed its product in approximately 10 smaller retail locations in the U.S.. The goal was to increase revenue, but also to be able to obtain more direct feedback on the product. Responses to quality have been positive, but management has also received feedback on how to tweak both branding and messaging. Lastly, management has spent the majority of the first quarter setting up an Amazon store. MycoWeR Infinite was made available on Amazon in the last week of April and marketing on the platform will begin in the latter part of May.

Sairiyo

Sairiyo is a biotechnology company focused on repurposing and developing improved formulations of naturally derived compounds for serious, rare, and life-threatening diseases. Sairiyo aims to obtain European Medicines Evaluation Agency and U.S. Food and Drug Administration ("FDA") approval. It is advancing the clinical development of its lead drug candidate, cepharanthine, a repurposed and reformulated naturally-derived compound for the potential treatment of cancer, neurological, inflammatory, and infectious diseases.

Cepharanthine is a natural product and an approved drug used for more than 70 years in Japan to treat a variety of acute and chronic diseases. Cepharanthine was approved by the Pharmaceuticals and Medical Devices Agency, Japan for the following indications, Standard Commodity No. of Japan 87290 under approval numbers 13313KUZ08490003, 21300AMZ00648000 and 21300AMZ00650000:

- 1942 Approved as a medicinal product for the treatment and prevention of tuberculosis.
- 1948 Viper bite; pertussis; bronchial asthma
- 1955 Gastric ulcer, gastric hyperacidity, gastritis
- 1957 Alopecia areata and pityriasis alopecia
- 1960 Middle ear catarrh with effusion
- 1962 Radiation therapy leukopenia
- 1995 Re-evaluation revealed radiation-induced leukopenia, loss of hair areata/pityriasis alopecia, middle ear catarrh with effusion (injection)

Cepharanthine is approved in Japan as an injectable, powder and tablet. In clinical research, cepharanthine exhibits multiple pharmacological properties including anti-oxidative, anti-inflammatory, immuno-regulatory, anti-cancer, anti-viral and anti-parasitic properties.

Sairiyo holds exclusive commercialization rights to U.S. patent 10,576,077 B2 which describes a method of manufacturing a soluble, orally bioavailable formulation of cepharanthine-2HCL. As part of the licensing terms with Southwest Research Institute® ("SwRI") (San Antonio, Texas), the Company has secured quantities of cGMP drug substance and drug product, pre-clinical data, and certain know-how to support future possible FDA clinical trials. The license agreement also includes exclusive rights to commercialize the formulation detailed in U.S. patent 10,576,077 B2 for all fields of use and exclusive rights to the patent, method of manufacturing, clinical supply, pre-clinical data, and know-how to support FDA clinical trials. The Company does not own U.S. patent 10,576,077 B2, rather it owns the exclusive right to commercially develop PD-001 according to the methods of manufacturing claims set forth in the associated claims set.

Compared to generic cepharanthine, Pharmadrug's novel formulation has been shown in rodent and non-rodent models to possess markedly superior bioavailability (more easily absorbed). Previous in vivo studies for the CEPN free base (generic) administered orally to humans

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demonstrated low bioavailability of 6-9% and similar studies in rodents given CEPN free base orally by gavage also exhibited low bioavailability of 5.65%¹. The low bioavailability of the CEPN free base was presumed to be primarily due to gelation during transit from the stomach through the intestinal tract². Oral bioavailability of PD-001 has been previously examined in rodent and non-human primates and upon acute exposure was found to be dose dependent and ranged from 41%-67%. These findings support the development of an orally administered formulation, and in so doing, removes the undesirable requirement for frequent intravenous dosing.

Sairiyo is currently focused on advancing the clinical development of cepharanthine to treat rare cancer diseases. Sairiyo was granted Orphan Drug Designation ("ODD") status from the FDA for cepharanthine in the treatment of esophageal cancer in January 2021 and has since added some world class experts to its scientific advisory team. ODD status from the FDA provides numerous benefits such as tax credits, a more streamlined regulatory process, and seven years of marketing exclusivity post regulatory approval.

Management decided to conduct some pre-clinical work to evaluate the mechanism of action more fully for cepharanthine given that the drug displays potential as a direct anti-cancer agent as well as a prospect for reducing resistance to common chemotherapies.

The first phase of the study aimed to compare Cepharanthine to the current standard of care ("SoC") in 60 human cancers. The Company was pleased to see that 20 of the 60 cells lines screened showed growth inhibition of at least fifty percent when exposed to cepharanthine levels previously determined to be well tolerated in a human clinical population. Additionally, there were several instances in which cepharanthine displayed growth inhibition which was comparable or superior to current gold standard treatments, including colorectal, liver and skin cancers. More notably, results of the study demonstrated that esophageal cancer was the most highly responsive of all sixty cancers examined.

Based on the results of the initial large in vitro cancer screen, the Company initiated a second study based on a short list of 23 cancers that were highly responsive to cepharanthine-2HCl. The Company updated the market on the results of the study in a press release dated November 18, 2021. Four instances of drug synergy (cepharanthine + chemotherapy) were revealed in the latest drug combination study. Cancer cell types and SoC treatments remain confidential for the purpose of filing subsequent intellectual property, but the Company provided results in the aforementioned press release for the four most promising types of cancer tested. Most notably, esophageal cancer was approximately five times more responsive to cepharanthine than the experimental positive control; a clinically approved chemotherapeutic agent. That esophageal cancer was shown to be the most highly responsive cancer examined further validates the Company's motivation to expeditiously advance the clinical development of its patented enteric-coated oral formulation of cepharanthine for esophageal cancer and leverage the benefits of its ODD.

The Company announced in a press release dated February 1, 2022, that it had filed a provisional patent application in the U.S., which details the novel synergistic combination of cepharanthine (PD-001) and cabazitaxel on prostate cancer growth inhibition and also sets forth claims related to the use of PD-001, cabazitaxel and/or other taxane family members used in combination to treat primary, metastatic, and chemotherapy-resistant prostate cancer. While the potency of cepharanthine on prostate cancer was notable in the context of other common chemotherapeutic agents, the Company reported that the combination of cepharanthine plus cabazitaxel provided unexpectedly synergistic reduction in prostate tumor cell survival. A provisional U.S. patent has now been filed to protect these findings and the Company plans to strategically build out and extend patent protection for PD-001 in the oncology space.

The Company has shipped its drug product, PD-001 to its contract research organization ("CRO") in support of the upcoming IND-enabling animal studies. These studies are designed to evaluate PD-001 efficacy, alone and in combination with SoC in two animal cancer models, esophageal and prostate cancer. The Company's prime cancer focus continues to be esophageal cancer for several reasons previously stated including the ODD awarded by the FDA. The currently designed animal model for esophageal cancer is to tackle the serious clinical issue of chemoresistance more thoroughly while also assessing cepharanthine's potential use as a monotherapy for esophageal cancer. The model for prostate was designed to evaluate cepharanthine's ability to provide synergy to current chemotherapies utilized.

The Company announced in a press release dated April 19, 2022, that a once-per-day oral regimen of PD-001, in combination with cabazitaxel provided statistically significant benefit from day 10 through to the end of dosing (day 21) in its recently completed prostate efficacy study. Accordingly, the Company filed a second provisional patent application to support new claims specifically related to the in vivo dosing of cepharanthine in combination with taxane-family members for the treatment of prostate cancer. The addition of PD-001 to the standard of care, cabazitaxel was found to improve tumor growth inhibition by 73% compared to cabazitaxel-alone. These results were deemed to be highly statistically significant. Furthermore, the addition of PD-001 to cabazitaxel did not notably increase toxicity compared to cabazitaxel alone.

¹ Deng Y, Wu W, Ye S, Wang W, Wang Z. Determination of cepharanthine in rat plasma by LC-MS/MS and its application to a pharmacokinetic study. *Pharm Biol.* 2017 Dec;55(1):1775-1779. doi: 10.1080/13880209.2017.1328446. PMID: 28521597; PMCID: PMC6130670.

² William E. Bauta, Joseph A. McDonough, Hong Dixon, Stephen T. Wellinghoff, Kevin FitzPatrick. Pharmaceutical salt forms of Cepharanthine and Tetrandrine. US Patent US10576077B2.

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On a separate front, the Company has initiated preparation of a Pre-Investigational New Drug Application ("Pre-IND") for its patented enteric-coated formulation of cepharanthine as an oral antiviral pill to treat mild-moderate COVID-19. Cepharanthine may work to lessen the effects of COVID infection. Cell, animal, and human studies have long reported the immunomodulatory and anti-inflammatory properties of cepharanthine. Cepharanthine has previously been shown to suppress cytokine production and the expression of cyclooxygenase; both of which are crucial to viral replication and inflammatory response. A 2019 study examined the effects of cepharanthine on human lung cells infected with the coronavirus HCoV-OC43. Following pre-treatment with cepharanthine, lung cells showed no virus-induced death. These findings were attributed to the ability of cepharanthine to inhibit viral RNA replication, block expression of viral proteins, and suppress production of proinflammatory molecules, thus preventing a deleterious exacerbation of cytokine response to the viral infection. Several third party validated library screens of approved and investigational drugs have identified cepharanthine as a forerunner drug candidate in the treatment of COVID-19 based on the superior antiviral properties it holds. Cepharanthine has been shown to be highly effective at blocking cell death following exposure to multiple different coronaviruses, including COVID-19. As such, it is believed that the Company's novel formulation of cepharanthine, PD-001 would be an appropriate candidate to evaluate as a potential treatment for mild to moderate COVID-19.

The Company announced on November 30, 2021, the successful completion of its Type B Pre-IND meeting with the FDA, for which a Pre-IND briefing package and meeting request letter was submitted in September 2021. The FDA has provided written responses to the Company regarding its clinical development plan for PD-001, a patented enteric-coated formulation of cepharanthine, as a potential oral antiviral pill for COVID-19. Pharmadrug believes the written response provides a path to agreements on IND-enabling studies, the design of a Phase I/2 clinical study, and the overall clinical development plan to move PD-001 forward as an oral treatment for COVID-19. By extension, the FDA guidance also provides important insights on advancing PD-001 as a potential treatment for oncology indications as part of the Company's ongoing strategy of targeting rare and life-threatening conditions. The Company continues to focus on completing the remaining IND-enabling studies to support future clinical studies.

In written responses to the questions provided by the Company, the FDA addressed Pharmadrug's questions related to manufacturing, safety/toxicology, pre-clinical efficacy studies, clinical trial design, and rationale necessary to support subsequent human clinical trials. The feedback provides the Company with greater clarity on the current requirements needed to file an IND to initiate a Phase I/2 clinical trial of PD-001 in patients with COVID-19. Based upon the historical clinical data for generic cepharanthine and the Company's pre-clinical testing performed on PD-001 thus far, Pharmadrug anticipates filing an IND in the next six to 12 months. In addition, Pharmadrug intends to pursue FDA Expedited Programs, such as Breakthrough Designation pending the development of preliminary clinical evidence to support such designation.

Following FDA feedback, the Company plans to continue the development of PD-001 for COVID-19. The Company plans to conduct several nonclinical safety, toxicology, virology assessments, as well as scale-up of drug product manufacturing. The currently described work is necessary to bring PD-001 to the clinic for COVID-19 and is highly complementary to the safety/tox/manufacturing efforts already underway for its cepharanthine program in oncology.

As part of its pharmaceutical psychedelic research efforts, Sairyo is also actively engaged in conducting research on DMT. The Company is collaborating with top-tier academic psychedelic teams on foundational DMT research to be able to build internal intelligence as a method to establishing its explicit commercial strategy.

Foundational DMT research refers to supporting basic research on the endogenous synthesis and effects of DMT on normal function. This work is being conducted by a respected academic, Dr. Jimo Borjigin, from the University of Michigan ("UofM"). These studies include phenotypic characterization of a genetic knockout line of animals engineered to not produce endogenous DMT. The Company also supports basic research into the impact of DMT when delivered exogenously to healthy human volunteers at Johns Hopkins University ("JHU"). The work is foundational in regard to the fact that it aims to elucidate how DMT and another undisclosed acute-acting psychedelic test article provoke profound hallucinatory states by activating completely distinct receptor signaling pathways in the brain. The Company has the right to license data and any resulting intellectual property generated under the terms of the research agreements with UofM and JHU to exploit for its commercial efforts as it sees fit.

The goal of the research is to bring a tryptamine-based medical product, capable of lower pathologically high intraocular pressure, to those in need (those suffering from primary open angle glaucoma ("POAG")). To do so, the Company intends to evaluate the efficacy of tryptamine-based candidate molecules in various in vitro and in vivo models of glaucoma. Should the Company's formulation show benefit in the studies currently underway, it intends to execute on non-clinical development efforts necessary to file an IND application. Such activities are generally well understood and advice/guidance from the FDA will be sought by the Company where and when appropriate.

The Company's DMT research efforts have focused on developing unique formulations while investigating DMT's role and potential in the human body outside of neuro-psychiatric functions and conditions. DMT has been shown to have anti-oxidative and anti-inflammatory

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properties. On April 28, 2021, the FDA had granted Sairiyo ODD for prevention of ischemia-reperfusion injury ("IRI") in patients undergoing solid organ transplantation, which includes the liver, kidney, heart, and lungs. The FDA ODD granted was broader than the Company's original application for kidney transplantation, recognizing the pernicious consequences of IRI in all solid organ transplantation

Before filing an IND application with the FDA to evaluate DMT in human clinical trials, the Company expects to advance its overall DMT strategy on three separate initiatives: (i) Pharmadrug is already at work evaluating specific DMT formulations aimed at superior delivery and improved efficacy; (ii) management will contemplate additional pre-clinical research in inflammatory and oxidative stress-induced complications, including organ transplants, to better understand the role DMT plays in the field, and (iii) the Company will broaden its scope to evaluate other rare indications that potentially could benefit from DMT.

The Company felt there was a more immediate opportunity to focus on DMT's potential for conditions in the eye, namely glaucoma. The rationale behind this is management's view that a potential successful psychedelic strategy requires the combination of a unique indication, unique formulation, and a unique delivery technology.

Tryptamines, such as DMT for eye diseases, represent the right opportunity to fulfill the objectives of identifying a unique indication, unique formulation, and a unique delivery technology. Management was able to capitalize on the Company's Chief Scientific Officer's ("CSO") many years of experience in targeting receptor pathways combined with existing literature to develop the concept. Essentially, glaucoma causes pathological increases in intraocular pressure ("IOP") that can cause progressive and irreversible vision loss. Many remedies are available in the form of topical drops. None of the treatments are completely successful due in part to side effects, lack of compliance and the increase in IOP overnight when drops are not administered. Previous research has shown that elevated IOP can be reduced through activation of serotonin receptors, but attractive drug candidates and methods of delivery remain to be developed. More specifically, tryptamine family members (of which DMT is one) have been shown to reduce IOP by activating 5HT-1a and 5HT-2a receptors in regions of the eye known to regulate fluid dynamics/pressure. The Company is currently evaluating novel formulations of DMT (as well as undisclosed analogues) that can address elevated IOP. Once these studies are complete the Company plans to elect the optimal candidate to be incorporated into a controlled release device for the treatment of glaucoma.

Pharmadrug was able to form a collaboration with the Terasaki Institute for Biomedical Innovation ("TIBI"). TIBI is a world leading biotechnology institute which develops medical devices and cutting-edge protocols for a variety of diagnostic, monitoring, and treatment applications. Their research platforms include work in biomaterials, cellular and tissue engineering, wearable biosensors, and organs-on-a-chip, with specific expertise in novel polymer development. The goal of the collaboration is to develop an ocular medical device that can continuously and slowly release a reformulated DMT or DMT analogue to reduce IOP. Pharmadrug will contribute the chemical formulations and TIBI will use its in-house technology to select and develop an effective delivery mechanism. During the first stage of the collaboration, TIBI scientists plan to use human, primary cell-based studies to identify the most potent candidate tryptamine. Follow up studies will leverage specific expertise in biomaterial engineering to produce a controlled release ophthalmic medical device. Finally, the drug-impregnated, controlled release product will be evaluated in a generally accepted non-human primate model of glaucoma.

Based on considerations related to physiochemical properties, resistance to metabolic breakdown and anticipated downstream formulation requirements, the Company has elected to specifically focus its efforts on comparing the potency of two candidate tryptamines, which were narrowed from an initial list of six. On November 24, 2021, the Company announced that TIBI had received the two candidate DMT analogue molecules selected by Pharmadrug.

The Company announced in a press release dated February 23, 2022, that it had completed its initial potency evaluation of two test articles using an in vitro calcium mobilization assay on trabecular meshwork cells; a cell type known to be critically important in the maintenance of healthy IOP. Calcium mobilization is understood to provoke cellular contraction, and specifically in the case of trabecular meshwork cells, is thought to contribute to the maintenance of healthy IOP by channeling aqueous humor away from the front of the eye. Both test articles were found to activate calcium mobilization, to levels that were comparable or greater than the experimental positive control, ionomycin. The Company's test articles were previously examined for in vitro toxicity and were found to be non-toxic to trabecular meshwork cells at concentrations expected to be used in treatment for various eye diseases.

Patents

The Company holds an exclusive commercialization right to U.S. patent 10,576,077 B2 which describes a method of manufacturing a soluble, orally bioavailable formulation of cepharanthine-2HCL. As part of the licensing terms with SwRI, the Company has secured quantities of cGMP drug substance and drug product, pre-clinical data, and certain know-how to support future FDA clinical trials. The license agreement also includes exclusive rights to commercialize the formulation detailed in U.S. patent 10,576,077 B2 for all fields of use.

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Based on recently generated data in the oncology space which examined the efficacy of cepharanthine-2HCL alone and in combination with standard of care chemotherapeutic agents, the Company sought counsel on filing a provisional patent. The provisional patent application was filed in February 2022.

Corporate Developments

On February 2, 2021, the Company completed the acquisition of Sairiyo (see "Business Acquisitions" for more details).

On February 8, 2021, the Company announced the appointment of world-renowned chemist and neuroscientist Dr. Steven A. Barker, Ph.D. to its newly-formed scientific advisory board for psychedelic pharmaceuticals to lead the research and development ("R&D") initiatives of DMT for mental health, neurological and inflammatory disorders.

On February 25, 2021, the Company announced it has expanded its psychedelic pharmaceutical program with the filing of an application with the FDA to receive ODD for DMT in the prevention of IRI in patients undergoing kidney transplantation.

On March 4, 2021, the Company announced that Sairiyo had appointed world-renowned gastric cancer expert, Dr. Yelena Y. Janjigian, MD, to Sairiyo's newly-formed scientific and clinical advisory board for cepharanthine in the treatment of esophageal cancer. On March 9, 2021, world-renowned drug-repurposing expert, Moshe Regosnitzky, was also appointed to the scientific and clinical advisory board.

On March 16, 2021, the Company entered into a sponsored research agreement with UofM, under the direction of Dr. Jimo Borjigin as Principal Investigator, to evaluate DMT's potential role in normal, diseased, and altered states of consciousness in a newly created animal model, with the objective to develop novel therapeutic strategies of DMT for clinical unmet medical needs currently not addressed by DMT.

On April 20, 2021, the Company entered into an agreement with SwRI, to initiate non-clinical and clinical manufacturing of cepharanthine for the Company's rare cancer and infectious diseases programs.

On April 28 2021, Sairiyo was granted ODD to DMI for prevention of IRI in patients undergoing solid organ transplantation, which includes the liver, kidney, heart and lung. The FDA ODD granted is broader than the Company's original application for kidney transplantation, recognizing the pernicious consequences of IRI in all solid organ transplantation.

On May 6, 2021, the Company announced that it has entered into a service agreement with a CRO with expertise in preclinical oncology model development and drug testing, to evaluate the Company's patented entericcoated formulation of cepharanthine in a broad panel of human cancers.

On May 12, 2021, the Company appointed Dr. Paul Van Slyke as CSO. Mr. Van Slyke previously served as the CSO of Sairiyo and is an entrepreneur-scientist with 18 granted and filed patents. Having completed his PhD at the University of Toronto ("UofT"), from the Department of Medical Biophysics, Mr. Van Slyke exercises a multidisciplinary approach to developing market ready solutions to foundational biological questions.

On May 17, 2021, through its Super Smart division, the Company launched a Slim Winkel branded online retail platform in the U.S., focusing on functional mushrooms. The website was launched with a domain name of slimwinkel.com. On June 7, 2021, the Slim Winkel branded online retail platform was also launched in the Netherlands.

On June 22, 2021, the Company announced that it has initiated preparation of a Pre-IND for its patented enteric-coated formulation of PD-001.

On July 28, 2021, the Company announced the result of the completion of its preclinical cancer study which evaluated cepharanthine-2HCL, the active pharmaceutical ingredients ("API") in PD-001, which validated cepharanthine's potential in treating different types of cancer, including esophageal, colorectal, liver and skin.

On August 3, 2021, the Company changed its ticker symbol to "PHRX", in order to provide greater visibility with respect to its long-term strategy, and to add value to the shareholders by developing and commercializing naturally-derived medicines.

On August 5, 2021, the Company announced that it had entered into a sponsored research agreement with TIBI to develop a novel ocular drug delivery platform that aims to deliver psychedelic and tryptamine-based pharmaceuticals.

On August 25, 2021, the Company announced that it has entered into a clinical trial agreement with JHU to conduct a clinical study comparing acute and enduring psychological and neural effects of DMT and an undisclosed, potentially active comparator molecule. The

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principal investigator, Dr. Frederick S. Barrett, PhD, Associate Professor of Psychiatry and Behavioral Sciences, will be supported by Co-investigators Dr. Sandeep Nayak and Dr. Roland Griffiths; all from the JHU Center for Psychedelic and Consciousness Research.

