



 Sciences' Plant-inspired Prescription Drugs



OTCQB:GBLX

2023 Shareholders' Meeting

Development Milestones Achieved (12 months)

- Parkinson's disease formulations advanced towards First-in-Human Trial
 - Formulated Clinical Prototypes in Oral Disintegrating Tablets (Catalent Pharma)
 - Completed Rodent Dose Response Study (University of Lethbridge, Canada)
 - Initiated IND-Enabling Studies (ADME & Toxicology - Labcorp Drug Development, Inc.)
- Time-Released Chronic Pain Nanoparticles (NP) advanced
 - NP Stability Study Completed (University of Seville, Spain)
 - Completed Initial Pharmacokinetic Study (NRC of Canada)
- Kava-based Anxiety Formulations
 - Achieved Preclinical Animal Proof-of-Concept (NRC of Canada)

PD Clinical: Orally Disintegrating Tablets (ODT)

Zydis™ Orally Disintegrating Tablets (ODT)

- Unique, freeze-dried oral solid dosage
- Instant oral dispersion – typically less than 3 seconds

Parkinson's MEM™ in Zydis™ ODT

- Convenient dosing solution for Parkinson's patients
- Greater than 50% of Parkinson's patients have swallowing problems

Clinical Advantages

- Improved bioavailability
- Increased patient compliance
- Rapid onset through buccal/sublingual absorption



Zydis™ Orally Disintegrating Tablets (ODT)



University of
Lethbridge



Catalent®



NEXT STEPS:

Parkinson's disease Formulations

✓ **Dose-Response Study in Rodents—University of Lethbridge**

✓ **Clinical Prototypes in Zydis®—Catalent Pharma**

- Prepared test batches of PD formulas in Oral Dissolving Tablets
- Stability Testing (on going)
- Chemistry Manufacturing Controls (CMC) for IND filing US FDA

Run Toxicology & ADME Studies on PD.MEM formulas—labcorp

- Toxicology on Parkinson's clinical prototypes
- ADME Studies = Absorption, Distribution, Metabolism and Excretion on Parkinson's clinical prototypes

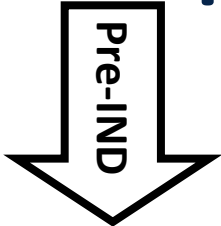
File pre-IND Application with US FDA

Pre-IND Meeting with the US FDA

First-in-Human Clinical Trial



Sciences’ Drug Development Pipeline



CLINICAL TRIALS						
Rx PROGRAMS	DISCOVERY	PRECLINICAL		First-in-Man/ Phase I	Combined Phase I-II	Phase III
						FDA APPROVAL
Parkinson's Disease (PD)						
Chronic Pain (CP)						
Anxiety (Piper plant family)						
Cytokine Release Syndrome (CRS)						
Heart Failure (HF)						

KEY

Completed

In-Process

Planning Phase



OTCQB:GBLX

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Grant Funding Milestones Achieved

- NRC-IRAP Grant: Preclinical Development of GBLX's Chronic Pain Formulas

Intellectual Property Issuances (12 months)

- First foreign patent granted for our PD formulations in China
- Received Notice of Allowance on 4 additional foreign patents in PD (Japan) and Anti-Inflammatory (Australia, Israel, Japan)
- Received Notice of Allowance on a US patent covering formulations for overactive bladder, refractory cough, and heart disease



Sciences' Research Articles (12 months)

Parkinson's Disease

Morash MG, Nixon J, Shimoda LMN, Turner H, Stokes AJ, Small-Howard AL, Ellis L. 2022. Identification of minimum essential therapeutic mixtures from Cannabis plant extracts by screening in cell and animal models of Parkinson's disease. *Front. Pharmacol.* 2022 Oct 5;13:907579. doi: 10.3389/fphar.2022.907579. PMID: 36278152; PMCID: PMC9586206.

Chronic Pain

El-Hammadi MM, Small-Howard AL, Jansen C, Fernández-Arévalo M, Turner H, Martín-Banderas L. Potential use for chronic pain: Poly(Ethylene Glycol)-Poly(Lactic-Co-Glycolic Acid) nanoparticles enhance the effects of Cannabis-Based terpenes on calcium influx in TRPV1-Expressing cells. *Int J Pharm.* 2022 Jan 30;616:121524. doi: 10.1016/j.ijpharm.2022.121524. Epub ahead of print. PMID: 35104595.2.

Anti-Inflammatory

Blevins, LK, Bach, AP, Crawford, RB, Zhou, J, Henriquez, JE, Rizzo, MD, Sermet, S, Khan, DMIO, Turner, H, Small-Howard, AL, Kaminski NE. Evaluation of the anti-inflammatory effects of selected cannabinoids and terpenes from Cannabis Sativa employing human primary leukocytes. *Food Chem Toxicol.* 2022 Dec;170:113458. doi: 10.1016/j.fct.2022.113458. Epub 2022 Oct 10. PMID: 36228902.

GbSciences



OTCQB:GBLX

Value Creation Overview



DISCOVERY

PhAROS™
AI/ML Discovery
Platform

Pre-validates efficacy
of plant-inspired
mixtures for disease-
targeted therapies



PIPELINE

Lead PD program
advancing to
First-in-Human

5 preclinical
programs
65+ disease
indications in IP



IP PORTFOLIO

ISSUED PATENTS:

6 US &
4 PCT/WIPO

PATENT-PENDING:

15 US &
49 PCT/WIPO



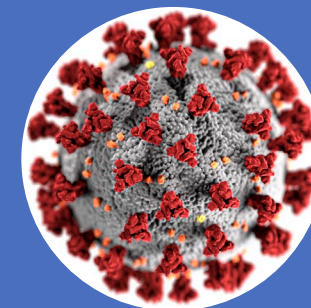
CNS PROGRAM

Parkinson's disease
formulas advancing
to First-in-Man,
Positive PoC data
US Patent Issued



CHRONIC PAIN

Oral, time-released
nanoparticles
Positive PoC data
US Patent Issued



COVID-related Cytokine Release Syndrome

Positive PoC data
Patents-pending

PhAROS™ Drug Discovery Platform

Phytomedical Analytics for Research Optimization at Scale



- Proprietary plant-based Rx therapies based on traditional medicine systems
- Minimum Essential Mixtures
- Pre-validates efficacy of drug-target-indication relationships
- “Transcultural Medicines” = ingredients not constrained by geography or culture
- De-risked as Rx therapies
- Multiple Uses: Novel Rx & Global Health Initiatives



Jansen C, Baker JD, Kodaira E, Ang L, Bacani AJ, Aldan JT, Shimoda LMN, Salameh M, Small-Howard AL, Stokes AJ, Turner H, Adra CN. Medicine in motion: Opportunities, challenges and data analytics-based solutions for traditional medicine integration into western medical practice. *J Ethnopharmacol.* 2021 Mar 1;267:113477. doi: 10.1016/j.jep.2020.113477. Epub 2020 Oct 21. PMID: 33098971; PMCID: PMC7577282.

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