

# Successful 2022 Milestones Support Value of Gb Sciences' AI-Enabled Drug Discovery Platform

A MESSAGE FROM BOTH THE PRESIDENT AND THE CHAIRMAN OF GB SCIENCES, INC.

## To Our Shareholders:

In 2022, Gb Sciences achieved significant milestones [advancing our plant-inspired drug development pipeline](#) for the treatment of a broad spectrum of critical and prevalent diseases, which supports the value of PhAROS™, our proprietary AI-enabled Drug Discovery Platform. Gb Sciences is entering 2023 with very good reason for excitement and optimism for our shareholders and for the potential to develop first-in-class drugs to treat serious disorders such as: [Parkinson's Disease](#), [Advanced Heart Disease](#), [Chronic Pain](#), [Inflammation](#), [Anxiety and Depression](#). In addition, our intellectual property portfolio currently contains six issued U.S. and four issued foreign patents, as well as 15 U.S. and 49 foreign patent-pending applications that cover our novel AI-enabled drug discovery platform and proprietary therapies for more than 65 different disorders.

[Recognizing the value of our PhAROS™ Drug Discovery Platform](#) for expediting our novel plant-inspired drug pipeline, we also realize that PhAROS™ has the potential to be of high value to other drug development biotech and pharmaceutical companies. With its data analytics and machine learning capabilities providing a breakthrough in drug discovery, our PhAROS™ Drug Discovery Platform greatly reduces the time and money required to discover and bring novel formulations to market. Therefore, in addition to developing our own biopharma pipeline, we plan to monetize PhAROS™ by pursuing potential licensing and or partnerships with other drug developers that offer the potential to generate substantial, recurring, high-margin revenues to Gb Sciences.

While other drug developers pursue conventional drug pathways, Gb Sciences is developing novel [Minimal Essential Mixtures](#) derived from the active ingredients found within traditional plant-based medicines that are still commonly used across the world. Traditional medicines that are mostly plant based have been used for centuries and are composed of all the ingredients for specific plants which can number in the hundreds or even thousands. Gb Sciences uses our novel PhAROS™ Drug Discovery Platform to determine which 3 ingredients of the hundreds of ingredients found in each plant, are the most effective and with the fewest adverse side effects.

In 2022, Gb Sciences has successfully prepared our lead program in Parkinson's disease for a first-in-human trial through the following essential steps: a) creating clinical prototypes by combining our proprietary Parkinson's formulas with a convenient oral delivery system; b) performing a dose response study in rodents to establish the correct range of active ingredients for our first-in-human trial; c) performing necessary ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicology) tests on the clinical prototypes; and d) selecting a Contract Research Organization (CRO) to prepare an Investigational New Drug (IND) application to the US FDA to begin our first-in-human trial.

Working with Catalent Pharma in 2022, Gb Sciences has successfully prepared the clinical prototypes of our proprietary cannabinoid-based formulations for Parkinson's disease in Catalent Pharma's proprietary Zydis® delivery system. Catalent Pharma's Zydis® delivery system is an Orally Disintegrating Tablet format that should be ideal for delivering our cannabinoid-ratio controlled formulations to Parkinson's patients. More than 50% of Parkinson's patients have trouble swallowing, but the Zydis® format delivers the active ingredients into the mouth by dispersion without needing water or the ability to swallow.

In February of 2023, the University of Lethbridge has successfully completed our dose response study in rodents, which helps us to establish the correct dosing of our cannabinoid-containing Parkinson's formulations in our first-in-human trial. The results of this important study will be delivered to Gb Sciences from the University of Lethbridge within the next six weeks.

Prior to filing our IND application for our first-in-human trial on our Parkinson's formulations, Gb Sciences must conduct ADMET testing on the clinical prototypes being formulated for us by Catalent Pharma. Gb Sciences has selected Labcorp Drug Development, formerly Covance, to perform our IND-enabling studies due to their expertise and testing locations in the United Kingdom near to where the ODT tablets are being manufactured by Catalent Pharma.

In the IND application for our Parkinson's disease therapeutics, the ADMET testing data from Labcorp will be combined with the Chemistry Manufacturing and Controls (CMC) data prepared by Catalent Pharma and our proof-of-concept data from the National Research Council (NRC) of Canada. In the near future, we expect to announce the selection of the Contract Research Organization that will write the IND-application and run the first-in-human trials for our novel treatment for the motor symptoms of Parkinson's disease.

Gb Sciences has four other promising late-preclinical stage programs, including our COVID-related cytokine release syndrome (COVID-CRS) formulations and our time-released oral nanoparticle formulations for chronic pain. We have [achieved preclinical proof-of-concept](#) for our COVID-CRS formulas in studies performed by Michigan State University. Our chronic pain formulations are being validated in animal trials at the National Research Council of Canada. Recently, we have announced that [our kava-inspired formulas for anxiety have achieved animal proof-of-concept](#). Gb Sciences is now preparing its [non-psychedelic, kava-based anxiety formulations](#) to treat the growing global need for anxiety and depression relief.

In closing, we would like to thank those shareholders who have supported our company this year and in past years. Our goal remains to produce maximum shareholder value while also providing innovative new therapeutic options for patients that need them.

Sincerely,

Dr. Andrea Small-Howard  
President, CSO & Director

Gb Sciences, Inc.

John Poss  
Chairman & CEO  
Gb Sciences, Inc.

### **Forward-Looking Statements**

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