On August 25, 2021, the Company acquired the remaining 20% interest in Pharmadrug Production.

On August 30, 2021, the Company appointed David Kideckel to the board of directors (the "Board"). Mr. Kideckel has over 20 years of combined industry and capital markets experience, which spans several senior healthcare & biotechnology executive roles including Johnson & Johnson Inc. and Alexion Pharmaceuticals. Mr. Kideckel also has a PhD in Neuroscience from UofT.

On September 23, 2021, the Company announced the launch of its own premium blend of functional mushrooms, MycoWeR Infinite.

On September 28, 2021, the Company announced that it had been granted a Pre-IND meeting with the FDA for the clinical development of cepharanthine.

On October 19, 2021, the Company's common shares began trading on the OTCQB under the symbol "LMLLF."

On November 5, 2021, the Company announced that TIBI has received and will immediately commence in vitro characterization studies on the short-list of DMT analogue molecules, which will support IND-enabling studies for FDA review. Pursuant to a research agreement, TIBI has also been commissioned to develop a novel ocular drug delivery platform that aims to deliver psychedelic and tryptamine-based pharmaceuticals, related to DMT, for eye diseases.

On December 13, 2021, the Company announced the addition of Dr. Cindy Hutnik to its scientific and clinical advisory board. Dr. Hutnik will assist the Company in its ongoing efforts to develop DMT and other related tryptamine analogues as a potential treatment for glaucoma.

On January 13, 2022, the Company announced the resignation of Robert Schwartz from the Board. The Company also appointed Mr. Kideckel to replace Mr. Schwartz on the Audit Committee.

On January 26, 2022, the Company announced that it has initiated the manufacturing of PD-001, for non-clinical and clinical studies in cancer and infectious diseases.

On February 1, 2022, the Company announced that it has filed a U.S. provisional patent application which details the novel synergistic combination of PD-001 and cabazitaxel on prostate cancer growth inhibition. This is the Company's only patent application.

On February 23, 2022, the Company announced that it has completed a head-to-head potency comparator study of its two undisclosed DMT-analogue candidates for the treatment of POAG. Following this outcome, the Company, in collaboration with TIBI, has initiated fabrication activities necessary to produce a novel medical device capable of delivering sustained, low (sub-psychedelic) quantities of their undisclosed tryptamine-based pharmaceutical to the front of the eye. The Company intends to use the current results in combination with several planned upcoming in vitro studies to elect its final development candidate.

On March 9, 2022, the Company announced the interim positive findings for the combination of cepharanthine and frontline chemotherapy for IND-enabling prostate cancer study.

On April 1, 2022, the Company provided an update on multiple activities currently underway which support the Company's approach in the development of PD-001. For a summary on the update, refer to the press release dated April 1, 2022, which is under the Company's profile on SEDAR at www.sedar.com.

On April 7, 2022, the Company announced that in collaboration with TIBI, it had completed the fabrication of a novel medical device capable of delivering sustained, low (sub-psychedelic) quantities of undisclosed tryptamine-based pharmaceutical to the front of the eye, the intended purpose of which is to potentially lower IOP in patients suffering from glaucoma.

On April 19, 2022, the Company announced that when the enteric coated oral formulation of Cepharanthine is combined with cabazitaxel, it significantly reduces tumor volume and provides improved prostate cancer tumor growth inhibition.

Financing Activities

By March 2021, the Company converted a remaining principal amount of \$285,000 of debentures into 5,700,000 units ("Units") of the Company at a price of \$0.05 per share. Each Unit is comprised of one common share and one-half (1/2) of a common share purchase warrant ("Warrant") exercisable at \$0.05 for a period of 36 months.

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During the year ended December 31, 2021, 850,000 common shares were issued as a result of the exercise of options for cash proceeds of \$72,250.

During the year ended December 31, 2021, 17,634,200 common shares were issued as a result of the exercise of 16,281,400 Warrants, 1,352,800 Finders' Warrants and 276,400 broker options, for total cash proceeds of \$881,710.

Outlook and Plans

Medical Cannabis

Following the German federal elections on September 26, 2021, a new coalition government and an official government was subsequently formed in December 2021. The coalition formally stated in its published agenda that it planned to move ahead with the legalization of adult-use cannabis and that it will be regulated and sold to adults for use in licensed shops. Discussions so far have pointed to some form of a cannabis control act based on the fact that the Green Party previously published its cannabis control act in a white paper.

Based on management's analysis, this would imply a regime where cannabis remains a controlled substance in Germany that would be subjected to stricter controls than alcohol or tobacco. Sales would only be allowed in pharmacies or specialty licensed retail stores. Regardless of the end retail model, two major themes have emerged: firstly, given the statements by the coalition government described above, it has become more likely that adult-use cannabis will be legalized in the next couple of years; and secondly, that it will probably remain a controlled substance but with expanded access. This would also imply that the current supply chain regulatory framework will remain in place and that the importation and distribution of cannabis will continue to require a narcotics or controlled substance license, a license that the Company currently has through Pharmadrug Production. As a result, management has begun a strategic review to best position the Company moving forward in light of the potential evolution to market dynamics if legalization of adult-use cannabis does indeed materialize.

As mentioned in the "Business Overview" section, the Company had signed a supply agreement with Eurox for Dronabinol, which Pharmadrug Production has already added the product to its license. Management believes the selling of Dronabinol will serve to increase sale volume, but should also significantly increase its pharmacy distribution network beyond its current levels.

The Company will be purchasing Pharmadrug-branded medical cannabis THC oils from Valcon Medical A/S ("Valcon") in Denmark. Valcon has all licenses from the Danish government and an EuGMP certification from the Danish government. Pharmadrug will sell medical cannabis THC oils in Germany under its German narcotics manufacturing license. From a German regulatory perspective, Pharmadrug will be considered to be the manufacturer that is outsourcing to a third party. Pharmadrug requires GMP certification to ensure the entire supply chain meets EuGMP requirements. The extract oil will be shipped by Valcon to Pharmadrug's storage facility in Germany. Pharmadrug expects the first shipment once the Company receives final stability testing and certificates of analysis in May 2022. The Company plans to sell to both German narcotics wholesalers and directly to pharmacies. The initial product will be a 25mg/ml high THC oil. In October 2021, Pharmadrug Production conducted the final inspection of Valcon's facility. The visit was deemed successful with the newly built cannabis oil extraction facility fulfilling all the necessary requirements to be able to supply GMP-calibre THC oils to the German medical cannabis market. The Company has registered the initial product with the regulator, and it has been added to its controlled substance license. The initial product is currently going through confirmatory stability testing with final results and certificates of analysis scheduled for May 2022. Once launched, Pharmadrug and Valcon have planned to introduce other oils including a balanced CBD / THC oil.

While the Company recently made the decision to focus its growth on cannabis oils and extractions, management believes the outcome of the German election and the likelihood of adult-use cannabis products on the horizon requires a renewed focus on cannabis flowers. As expected, recent trends showed that cannabis oil growth is accelerating and is on a path to overtake flowers at some point in the future. That being said, the potential introduction of adult-use should reignite the flower market. As such, the Company has resumed discussions to introduce a unique brand of flower to the German market. Such a product can either take the form of a third-party brand with an exclusive relationship and marketing sovereignty or a unique white label product that will carry the Pharmadrug brand.

The following tables summarize the Company's current and anticipated upcoming product offering in Germany.

I. Flower Products of Bedrocan (supplied by the OMC)

Product	Size	THC	CBD	Strain Type
Bedrocan	5 gram	22%	<1%	Sativa
Bedica	5 gram	14%	<1%	Indica
Bedrobinol	5 gram	13.5%	<1%	Sativa
Bediol	5 gram	6.3%	8%	Sativa
Bedrolite	5 gram	<1%	7.5%	Sativa

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2. Dronabinol Synthetic THC oil (in stock, sales have begun)

Product Size	Active Ingredient	Includes
1,000 mg	95-100% Dronabinol	Syringe and kit
500 mg	95-100% Dronabinol	Syringe and Kit
250 mg	95-100% Dronabinol	Syringe and Kit

3. Pharmadrug-branded THC Oil provided by Valcon. Under this arrangement, the Company acts as “manufacturer”, and sells the product to wholesalers and pharmacies. Valcon has all licenses and GMP certification from the Danish government. The Company has performed all necessary supply chain inspections, and has registered the product and added it to its license. The Company is waiting for final Stability testing and Certificates of Analysis required to release the product to market, of which the data is expected by May 2022. It is anticipated that the first product will be a high THC oil (25 mg/ml).

Product	Size	THC	CBD
10:10 oil	25 ml	250 mg	250 mg
2:5 oil	25 ml	625 mg	N/A

4. CBD

The Company has a Pharmadrug Production-branded Hemp 5% CBD oil. 10 ml bottle. The product is being sold to e-commerce platforms.

Super Smart

The Company announced in September 2021 that Super Smart would be launching its own MycoWeR-branded premium blend of functional mushrooms. MycoWeR Infinite debuted for sale in the U.S. with the first commercial lot of products being received in October 2021, with initial sales and deliveries taking place in November 2021. MycoWeR Infinite has been positioned as a premium brand in a rapidly growing marketplace primarily occupied by high price, low potency functional mushroom products.

Despite modest revenues to date, the Company has been developing three distinct sales channels. The first has been via the Slim Winkel platform with the help of online marketing and social influencers. The second has been a brick-and-mortar approach. The Company has placed its product in approximately ten smaller retail locations in the U.S. The goal was to increase revenue, but also to be able to obtain more direct feedback on the product. The response to the quality has been positive, but the management has also received feedback on how to tweak both branding and messaging. Lastly, management has spent the majority of the first quarter setting up an Amazon store. MycoWeR Infinite was made available on Amazon in the last week of April and marketing on the platform will begin in the latter part of May.

Pharmadrug's executive team flew to the Netherlands to visit the Tiel location, as well as several locations in both Amsterdam and Rotterdam in August. Management was able to visit over 30 stores, including several stores currently for sale. The conclusion was that the retail market is still under tremendous pressure. The cost of purchasing existing stores is prohibitive and the building of greenfield locations in a competitive environment is not economically viable, especially within a relatively small market which is not currently exhibiting any signs of significant growth.

Super Smart initially decided to continue with the European online effort with an undertaking to overhaul the site and develop a strategy to reflect the distinct European market by adapting an e-commerce only model. The plan was to keep the location in Tiel as a hub for logistics. More recently, the Board and management came to the realization that it made more sense to streamline its focus. The European legal recreational psychedelics market is still quite small, and The Company has a burgeoning functional mushrooms market to address in the U.S. with a unique product. As a result, the Company has decided to close both the European online store as well as the physical location in Tiel.

Cepharanthine

Based on positive feedback from the FDA on the Company's proposed Chemistry and Manufacturing Control program, Pharmadrug has initiated cGMP production at SwRI of a quantity of PD-001 that is expected to be sufficient to support development activities through to the end of phase II assessment. Since the Company's press release on January 26, 2022, bulk API has been received by SwRI and the drug substance, cepharanthine-2HCL, is being manufactured. Completion date is expected to be Q2 2022. Following full characterization of the drug substance for critical quality attributes, the drug product manufacturing (enteric coating of the drug substance) will commence. The material produced under these tasks will support IND-enabling activities, such as stability, safety, toxicology, pharmacokinetic and non-clinical efficacy studies, required by the FDA prior to proceeding to human clinical studies. Work completed thus far on the parent molecule, cepharanthine by Pharmadrug and others, potentially de-risks and expedites several aspects of these studies.

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The Company has shipped a previously manufactured supply of its drug product, PD-001 to the CRO in support of the upcoming IND-enabling animal studies. These studies are designed to evaluate PD-001 efficacy, alone and in combination with SoC chemotherapies in two animal cancer models, esophageal and prostate cancer. The Company's lead cancer focus continues to be esophageal cancer for several reasons previously stated including the ODD awarded by the FDA. The currently designed animal model for esophageal cancer aims to tackle the serious clinical issue of chemoresistance more thoroughly while also assessing cepharanthine's potential use as a monotherapy for esophageal cancer. The in vivo prostate cancer model recently completed was designed to evaluate cepharanthine's ability to provide synergy to current chemotherapies utilized.

Cepharanthine and COVID-19

The Company announced in a press release dated April 19, 2022, that a once-per-day oral regimen of PD-001, in combination with cabazitaxel provided statistically significant benefit from day 10 through to the end of dosing (day 21) in its recently completed prostate efficacy study. Accordingly, the Company filed a second provisional patent application to support new claims specifically related to the in vivo dosing of cepharanthine in combination with taxane-family members for the treatment of prostate cancer. The addition of PD-001 to the standard of care, cabazitaxel was found to improve tumor growth inhibition by 73% compared to cabazitaxel-alone. These results were deemed to be highly statistically significant. Furthermore, the addition of PD-001 to cabazitaxel did not notably increase toxicity compared to cabazitaxel alone. Further studies may be undertaken while PD-001 is prepared for the clinic that would look at optimizing dosing or potentially assessing cepharanthine's potential to reduce chemo toxicity.

The Company's esophageal cancer efficacy study is currently underway with the animals currently receiving dosing. Final results are expected by the end of May. As previously mentioned, the trial is modeled to evaluate efficacy of PD-001 as a monotherapy and also in combination with a standard of care chemotherapy, specifically paclitaxel. Efficacy of PD-001 will be examined at three distinct doses alone, or when combined with paclitaxel. The potential benefit of PD-001 oral treatment on tumor volume and tumor growth inhibition will be determined based on comparison of outcomes for animals receiving a placebo treatment or paclitaxel at a dose previously determined to be optimal. Gross observations of any potential drug induced toxicity including weight loss, behavior and appearance will also be monitored and reported.

In addition to the Company's activities in the oncology space, primary virology studies are currently being planned for execution in Q2-Q3, 2022. Thus far, the Company has been encouraged by the multiple, peer-reviewed studies demonstrating the in vitro and in vivo antiviral properties of cepharanthine on SARS, MERS, and SARC-CoV-2 (COVID-19). To best understand the underlying mechanisms by which cepharanthine mediates, and to more fully validate these independent findings the Company intends to test evaluate the in vitro antiviral potency of PD-001 on a panel of SARS-CoV-2 variants. Additionally, cepharanthine has previously shown antiviral properties against multiple viruses including ebola, zika and herpes simplex virus. Such broad-spectrum antiviral activity is quite a rare drug attribute. Consistent with this, the Company intends to more fully explore additional opportunities for PD-001 in viral disease. To do so, the Company intends to commission a study to evaluate the antiviral capacity of PD-001 in a broad, in vitro panel of human viral pathogens.

Pharmaceutical Psychedelics Research

Pharmadrug and Sairiyo had already begun to develop a strategy to commence a unique and value adding research program in the psychedelic space prior to signing the purchase agreement. Following the Sairiyo Acquisition (defined hereafter) and its biotech R&D core competencies, Pharmadrug has undertaken efforts to expand its research activities in the pharmaceutical psychedelics space, which will focus specifically on DMT. Through engagement with respected academics and medical/clinical key opinion leaders in the space, management will initiate pivotal preclinical and clinical development activities. Pharmadrug has brought on Dr. Barker as an advisor. The Company is collaborating with top-tier academic scientists on foundational DMT research to be able to build internal intelligence to serve as the building block at establishing its explicit commercial strategy. The first such relationship was announced in March 2021 with the funding of a foundational study at UofM on the role of naturally occurring DMT in the brain.

On August 25, 2021, the Company announced that it had entered into a Clinical Trial Agreement with JHU to conduct a clinical study comparing acute and enduring psychological and neural effects of DMT and an undisclosed, potently active comparator molecule. 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 positioned to identify novel applications for DMT and unlock its full therapeutic potential. The team at JHU is currently finalizing an IND application to the FDA with a goal to get it submitted before the end of the second quarter.

The Company was also able to form a collaboration with TIBI, which is a world-leading biotechnology institute which develops medical devices and cutting-edge protocols for a variety of diagnostic, monitoring, and treatment applications. Their research platforms include work in biomaterials, cellular and tissue engineering, wearable biosensors, and organs-on-a-chip, with specific expertise in novel polymer development. The goal of the collaboration is to develop an ocular medical device that can continuously and slowly release a reformulated

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DMT or DMT analogue to reduce IOP. Pharmadrug has contributed the chemical formulations and the TIBI will use its in-house technology to select and develop an effective delivery mechanism. During the first stage of the collaboration, the TIBI's scientists have used human, primary cell-based studies to identify the most potent candidate tryptamine.

Based on considerations related to physiochemical properties, resistance to metabolic breakdown and anticipated downstream formulation requirements, the Company has now elected to specifically focus its efforts on comparing the potency of two candidate tryptamines, which were narrowed from an initial list of six. The next few months will be vital in characterizing relative drug potency and selecting a single lead candidate to take forward for further development.

Follow-up studies will leverage specific expertise in biomaterial engineering to produce a controlled release ophthalmic medical device. Subsequently, the Company will focus on conducting an IND enabling efficacy studies using a well accepted animal model of Glaucoma. The Company expects to be in position to begin an animal study late in Q2 of 2022 with the results by late summer. The intention is to bring the product to the FDA for the purpose of a future clinical trial.

Financial Information

Selected financial information

The Company's selected financial information as at the end of the reporting period and for the three most recently completed financial years ended December 31, are summarized as follows:

	2021	2020	2019
	\$	\$	\$
Sales revenue	494,991	683,671	610,576
Gross profit	100,861	182,037	253,255
Operating expenses	(5,224,253)	(4,020,752)	(5,346,850)
Other expenses	(1,583,708)	(2,063,912)	(1,888,228)
Net loss and comprehensive loss	(5,752,539)	(4,906,124)	(7,202,028)
Total assets	19,520,440	13,688,600	10,378,485
Total liabilities	2,655,126	2,775,651	5,920,388
Shareholders' equity (deficiency)	16,865,314	9,657,057	2,977,966

Selected quarterly financial results

Selected financial information for the eight most recently completed quarters as follows:

	Q4 2021	Q3 2021	Q2 2021	Q1 2021
	\$	\$	\$	\$
Sales revenue	101,948	143,526	112,862	136,655
Operating expenses	(1,309,332)	(1,317,455)	(1,196,909)	(1,400,557)
Other expenses	(680,726)	(184,821)	(193,073)	(525,088)
Net loss	(1,432,509)	(1,374,494)	(1,234,674)	(1,831,877)
Loss per share – basic and diluted	(0.006)	(0.013)	(0.009)	(0.006)
	Q4 2020	Q3 2020	Q2 2020	Q1 2020
	\$	\$	\$	\$
Sales revenue	175,406	137,322	192,328	178,615
Operating expenses	(792,585)	(1,227,726)	(1,420,155)	(643,044)
Other income (expenses)	(2,302,308)	148,597	(289,991)	379,790
Net loss	(2,570,050)	(1,043,168)	(1,661,210)	(224,945)
Loss per share – basic and diluted	(0.012)	(0.006)	(0.018)	(0.003)

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Financial Results for the Year ended December 31, 2021

Results of operations

During the year ended December 31, 2021 ("Fiscal 2021"), the Company recorded total sales revenue of \$494,991 (2020 – \$683,671) and cost of goods sold ("COGS") of \$394,130 (2020 – \$501,634), for a gross profit of \$100,861 (2020 – \$182,037) from shipments of cannabis products to pharmacies through out Germany, Netherlands and the U.S. In Fiscal 2021, the Company had continued to experience volatile sales volume, as COVID lockdown restrictions had once again limited supply shipments from the Netherlands. While the Company plans to maintain its Bedrocan business, it has also been focusing more on the burgeoning cannabis extracts and oil space, as well as other wellness products for the Netherlands and U.S. markets. As compared to the year ended December 31, 2020 ("Fiscal 2020"), sales revenue, COGS and gross profit all reduced by about 27.6%, 21.4% and 44.6% respectively, as a result of the Company running out of inventories and vendors not supplying products as expected in the current year. There was also an increase in the COGS as a percentage of revenue from 73.4% in Fiscal 2020 to 79.6% in Fiscal 2021, as a result of increase in the cost of acquiring products without a corresponding increase in the selling price of the products.

In Fiscal 2021, the Company incurred total operating expenses of \$5,224,253, as compared to total operating expenses of \$4,020,752 in the prior year, for an increase of \$1,203,501. The substantial increase in operating expenses incurred is primarily due to:

- Increase in research expense to \$553,768 (2020 – \$nil) as a result of cost incurred on various research activities carried out by the Company in connection with various health and academic institutions in the current year in advancing the clinical development of cepharanthine, a repurposed and reformulated naturally-derived compound for the potential treatment of cancer, neurological, inflammatory and infectious diseases. The Company did not engage in any research activities in the prior year.
- Increase of \$456,329 in travel and promotion expense to \$489,807 (2020 – \$33,478) where the increase is primarily from marketing and investor relations consulting work performed in the current year. In conjunction with the Sairiyo Acquisition, the Company had also started a marketing campaign to promote the different facets of Pharmadrug, whereas in the prior year, the Company did not engage in much promotional activities due to lockdown and travel restrictions imposed by COVID-19.
- Increase of \$402,115 in salaries and consulting fees to \$1,045,458 (2020 – \$643,343) where the majority of the increase was attributed to the staff and sales force recruitment by Pharmadrug Production and Interrobang Tiel. In the current year, the Company also entered into executive employment agreements with the Chief Executive Officer ("CEO") and the new CSO. Fees paid for consultants were also included under management, consulting fees and salaries during the period.
- Reversal of \$152,710 in allowance of expected credit loss ("ECL") to \$nil (2020 – \$152,710) as a result of ECL relating to settlement over certain promissory note balance owed recorded in 2019, which was reversed in Fiscal 2020 and partially offset the operating expense.
- Increase of \$140,660 in office and general expenses to \$351,881 (2020 – \$211,221) as a result of geographical business expansion which led to the Company incurring more expenses such as rent and insurance.

Such increase in operating expenses in Fiscal 2021 was partially offset by the following items:

- Decrease of \$350,378 in professional fees to \$824,012 (2020 – \$1,174,390) which is as a result of significant expenses which were incurred in relation to the settlement of the bridge loan facility, including additional restructuring and advisory fees of over \$250,000, which occurred in the prior year and none in the current year.
- Decrease of \$175,054 in share-based compensation to \$599,761 (2020 – \$774,815) as a result of options granted in prior year which fully vested immediately, compared to the current year in which options issued vest over a period of time.

In Fiscal 2021, the Company incurred other expenses of \$1,583,708, as compared to other expenses of \$2,063,912 incurred in Fiscal 2020. Finance costs, comprising interest and accretion on convertible debentures, and lease liabilities totaled \$156,358 (2020 – \$321,293). In terms of investments held by the Company, a realized gain of \$903,060 (2020 – loss of \$42,611) was recorded upon the dispositions of certain investments, while a fair value decrease of \$1,620,723 (2020 – increase of \$2,574,778) was also recorded of the valuation of the liquid investments.

In Fiscal 2021, the Company also incurred other non-cash expenses such as depreciation of property and equipment and right-of-use ("ROU") assets and amortization on intangible assets of \$1,283,029 (2020 – \$1,296,574). The amount incurred was \$13,545 lower than that of the prior year.

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In Fiscal 2021, the Company recorded a current income tax expense of \$14,730 (2020 – \$nil), and a deferred income tax recovery of \$848,276 (2020 – deferred income tax recovery of \$475,012).

Net loss for Fiscal 2021 was \$5,873,554, as compared to a net loss \$5,427,615 in the prior year. Net loss attributable to shareholders of Pharmadrug for Fiscal 2021 was \$5,626,492 (basic and diluted loss of \$0.018), as compared to a net loss attributable to shareholders of Pharmadrug of \$5,150,281 (basic and diluted loss of \$0.038) in 2020.

Cash flows

Net cash used in operating activities during Fiscal 2021 was \$4,125,319, as compared to net cash used in operating activities of \$1,802,982 in 2020, for an increased spending of \$2,322,337. Due to the Company's continuous growth in Europe and North America, along with its venture into the biotech R&D space, operating spending had increased as a result. Management intends to maintain a tight control on expenses and ensuring that only essential expenses will be incurred at a reasonable cost.

Net cash provided by financing activities during Fiscal 2021 was \$776,973, as compared to net cash provided by financing activities of \$132,235 in 2020, for an increase of \$644,738. In 2021, the Company generated a cash inflow of about \$954,000 from proceeds of exercise of warrants and options, which was offset by \$112,958 paid on interest on debenture payment and \$64,029 on lease payment. In the prior year, the Company repaid the full balance of the bridge loan facility through a combination of cash payment and issuance of common shares, including a total payment of \$1,889,819 made in July 2020. The Company also received funds of \$480,000 from Interrobang prior to the closing of the Super Smart Transaction, and proceeds of \$200,000, on RLH's subscription of 2,666,667 Units of Pharmadrug. Toward the end of 2020, the Company also received proceeds of more than \$1.4 million from exercise of warrants and broker options, as Pharmadrug garnered the attention of investors and the markets.

Net cash provided by investing activities during Fiscal 2021 was \$1,480,840, as compared to net cash provided by investing activities of \$3,781,417 in 2020, for a decrease of \$2,300,577. In 2021, a total of \$1,214,455 was received from the disposal of investments, along with \$361,982 cash acquired on the Sairiyo Acquisition. This was offset by about \$43,000 spent on acquisition of intangibles, property and equipment, along with \$52,879 spent on acquisition on the remaining 20% interest in Pharmadrug Production. In 2020, on completion of the amalgamation transaction with Interrobang, more than \$2.1 million was acquired from Interrobang, while the Company also received proceeds of \$2,115,332 upon dispositions of certain liquid investments, which was partially offset by proceeds of \$492,076 spent on the exercise of certain warrant investments.

Reconciliation of Non-IFRS Measures

The following information provides reconciliations of the supplemental non-IFRS financial measures, presented herein to the most directly comparable financial measures calculated and presented in accordance with IFRS. The Company has provided the non-IFRS financial measures, which are not calculated or presented in accordance with IFRS, as supplemental information. These supplemental non-IFRS financial measures are presented because management has evaluated the financial results both including and excluding the adjusted items and believes that the supplemental non-IFRS financial measures presented provide additional perspective and insight when analyzing the core operating performance of the business.

Adjusted EBITDA

Adjusted EBITDA is a measure of the Company's overall financial performance and is used as an alternative to earnings or income in some circumstances. Adjusted EBITDA is net income (loss) with interest, taxes, depreciation on property and equipment and ROU assets, amortization on intangible assets, non-cash adjustments and other unusual or non-recurring items such as unidentifiable assets acquired on assets acquisitions, restructuring fees, loss on share exchange transaction and gain on settlement, being added back. Adjusted EBITDA can be used to analyze and compare profitability among companies and industries, as it eliminates the effects of financing and capital expenditures. Adjusted EBITDA is often used in valuation ratios and can be compared to enterprise value and revenue.

There are no comparable IFRS financial measures presented in the 2021 Financial Statements. Reconciliations of the supplemental non-IFRS financial measures are presented in this MD&A. The Company provides the non-IFRS financial measures as supplemental information and in addition to the financial measures that are calculated and presented in accordance with IFRS. These supplemental non-IFRS financial measures are presented because management believes such measures provide information which is useful to shareholders and investors in understanding its performance and which may assist in the evaluation of the Company's business relative to that of its peers. However, such measures should not be considered superior to, as a substitute for or as an alternative to, and should only be considered in conjunction with, the most comparable IFRS financial measures.

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	2021	2020
	\$	\$
Net loss	(5,873,554)	(5,427,615)
Adjusted for:		
Depreciation on property and equipment	9,589	41,500
Depreciation on right-of-use assets	61,148	7,891
Amortization on intangible assets	1,212,292	1,247,183
Share-based compensation	599,761	774,815
Unidentifiable assets acquired	-	4,509,767
Restructuring fees	-	467,726
Loss on share exchange transaction	-	40,807
Gain on settlement	-	(169,279)
Foreign exchange loss (gain)	726,727	(115,111)
Current tax expense	14,730	-
Deferred tax recovery	(848,276)	(475,012)
	(4,097,583)	902,672

After adjusting for non-cash items, including depreciation on property and equipment and ROU assets, amortization on intangible assets, share-based compensation, current and non-cash income tax expense (recovery), the Adjusted EBITDA for Fiscal 2021 was adjusted loss of \$4,097,583 (2020 – adjusted earnings of 902,166). These supplemental non-IFRS measures should not be considered superior to, as a substitute for, or as an alternative to, and should be considered in conjunction with, the IFRS financial measures presented.

Working Capital and Liquidity Outlook

The Company's objective when managing its liquidity and capital resources is to maintain sufficient liquidity to support financial obligations when they come due, while executing operating and strategic plans. The Company manages liquidity risk by monitoring its operating requirements and preparing budgets and cash flow forecast to identify cash flow needs for general corporate and working capital purposes, as well as for expansion initiatives.

As at December 31, 2021, the Company had current assets of \$1,593,749 (December 31, 2020 – \$4,685,770), including cash of \$957,984 (December 31, 2020 – \$2,134,866) and liquid investments valued at \$337,387 (December 31, 2020 – \$2,269,504), to settle current liabilities of \$479,850 (December 31, 2020 – \$619,303), for a working capital of \$1,113,899 (December 31, 2020 – \$4,066,467).

The Company currently has no regular cash flows from operations, and the level of operations is principally a function of availability of capital resources. The primary source of funding has been through the completion of private placement financings of equity securities and convertible debentures, as well as from proceeds on exercises of options and warrants.

Going forward, the Company will have to continue to rely on equity or debt financings for its working capital requirements, or to restructure its debt level. There is no guarantee that the Company will be able to successfully complete such financings, as market conditions and business performance may dictate availability and interest.

Capital Management

The Company manages its capital structure and adjusts it, based on the funds available to the Company, in order to support the development of its planned business activities. The Board does not establish quantitative return on capital criteria for management, but rather relies on the expertise of the Company's management to sustain future development of the business. In order to carry out the planned business activities and pay for administrative costs, the Company will spend its existing working capital and raise additional funds as needed. Management reviews its capital management approach on an ongoing basis and believes that this approach, given the relative size of the Company, is reasonable.

The Company considers its capital to be shareholders' equity, which is comprised of share capital, equity component of convertible debentures, reserves for share-based payments and warrants, accumulated other comprehensive loss and accumulated deficit. As at December 31, 2021, the Company's capital consisted of an equity attributable to the shareholders of Pharmadrug Inc. of \$16,865,314 (December 31, 2020 – equity attributable to the shareholders of Pharmadrug Inc. of \$9,657,057).

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The Company's objective when managing capital is to obtain adequate levels of funding to support its business activities, to obtain corporate and administrative functions necessary to support organizational functioning and obtain sufficient funding to further the development of its business. The Company raises capital, as necessary, to meet its needs and take advantage of perceived opportunities and, therefore, does not have a numeric target for its capital structure. Funds are primarily secured through equity capital raised by way of private placements and issuance of convertible debentures. There can be no assurance that the Company will be able to continue raising capital in this manner.

The Company is not subject to externally imposed capital requirements.

Key Management Personnel Compensation and Related Party Transactions

Key management includes the Company's directors, officers and any employees with authority and responsibility for planning, directing and controlling the activities of an entity, directly or indirectly.

Key management personnel compensation

The remuneration of directors and other members of key management personnel during the year ended December 31, 2021 and 2020 were as follows:

	2021	2020
	\$	\$
Management salaries and consulting fees	230,014	40,000
Professional fees	137,500	90,000
Share-based compensation	539,017	211,157
	<u>906,531</u>	<u>341,157</u>

Effective September 1, 2020, Pharmadrug and Daniel Cohen, the CEO of the Company, entered into an executive agreement, whereas the Company agreed to pay an annual base salary of \$120,000 for CEO services. The annual base salary shall be increased to \$180,000, exclusive of bonuses, benefits and other compensation, once the Company has raised a minimum of \$1,500,000. During the year ended December 31, 2021, the Company recorded management salaries of \$120,000 (2020 – \$40,000) in relation to the CEO's employment compensation. As at December 31, 2021, no balance was owed to the CEO (December 31, 2020 – \$nil).

Effective May 1, 2021, Pharmadrug and Paul Van Slyke, CSO, entered into an executive employment agreement, whereas the Company agreed to pay an annual base salary of \$140,000 for his services. The annual base salary shall be increased to \$182,000, exclusive of bonuses, benefits and other compensation once the Company has raised a minimum of \$2,000,000 in equity. During the year ended December 31, 2021, the Company recorded management salaries of \$93,333 in relation to the CSO's employment compensation. Prior to entering into the employment agreement, the CSO also charged fees of \$16,681 (2020 – \$nil) for providing CSO-consulting services to the Company. As at December 31, 2021, a balance of \$1,893 (December 31, 2020 – \$nil) owing to the CSO was included in accounts payable and accrued liabilities. The amount outstanding is unsecured, non-interest bearing and due on demand.

During the year ended December 31, 2021, Branson Corporate Services Ltd. ("Branson"), where Keith Li, the Chief Financial Officer ("CFO") and Corporate Secretary of the Company is employed, charged fees of \$137,500 (2020 – \$90,000), for providing CFO services to the Company, as well as other accounting and administrative services. As at December 31, 2021, no balance was owed to Branson (December 31, 2020 – \$39,550 included in accounts payable and accrued liabilities).

Share-based compensation

On August 31, 2020, the Company granted 3,000,000 options to the CEO at an exercise price of \$0.05, expiring on August 31, 2025. The options vested immediately on grant. The Company also granted 5,500,000 options to its other officers and directors under the same terms and expiry, of which these options vest in one-third increments after six months, 12 months and 18 months until fully vested. The grant date fair value attributable to these options was \$239,501, of which \$85,762 (2020 – \$148,157) was recorded as share-based payments in connection with the vesting of these options during the year ended December 31, 2021.

On August 31, 2020, the Company also issued 1,300,000 common shares to an entity controlled by the CEO of the Company, and 500,000 common shares to a former officer respectively, as compensation as stipulated by their respective consulting agreement with Pharmadrug. The common shares valued at \$63,000 was included in share-based payments during the year ended December 31, 2020.

On February 4, 2021, the Company granted 4,250,000 options to various officers and directors at an exercise price of \$0.085, expiring on February 4, 2026. These options vest in one-third increments after three months, six months and 12 months until fully vested. The grant

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date fair value attributable to these options was \$311,004, of which \$301,063 was recorded as share-based compensation in connection with the vesting of these options during the year ended December 31, 2021.

On May 12, 2021, the Company granted 2,000,000 options to the CSO at an exercise price of \$0.09, expiring on May 12, 2026. 500,000 of these options vested immediately on grant, with the remaining options to vest in two equal halves after six and 12 months until fully vested. The grant date fair value attributable to these options was \$136,277, of which \$117,796 was recorded as share-based compensation in connection with the vesting of these options during the year ended December 31, 2021.

On August 30, 2021, the Company granted 750,000 options to a director at an exercise price of \$0.06, expiring on August 30, 2026. 250,000 of these options vested immediately on grant, with the remaining options to vest in two equal halves after six and 12 months until fully vested. The grant date fair value attributable to these options was \$38,223, of which \$25,622 was recorded as share-based compensation in connection with the vesting of these options during the year ended December 31, 2021.

Other related party transactions

On July 17, 2020, the Company completed certain Restructuring which also involved amounts previously due to certain of its officers. Indebtedness exchanged as part of the aggregate of \$1,005,620 principal amount of Replacement Debentures include:

- A balance of \$269,604 owed to the CEO, comprised of a \$200,000 principal amount and accrued interest of \$69,604 under the Notes; and
- A balance of \$233,206 owed to the CEO, comprised of a \$200,000 principal amount and accrued interest of \$22,815 under the Unsecured Debentures.

Indebtedness settled as part of the issuance of 14,437,090 Units at a deemed price of \$0.05 per Unit include:

- A balance of \$62,150 owed to the CEO for services provided under the terms of his consulting agreement.
- A balance of \$269,604 owed to the CEO, comprised of a \$200,000 principal amount and accrued interest of \$69,604 under the Notes.
- A balance of \$62,150 owed to a former officer for services provided under the terms of his consulting agreement; and
- A balance of \$77,950 owed to the former Chairman of the Company for consulting services previously provided to the Company.

Financial Instruments

The Company is exposed to various risks as it relates to financial instruments. Management, in conjunction with the Board, mitigates these risks by assessing, monitoring and approving the Company's risk management process. There have not been any changes in the nature of these risks or the process of managing these risks from the previous reporting periods.

Credit risk

Credit risk is the risk of loss associated with counterparty's inability to fulfill its payment obligations. The Company's credit risk is primarily attributable to cash and other receivables, which expose the Company to credit risk should the borrower default on maturity of the instruments. Cash is held with reputable chartered banks in Canada and Germany, and in trust with the Company's legal counsel. Management believes that the credit risk concentration with respect to financial instruments included in cash and other receivables is minimal. For the year ended December 31, 2021, the Company did not recognize any ECL on trade receivables in the consolidated statements of loss and comprehensive loss. For the year ended December 31, 2020, the Company recorded a reversal of ECL on certain loan receivable of \$155,614 and an ECL on trade receivables of \$2,904 which are included in reversal of ECL in the consolidated statements of loss and comprehensive loss.

Liquidity risk

Liquidity risk is the risk that the Company will not have sufficient cash resources to meet its financial obligations as they come due. The Company's liquidity and operating results may be adversely affected if the Company's access to the capital market is hindered, whether as a result of a downturn in stock market conditions generally or related to matters specific to the Company. The Company generates cash flow primarily from its financing activities.

As at December 31, 2021, the Company had a cash balance of \$957,984 (December 31, 2020 – \$2,134,866) and liquid investments valued at \$337,387 (December 31, 2020 – \$2,269,504), to settle current liabilities of \$479,850 (December 31, 2020 – \$619,303).

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As at December 31, 2021, the Company had the following contractual obligations:

	Less than 1 year	1 to 3 years	3 to 5 years	Total
	\$	\$	\$	\$
Accounts payable and accrued liabilities	437,176	-	-	437,176
Lease liabilities	42,674	37,320	-	79,994
Provisions	-	97,014	-	97,014
Convertible debentures	-	786,374	-	786,374
Total	479,850	920,708	-	1,400,558

The Company manages liquidity risk by maintaining adequate cash reserves and by continuously monitoring forecast and actual cash flows for a rolling period of 12 months to identify financial requirements. Where insufficient liquidity may exist, the Company may pursue various debt and equity instruments for short or long-term financing of its operations.

Management believes there is sufficient capital to meet short-term business obligations, after taking into account cash flow requirements from operations and the Company's cash position as at December 31, 2021. Nonetheless, management also understands that it will have to raise new funds in 2022 in order to continue its operations.

Market risk

Market risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will significantly fluctuate due to changes in market prices. The value of the financial instruments can be affected by changes in interest rates, foreign exchange rates, and equity and commodity prices. The Company is exposed to market risk in trading its investments and unfavorable market conditions could result in dispositions of investments at less than favorable prices. A 10% change in the fair value of the Company's other investments would impact net income or loss by approximately \$34,000 based upon balances as at December 31, 2021.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company's convertible debentures have fixed interest rates. As at December 31, 2021, the Company had no hedging agreements in place with respect to floating interest rates.

Foreign exchange risk

Foreign exchange risk is the risk that the Company will be subject to foreign currency fluctuations in satisfying obligations related to its foreign activities. The Company has operations in Europe and in the U.S. where there are financial instruments and transactions denominated in foreign currencies, notably in EUR and USD. The Company's primary exposure to foreign exchange risk is that transactions denominated in EUR and USD may expose the Company to the risk of exchange rate fluctuations.

COVID-19

In December 2019, COVID-19 surfaced in Wuhan, China. The World Health Organization declared a global emergency on January 30, 2020 with respect to the outbreak then characterized it as a pandemic on March 11, 2020. The outbreak has spread throughout Europe and the Middle East and there have been cases of COVID-19 in Canada and the U.S. and has continued to cause companies and various international jurisdictions to impose restrictions, such as quarantines, closures, cancellations and travel restrictions. The duration of the business disruptions internationally and related financial impact to the global economy remains highly uncertain at this time, as COVID-19 continues to evolve.

The Company's German operations had been impacted by limited supply of cannabis products caused by continued shipment delays from the Netherlands. While management expects the situation to improve once all lockdown restrictions will be eventually lifted, ultimately, the extent to which the COVID-19 pandemic impacts the Company's financial results will depend on future developments, which remain highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the COVID-19 pandemic and actions taken to contain it or its impact, among others.

These uncertainties arise from the inability to predict the ultimate geographic spread of the disease, and the duration of the outbreak, including the duration of travel restrictions, business closures or disruptions, and quarantine/isolation measures that are currently, or may be put in place by Canada, Germany, the Netherlands, the U.S. and other countries to fight the virus. While the extent of the impact remains

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unknown, the Company anticipates this outbreak may continue to cause supply chain disruptions, and increased government regulations, all of which may negatively impact the Company's business and financial condition.

Fair value

Fair value estimates of financial instruments are made at a specific point in time based on relevant information about financial markets and specific financial instruments. As these estimates are subjective in nature, involving uncertainties and matters of significant judgment, they cannot be determined with precision. Changes in assumptions can significantly affect estimated fair values. The Company's financial instruments consist of cash, other receivables (excluding sales tax recoverable), other investments, accounts payables and accrued liabilities, lease liabilities and convertible debentures.

The fair value of cash, other receivables (excluding sales tax recoverable), other investments, accounts payables and accrued liabilities are approximately equal to their carrying value due to their short-term nature. The fair values of the lease liabilities and convertible debentures approximate their carrying amounts as they were measured taking into consideration comparable instruments with similar risks in determining the rates at which to discount their amount in applying their respective measurement models.

The Company classifies fair value measurements using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy has the following levels:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 – Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

	Level 1	Level 2	Level 3	Total
	\$	\$	\$	\$
Cash	957,984	-	-	957,984
Other investments	-	337,387	-	337,387

As at December 31, 2021 and 2020, the Company's financial instruments carried at fair value consisted of its cash, which is classified as Level 1, and its other investments, which have been classified as Level 2 (for investments in warrants securities). There were no transfers between Levels 2 and 3 for recurring fair value measurements during the years ended December 31, 2021 and 2020.

Business Acquisitions

Pharmadrug Acquisition

On February 27, 2019, the Company entered into a definitive share purchase agreement (the "Share Purchase Agreement") to acquire an 80% ownership in Pharmadrug Production (the "Pharmadrug Acquisition"), for a purchase price of €4.6 million settled in cash (\$7,101,848). The seller, Anquor Pharmaceuticals Ug ("Anquor"), retains a 20% non-controlling interest ("NCI") in Pharmadrug Production.

In addition, the Company had advanced €400,000 (approximately \$601,520) to Pharmadrug Production as a shareholder loan to assist the German subsidiary to maintain appropriate levels of working capital. The Share Purchase Agreement provides that Anquor will be entitled to receive an earn-out payment of €400,000 if the total revenues of the pharmaceutical tender business of Pharmadrug Production for the 2019 financial year are 90% or more of the total revenues of that business segment for the 2018 financial year. The earn-out, if any, was due and payable to Anquor on March 1, 2020. As at December 31, 2019, the earn-out had not been achieved. Thus, no pay-out has been made.

On May 17, 2019 (the "Acquisition Date"), the Company completed the Pharmadrug Acquisition. Goodwill of \$4,605,861, which is not tax deductible, was recognized due to the expected synergies from combining operations of the Company and Pharmadrug Production. The Company determined that the Pharmadrug Acquisition was a business combination in accordance to the definition of IFRS 3 – Business Combination ("IFRS 3"), and as such, had accounted for it in accordance with this standard, with the Company being the acquirer on the Acquisition Date.

On July 14, 2021, the Company entered into a new share purchase agreement (the "New Share Purchase Agreement") with Anquor, to acquire the 20% NCI (the "NCI Acquisition") in Pharmadrug Production, to obtain 100% ownership, for a purchase price consideration of €35,000 (\$52,879) payable in cash.

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On August 25, 2021, the Company completed the NCI Acquisition by transferring the purchase consideration to Anquor, as required by the New Share Purchase Agreement. On closing of the NCI Acquisition, the carrying amount of the NCI was \$1,004,463. The difference between the purchase price and the carrying amount of the NCI has been recognized in accumulated deficit.

Super Smart Transaction

On May 25, 2020 and as amended on June 12, 2020, the Company entered into a definitive agreement (the "Amalgamation Agreement") with Interrobang d/b/a Super Smart, pursuant to which Pharmadrug acquired all of the issued and outstanding shares of Super Smart, effected by way of a three-cornered amalgamation between Pharmadrug, Super Smart and a wholly-owned subsidiary of Pharmadrug (the "Super Smart Transaction").

On June 15, 2020 (the "Super Smart Transaction Date"), the Super Smart Transaction closed. Pursuant to the terms of the Super Smart Transaction, each Super Smart share, warrant or finder's warrants was exchanged for one equivalent security in the capital of Pharmadrug. Super Smart previously issued on May 23, 2020, 2,500 subscription receipts (the "Debentures Subscription Receipts") for an outstanding principal amount of \$2,500,000 of senior secured convertible debentures (the "Super Smart Debentures"). Each Debentures Subscription Receipt entitles the holder to receive, without payment of any additional consideration or further action, and subject to adjustment, one 12% senior secured Super Smart Debenture automatically immediately prior to the completion of the Super Smart Transaction. The purchase price and other terms of the Super Smart Transaction were negotiated at arm's length with the Board of Pharmadrug and Interrobang.

Following completion of the Super Smart Transaction, Interrobang became a wholly-owned subsidiary of Pharmadrug.

The acquisition of Super Smart did not constitute a business combination because this entity did not meet the definition of a business under IFRS 3. As a result, the transaction was accounted for in accordance with IFRS 2 – Share-Based Payments ("IFRS 2"), and share consideration paid was measured at the fair value of the identifiable and unidentifiable assets acquired. Consideration consisted entirely of shares and warrants of the Company which were measured at the estimated fair value on the date of the acquisition.

Details of the Super Smart Transaction are presented as follows:

	\$
Purchase Price Consideration Paid	
Fair value of common shares issued ⁽ⁱ⁾	2,886,000
Fair value of warrants issued ⁽ⁱⁱ⁾	1,749,765
	4,635,765
Net Identifiable Assets Acquired	
Cash	2,191,932
Advances	400,000
Promissory note	76,975
Accounts payable and accrued liabilities	(27,667)
Other liabilities	(1,000)
Debentures Subscription Receipts	(2,500,000)
Total Net Identifiable Assets Acquired	140,240
Unidentifiable Assets Acquired	4,495,525

The unidentifiable assets acquired consist largely of the synergies and economies of scale expecting from combining the operations of the Company and Interrobang. The synergies include improved sales and marketing, lower management salaries and wages, and potential supply chain efficiencies in combining the cannabis distribution and psychedelic business.

Consideration paid consisted entirely of shares and warrants of the Company which were measured at the estimated fair value on the date of the Super Smart Transaction, as follows:

- (i) The fair value of the 44,400,000 common shares, issued to former Super Smart shareholders, was determined to be \$2,886,000 based on the closing share price of Pharmadrug on the Super Smart Transaction Date on June 15, 2020.
- (ii) The estimated fair value of the 32,200,000 warrants as consideration are based on Black-Scholes with the following assumptions: current stock price – \$0.065 per share, expected dividend yield – 0%, expected volatility – 121%, risk-free interest rate – 0.27%,

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exercise price of \$0.05, and an expected life of three years. In making the assumptions for expected volatility, the Company used the estimated average volatility of comparable companies operating in the cannabis industry.

- (iii) The estimated fair value of the 3,748,400 finders' options as consideration are based on the Monte Carlo option model with the following assumptions: current stock price – \$0.065 per share, expected volatility 97%, risk-free interest rate – 0.29%, and an expected life of two years. In making the assumptions for expected volatility, the Company used the estimated average volatility of comparable companies operating in the cannabis industry.

Smart Shop Acquisition

On August 10, 2020, the Company, through Interrobang Tiel, entered into a purchase and sale agreement with Souveniert JE, pursuant to which Pharmadrug acquired the assets of the seller (the "Smart Shop Acquisition"). On October 1, 2020, the Smart Shop Acquisition closed.

The acquisition of Souveniert JE does not constitute a business combination because this entity did not meet the definition of a business under IFRS 3. As a result, the Company has accounted for the Smart Shop Acquisition as an asset acquisition. Consideration consisted of a cash payment of €10,000 (\$15,805).

Details of the Smart Shop Acquisition are presented as follows:

	\$
Purchase Price Consideration Paid	
Cash	15,805
	15,805
Net Identifiable Assets Acquired	
Inventories	1,563
Total Net Identifiable Assets Acquired	1,563
Unidentifiable Net Assets Acquired	14,242

The unidentifiable net assets acquired consist largely of the synergies and economies of scale expecting from the Smart Shop Acquisition. The synergies included improved sales and marketing, complementary products, and potential complementary geographies and customers.

Sairiyo Acquisition

On January 25, 2021, the Company entered into a share exchange agreement (the "Agreement") to acquire Sairiyo, a biotechnology company focused on developing improved formulations of naturally derived compounds for serious, rare, and life-threatening diseases.

On February 2, 2021 (the "Sairiyo Acquisition Date"), the Company completed the acquisition of Sairiyo (the "Sairiyo Acquisition"). Under the terms of the Agreement, the Company acquired all the issued and outstanding shares of Sairiyo in consideration for the issuance of an aggregate of 75,000,000 units (each a "Unit") of Pharmadrug. Each Unit is comprised of one common share and one common share purchase warrant ("Warrant") of Pharmadrug. Each Warrant entitles the holder thereof to acquire one common share in the capital of Pharmadrug at any time on or before the August 2, 2022, at an exercise price of \$0.10 per share.

Following completion of the Sairiyo Acquisition, Sairiyo became a wholly-owned subsidiary of Pharmadrug.

The Company determined that the Sairiyo Acquisition was a business combination in accordance to the definition of IFRS 3, and as such, had accounted for it in accordance with this standard, with the Company being the acquirer on the Sairiyo Acquisition Date.

The following table sets forth the allocation of the purchase price to the net identifiable assets acquired, based on estimates of fair value:

	\$
Purchase Price Consideration Paid	
Fair value of common shares issued ⁽ⁱ⁾	6,750,000
Fair value of warrants issued ⁽ⁱⁱ⁾	3,169,059
	9,919,059

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Net Identifiable Assets Acquired	
Cash	361,982
Intangible assets	
Patents and Licenses	4,529,600
Accounts payable and accrued liabilities	(14,795)
Deferred tax liabilities on intangible assets acquired	(1,200,344)
Total Net Identifiable Assets Acquired	3,676,443
Goodwill	6,242,616

Consideration paid consisted entirely of shares and warrants of the Company which were measured at the estimated fair value on the Sairiyo Acquisition Date, as follows:

- (i) The fair value of the 75,000,000 common shares, issued to former Sairiyo shareholders, was determined to be \$6,750,000 based on the closing share price of Pharmadrug on the Sairiyo Acquisition Date of February 2, 2021.
- (ii) The estimated fair value of the 75,000,000 Warrants as consideration are based on Black-Scholes with the following assumptions: current stock price – \$0.09 per share, expected dividend yield – 0%, expected volatility – 109%, risk-free interest rate – 0.15%, exercise price of \$0.10, and an expected life of 1.5 years. In making the assumptions for expected volatility, the Company used the estimated average volatility of comparable companies operating in the cannabis industry.

Goodwill of \$6,242,616, which is not tax deductible, was recognized due to the expected synergies from combining operations of the Company and Sairiyo.

Contingencies

The Company's cannabis operations are subject to a variety of local regulations. Failure to comply with one or more of those regulations could result in fines, restrictions on its operations, or losses of permits that could result in the Company ceasing operations in that specific state or local jurisdiction. In Germany, the legalization of medical cannabis in March 2017 gave rise to a formal medical cannabis program nationwide. However, Germany does not currently have a legally permissible adult-use, or recreational cannabis market. While management believes that the Company is in compliance with applicable local and state regulations as at December 31, 2021, cannabis regulations continue to evolve and are subject to differing interpretations. As a result, the Company may be subject to regulatory fines, penalties, or restrictions in the future.

The Company may, from time to time, be subject to various administrative, regulatory, and other legal proceedings arising in the ordinary course of business. Liabilities associated with legal proceedings are recorded when (i) the liabilities are a result of a past event, (ii) it is probable that an outflow of resources will be required to settle the obligations, and (iii) a reliable estimate can be made of the amount of obligation.

As at December 31, 2021, the Company had the following claims:

- On August 20, 2019, THoR Beteiligungen GmbH ("THoR") incorrectly transferred an amount of €6,804 to Pharmadrug Production's business account and subsequently demanded its repayment. On October 22, 2019, Pharmadrug Production declared that the Company would offset this amount against a counterclaim against THoR, which subsequently issued a notice of assignment, according to which the claim had been assigned to Pharmadrug International GmbH ("Pharmadrug International") on September 27, 2019. Pharmadrug International has since filed a claim for repayment of a mismatch transfer against Pharmadrug Production for the same amount.
- On February 21, 2020, Thor Investments GmbH ("Thor Investments") filed a lawsuit with Pharmadrug Production for a repayment of a loan in the amount of €34,222 plus interest. The loan with Thor Investments dates back to March 2019.

As at December 31, 2021, the Company had recorded a provision of approximately \$71,955 (€50,000) for the estimated potential damages and liabilities it is expected to pay out.

Material Contracts and Commitments

The Company, through its German subsidiary, Pharmadrug Production, holds a Schedule I E.U. narcotics license issued by the BfArM, along with GMP certification. This license distinguishes the Company from a medical wholesaler and allows us to import, export, manufacture and distribute narcotics such as medicinal cannabis products.

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Pharmadrug Production also holds a manufacturing license acc. §13 of the German drug law and a GMP certificate acc. Article III of the Directive 2001/83/EC. With our qualified person acc. §14 of the German drug law we have the right to release medicinal products for the European market.

The Pharmadrug Production wholesaling license acc. §52a of the German drug law and our GDP certificate allow us to trade with all pharmaceutical products worldwide. As a registered API trader, we can also handle API trading worldwide. With this designation the Company is able to import products with APIs from anywhere in the world subject to such products meeting applicable GMP standards. The legal function for this kind of business will be guaranteed by our Responsible person for wholesale distribution.

Off-Balance Sheet Arrangements

As at December 31, 2021 and the date of this MD&A, the Company does not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on the results of operations or financial condition of the Company.

Subsequent Events

Shares, options and warrants

On January 18, 2022, the Company issued 3,400,000 common shares to a marketing advisor (the "Marketing Advisor"), pursuant to the terms of the marketing services agreement entered between the parties. The Company also granted 3,000,000 options to the Marketing Advisor. The options are exercisable at a price of \$0.05 per common share for a period of one year. The options vested immediately on grant.

On January 18, 2022, the Company also granted 750,000 options to an arm's length consultant. The options are exercisable at a price of \$0.05 per common share for a period of two years. The options also vested immediately on grant.

On April 18, 2022, the Company issued 750,000 common shares as a result of the exercise of 750,000 Warrants for cash proceeds of \$37,500.

On April 19, 2022, the Company issued 620,000 common shares as a result of the exercise of 620,000 broker options for cash proceeds of \$31,000. Upon exercise of the broker options, 310,000 underlying warrants exercisable at \$0.05 to purchase one common share of the Company up to June 12, 2023, were issued.

On April 21, 2022, the Company issued another 750,000 common shares as a result of the exercise of 750,000 Warrants for cash proceeds of \$37,500.

Disclosure of Outstanding Share Data as of May 2, 2022

	Authorized	Outstanding
Voting or equity securities issued and outstanding	Unlimited number of common shares	346,336,383 common shares
Securities convertible or exercisable into voting or equity		108,612,328 warrants exercisable to acquire common shares of the Company, and 25,850,000 outstanding stock options, of which 24,850,000 stock options are exercisable into common shares of the Company.

Significant Accounting Judgments and Estimates

The preparation of the Company's consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, revenue and expenses. These are described in greater detail in Note 2(e) to the Company's 2021 Financial Statements.

Summary of Significant Accounting Policies

The accounting policies applied by the Company are the same as noted in the Company's audited consolidated financial statements for the years ended December 31, 2021 and 2020.

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Regulatory Overview

A summary of the applicable regulatory framework for the Company's various business segments and proposed business activity are set forth below.

Business Segment	Current/ Proposed Location of Operation	Summary of Applicable Regulatory Frameworks	Third-party Researchers, Suppliers, and/or Manufacturers	Agreements / Contracts Related to Operations
Pharmadrug Production ¹	Germany / Eurozone	<p>Pharmadrug Production GmbH holds a Schedule I European Union narcotics license issued by the German Federal Institute for Drugs and Medical Devices, along with Good Manufacturing Practice certification ("GMP").</p> <p>Pharmadrug Production GmbH holds a manufacturing license (granted by BfArM) and GMP certificate.</p> <p>Pharmadrug Production GmbH has a wholesale license (granted by BfArM) for active pharmaceutical ingredients ("APIs").</p>	<p>Office of Medical Cannabis of the Netherlands (EuGMP Medical Cannabis Flower)</p> <p>Eurox Pharma GmbH ("Eurox") (Dronabinol)</p> <p>Valcon Medical A/S ("Valcon") (THC medical cannabis oil)</p>	<p>The licenses for Germany are issued by BfArM which is the German equivalent of Health Canada or the United States Food and Drugs Administration.</p> <p>On December 22, 2021, the Pharmadrug Production and Eurox entered into a supply agreement, for Eurox to supply cannabis extracts with active ingredients in CBD and THC. The shelf life at first delivery is for a minimum of 6 months and will continue to grow over the time of supply accordingly.</p> <p>On May 14, 2021, Pharmadrug Production and Valcon entered into a supply agreement for medical grade THC oil to be sold under Pharmadrug's own brand.</p>
Super Smart	Netherlands	Opium Act (Netherlands) (truffles containing psilocybin are not prohibited under the Opium Act)	McSmart Red Light Holland	N/A
Slim Winkel US	United States	<p>Dietary Supplement Health and Education Act of 1994</p> <p>The Federal Food, Drug and Cosmetic Act.</p> <p>Nutrition, Labeling and Education Act.</p>	<p>Nammex Inc.</p> <p>SOS Copackers</p>	<p>N/A</p> <p>N/A</p>
Sairiyo	United States	<p>The Federal Food, Drug and Cosmetic Act.</p> <p>Controlled Substances Act</p> <p>Regulatory approvals are obtained by the Company's third-party researchers referenced in the next column for DMT and Tryptamines.</p>	<p>University of Michigan ("UofM") (Sponsored Research)</p> <p>Southwest Research Institute ("SwRI") (Cepharanthine Manufacturing)</p>	<p>On March 1, 2021, a research agreement was entered with UofM, with the objective to understand the mechanisms that regulate the synthesis of endogenous DMT.</p> <p>On April 15, 2021, a contract for services was entered with SwRI to initiate non-clinical and clinical manufacturing of cepharanthine for the Company's rare cancer and infectious diseases programs.</p>

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Business Segment	Current/Proposed Location of Operation	Summary of Applicable Regulatory Frameworks	Third-party Researchers, Suppliers, and/or Manufacturers	Agreements / Contracts Related to Operations
			<p>Terasaki Institute for Biomedical Innovation ("TIBI") (Sponsored Research of Tryptamines)</p> <p>Johns Hopkins University ("JHU") (Sponsored Research for DMT)</p> <p>Crown Bioscience Inc. ("Crown Bioscience") (Cepharanthine Efficacy Testing Lab)</p>	<p>On August 4, 2021, a sponsored research agreement was entered with TIBI with the objective to perform in vitro and in vivo testing in tryptamines relating to glaucoma.</p> <p>On July 9, 2021, an investigator-initiated clinical trial agreement was entered with JHU, with the objective to conduct a clinical study comparing acute and enduring psychological and neural effects of DMT and other psychedelic compounds.</p> <p>In 2021, research activities were contracted out to Crown Bioscience, which conducts studies directed by Pharmadrug to "assess the efficacy of cepharanthine in the treatment of cancers in both in vitro and in vivo studies".</p> <p>For more information, see "Research and Development Projects" below.</p>

Notes:

1. Pharmadrug Production GmbH does not cultivate cannabis. It is an importer and wholesaler to pharmacies of cannabis products in Germany for medical purposes only and is currently authorized to import cannabis products in Germany from the Netherlands and Denmark.

Germany

In Germany, cannabis is federally legal for medicinal use; however, the sale of medical cannabis and cannabis extracts is limited to pharmacies. The BfArM oversees the prescription, distribution and import of medical cannabis in Germany. Under its mandate, BfArM issues import permits for the import of medical cannabis for distribution through pharmacies in Germany. With the legalization of cannabis in Germany for medical use, BfArM has established a Cannabis Agency to organize and control the cultivation of cannabis for medical use via a tender process to identify suppliers to cultivate medical cannabis within Germany. Under the current German regulatory framework, it is possible for the Company to sell imported cannabis products to pharmacies directly outside of the Cannabis Agency tender process.

Pharmadrug Production holds a manufacturing license acc. §13 of the German drug law and a GMP certificate acc. Article III of the Directive 2001/83/EC. With our qualified person acc. §14 of the German drug law we have the right to release medicinal products for the European market (in those jurisdictions where such products are legal). Our narcotics license allows us to import, export, manufacture and distribute narcotics such as medicinal cannabis products. Responsible for all processes in connection with narcotic products or APIs is our Responsible person for narcotics acc. §5 of the narcotic law.

The Pharmadrug Production wholesaling license acc. §52a of the German drug law and our GDP certificate allows us to trade with all pharmaceutical products worldwide. As a registered API trader, we can also handle API trading worldwide. The legal function for this kind of business will be overseen by our Responsible person for wholesale distribution.

The Responsible person is an employee of the Company and in that role he is responsible for all narcotics transactions and activities occurring with qualified and legally acceptable counter-parties.

Ketamine is defined as Rx only drug substance in Germany. We can trade with Ketamine as an intermediate product (Bulk) or as an API product due to the rights that we have with our licenses. The Company has sourced a supply of Ketamine but has no current clients/customers. At present the Company has no current intentions to trade in or market Ketamine.

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Pharmadrug Production is a Schedule I narcotics distributor with EuGMP certification. As noted above, it can function as a wholesaler or as a manufacturer. As a wholesaler, Pharmadrug Production purchases end product from manufacturers and sells it to pharmacies. Pharmadrug Production can also act as a manufacturer using its manufacturing license and GMP certification from German regulators. With this capability, Pharmadrug Production can third party manufacture any narcotic, package under Pharmadrug Production's name and store it at its third-party narcotics manufacturing facility. Pharmadrug Production ensures that the entire supply chain meets GMP standards and regulatory specifications. Pharmadrug Production can third party manufacture and distribute in Germany or the E.U. (in those markets where the product being distributed is legal) or for export without such third-party manufacturer being required to be licensed with the Cannabis Agency. Pharmadrug Production can also third-party manufacture outside of the E.U. and import into Germany and thereby act as the gateway into the eurozone. Under that scenario, Pharmadrug Production has to ensure that any product imported from outside of the eurozone meets EuGMP standards. If required, Pharmadrug Production can bring the German regulator in to inspect a facility outside of the eurozone and grant a German EuGMP certification for such facility.

Netherlands

In June of 2020, the Company acquired Interrobang, doing business as Super Smart. The Company was focused on consolidating the fragmented "smartshop" market in the Netherlands, with a particular focus on psychedelic-based products. Unlike coffee shops, smartshops have a legal framework that allows them to sell entheogenic plants, which are plants containing substances that have hallucinogenic properties. The bulk of what is sold in smart shops are truffles containing psilocybin, the active component of "magic" mushrooms. No specific license is needed for this business. In the Netherlands, neither the federal government nor any local government has implemented any direct regulatory or licensing framework in respect of the cultivation, production, and sale, and recreational consumption of fresh, unprocessed truffles within the Netherlands. As such, the Netherlands does not directly regulate the cultivation, distribution, sale and possession of fresh, unprocessed truffles, whether at the federal level or at a local level. However, to the extent truffles are subject to processing, or have transitioned in a stage of growth to become magic mushrooms, such biomatter will, at such point in time, become a controlled substance that is subject to direct federal regulation in the Netherlands under the Opium Act.

The Netherlands has 355 municipalities. In each municipality, the municipal council is authorized to adopt a General Municipal Bylaw. Such bylaws often include model provisions introduced by the Association of Netherlands Municipalities. Some districts require a specific license under their bylaws to operate a smartshop but the jurisdiction in which Super Smart's smartshop is located does not. If one wishes to know whether a municipality sets any requirements on the establishment of a smartshop you start by consulting the General Municipal Bylaw. Municipalities are also authorized to prevent the establishment of smartshops by using zoning plans. The Company has reviewed the applicable municipal zoning plan and has verified that its smartshop is in compliance therewith.

Super Smart's e-commerce platform also does not require a license to operate. The only license required is a normal business registration. However, the Dutch Advertising Code Authority (Stichting Reclame Code) (the "DACA") has implemented the Dutch Advertising Code (the "Advertising Code"), which stipulates certain rules pertaining to advertising by various businesses within the Netherlands, with certain specialized rules applying to certain types of products such as foods, alcohol and tobacco. Among its general requirements, the Advertising Code stipulates, for example, that advertising shall not be dishonest or misleading, or aggressive. The Company consulted with local counsel prior to launching its e-commerce business, in the course of which consultation the Company confirmed that its advertising activities would not be strictly subject to any specific requirements in respect of its activities as they relate to the advertising and promotion of truffles. However, as at the date hereof, the Company has adopted an ethical approach to marketing and advertising, whereby the Company voluntarily identifies and adheres to certain industry best practices which generally apply to businesses, and where possible, applies certain requirements applicable to tobacco and alcohol to the e-commerce business, mutatis mutandis, taking care to, for example, avoid displaying, suggesting or encouraging excessive or otherwise irresponsible consumption.

The Opium Act is the primary drug legislation in the Netherlands. Articles 2 and 3 of the Opium Act prohibit the possession, production, preparation, processing, selling, delivering, transporting, importing and exporting of any drug or substance listed on the Opium Act Lists, as well as preparations containing one or more of such prohibited substances. Articles 2 and 3 of the Opium Act also prohibit the above-noted activities in respect of a number of plants or parts of plants which are named in the Opium Act Lists.

Under the legislative framework of the Opium Act, and as confirmed by case law from the Supreme Court of the Netherlands (the highest court in the Netherlands), insofar as the Opium Act Lists include certain compounds and preparations but not the organic matter within which those compounds occur naturally, the prohibitions in Articles 2 and 3 of the Opium Act do not relate to unlisted organic matter (and parts thereof). The Opium Act Lists expressly name magic mushrooms, as well as psilocin (psilocine) and psilocybin (psilocybine), both of which are substances that naturally occur within both magic mushrooms and truffles. However, the Opium Act Lists do not expressly name truffles. The consequence of this exclusion is that, in light of the legislative framework of the Opium Act, and case law from the Supreme Court of the Netherlands, Articles 2 and 3 of the Opium Act do not prohibit the cultivation, production, and sale of fresh, unprocessed truffles, but, solely to the extent that (i) the fresh truffles are not subject to further processing that results in such truffles becoming a

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preparation prohibited under the Opium Act, and (ii) the biomatter that is cultivated, produced, and sold as fresh truffles has not progressed to a stage in growth where the biomatter has transitioned from sclerotia (truffles), to become a magic mushroom (paddo). In short, the lack of direct regulation of fresh, unprocessed truffles and the cultivation, distribution, sale and possession of fresh, unprocessed truffles does not mean that activities pertaining to truffles are entirely unregulated, but rather, unregulated only to the extent that such activities pertain to fresh unprocessed truffles, which have not transitioned to a stage of growth to become magic mushrooms.

United States

Super Smart US

Functional mushrooms are considered nutraceutical products and are treated as vitamins and food supplements in the U.S. The Company has them produced and bottled by a manufacturer in San Diego with all the required labelling. To maintain FDA compliance, the Company adheres to standards set forth under the Dietary Supplement Health and Education Act of 1994 ("DSHEA").

The FDA also regulates the formulation, manufacturing, preparation, packaging, labeling, holding, and distribution of foods, drugs and dietary supplements under the Federal Food, Drug, and Cosmetic Act ("FFDCA") and DSHEA. "Dietary supplements" are defined as vitamins, minerals, herbs, other botanicals, amino acids and other dietary substances for human use to supplement the diet, as well as concentrates, metabolites, constituents, extracts or combinations of such dietary ingredients. Functional mushrooms would fall within the definition of a dietary supplement. Generally, under DSHEA, dietary ingredients that were on the market prior to October 15, 1994 may be used in dietary supplements without notifying the FDA. New dietary ingredients (i.e., not marketed in the U.S. prior to October 15, 1994) must be the subject of a new dietary ingredient notification submitted to the FDA unless the ingredient has been "present in the food supply as an article used for food" without being "chemically altered." A new dietary ingredient notification must provide the FDA with evidence of a "history of use or other evidence of safety" establishing that use of the dietary ingredient, when used under the conditions recommended or suggested in the labeling of the dietary supplement, "will reasonably be expected to be safe." A new dietary ingredient notification must be submitted to the FDA at least 75 days before the initial marketing of the new dietary ingredient. There can be no assurance that the FDA will accept the evidence of safety for any new dietary ingredients that the Company may want to market, and the FDA's refusal to accept such evidence could prevent the marketing of such dietary ingredients.

The DSHEA revised the provisions of the FFDCA concerning the composition and labeling of dietary supplement ingredients and products. Under the DSHEA, dietary supplement labeling must include the statement of identity (name of the dietary supplement), the net quantity of contents statement (amount of the dietary supplement), the nutrition labeling, the ingredient list, and the name and place of business of the manufacturer, packer, or distributor. The DSHEA also states that dietary supplements may display "statements of nutritional support," provided certain requirements are met. Such statements must be submitted to the FDA within 30 days of first use in marketing and must be accompanied by a label disclosure that "This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease." Such statements may describe how a particular dietary ingredient affects the structure, function or general well-being of the body, or the mechanism of action by which a dietary ingredient may affect body structure, function, or well-being, but may not expressly or implicitly represent that a dietary supplement will diagnose, cure, mitigate, treat, or prevent a disease. Any statement of nutritional support the Company makes in labeling must possess scientific evidence substantiating that the statement is truthful and not misleading. If the FDA were to determine that a particular statement of nutritional support was an unacceptable drug claim or an unauthorized version of a health claim about disease risk reduction for a food product, or if the FDA were to determine that a particular claim was not adequately supported by existing scientific data or was false or misleading, the Company would be prevented from using that claim. In addition, the FDA deems promotional and internet materials as labeling; therefore, the Company's promotional and internet materials must comply with FDA requirements and could be the subject of regulatory action by the FDA, or by the Federal Trade Commission (the "FTC") if that agency or other governmental authorities, reviewing the materials as advertising, considers the materials false and misleading.

U.S. laws also require recordkeeping and reporting to the FDA of all serious adverse events involving dietary supplements products. The Company will need to comply with such recordkeeping and reporting requirements, and implement procedures governing adverse event identification, investigation, and reporting. As a result of reported adverse events, health and safety risks or violations of applicable laws and regulations, the Company may from time to time elect, or be required, to recall, withdraw or remove a product from a market, either temporarily or permanently.

The Company's nutraceutical products (functional mushrooms) are considered "food" and must be labeled as such. Within the U.S., this category of products is subject to the federal Nutrition, Labeling and Education Act ("NLEA"), and regulations promulgated under the NLEA. The NLEA regulates health claims, ingredient labeling and nutrient content claims characterizing the level of a nutrient in the product. The ingredients in conventional foods must either be generally recognized as safe by experts for the purposes to which they are put in foods, or be approved as food additives under FDA regulations. As the Company's nutraceutical products are regulated as foods, it is

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required to comply with the Federal Food Safety & Modernization Act and applicable regulations. The Company is required to provide foreign supplier certifications evidencing the Company's compliance with FDA requirements.

The FDA has broad authority to enforce the provisions of the FFDCAs applicable to foods, drugs, dietary supplements, and cosmetics, including powers to issue a public warning letter to a company, to publicize information about illegal or harmful products, to request a recall of products from the market, and to request the U.S. Department of Justice to initiate a seizure action, an injunction action, or a criminal prosecution in the U. S. courts. The Company could be subject to fines and penalties, including under administrative, civil, and criminal laws for violating U.S. laws and regulations, and the Company's nutraceutical products could be banned or subject to recall from the marketplace. The Company could also be subject to possible business and consumer claims under applicable statutory, product liability and common laws.

The FTC exercises jurisdiction over the advertising of the Company's nutraceutical products in the U.S. The FTC has in the past instituted enforcement actions against several dietary supplement and food companies and against manufacturers of dietary supplement products, including for false and misleading advertising, label claims or product promotional claims. In addition, the FTC has increased its scrutiny of the use of testimonials, which the Company may utilize, as well as the role of endorsements and product clinical studies. The Company cannot be sure that the FTC, or comparable foreign agencies, will not question the Company's advertising, product claims, promotional materials, or other operations in the future. The FTC has broad authority to enforce its laws and regulations, including the ability to institute enforcement actions that could result in recall actions, consent decrees, injunctions, and civil and criminal penalties by the companies involved. Failure to comply with the FTC's laws and regulations could impair the Company's ability to market the Company's nutraceutical products.

The Company is also subject to regulation under various state and local laws, ordinances and regulations that include provisions governing, among other things, the registration, formulation, manufacturing, packaging, labeling, advertising, sale and distribution of foods and dietary supplements. In addition, the Company may become subject to additional laws or regulations administered by the FDA or by other federal, state, local or foreign governmental authorities, to the repeal of laws or regulations that the Company considers favorable, or to more stringent interpretations of current laws or regulations. In the future, the Company believes that the dietary supplement industry will likely face increased scrutiny from federal, state, and local governmental authorities. It is difficult to predict the effect future laws, regulations, repeals, or interpretations will have on the Company's business. However, such changes could require the reformulation of products, recalls or discontinuance of products, additional administrative requirements, revised or additional labeling, increased scientific substantiation or other requirements. Any such changes could have a material adverse effect on the Company's business or financial performance.

Cepharanthine

Cepharanthine, a bisbenzylisoquinoline alkaloid isolated from tubers of *Stephania*, has been used in Asia for hundreds of years and has been approved by the Pharmaceutical and Medical Devices Agency in Japan for more than 70 years. Cepharanthine is not a controlled substance in the U.S. or China and the Company does not conduct or currently plan to conduct research with respect to cepharanthine in any other countries. The Company intends to develop its novel enteric coated cepharanthine drug product for cancer and infectious disease using a 505(b)(2) regulatory pathway. The 505(b)(2) New Drug Application ("NDA") is a streamlined NDA process in the U.S. pursuant to which the applicant relies upon one or more investigations conducted by someone other than the applicant and for which the applicant has not obtained right of reference. In other words, the 505(b)(2) pathway enables investigators and/or manufacturers to apply for approval without having to repeat all the drug development work done for an innovator drug.

Sairiyo is the Company's biotechnology subsidiary that is advancing the pre-clinical and clinical development of cepharanthine, a repurposed and reformulated naturally-derived compound for the potential treatment of cancer, neurological, inflammatory, and infectious diseases. Cepharanthine is not a controlled substance. In its generic form, it has been an approved drug in Japan for over 70 years. It is used for many ailments including orally for snake bites, hair loss and malaria and by intravenous for cancer (although not extensively due to its low bioavailability). The Company has the exclusive patent to an enteric coated version that has a significantly higher bioavailability. The reformulation was developed by the SwRI in Texas. The regulatory framework is that of any non-narcotic compound being developed for an FDA clinical trial.

In order to develop regulated therapies, Pharmadrug's business must be conducted in strict compliance with the regulations of federal, state, local and regulatory agencies in the U.S. These regulatory authorities regulate, among other things, the research, manufacture, promotion, and distribution of drugs in specific jurisdictions under applicable laws and regulations.

The regulatory approval process is generally lengthy and expensive, with no guarantee of a positive result. Failure to comply with applicable regulatory authorities or other requirements may result in civil or criminal penalties, recall or seizure of products, injunctive relief including partial or total suspension of production, or withdrawal of a product from the market.

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The FDA and other federal, state, local and foreign regulatory agencies impose substantial requirements upon the clinical development, approval, labeling, manufacture, marketing, and distribution of drug products. These agencies regulate, among other things, research and development activities and the testing, approval, manufacture, quality control, safety, effectiveness, labeling, storage, record keeping, advertising and promotion of any product candidates or commercial products. The Company is in the process of preparing an IND application, which it expects to file with the FDA in the second half of 2022.

DMT

DMT is strictly controlled under the *Controlled Substances Act* (21 U.S.C. § 811) (the "CSA") as a Schedule I substance. Schedule I substances by definition have no currently accepted medical use in the U.S, a lack of accepted safety for use under medical supervision, and a high potential for abuse. Schedule I and II drugs are subject to the strictest controls under the CSA, including manufacturing and procurement quotas, security requirements and criteria for importation. Anyone wishing to conduct research on substances listed in Schedule I under the CSA must register with the U.S. Drug Enforcement Administration ("DEA") and obtain DEA approval of the research proposal.

The CSA and its implementing regulations establish a "closed system" of regulations for controlled substances. The CSA imposes registration, security, recordkeeping and reporting, storage, manufacturing, distribution, importation, and other requirements under the oversight of the DEA. The DEA is responsible for regulating controlled substances, and requires those individuals or entities that manufacture, import, export, distribute, research, or dispense controlled substances to comply with the regulatory requirements in order to prevent the diversion of controlled substances to illicit channels of commerce.

Facilities that manufacture, distribute, import, or export any controlled substance must register annually with the DEA. The DEA registration is specific to the particular location, activity(ies) and controlled substance schedule(s).

The DEA inspects all manufacturing facilities to review security, recordkeeping, reporting and handling prior to issuing a controlled substance registration. The specific security requirements vary by the type of business activity and the schedule and quantity of controlled substances handled. The most stringent requirements apply to manufacturers of Schedule I and Schedule II substances. Required security measures commonly include background checks on employees and physical control of controlled substances through storage in approved vaults, safes, and cages, and through use of alarm systems and surveillance cameras. Once registered, manufacturing facilities must maintain records documenting the manufacture, receipt, and distribution of all controlled substances. Manufacturers must submit periodic reports to the DEA of the distribution of Schedule I and II controlled substances, Schedule III narcotic substances, and other designated substances. Registrants must also report any controlled substance thefts or significant losses, and must obtain authorization to destroy or dispose of controlled substances. Imports of Schedule I and II controlled substances for commercial purposes are generally restricted to substances not already available from a domestic supplier or where there is not adequate competition among domestic suppliers. In addition to an importer or exporter registration, importers and exporters must obtain a permit for every import or export of a Schedule I and II substance or Schedule III, IV and V narcotic, and submit import or export declarations for Schedule III, IV and V non-narcotics.

For drugs manufactured in the U.S., the DEA establishes annually an aggregate quota for the amount of substances within Schedules I and II that may be manufactured or produced in the U.S. based on the DEA's estimate of the quantity needed to meet legitimate medical, scientific, research and industrial needs. The quotas apply equally to the manufacturing of the API and production of dosage forms. The DEA may adjust aggregate production quotas a few times per year, and individual manufacturing or procurement quotas from time to time during the year, although the DEA has substantial discretion in whether or not to make such adjustments for individual companies.

Individual U.S. states also establish and maintain separate controlled substance laws and regulations, including licensing, recordkeeping, security, distribution, and dispensing requirements. State authorities, including boards of pharmacy, regulate use of controlled substances in each state. Failure to maintain compliance with applicable requirements, particularly as manifested in the loss or diversion of controlled substances, can result in enforcement action. The DEA may seek civil penalties, refuse to renew necessary registrations, or initiate proceedings to revoke those registrations. In certain circumstances, violations could lead to criminal prosecution.

As part of its pharmaceutical psychedelic research efforts, the Company is also actively engaged in conducting research on DMT. Sponsored research is being conducted at UofM. This is for endogenous DMT, i.e. naturally produced in the body. There is no DMT or psychedelic or narcotic used in this study.

Pharmadrug also sponsors R&D activities focused on DMT and two undisclosed analogues of DMT (tryptamine family members). As it relates to the tryptamine programs, all of the R&D is conducted at either JHU (Baltimore, MD) or TIBI (Los Angeles, CA). Both institutions have the authority and legal right to perform all work currently underway on Pharmadrug's R&D programs.

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JHU is currently working on an IND submission to the FDA. JHU is licensed by the DEA to possess and conduct research on DMT. TIBI are conducting research to develop an ocular medical device that can continuously and slowly release a reformulated DMT or DMT analogue to reduce intraocular pressure. The R&D activities conducted by TIBI are on two undisclosed tryptamine molecules. One of the candidate molecules is a schedule I material and the other is not scheduled in the U.S. For the single schedule I candidate tryptamine, TIBI has secured a controlled substance/regulated chemical registration certificate. Under the terms of the agreements with JHU and TIBI, these institutes are responsible for obtaining all necessary consents, approvals, and authorizations of all governmental authorities and other persons required in connection with the execution, delivery, and performance of the existing agreements prior to commencing work. The execution and delivery of these sponsored research agreements and the performance of each institution's obligations do not conflict with or violate any requirement of applicable laws or regulations. The Company has not sourced DMT or DMT analogues, nor does it make available for sale DMT or DMT analogues as it is not licensed to do so. The institutions where the Company sponsors R&D, have sourced these materials under their own licenses and institutional obligations.

The Company has an exclusive license for all fields of use to U.S. patent 10,576,077 B2. Based on recently generated data in the oncology space which examined the efficacy of Cepharanthine-2HCL alone and in combination with SoC chemotherapeutic agents, the Company has sought advice on filing a provisional patent. A provisional patent was filed to capture claims related to these findings in Q1 2022.

Neither the Company nor any of its subsidiaries are engaged in cannabis operations in the U.S.

Compliance Program

The Company oversees and monitors compliance with applicable laws in each jurisdiction in which it operates. In addition to the Company's senior executives and the employees responsible for overseeing compliance, the Company has local counsel engaged in every jurisdiction in which it operates and has received legal opinions or advice in each of these jurisdictions regarding (a) compliance with applicable regulatory frameworks, and (b) potential exposure to, and implications arising from, applicable laws in jurisdictions in which the Company has operations or intends to operate.

The Company works with third parties who require regulatory licensing to handle scheduled drugs. The Company continuously updates its compliance and channel programs to maintain regulatory standards set for drug development. The Company also works with clinical research organizations who maintain batch records and data storage for the Company's pre-clinical programs.

In conjunction with the Company's human resources and operations departments, the Company oversees and implements training on the Company's protocols. The Company will continue to work closely with external counsel and other compliance experts, and is evaluating the engagement of one or more independent third-party providers to further develop, enhance and improve its compliance and risk management and mitigation processes and procedures in furtherance of continued compliance with the laws of the jurisdictions in which the Company operates.

The programs currently in place include monitoring by executives of the Company to ensure that operations conform to and comply with required laws, regulations, and operating procedures. The Company is currently in compliance with the laws and regulations in all jurisdictions and the related licensing framework applicable to its business activities.

The Company has material contractual relationships with three third-party research institutions. The Company is not substantially dependent on any of the contracts with such third parties. The Company and, to its knowledge, each of its third-party researchers, suppliers and manufacturers have not received any non-compliance, citations or notices of violation which may have an impact on the Company's licenses, business activities or operations.

The Company conducts due diligence on third-party researchers, medical professionals, clinics, cultivators, processors, and others as applicable, with whom it engages. Such due diligence includes but is not limited to the review of necessary licenses and the regulatory framework enacted in the jurisdiction of operation. Further, the Company generally obtains, under its contractual arrangements, representations, and warranties from such third parties pertaining to compliance with applicable licensing requirements and the regulatory framework enacted in the jurisdiction of operation.

Research and Development Projects

The following description of the various R&D projects relates to the expenditures made during the year ended December 31, 2021:

On March 1, 2021, the Company and UofM entered into a research agreement (the "Research Agreement"). The objective of the Research Agreement is to understand 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, in order to develop novel therapeutic strategies that can be translatable and clinically relevant. Pursuant to the Research Agreement, it is agreed that the total fixed price costs payable to UoM

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is USD \$254,452. During the year ended December 31, 2021, a total of USD \$199,321 (CAD \$255,972) (2020 – \$nil) had been paid to UofM in relation to the work performed.

On April 15, 2021, the Company and SwRI entered into a contract for services (a “Service Contract”), to initiate non-clinical and clinical manufacturing of cepharanthine for the Company's rare cancer and infectious diseases programs. Pursuant to the Service Contract, the total fixed cost payable to SwRI is USD \$64,783. During the year ended December 31, 2021, a total of USD \$67,783 (CAD \$86,348) (2020 – \$nil) had been paid to SwRI in relation to work done and other expenses incurred.

On August 4, 2021, the Company and TIBI entered into a sponsored research agreement (the “Sponsored Research Agreement”). The objectives of this Sponsored Research Agreement are the development of in vitro cell and tissue-based assays to examine the therapeutic efficiency of APIs and the fabrication and characterization of poly (HEMA)-based contact lenses capable of loading and releasing serotonergic ligands. Pursuant to the Sponsored Research Agreement, the total estimated cost of the research program is USD \$235,129. During the year ended December 31, 2021, a total of USD \$80,825 (CAD \$103,465) (2020 – \$nil) had been paid to TIBI in relation to the work performed.

On July 9, 2021, the Company and JHU entered into an investigator-initiated clinical trial agreement (the “Clinical Trial Agreement”). The objective of the Clinical Trial Agreement is to conduct a clinical study comparing acute and enduring psychological and neural effects of DMT and an undisclosed, potentially active comparator molecule. Pursuant to the Clinical Trial Agreement, the total cost payable to JHU is USD \$53,613. During the year ended December 31, 2021, a total of USD \$26,807 (CAD \$34,518) (2020 – \$nil) had been paid to JHU in relation to work performed.

In 2021, the Company also contracted out research activities to Crown Biosciences Inc. (“Crown Biosciences”), for the OmniScreen study to assess the efficacy and IC50 of selected Crown Bioscience cell lines and 2D Combination Study in CX Cell Lines. During the year ended December 31, 2021, a total of USD \$57,607 (CAD \$73,465) (2020 – \$nil) had been paid to Crown Biosciences in relation to work performed.

Ongoing R&D

The following summarizes Company's ongoing research relating to cepharanthine and DMT (and tryptamine analogues), and to any other products that are not at the commercial production stage:

Enteric Coated Cepharanthine Program (SARS-CoV-2 indication)

The Company is engaged in basic R&D of enteric coated cepharanthine-2HCL for treatment of mild-moderate infection resulting from SARS-CoV-2 or variants thereof. Currently, the cepharanthine program for infectious disease is early stage and Pharmadrug does not generate any revenue from the sale of enteric coated cepharanthine-2HCL (aka, PD-001). The application of cepharanthine as an antiviral to treat SARS-Cov-2 specifically, as well as more generally, coronavirus infection, is well supported in the primary, peer-reviewed literature. As it relates to development of PD-001 SARS-CoV-2 infection, Pharmadrug, like most early-stage life sciences and pharmaceutical companies, is focused on R&D. Any future revenue will be dependent on a number of factors, including the outcome of the Company's pre-clinical and non-clinical research activities, sponsored clinical trials and the receipt of all necessary regulatory approvals. To establish its business operations, the Company intends to leverage the extensive professional network of its management to identify and engage CROs, government testing facilities and academics/institutions within Canada, the U.S. and China.

Manufacturing of drug substance, drug product, outstanding method development and ICH stability studies are slated for Q1-Q4, 2022 at an estimated cost of USD \$490,000. Following submission of a Pre-IND application to the FDA, the Company received guidance related to additional studies and activities that will be required to support a successful IND filing for PD-001 for the treatment of mild-moderate SARS-CoV-2 infection. These studies include non-clinical safety / toxicology / pharmacokinetic studies in two species, primary virology, genotox, hERG and bioanalytical development. The full cost and formal timeline for the Company to complete the pre-clinical and non-clinical program is currently being examined and is highly dependent on several factors that remain to be determined. For instance, the Company is currently in discussions to determine if, and to what extent, the requested information can be secured from the Japanese health authority, the jurisdiction in which cepharanthine has previously been approved. The Company intends to leverage any existing datasets that it is able to secure for cepharanthine to support a 505(b)2 regulatory path to the clinic for PD-001. Furthermore, multiple federal government programs currently exist which provide access to testing and rapid development of antiviral agents to treat SARS-CoV-2 infections. The Company is currently evaluating the extent to which it can take advantage of these programs to support planned preclinical development activities. IND filing of PD-001 for the COVID-19 indication is expected in Q2 2022.

No research is conducted directly by the Company; all research is completed by third-parties.

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Enteric Coated Cepharanthine Program (oncology indication)

The Company is engaged in basic R&D of enteric coated cepharanthine-2HCL as an adjuvant treatment of various cancers, with lead oncology indication to be announced following completion of in vivo efficacy studies expected in Q2 2022. The application of cepharanthine as a cytotoxic agent alone, or one that improves the efficacy of approved chemotherapeutic agents when combined is well supported in the primary, peer-reviewed literature. The Company's in vitro cancer studies with PD-001 alone (60 cancer cell lines) or in combination with standard of care chemotherapeutics (23 cell lines) is now complete and information gleaned from these studies is being applied to in vivo efficacy studies which are currently underway. The estimated costs related to evaluation of PD-001 anti-cancer properties in vitro and in vivo is currently USD \$114,000 and is slated to be complete in Q3 2022.

IND-enabling studies of PD-001 overlap significantly with those activities described in the Covid-19 indication (above) and are based on the feedback that the Company recently received from the regulator following its Pre-IND submission for PD-001 in COVID-19. As such, considerable capital efficiency will be lent to the Company's oncology program development of PD-001. Vendors and costs for the non-clinical program related to PD-001 development are currently being identified and evaluated.

The Company's research also uses non-enteric coated cepharanthine-2HCL for its in vitro studies, as enteric coating is not relevant in an in vitro context. No research is conducted directly by the Company; all research is completed by third-parties.

Clinical Trial Updates

The critical path to an IND filing is the production of a cGMP lot of PD-001 followed by the stability testing and final toxicology tests specifically required by the FDA. On January 26, 2022 the Company announced that it has started the process of producing a cGMP lot of PD-001. In the meantime, the Company has three indications that it believes to be of merit for a clinical trial and will continue IND enabling pre-clinical work on all three; SARS-CoV-2 (Covid-19), esophageal cancer and prostate cancer. The FDA response from the Pre-IND meeting only required confirmatory in vitro trials to commence a SARS-CoV-2 (Covid-19) clinical trial. The Company has now completed its first IND enabling animal study relating to the treatment for prostate cancer with final results disclosed in its April 19, 2022 press release. Pharmadrug, as of April 2022 initiated its first IND enabling animal study for esophageal cancer. Tumor-bearing animals are currently receiving treatments with PD-001 and/or standard of care chemotherapy and final results first expected in towards the end of May 2022.

DMT Analogues Program: Novel Treatment of Primary Open Angle Glaucoma

The Company is engaged in basic R&D of psychedelic tryptamines for the potential treatment of POAG. Currently the Company, under a sponsored research agreement with TIBI, is evaluating the potential utility of tryptamine-based drug candidates using in vitro model systems designed to model the hemodynamic response present in the outflow tract of human eyes that display intraocular pressure dysregulation (aka glaucoma). Under the same agreement, TIBI will conduct additional 3-dimensional cell culture potency/kinetics testing of the candidate molecule(s) and formulate the ultimate development candidate into a medical device designed to deliver sustained, low dose (sub-psychedelic concentrations) of the DMT analogue to the front of the eye. The cost and timeline to deliver on these activities is USD \$235,000 for Q2 2022. Once the drug delivery device is fabricated it will be tested in a suitable animal model of POAG and based on the outcome of those studies, the Company will determine whether the result warrants further non-clinical development. Pharmadrug does not generate any revenue from the sale of the tryptamine candidate molecules currently under development. The topical application of serotonergic compounds, including psychedelic tryptamines to lower intraocular pressure is supported in the primary, peer-reviewed literature. As it relates to development of the Company's candidate tryptamine molecules, it is not currently possible to predict with sufficient accuracy, the duration and cost to bring an eventual medical product through the regulatory path. Any future revenue will be dependent on a number of factors, including the outcome of the Company's preclinical and non-clinical research activities, sponsored clinical trials and the receipt of all necessary regulatory approvals. To establish its business operations, the Company intends to leverage the extensive professional network of its management to identify and engage commercial CROs and academics/institutions within the U.S.

Phase I Safety, Tolerability and Comparison Study of N,N-Dimethyltryptamine (DMT) and an Undisclosed Acute Acting Psychedelic in Healthy Volunteers

The Company has entered into a Clinical Trial Agreement with JHU to conduct a clinical study comparing acute and enduring psychological and neural effects of N,N-Dimethyltryptamine (DMT) and an undisclosed, potently active comparator molecule. The principal investigator, Dr. Frederick S. Barrett, PhD, Associate Professor of Psychiatry and Behavioral Sciences, will be supported by Co-investigators Dr. Sandeep Nayak and Dr. Roland Griffiths; all from the JHU Center for Psychedelic and Consciousness Research. An IND application and related IRB application is currently being drafted to support the proposed study and are expected to be submitted in Q2 2022. The first part of the planned study will examine dose effects of DMT and the other test article. During the second part of the study, healthy subjects will be exposed to a maximum tolerated dose of each drug (as defined in part I of the study). During both parts of the study, investigators will carefully characterize any acute and persisting subjective, affective, cognitive, and neural dose-dependent effects for both drugs being evaluated. The clinical study is proposed to take place over a 3-year period and to include up to a year of data analysis thereafter. Employing

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an extensive battery of psychological assessment tools, coupled with state-of-the-art functional MRI and EEG the JHU researchers endeavor 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. The estimated total cost of the agreed upon studies is USD \$3,442,000 (excluding cost of clinical drug supply) and is slated to be complete in Q2 2026. The Company is currently seeking quotations from CDMOs related to the cost of cGMP N,N-dimethyltryptamine to support the planned study.

Insider Trading Policy and Code of Ethics and Business Conduct

Insider Trading Policy

The Company has adopted an insider trading policy to set forth basic guidelines for trading in the Company's securities (including, without limitation, its Common Shares) to avoid any situation that might have the potential to damage the Company's reputation or which could constitute a violation of federal or provincial securities law by the Company, its officers, directors, employees, consultants, affiliates, and certain family members of such individuals ("Insiders"). Under this policy, Insiders are prohibited from trading in Common Shares and other securities on the basis of material, non-public information relating to the Company until after the information has been disclosed to the public or during a blackout period.

The obligation not to trade on inside information applies not only to the Insiders, but also to persons who obtain such information from Insiders and use it to their advantage. Thus, liability may be imposed upon the Company, its Insiders and also outsiders who are the source of leaks of material information not yet disclosed to the public and the leaks coincide with purchases or sales of the Company's securities by such insiders, outsiders or by "tippees"

In order to provide a degree of certainty as to when insider trading is permissible, the policy imposes mandatory blackout periods during the period commencing on the first day following the end of each fiscal quarter or year-end and ending at the close of business on the second trading day following the dissemination by the Company of such quarterly and annual results. In addition, no Insider is permitted to trade any securities of the Company until two trading days after the issuance of any news release in which material information is released to the public. The Company may, from time to time, issue a general blackout period for a specific or indefinite period covering Insiders or specific employees or groups.

Code of Business Conduct

The Company has adopted a Code of Business Conduct (the "Code"). The Code sets forth standards designed to reasonably: deter wrongdoing, promote honest and ethical conduct, promote prompt internal reporting of violations of the Code and promote accountability. All personnel, in discharging their duties, must comply with applicable laws and regulations, the rules of the stock exchange(s) on which the Common Shares are listed as well as the Company's internal policies.

The Code sets the expectation that personnel learn about laws, rules and regulations that affect what they do at the Company, and raise any questions concerning the applicability, existence or interpretation of any law or regulation or conduct with their supervisor or the legal department of the Company. The Code prohibits personnel from making or participating in making any payments designed to cause or improperly influence the decisions of an individual, a company or a governmental official to act in a way that gives the Company or its personnel an advantage or soliciting, encouraging, or actually receiving any bribe or other payment, contribution, gifts, or favor that could influence your or another's decision.

The Code encourages personnel to report any actual or suspected fraud or securities law violations to the Chief Compliance Officer. The Code mandates a safe work environment and a no tolerance policy towards harassment and violence in the workplace. The Code provides guidance on avoiding conflicts of interest and acting in the best interest of the Company.

Disclosure Policy

The Company has adopted a corporate disclosure policy the objective of which is to ensure that the communications of the Company with the public are:

- timely, factual, and accurate.
- broadly disseminated in accordance with all applicable legal and regulatory requirements.

The disclosure policy documents the disclosure policies and practices of the Company and aims to promote an understanding of the legal requirements among the Company's directors, officers, and employees. This policy is also intended to assist any director or officer of the Company in the conduct of the reasonable investigation required to provide a defence to any action against such director or officer based on a misrepresentation or failure to make timely disclosure.

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The disclosure policy extends to all directors, officers, and employees of the Company, those authorized to speak on its behalf and all other insiders and covers all disclosure, including disclosure made in:

- all statutorily mandated documents filed with securities regulators.
- all written statements made in non-mandated documents such as letters to shareholders, presentations by senior management and information contained on the Company's website and in other electronic communications.
- all oral statements including oral statements made in meetings and telephone conversations with analysts and investors, interviews with the media as well as speeches, press conferences and conference calls.
- any other communication, the content of which would reasonably be expected to effect the market value or price of any security of the Company.

Risk Factors

The Company faces exposure to risk factors and uncertainties relating to its business that could significantly negatively impact its operations and financial results. Additional risks and uncertainties not presently known to Pharmadrug or currently deemed immaterial by Pharmadrug may also impair the Company's operations. If any such risks actually occur, shareholders of the Company could lose all or part of their investment and the business, financial condition, liquidity, results of operations and prospects of the Company could also be materially adversely affected and the ability of the Company to implement its growth plans could be adversely affected.

The following is a summary of risks that could be applicable to the business of the Company:

Regulatory Risks and Uncertainties

In Canada, certain psychedelic drugs, including psilocybin, are classified as Schedule III drugs under the CSA and as such, medical and recreational use is illegal under Canadian federal laws. In the U.S., certain psychedelic drugs, including psilocybin, are classified as Schedule I drugs under the CSA and the Controlled Substances Import and Export Act and as such, medical and recreational use is illegal under the U.S. federal laws. There is no guarantee that psychedelic drugs or psychedelic inspired drugs will ever be approved as medicines in any jurisdiction in which the Company operates. All activities involving such substances by or on behalf of the Company are conducted in accordance with applicable federal, provincial, state, and local laws. Further, all facilities engaged with such substances by or on behalf of the Company do so under current licenses and permits issued by appropriate federal, provincial, and local governmental agencies. While the Company is focused on programs using psychedelic inspired compounds, it does not have any direct or indirect involvement with the illegal selling, production, or distribution of any substances in the jurisdictions in which it operates and does not intend to have any such involvement. However, the laws and regulations generally applicable to the industry in which the Company is involved in may change in ways currently unforeseen. Any amendment to or replacement of existing laws or regulations, including the classification or re-classification of the substances the Company is developing or working with, which are matters beyond the Company's control, may cause the Company's business, financial condition, results of operations and prospects to be adversely affected or may cause the Company to incur significant costs in complying with such changes or it maybe unable to comply there with. A violation of any applicable laws and regulations of the jurisdictions in which the Company operates could result in significant fines, penalties, administrative sanctions, convictions, or settlements arising from civil proceedings initiated by either government entities in the jurisdictions in which the Company operates, or private citizens or criminal charges.

The loss of the necessary licenses and permits could have an adverse effect on the Company's operations. The psychedelic drug industry is a fairly new industry, and the Company cannot predict the impact of the ever-evolving compliance regime in respect of this industry. Similarly, the Company cannot predict the time required to secure all appropriate regulatory approvals for future products, or the extent of testing and documentation that may, from time to time, be required by governmental authorities. The impact of compliance regimes, any delays in obtaining, or failure to obtain regulatory approvals may significantly delay or impact the development of markets, its business and products, and sales initiatives and could have a material adverse effect on the business, financial condition, and operating results of the Company. The success of the Company's business is dependent on the reform of controlled substances laws pertaining to psilocybin. If controlled substances laws are not favourably reformed in Canada, the U.S., and other global jurisdictions, including the Netherlands, the commercial opportunity that the Company is pursuing may be highly limited.

The Company makes no medical, treatment or health benefit claims about the Company's proposed products. The FDA, Health Canada or other similar regulatory authorities have not evaluated claims regarding psilocybin, DMT, psilocybin analogues, or other psychedelic compounds or nutraceutical products. The efficacy of such products has not been confirmed by approved research. There is no assurance that the use of psilocybin, DMT, psilocybin analogues, or other psychedelic compounds or nutraceuticals can diagnose, treat, cure, or prevent any disease or condition. Vigorous scientific research and clinical trials are needed.

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Limited Operating History, including in Cannabis Industry

The Company, with a limited operating history in the cannabis and psychedelic industry, is subject to many risks common to such enterprises, including under-capitalization, cash shortages, limitations with respect to personnel, financial and other resources, and lack of revenue. There is no assurance that the Company will be successful in achieving a return on shareholders' investment and the likelihood of success must be considered in light of its early stage of operations. The Company also has no history of earnings.

Because the Company has a limited operating history in an emerging area of business, investors should consider and evaluate its operating prospects in light of the risks and uncertainties frequently encountered by early-stage companies in rapidly evolving markets. These risks may include:

- risks that it may not have sufficient capital to achieve its growth strategy.
- risks that it may not develop its product and service offerings in a manner that enables it to be profitable and meet its patients' or customers' requirements.
- risks that its growth strategy may not be successful.
- risks that fluctuations in its operating results will be significant relative to its revenues; and
- risks relating to an evolving legal and regulatory regime for cannabis that varies significantly by jurisdiction.

The Company's future growth will depend substantially on its ability to address these and the other risks described in this section. If it does not successfully address these risks, its business may be significantly harmed.

Need for Additional Financing

The capital raised by the Company to date is insufficient to meet its presently anticipated working capital requirements and capital expenditure commitments for the near future. The Company needs to raise significant additional funds sooner to support its international growth strategy, develop new or enhanced services and products, respond to competitive pressures, acquire, or invest in complementary or competitive cannabis-related businesses or technologies, or take advantage of unanticipated opportunities. The Company cannot be sure that additional financing will be available on acceptable terms or at all. Furthermore, any debt financing, if available, may involve restrictive covenants, which may limit Pharmadrug's operating flexibility with respect to business matters. As additional funds are raised through the issuance of equity securities, the percentage ownership of existing shareholders will be reduced; such shareholders may experience additional dilution in net book value; and such equity securities may have rights, preferences, or privileges senior to those of its existing shareholders. If adequate funds are not available on acceptable terms or at all, the Company may be unable to develop or enhance its services and products, take advantage of future opportunities, repay debt obligations as they become due, or respond to competitive pressures, any of which could have a material adverse effect on its business, prospects, financial condition, and results of operations.

Volatile Financial and Economic Conditions

Current financial and economic conditions remain extremely volatile. Access to public and private capital and financing continues to be negatively impacted by many factors, particularly in the cannabis sector. Such factors may impact the Company's ability to obtain financing in the future on favorable terms or obtain any financing at all. Additionally, global conditions may cause a long-term decrease in asset values. If such volatility and market turmoil continue, the Company's operations and financial condition could be adversely impacted.

Non-Compliance with Cannabis Laws and Regulations or Other Laws and Regulations

Non-compliance with federal, provincial or state laws and regulations, or the expansion of current or enactment of new laws or regulations, could adversely affect the Company's business in Germany, Netherlands, the U.S., and elsewhere it operates or invests. Achievement of the Company's business objectives are contingent, in part, upon compliance with regulatory requirements enacted by these governmental authorities and obtaining all regulatory approvals, where necessary, for the carrying on of business of Pharmadrug. The Company cannot predict the time required to secure all appropriate regulatory approvals for its business or other businesses in which the Company invests, or the extent of testing and documentation that may be required by governmental authorities. Any delays in obtaining, or failure to obtain regulatory approvals would significantly delay the development of markets and products and could have a material adverse effect on the business, results of operations and financial condition of the Company.

There can be no assurances the federal government of the German, Dutch and American jurisdictions will not seek to enforce applicable cannabis or other laws against Pharmadrug. The consequences of such enforcement would likely be materially detrimental to the Company and the businesses in which the Company invests, and could result in the forfeiture or seizure of all or substantially all of the Company's assets. Further, the Company's third-party service providers could suspend or withdraw services as a result of non-compliance with federal, state or local laws and regulations regarding cannabis.

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It is also important to note that local, city, state and provincial ordinances may strictly limit and/or restrict disbursement of cannabis in a manner that will make it extremely difficult or impossible to transact business that is necessary for the continued operation of the cannabis industry.

Regulatory Approvals and Permits

The Company is and may be required to obtain and maintain certain permits, licenses and approvals in the jurisdictions in which it operates. There can be no assurance that the Company will be able to obtain and/or maintain the necessary permits, licenses and approvals. Any regulatory authority with jurisdiction could also impose certain restrictions on the Company's ability to operate in the relevant jurisdiction. Any material delay or failure to receive these items, or onerous regulatory restrictions would delay and/or inhibit the Company's ability to conduct its business and would adversely affect the Company's business, financial condition and results of operations.

Environmental and Employee Health and Safety Regulations

The Company's operations are subject to environmental and safety laws and regulations concerning, among other things, emissions and discharges to water, air and land, the handling and disposal of hazardous and non-hazardous materials and wastes, and employee health and safety. The Company will incur ongoing costs and obligations related to compliance with environmental and employee health and safety matters. Failure to comply with environmental and safety laws and regulations may result in additional costs for corrective measures, penalties or in restrictions on the Company's operations. In addition, changes in environmental, employee health and safety or other laws, more vigorous enforcement thereof or other unanticipated events could require extensive changes to the Company's operations or give rise to material liabilities, which could have a material adverse effect on the business, results of operations and financial condition of the Company.

Pharmadrug Production

Management highlights several possible risks related to the Pharmadrug Acquisition. While the Company has sufficient resources on the ground and management will spend adequate time on site to help grow the business, Pharmadrug Production is located on a different continent. In addition, the Company is in the early stages of the medical cannabis industry in Germany. There are other associated risks such as a lack of demand, changes to the regulatory environment, competitive factors, the ability for Pharmadrug Production to import product into the country, the eventual production of medical cannabis domestically, amongst others.

Risks Associated with Increasing Competition

The cannabis industry is highly competitive. The Company will compete with numerous other businesses in the medicinal cannabis industry, many of which possess greater financial and marketing resources and other resources than the Company. The cannabis business is affected by changes in consumer tastes and discretionary spending patterns, national and regional economic conditions, demographic trends, local competitive factors, cost and availability of raw material and labour, and governmental regulations. Any change in these factors could materially and adversely affect the Company's operations.

The Company expects to face additional competition from new entrants. If the number of legal users of cannabis increases in Germany, and/or other jurisdictions where the Company currently operates or plans to operate, the demand for cannabis-related products will increase and the Company expects that competition will become more intense, as current, and future competitors begin to offer an increasing number of diversified products.

To remain competitive, the Company will require a continued high level of investment in acquisitions and investments, research and development, and marketing. The Company may not have sufficient resources to maintain such activities on a competitive basis which could adversely affect the business, financial condition, and results of operations the Company.

Success of New and Existing Products and Services is Uncertain

The Company expects to commit significant resources and capital to develop and market existing and new products, services, and enhancements. These products and services are relatively untested, and the Company cannot provide any assurance that it will achieve market acceptance for these products and services, or other new products and services that it may offer in the future. Moreover, these and other new products and services may face significant competition with new and existing competitors. In addition, new products, services, and enhancements may pose a variety of technical challenges and require the Company to attract additional qualified employees. The failure to successfully develop and market these new products, services or enhancements could seriously harm the Company's business, financial condition, and results of operations. Moreover, if the Company fails to accurately project demand for our new or existing products, it may encounter problems of overproduction or underproduction which would materially and adversely affect its business, financial condition, and results of operations, as well as damage our reputation and brand.

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New Well-Capitalized Entrants May Develop Large-Scale Operations

Currently, the cannabis industry generally is comprised of individuals and small to medium-sized entities, however, the risk exists that large conglomerates and companies who also recognize the potential for financial success through investment in this industry could strategically purchase or assume control of larger or a larger number of dispensaries and cultivation and production facilities, which trend is now being observed by the Company. These potential competitors may have longer operating histories, significantly greater financial, technological, engineering, manufacturing, marketing, and distribution resources, and be larger and better capitalized. Larger competitors could establish price setting and cost controls which would effectively "price out" many of the individuals and small to medium-sized entities who currently make up the bulk of the participants in the varied businesses operating within and in support of the medical and adult-use cannabis industry. While the approach in most state laws and regulations seemingly deters this type of takeover, this industry remains nascent and as indicated above this trend is being observed, so what the landscape will be in the future remains largely unknown.

The Company's proposed business plan is subject to all business risks associated with new business enterprises, including the absence of any significant operating history upon which to evaluate an investment. The likelihood of the Company's success must be considered in light of the problems, expenses, difficulties, complications, and delays frequently encountered in connection with the formation of a new business, the development of new strategy and the competitive environment in which the Company operates. It is possible that the Company will incur losses in the future. There is no guarantee that the Company will be profitable.

No Assurance of Commercial Success

The successful commercialization of the Company's products will depend on many factors, including, the Company's ability to establish and maintain working partnerships with industry participants in order to market its products, the Company's ability to supply a sufficient amount of its products to meet market demand, and the number of competitors within each jurisdiction within which the Company may from time to time be engaged. There can be no assurance that the Company or its industry partners will be successful in their respective efforts to develop and implement, or assist the in developing and implementing, a commercialization strategy for the Company's products.

Introduction of, or Changes in, Laws, Regulations and Guidelines affecting Psychedelic Business

Although the cultivation, production, and distribution of fresh, unprocessed truffles within the Netherlands is not subject to regulation as, for example, the cannabis industries in Canada and the U.S., the Company's operations in the Netherlands remain subject to compliance with the Opium Act, as well as other laws, regulations, and guidelines in effect from time to time enacted by applicable governmental authorities. Although the Company is, to its knowledge, in compliance with all applicable laws (and intends to continue to comply), there can be no assurance that new laws, regulations, and guidelines will not be enacted, or that existing or future laws and regulations will not be changed. Any introduction of new (or changes to existing) laws, regulations, and guidelines, or other unanticipated events could require extensive changes to the Company's operations, increase compliance costs, and give rise to material liabilities, which could have a material adverse effect on the Company.

No Assurance of Commercial Success or Profitability of Psychedelic Business

The successful commercialization of the Company's psychedelic products in the Netherlands will depend on many factors, including, (i) the Company's ability to establish and maintain new and existing working partnerships with industry partners in order to source, distribute, and market its product offerings within the Netherlands, (ii) the Company's ability to supply a sufficient amount of its product offering to meet market demand, and (iii) the number of competitors from time to time competing with the Company within the Netherlands. As the Company continues to grow and expand its operations within the Netherlands, there is a risk that the Netherlands psychedelic industry may become increasingly competitive in all its phases, and in particular as a result of the possibility that new entrants (including from jurisdictions outside of the Netherlands) could attempt to mirror the Company's business model and establish operations in the Netherlands. There can be no assurance that the Company will be successful in its efforts to develop and implement a commercialization strategy for the Company's future products. Further, there can be no assurance that consumer demand for the Company's product offerings will be as anticipated, or that the Company will become profitable.

Limited Operating History in Psychedelic Industry

The Company began operations in the Netherlands in fiscal Q3 2020, and has a limited operating history within the psychedelic industry. As such, the Company will be subject to all of the business risks and uncertainties associated with any early staged enterprise, including the risks that it will be unable to (i) successfully distribute its products, (ii) establish a market for its products, (iii) achieve its growth objectives and targets, and/or (iv) successfully assess and meet consumer demand and become profitable. The Company's future growth will depend substantially on its ability to address these risks, and any failure to successfully address such risks could have a material adverse effect on the Company.

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Difficulty to Forecast Demand in Psychedelic Business

The Company must rely largely on its own market research to forecast sales as detailed forecasts are not generally obtainable from other sources at this early stage of the psychedelic industry in the Netherlands. A failure in the demand for the Company's product offerings to materialize as a result of competition, technological change or other factors could have a material adverse effect on the Company.

Liability, Enforcement Complaints, etc. – Psychedelic Business.

As a company engaged in the psychedelic industry within the Netherlands, the Company may from time to time become subject to litigation, formal or informal complaints, enforcement actions, and inquiries, including by one or more federal or local governmental authorities in the Netherlands. Any such litigation, complaints, and/or enforcement actions involving the Company could consume a considerable amount of financial and other corporate resources and the time of management, and could have a material adverse effect on the Company.

Achieving Publicly Announced Milestones

From time to time, the Company may announce the timing of certain events it expects to occur, such as the anticipated timing of results from clinical trials. These statements are forward-looking and are based on the best estimates of management at the time relating to the occurrence of such events. However, the actual timing of such events may differ from what has been publicly disclosed. The timing of events such as initiation or completion of a clinical trial, filing of an application to obtain regulatory approval, or announcement of additional clinical trials for cepharranthine may ultimately vary from what is publicly disclosed. The Company undertakes no obligation to update or revise any forward-looking information or statements, whether as a result of new information, future events or otherwise, except as otherwise required by law. Any variation in the timing of previously announced milestones could have a material adverse effect on the Company's business plan, financial condition or operating results and the trading price of the common shares.

Early Stage of the Industry and Product Development

Given the early stage of its R&D activities on cepharranthine, the Company can make no assurance that its R&D programs will result in regulatory approval or commercially viable products. To achieve profitable operations, the Company, alone or with others, must successfully develop, gain regulatory approval for, and market its future products. The Company currently has no products that have been approved by the FDA, or any similar regulatory authority. To obtain regulatory approvals for its drug product candidates being developed and to achieve commercial success, clinical trials must demonstrate that the drug product candidates are safe for human use and that they demonstrate efficacy.

Many drug product candidates never reach the stage of clinical testing and even those that do have only a small chance of successfully completing clinical development and gaining regulatory approval. Such product candidates can fail for a number of reasons, including, but not limited to, being unsafe for human use or due to the failure to provide therapeutic benefits equal to or better than the standard of treatment at the time of testing. Unsatisfactory results obtained from a particular study relating to a R&D program may cause the Company or its collaborators to abandon commitments to that program. Positive results of early pre-clinical research may not be indicative of the results that will be obtained in later stages of pre-clinical or clinical research. Similarly, positive results from early-stage clinical trials may not be indicative of favorable outcomes in later-stage clinical trials, and the Company can make no assurance that any future studies, if undertaken, will yield favorable results.

The early stage of the Company's product development makes it particularly uncertain whether any of its product development efforts will prove to be successful and meet applicable regulatory requirements, and whether any of its drug product candidates will receive the requisite regulatory approvals, be capable of being manufactured at a reasonable cost or be successfully marketed. If the Company is successful in developing its current and future drug product candidates into approved products, it will still experience many potential obstacles, which would affect its ability to successfully market and commercialize such approved products, such as the need to develop or obtain manufacturing, marketing and distribution capabilities, price pressures from third-party payors, or proposed changes in health care systems. If the Company is unable to successfully market and commercialize any of its products, its financial condition and results of operations may be materially and adversely affected.

The Company can make no assurance that any future studies, if undertaken, will yield favorable results. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later-stage clinical trials after achieving positive results in early-stage development, and the Company cannot be certain that it will not face similar setbacks. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway or safety or efficacy observations made in clinical trials, including previously unreported adverse events. Moreover, preclinical, and clinical data are often susceptible to varying interpretations and analyses, and many companies that believed their drug product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA approval. If the Company fails to produce positive results in future clinical trials and other programs, the

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development timeline and regulatory approval and commercialization prospects for DMT, and, correspondingly, its business and financial prospects, would be materially adversely affected.

Pre-clinical testing and clinical trials for the Company's products may not achieve the desired results. The results of pre-clinical testing and clinical trials are uncertain. Product approvals are subject to a number of contingencies and may not be obtained in the time expected or at all. The Company's future products may not attract a following among patients, retailers and/or providers. The Company expects to face an inherent risk of exposure to product liability claims, regulatory action, and litigation if the products it plans to distribute are alleged to have caused loss or injury. There can be no assurance that the Company will be able to obtain or maintain product liability insurance on acceptable terms or with adequate coverage against potential liabilities.

Reliance on Third Parties for Clinical Development Activities

The Company relies and will continue to rely on third parties to conduct a significant portion of its pre-clinical and clinical development activities. For example, clinical development activities include trial design, regulatory submissions, clinical patient recruitment, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management. If there is any dispute or disruption in its relationship with third parties, or if it is unable to provide quality services in a timely manner and at a feasible cost, the Company's active development programs will face delays. Further, if any of these third parties fails to perform as the Company expects or if their work fails to meet regulatory requirements, the Company's testing could be delayed, cancelled, or rendered ineffective.

Certain lab testing relating to cepharanthine is conducted at a facility in China operated by Crown Bioscience. Although Crown Bioscience is a U.S. based company, where any operations are conducted in emerging markets there is a heightened risk, both political and regulatory, associated with such activities. Any delays in testing resulting from such activity being conducted in such jurisdictions could result in adverse impacts on the Company.

Clinical Testing and Commercializing Products

Before obtaining marketing approval from regulatory authorities for the commercialization of DMT, the Company must conduct pre-clinical studies in animals and extensive clinical trials in humans to demonstrate the safety and efficacy of the drug product candidates. Clinical testing is expensive and difficult to design and implement, can take many years to complete and has uncertain outcomes. The outcome of pre-clinical studies and early clinical trials may not predict the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials due to lack of efficacy or unacceptable safety profiles, notwithstanding promising results in earlier trials. The Company does not know whether the clinical trials it may conduct will demonstrate adequate efficacy and safety to result in regulatory approval to market any of its drug product candidates in any jurisdiction. A drug product candidate may fail for safety or efficacy reasons at any stage of the testing process. A major risk the Company faces is the possibility that none of its drug product candidates under development will successfully gain market approval from the FDA, or other regulatory authorities, resulting in the Company being unable to derive any commercial revenue from this business segment after investing significant amounts of capital in its development.

The Company cannot predict whether any clinical trials will begin as planned, will need to be restructured, or will be completed on schedule, or at all. The Company's product development costs will increase if it experiences delays in clinical testing. Significant clinical trial delays could shorten any periods during which the Company may have the exclusive right to commercialize its drug product candidates or allow its competitors to bring products to market before the Company, which would impair the Company's ability to successfully commercialize its drug product candidates and may harm its financial condition, results of operations and prospects.

Completion of Clinical Trials

As the Company's drug product candidates advance from pre-clinical testing to clinical testing, and then through progressively larger and more complex clinical trials, the Company will need to enroll an increasing number of patients that meet its eligibility criteria. There is significant competition for recruiting patients in clinical trials, and the Company may be unable to enroll the patients it needs to complete clinical trials on a timely basis or at all. The factors that affect the Company's ability to enroll patients are largely uncontrollable and include, but are not limited to, the size and nature of the patient population, eligibility and exclusion criteria for the trial, design of the clinical trial, competition with other companies for clinical sites or patients, perceived risks and benefits of the drug product candidate, and the number, availability, location, and accessibility of clinical trial sites.

Nature of Regulatory Approvals

Certain of the Company's development and commercialization activities and drug product candidates are significantly regulated by a number of governmental entities, including the FDA. Regulatory approvals are required prior to each clinical trial and the Company may fail to obtain the necessary approvals to commence or continue clinical testing. The Company must comply with regulations concerning the

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manufacture, testing, safety, effectiveness, labeling, documentation, advertising, and sale of products and drug product candidates and ultimately must obtain regulatory approval before it can commercialize a drug product candidate. The time required to obtain approval by such regulatory authorities is unpredictable but typically takes many years following the commencement of preclinical studies and clinical trials. Any analysis of data from clinical activities the Company performs is subject to confirmation and interpretation by regulatory authorities, which could delay, limit, or prevent regulatory approval. Even if the Company believes results from its sponsored clinical trials are favorable to support the marketing of its drug product candidates, the FDA or other regulatory authorities may disagree. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a drug product candidate's clinical development and may vary among jurisdictions.

The Company has not obtained regulatory approval for any drug product candidate and it is possible that none of its existing drug product candidates or any future drug product candidates will ever obtain regulatory approval. The Company could fail to receive regulatory approval for its drug product candidates for many reasons, including, but not limited to failure to demonstrate that a drug product candidate is safe and effective for its proposed indication, failure of clinical trials to meet the level of statistical significance required for approval, failure to demonstrate that a drug product candidate's clinical and other benefits outweigh its safety risks.

A regulatory authority may require more information, including additional preclinical or clinical data to support approval, which may delay or prevent approval and the Company's commercialization plans, or the Company may decide to abandon the development program. If the Company were to obtain approval, regulatory authorities may approve any of its drug product candidates for fewer or more limited indications than the Company request, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a drug product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that drug product candidate. Moreover, depending on any safety issues associated with the Company's drug product candidates that garner approval, the U.S. Food and Drug Administration or other regulatory authorities may impose a risk evaluation and mitigation strategy, thereby imposing certain restrictions on the sale and marketability of such products.

If there are changes in the application of legislation, regulations, or regulatory policies, or if problems are discovered with the Company's products, or if one of its distributors, licensees, or co-marketers, if any, fails to comply with regulatory requirements, the regulators could take various actions. These include imposing fines on the Company, imposing restrictions on the Company's products or its manufacture and requiring the Company to recall or remove its products from the market. The regulators could also suspend or withdraw the Company's marketing authorizations, requiring it to conduct additional clinical trials, change its labeling or submit additional applications for marketing authorization. If any of these events occurs, the Company's ability to sell its products may be impaired, and it may incur substantial additional expense to comply with regulatory requirements, which could materially adversely affect its business, financial condition, and results of operations.

Negative Results of External Clinical Trials or Studies

From time to time, studies, or clinical trials on various aspects of biopharmaceutical products are conducted by academic researchers, competitors, or others. The results of these studies or trials, when published, may have a significant effect on the market for the biopharmaceutical product that is the subject of the study. The publication of negative results of studies or clinical trials or adverse safety events related to the Company's drug product candidates, or the therapeutic areas in which the Company's drug product candidates compete, could adversely affect its share price and the Company's ability to finance future development of its drug product candidates, and its business and financial results could be materially and adversely affected.

Unfavourable Publicity or Consumer Perception

The Company's success within the cannabis industry, specifically its operations conducted through its German subsidiary, may be significantly influenced by consumer perception of cannabis and the Company's products, any of which can be significantly influenced by regulatory investigations, litigation, media attention and other publicity regarding the consumption of cannabis, etc. There can be no assurance that future findings, regulatory proceedings, litigation, media attention or other research findings or publicity will be favorable to the cannabis space or any particular product offering of the Company, or consistent with earlier publicity. Any adverse findings, regulatory proceedings, litigation, media attention or other publicity, whether or not accurate or with merit, could have a material adverse effect on the Company.

Liability, Enforcement Complaints, etc.

As a company engaged in the cannabis industry within Germany, the Company may from time to time become subject to litigation, formal or informal complaints, enforcement actions, and inquiries, including by one or more federal or local governmental authorities in Germany. Any such litigation, complaints, and/or enforcement actions involving the Company and its German subsidiary could consume a considerable amount of financial and other corporate resources and the time of management, and could have a material adverse effect on the Company.

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Third Party Transportation

The Company may from time to time rely on its industry partners to provide transportation and delivery services to distribute its product offerings. The Company is exposed to the inherent risks associated with relying on third party transportation service providers, including logistical problems, delays, loss or theft of product and increased shipping costs. Any delay in transporting the product, breach of security or loss of product, could have a material adverse effect on the Company.

Product Liability

The Company carries product liability insurance coverage for its operations in Germany. Even though the Company is not aware of any product liability claims at this time, its business exposes itself to potential product liability, recalls and other liability risks that are inherent in the distribution of certain of its products. The Company can provide no assurance that such potential claims will not be asserted against it. A successful liability claim or series of claims brought against the Company could have a material adverse effect on its business, financial condition, and results of operations. Claims or losses in excess of any product liability cover that may be obtained by the Company could have a material adverse effect on its business, financial conditional and results of operations.

Product Recalls

Manufacturers, producers, and distributors of products are sometimes subject to the recall or return of their products for a variety of reasons, including product defects, such as contamination, unintended harmful side effects or interactions with other substances, packaging safety and inadequate or inaccurate labelling disclosure. If any of the Company's products are recalled due to an alleged product defect or for any other reason, the Company could be required to incur the unexpected expense of the recall and any legal proceedings that might arise in connection with the recall. The Company may lose a significant amount of sales and may not be able to replace those sales at an acceptable margin or at all. In addition, a product recall may require significant management attention. Although the Company's suppliers have detailed procedures in place for testing its products, there can be no assurance that any quality, potency, or contamination problems will be detected in time to avoid unforeseen product recalls, regulatory action, or lawsuits. Additionally, if the Company is subject to a recall, the image of the Company could be harmed. A recall for any of the foregoing reasons could lead to decreased demand for the Company's products and could have a material adverse effect on the results of operations and financial condition of the Company. Additionally, product recalls may lead to increased scrutiny of the Company's operations by regulatory agencies, requiring further management attention, potential loss of applicable licenses and potential legal fees and other expenses.

Distribution and Supply Chain Interruption

The Company is susceptible to risks relating to distributor and supply chain interruptions. Distribution in Germany will be largely accomplished through independent contractors, therefore, an interruption (e.g., a labour strike) for any length of time affecting such independent contractors may have a significant impact on the Company's ability to sell its products. Supply chain interruptions, including a production or inventory disruption, could impact product quality and availability. Inherent to producing products is a potential for shortages or surpluses in future years if demand and supply are materially different from long-term forecasts. The Company monitors category trends and regularly reviews maturing inventory levels.

Limited Products

The Company will be heavily reliant on the distribution of cannabis products in Germany. Although the Company is not reliant on the legalization of cannabis products for recreational use in Germany, if the Company's products do not achieve sufficient market acceptance, it will be difficult for the Company to achieve profitability. The Company's revenue will be derived almost exclusively from the sale from distribution of cannabis products, and the Company expects that this product segment will account for substantially all of its revenue for the foreseeable future. If the cannabis distribution market declines or fail to achieve substantially greater market acceptance than it currently enjoys, the Company will not be able to grow its revenues sufficiently for it to achieve consistent profitability. Even if products to be distributed by the Company conform to safety and quality standards, sales could be adversely affected if consumers lose confidence in the safety, efficacy, and quality of cannabis products. Adverse publicity about cannabis products that the Company sells may discourage consumers from buying products distributed by the Company.

Foreign Operations

Through operations from its wholly-owned subsidiary in Germany, the Company may be subject to political, economic and other uncertainties, including, but not limited to, cancellation or modification of contract rights, foreign exchange restrictions, currency fluctuations, export quotas, royalty and tax increases and other risks arising out of foreign governmental sovereignty over the areas in which the Company's operations are conducted, as well as risks of loss due to civil strife, acts of war, and insurrections. The Company's international operations may also be adversely affected by laws and policies of Canada affecting foreign trade, taxation, and investment. In the event of a

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dispute arising in connection with its foreign operations, the Company may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdiction of courts in Canada or enforcing Canadian judgments in foreign jurisdictions. Similarly, to the extent that the Company's assets are located outside of Canada, investors may have difficulty collecting from the Company any judgments obtained in the Canadian courts and predicated on the civil liability provisions of securities laws. Consequently, investors may be effectively prevented from pursuing remedies against the Company under Canadian securities laws or otherwise. The Company may also be hindered or prevented from enforcing its rights with respect to a governmental entity or instrumentality because of the doctrine of sovereign immunity.

Impact of the COVID-19 Pandemic

In December 2019, COVID-19 surfaced in Wuhan, China. COVID-19 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The World Health Organization declared a global emergency on January 30, 2020 with respect to the outbreak then characterized it as a pandemic on March 11, 2020. The outbreak has spread throughout the world, and there have been continued rising cases of COVID-19 in Canada and the U.S., which had continued to cause companies and various international jurisdictions to impose restrictions, such as quarantines, closures, cancellations, and travel restrictions.

The Company's German operations had been impacted by limited supply of cannabis products caused by shipment delays from the Netherlands, but management expects the situation to improve once local lockdown restrictions are lifted with vaccine and booster roll-out. Ultimately, the extent to which the COVID-19 pandemic impacts the Company's financial results will depend on future developments, which remain highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the COVID-19 pandemic and actions taken to contain it or its impact, among others.

The lockdown in the Netherlands has impacted the retail operations of the Company's psychedelic smartshop. The persistent impact on the retail industry had made the Company's execution of a brick-and-mortar strategy less attractive. With the COVID-19 pandemic lasting much longer than management initially expected, the Company made the decision to pivot from its initial plans and has put the development of its brick-and-mortar strategy on hold. In the meantime, the Company decided to develop its brand and business by establishing an online retail strategy under its Slim Winkel brand.

The Company has not yet experienced significant interruptions in its R&D programs located in the U.S. The Company's ability to maintain current timeline estimates may be, to some extent, influenced by the severity and duration of any future shutdowns or public health measures within the U.S. Furthermore, as it specifically relates to ongoing development activities for PD-001 in the COVID-19 space – CRO and Federal testing facilities are currently experiencing significant strain related to the volume of R&D being conducted on candidate antiviral agents. The impact of the pandemic can be reasonably expected to limit access to these resources in the near term.

The pandemic has given rise to numerous uncertainties relating to, among other things, the inability to predict the ultimate geographic spread of the disease, and the duration of the outbreak, including the duration of travel restrictions, business closures or disruptions, and quarantine/isolation measures that are currently, or may be put in place by Canada, Germany, the U.S., the Netherlands, and other countries to fight the virus. While the extent of the impact remains unknown, the Company anticipates this pandemic may cause further supply chain disruptions, and increased government regulations, all of which may negatively impact the Company's business and financial condition.

The Company is actively addressing the risk to its business continuity represented by each of the above factors through the implementation of a broad range of measures throughout its structure and is re-assessing its response to the COVID-19 pandemic on an ongoing basis. The above risks individually or collectively may have a material impact on the Company's ability to generate revenue.

Factors which may Prevent Realization of Growth Targets

In continuing with the Company's operations, there is a risk that the additional resources will be needed, and milestones will not be achieved on time, on budget, or at all, as they can be adversely affected by a variety of factors, including some that are discussed elsewhere in these risk factors and the following as it relates to the Company:

- delays in obtaining, or conditions imposed by, regulatory approvals.
- facility design errors.
- environmental pollution.
- non-performance by third party contractors.
- increases in materials or labour costs.
- construction performance falling below expected levels of output or efficiency.
- breakdown, aging or failure of equipment or processes.

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- contractor or operator errors.
- labour disputes, disruptions or declines in productivity.
- inability to attract sufficient numbers of qualified workers.
- disruption in the supply of energy and utilities; and
- major incidents and/or catastrophic events such as fires, explosions, earthquakes, or storms.

Constraints on Marketing Products

The development of the Company's business and operating results may be hindered by applicable restrictions on sales and marketing activities imposed by government regulatory bodies. The regulatory environment in Europe may limit the Company's ability to compete for market share in a manner similar to other industries. If the Company is unable to effectively market its products and compete for market share, or if the costs of compliance with government legislation and regulation cannot be absorbed through increased selling prices for its products, the Company's revenues and operating results could be adversely affected.

Reliance on Management and Advisory Board

The Company will need to expand and effectively manage its managerial, operational, financial, development and other resources in order to successfully pursue its development and commercialization efforts of its products. The success of the Company is currently dependent on the performance of its management team, which also relies on advice and guidance of certain members of the Board and Advisory Board, not all of whom are or will be bound by formal contractual employment agreements.

The Company's success depends on its continued ability to attract, retain, and motivate highly qualified people. The loss of the services of these persons would have a material adverse effect on the Company's business and prospects in the short term and could delay or prevent the commercialization of its products, and the business may be harmed as a result. The Company may not be able to attract or retain qualified management and scientific personnel in the future due to the intense competition for qualified personnel with extensive management experience in such fields as pharmaceutical regulations, finance, manufacturing, marketing, law, and investment. If the Company is not able to attract and retain the necessary personnel to accomplish its business objectives, the achievement of its development objectives, its ability to raise additional capital and its ability to implement its business strategy may be significantly reduced and could have a material adverse effect on the Company and its prospects.

Reliance on Third-Party Service Providers

Third party service providers to the Company may withdraw or suspend their service to the Company under threat of prosecution. In jurisdictions where the possession, use, cultivation, and transfer of cannabis and any related drug paraphernalia may be illegal, and any such acts are criminal acts under local, city, state and provincial law, companies that provide goods and/or services to companies engaged in cannabis-related activities may, under threat of federal civil and/or criminal prosecution, suspend or withdraw their services. Any suspension of service and inability to procure goods or services from an alternative source, even on a temporary basis, that causes interruptions in the Company's operations could have a material and adverse effect on the Company's business.

Insurance and Uninsured Risks

The Company's business is subject to a number of risks and hazards generally, including adverse environmental conditions, accidents, labour disputes, and changes in the regulatory environment. Such occurrences could result in damage to assets, personal injury or death, environmental damage, delays in operations, monetary losses, and possible legal liability.

Although the Company intends to continue to maintain insurance to protect against certain risks in such amounts as it considers to be reasonable, its insurance will not cover all the potential risks associated with its operations. The Company may also be unable to maintain insurance to cover these risks at economically feasible premiums. Insurance coverage may not continue to be available or may not be adequate to cover any resulting liability. Moreover, insurance against risks such as environmental pollution or other hazards encountered in the operations of the Company is not generally available on acceptable terms. Company might also become subject to liability for pollution or other hazards which may not be insured against or which the Company may elect not to insure against because of premium costs or other reasons. Losses from these events may cause the Company to incur significant costs that could have a material adverse effect upon its financial performance and results of operations.

The Company may be underinsured and there may be difficulties with acquiring and maintaining insurance coverage in the cannabis industry may reduce the capability of insurance to serve as a reliable and effective risk management tool. Cannabis specific insurance is still a small and specialized market. Consequently, insurance is often unattainable as it is not offered, or it is prohibitively expensive given the scarcity of actuarial data, small number of market participants, which both reduce the ability to share risk across entities. Consequently, many of the

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risks we face as a Company are uninsured or uninsurable, and we self-insure. Consequently, the Company will be vulnerable to low probability high impact events. If one such event, were to occur it could result in material adverse effects to the financial condition of the Company.

Dependence on Suppliers and Skilled Labor

The ability of the Company to compete and grow will be dependent on it having access, at a reasonable cost and in a timely manner, to skilled labor, equipment, parts, and components. No assurances can be given that the Company will be successful in maintaining its required supply of skilled labor, equipment, parts, and components. It is also possible that the final costs of the major equipment contemplated by the Company's capital expenditure program may be significantly greater than anticipated by the Company's management and may be greater than funds available to the Company, in which circumstance the Company may curtail, or extend the timeframes for completing, its capital expenditure plans. This could have an adverse effect on the financial results of the Company.

Management of Growth

As it continues to develop its operations, Pharmadrug may be subject to growth-related risks including capacity constraints and pressure on its internal systems and controls. The ability of the Company to manage growth effectively will require it to continue to implement and improve its operational and financial systems and to expand, train and manage its personnel base. The inability of the Company to deal with this growth may have an adverse effect on the Company's business, financial condition, results of operations and prospects.

No History of Dividends

The Company has no earnings or dividend record and does not anticipate paying any dividends on the Company's shares in the foreseeable future.

Foreign Currency Exchange Rates

Exchange rate fluctuations may adversely affect the Company's financial position and results. It is anticipated that a significant portion of the Company's business will be conducted in EUR and USD. The Company's financial results are reported in CAD and costs are incurred primarily in EUR and also in USD in its PACs. The depreciation of the CAD against the EUR and USD could increase the actual capital and operating costs of the Company and materially adversely affect the results presented in the Company's consolidated financial statements.

The Market Price of Securities is Volatile and may not Accurately Reflect the Long-Term Value of the Company

Securities markets have a high level of price and volume volatility, and the market price of securities of many companies – including Pharmadrug – has experienced substantial volatility in the past. This volatility may affect the ability of holders of common shares to sell their securities at an advantageous price. Market price fluctuations in the common shares may be due to the Company's operating or financial results failing to meet expectations of investors in any period, adverse changes in general market conditions or economic trends, acquisitions, dispositions or other material public announcements by the Company or its competitors, along with a variety of additional factors. These broad market fluctuations may adversely affect the market price of Pharmadrug's common shares.

Financial markets historically at times experienced significant price and volume fluctuations that have particularly affected the market prices of equity securities of companies and that have often been unrelated to the operating performance, underlying asset values or prospects of such companies. Accordingly, the market price of Pharmadrug's shares may decline even if the Company's business performance, underlying asset values or prospects have not changed. Additionally, these factors, as well as other related factors, may cause prolonged decreases in investment values which may result in impairment losses. There can be no assurance that continuing fluctuations in price and volume will not occur. If such increased levels of volatility and market turmoil continue, the Company's operations could be adversely impacted, and the trading price of the shares may be materially adversely affected.

Limited Market for Securities

There can be no assurance that an active and liquid market for the Company's common shares, warrants and/or convertible debentures will develop or be maintained, and an investor may find it difficult to resell such securities.

Enforcement of Proprietary Rights

The Company may be unable to adequately protect or enforce its proprietary rights. Its continuing success will likely depend, in part, on its ability to protect internally developed or acquired, intellectual property and maintain the proprietary nature of its technology through a combination of licenses and other intellectual property arrangements, without infringing the proprietary rights of third parties. The Company cannot prove assurance that its intellectual property owned by the Company will be held valid at the foreign government level if challenged, or that other parties will not claim rights in or ownership of its proprietary rights.

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Infringement or Misappropriation Claims

The Company may be exposed to infringement or misappropriation claims by third parties, which, if determined adversely to the resulting Company, could subject the Company to significant liabilities and other costs. The Company's success may likely depend on its ability to use and develop new extraction technologies, recipes, know-how and new strains of cannabis without infringing the intellectual property rights of third parties. The Company cannot assure that third parties will not assert intellectual property claims against it. The Company is subject to additional risks if entities licensing to it intellectual property does not have adequate rights in any such licensed materials. If third parties assert copyright or patent infringement or violation of other intellectual property rights against the Company, it will be required to defend itself in litigation or administrative proceedings, which can be both costly and time consuming and may significantly divert the efforts and resources of management personnel. An adverse determination in any such litigation or proceedings to which the Company may become a party could subject it to significant liability to third parties, require it to seek licenses from third parties, to pay ongoing royalties or subject the Company to injunctions prohibiting the development and operation of its applications.

Unfavourable Publicity or Consumer Perception

Management of the Company believes the cannabis industry is highly dependent upon consumer perception regarding the safety, efficacy and quality of the cannabis produced.

Consumer perception of the Company's products can be significantly influenced by scientific research or findings, regulatory investigations, litigation, media attention and other publicity regarding the consumption of cannabis products. There can be no assurance that future scientific research or findings, regulatory investigations, litigation, media attention or other publicity will be favorable to the cannabis market or any particular product, or consistent with earlier publicity. Future research reports, findings, regulatory investigations, litigation, media attention or other publicity that are perceived as less favorable than, or that question, earlier research reports, findings or other publicity could have a material adverse effect on the demand of the Company's products and the business, results of operations, financial condition, and cash flows of the Company. The Company's dependence upon consumer perceptions means that adverse scientific research reports, findings, regulatory proceedings, litigation, media attention or other publicity, whether or not accurate or with merit, could have such a material adverse effect on the Company, the demand for the Company's products, and the business, results of operations, financial condition, and cash flows of the Company.

Further, adverse publicity reports or other media attention regarding the safety, efficacy, and quality of cannabis in general, or the Company's products specifically, or associating the consumption of cannabis with illness or other negative effects or events, could have such a material adverse effect. Such adverse publicity reports or other media attention could arise even if the adverse effects associated with such products resulted from consumers' failure to consume such products appropriately or as directed.

A negative shift in the public's perception of cannabis, including vaping or other forms of cannabis administration, in the E.U., or any other applicable jurisdiction could cause State jurisdictions to abandon initiatives or proposals to legalize medical and/or adult-use cannabis, thereby limiting the number of new jurisdictions into which the Company could expand. Recent medical alerts by health agencies on vaping related illness and other issues directly related to cannabis consumption could potentially create an inability to fully implement the Company's expansion strategy and may have a material adverse effect on the Company's business, results of operations or prospects.

Internal Controls

Effective internal controls are necessary for the Company to provide reliable financial reports and to help prevent fraud. Although the Company will undertake a number of procedures and will implement a number of safeguards, in each case, in order to help ensure the reliability of its financial reports, including those imposed on the Company under Canadian securities law, the Company cannot be certain that such measures will ensure that the Company will maintain adequate control over financial processes and reporting. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm the Company's results of operations, or cause it to fail to meet its reporting obligations. If the Company or its auditors discover a material weakness, the disclosure of that fact, even if quickly remedied, could reduce the market's confidence in the Company's consolidated financial statements and materially adversely affect the trading price of Pharmadrug's shares.

Product Liability

As a distributor of products designed to be ingested by humans, the Company faces an inherent risk of exposure to product liability claims, regulatory action, and litigation if its products are alleged to have caused significant loss or injury. In addition, the manufacture and sale of cannabis involve the risk of injury to consumers due to tampering by unauthorized third parties or product contamination. Previously unknown adverse reactions resulting from human consumption of cannabis alone or in combination with other medications or substances could occur. As a manufacturer, distributor and retailer of adult-use and medical cannabis, or in its role as an investor in or service provider to an entity that is a manufacturer, distributor and/or retailer of adult-use or medical cannabis, the Company may be subject to various

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product liability claims, including, among others, that the cannabis product caused injury or illness, include inadequate instructions for use or include inadequate warnings concerning possible side effects or interactions with other substances. A product liability claim or regulatory action against the Company could result in increased costs, could adversely affect the Company's reputation with its clients and consumers generally, and could have a material adverse effect on the business, results of operations, financial condition, or prospects of the Company.

There can be no assurances that the Company will be able to maintain product liability insurance on acceptable terms or with adequate coverage against potential liabilities. Such insurance is expensive and may not be available in the future on acceptable terms, or at all. The inability to maintain sufficient insurance coverage on reasonable terms or to otherwise protect against potential product liability claims could prevent or inhibit the commercialization of the Company's potential products or otherwise have a material adverse effect on the business, results of operations, financial condition, or prospects of the Company.

Product Recalls

Manufacturers and distributors of products are sometimes subject to the recall or return of their products for a variety of reasons, including product defects, such as contamination, unintended harmful side effects or interactions with other substances, packaging safety and inadequate or inaccurate labeling disclosure. Such recalls cause unexpected expenses of the recall and any legal proceedings that might arise in connection with the recall. This can cause loss of a significant amount of sales. In addition, a product recall may require significant management attention. Although the Company has detailed procedures in place for testing its products, there can be no assurance that any quality, potency, or contamination problems will be detected in time to avoid unforeseen product recalls, regulatory action, or lawsuits. Additionally, if one of the Company's products were subject to recall, the image of that product and the Company could be harmed. Additionally, product recalls can lead to increased scrutiny of operations by applicable regulatory agencies, requiring further management attention and potential legal fees and other expenses.

Liability for Activity of Employees, Contractors, and Consultants

The Company could be liable for fraudulent or illegal activity by its employees, contractors and consultants resulting in significant financial losses to claims or regulatory enforcement actions against the Company. The cannabis industry is under strict scrutiny. Failure to comply with relevant laws could result in fines, suspension of licenses and civil or criminal action being taken against the Company. Consequently, the Company is subject certain risks, including the risk that employees, contractors, and consultants may inadvertently fail to follow the law or purposefully neglect to follow the law, either of which could result in material adverse effects to the financial condition of the Company.

Ability to Obtain and Retain Licenses and Permits

The Company may not be able to obtain and/or retain all necessary licenses and permits in Germany, and throughout the Eurozone, which could, among other things, delay or prevent the Company from becoming profitable. The Company's business is reliant on the issuance of required licenses. Failure to acquire necessary licenses required to operate new business expansion could have a material adverse effect on its financial condition. Due to the nature of licensing, which is at the discretion of local governments, it is outside of the Company's control and therefore ability to ensure that the Company will receive the licenses it seeks.

Disruption of Business

Conditions or events including, but not limited to, those listed below could disrupt the Company's operations, increase operating expenses, resulting in delayed performance of contractual obligations or require additional expenditures to be incurred: (i) extraordinary weather conditions or natural disasters such as hurricanes, tornadoes, floods, fires, extreme heat, earthquakes, etc.; (ii) a local, regional, national or international outbreak of a contagious disease, including the COVID-19 coronavirus, MERS, Severe Acute Respiratory Syndrome, HINI influenza virus, avian flu, or any other similar illness could result in a general or acute decline in economic activity (see also, "Public Health Crises, including COVID-19"); (iii) political instability, social and labour unrest, war or terrorism; or (iv) interruptions in the availability of basic commercial and social services and infrastructure including power and water shortages, and shipping and freight forwarding services including via air, sea, rail and road.

Use of Non-IFRS Financial Measures

This MD&A contains references to "Adjusted EBITDA", which is a non-IFRS financial measures which does not have any standardized definitions under IFRS. Adjusted EBITDA is a measure of the Company's overall financial performance and is used as an alternative to earnings or income in some circumstances. Adjusted EBITDA is essentially net income (loss) with interest, taxes, depreciation and amortization, non-cash adjustments and other unusual or non-recurring items added back. Adjusted EBITDA can be used to analyze and compare profitability among companies and industries, as it eliminates the effects of financing and capital expenditures. Adjusted EBITDA

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is often used in valuation ratios and can be compared to enterprise value and revenue. The term Adjusted EBITDA does not have any standardized meaning according to IFRS and therefore may not be comparable to similar measures presented by other companies.

There are no comparable IFRS financial measures presented in the 2021 Financial Statements. Reconciliations of the supplemental non-IFRS financial measures are presented in this MD&A. The Company provides the non-IFRS financial measures as supplemental information and in addition to the financial measures that are calculated and presented in accordance with IFRS. These supplemental non-IFRS financial measures are presented because management believes such measures provide information which is useful to shareholders and investors in understanding its performance and which may assist in the evaluation of the Company's business relative to that of its peers. However, such measures should not be considered superior to, as a substitute for or as an alternative to, and should only be considered in conjunction with, the most comparable IFRS financial measures.

Disclosure of Internal Controls over Financial Reporting

Management has established processes to provide them sufficient knowledge to support representations that they have exercised reasonable diligence that (i) the consolidated financial statements do not contain any untrue statement of material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it is made, as of the date of and for the periods presented by the consolidated financial statements; and (ii) the consolidated financial statements fairly present in all material respects the financial condition, results of operations and cash flows of the Company, as of the date of and for the periods presented. In contrast to non-venture companies, this MD&A does not include representations relating to the establishment and maintenance of disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR"). In particular, management is not making any representations relating to the establishment and maintenance of: controls and procedures designed to provide reasonable assurance that information required to be disclosed by the Company in its filings or other reports or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Investors should be aware that inherent limitations on the ability of management of the Company to design and implement on a cost-effective basis DC&P and ICFR may result in additional risks to the quality, reliability, transparency and timeliness of filings and other reports provided under securities legislation.

Cautionary Note Regarding Forward-Looking Statements

This MD&A includes "forward-looking statements", within the meaning of applicable securities legislation, which are based on the opinions and estimates of management and are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking statements. Forward-looking statements are often identified by the use of words such as "seek", "anticipate", "budget", "plan", "continue", "estimate", "expect", "forecast", "may", "will", "project", "predict", "potential", "targeting", "intend", "could", "might", "should", "believe" and similar words suggesting future outcomes or statements regarding an outlook. Forward-looking statements herein include those relating to, without limitation: the Company's growth strategy and plans, including plans relating to those entities in which it has invested; substantial fluctuation of losses from quarter to quarter and year to year due to numerous external risk factors, and anticipation that we will continue to incur significant losses in the short-term future; the status of German laws with respect to cannabis; the risk of unforeseen changes in the laws or regulations in Canada, Germany, the Netherlands and the U.S. and other jurisdictions in the Company operates; the development and commercialization of cepharranthine; the results of and plans for further R&D and clinical trials on cepharranthine; the results of the Company's R&D in the psychedelics space and the development of the Super Smart business; the Company's ability to obtain and maintain required permits or approvals; the reliance on third-party experts and contract manufacturers to deliver quality preclinical and clinical materials; the duration of COVID-19 and the extent of its economic and social impact; and the Company's ability to access additional fundings and its needs. Such statements are based on numerous assumptions believed by management to be reasonable in the circumstances, including among others that the Company will succeed with its cannabis and psychedelic business. The risks and uncertainties that could affect such forward-looking statements include, but are not limited to, those set out in this MD&A under "Risk Factors" as well as: rapidly changing legal and regulatory environment affecting the cannabis industry in Germany, and other jurisdictions globally; inability to identify and complete future strategic investments and acquisitions on favourable terms or at all; operating internationally and/or in emerging markets; and agricultural risks. Due to the risks, uncertainties, and assumptions inherent in forward-looking statements, prospective investors in securities of the Company should not place undue reliance on these forward-looking statements.

Readers are cautioned that the foregoing lists of risks, uncertainties and other factors are not exhaustive. The forward-looking statements contained in this MD&A are made as of the date hereof and the Company undertakes no obligation to update publicly or revise any such statements, whether as a result of new information, future events or otherwise, except in accordance with applicable securities laws. The forward-looking statements herein are expressly qualified by this cautionary statement.

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Management's Responsibility for Financial Information

Management is responsible for all information contained in this MD&A. The Company's 2021 Financial Statements have been prepared in accordance with IFRS and include amounts based on management's informed judgments and estimates. The financial and operating information included in this MD&A is consistent with that contained in the 2021 Financial Statements in all material aspects.

The Audit Committee has reviewed the 2021 Financial Statements and this MD&A with management of Pharmadrug. The Board of the Company has approved the 2021 Financial Statements and this MD&A on the recommendation of the Audit Committee.

May 2, 2022

Daniel Cohen
Chief Executive Officer