



The Future of Cancer Immunotherapy

BriaCell Therapeutics Corp.

BCT:TSXV; BCTXF:OTCQB

Investor Presentation

February 2021

BriaCell Therapeutics Corp. (“**BriaCell**”)

Except for historical information, this presentation contains forward-looking statements, which reflect BriaCell’s current expectations regarding future events. These forward-looking statements involve known and unknown risks and uncertainties that could cause BriaCell’s actual results to differ materially from those statements. Those risks and uncertainties include, but are not limited to, our ability to access capital, the successful and timely completion of clinical trials, the receipt of all regulatory approvals and other risks detailed in our our registration statement on Form F-1 which we filed with the Securities and Exchange Commission on February 21, 2020, as amended from time to time and available at www.sec.gov. The forward-looking statements in this presentation are also based on a number of assumptions which may prove to be incorrect.

Forward-looking statements contained in this presentation represent views only as of the date of this presentation and are presented for the purpose of assisting potential investors in understanding BriaCell’s business, and may not be appropriate for other purposes. BriaCell does not undertake to update forward-looking statements, whether written or oral, that may be made from time to time by or on its behalf, except as required under applicable securities legislation.

- BriaCell Therapeutics Corp. (**BCT:TSXV; BCTXF:OTC**) is a clinical stage immunotherapy company developing treatments that boost the ability of the body's own cancer-fighting cells to destroy cancerous tumors including Bria-IMT™ for **advanced breast cancer** (the cause of over 40,000 deaths per year in the U.S.)
- 35 patients dosed to-date showing robust response → We believe BriaCell's Phase I/IIa safety & efficacy show similar or superior results to those of other advanced or approved drugs for breast cancer when they were at a similar clinical stage of development.
- **Incyte Corporation (INCY:NASDAQ)** → Corporate collaboration and supply agreement
 - Non-exclusive clinical trial collaboration to evaluate the effects of combinations
 - **Bria-IMT™ combined with immune checkpoint inhibitors (Phase I/IIa)**
 1. Bria-IMT™ with pembrolizumab (KEYTRUDA®); dosed 11 patients → transitioned to Incyte combination
 2. Bria-IMT™ with **Incyte's selected compounds under corporate collaboration**
- **Registration Study** initiation expected early-2022 → Bria-IMT™ combined with immune checkpoint inhibitor
- **Bria-OTS™ "Off-The-Shelf Personalized"** immunotherapy based on patient's HLA-type
 - R&D Agreement with the **National Cancer Institute** (part of NIH)
- CEO, Dr. William Williams, has been involved in 11 drug approvals



Advancing towards pivotal early 2022 registration study commencement

William V. Williams, MD, FACP, President & CEO, Director

- Former VP, Exploratory Development, Incyte Corporation
- Former VP, Experimental Medicine, GlaxoSmithKline
- Former Head, Rheumatology Research, University of Pennsylvania
- Extensive drug development experience

Charles Wiseman, MD, Co-Founder & Director

- Assistant Professor at The University of Texas MD Anderson Cancer Center
- Director, Immunotherapy Lab, St. Vincent Medical Center
- Clinical Professor of Medicine (retired), Keck-USC School of Medicine
- Former Acting Chief of the Division of Oncology/Hematology at the White Memorial Medical Center

Rebecca A. Taub, MD, Director

- Current: CMO & EVP, Director, Founder, Madrigal Pharmaceuticals
- Senior VP, VIA Pharmaceuticals
- VP of Research, Metabolic Diseases, Hoffmann-La Roche Company
- Executive Director, Bristol-Myers Squibb
- Executive Director, Dupont Pharmaceuticals
- Professor of Genetics and Medicine, University of Pennsylvania

Jamieson Bondarenko, CFA, CMT, Chairman of the Board

- Previously Principal and Managing Director of the Equity Capital Markets group of Eight Capital
- Previously several positions at Dundee Securities Ltd., including Managing Director, Director, Vice President and Associate









Vaughn Embro-Pantalony, MBA, FCPA, FCMA, CDir, ACC, Director

- Current: Chair, Board of Directors, Sorcimmed Biopharma Inc.
- Board and Audit Committee Member, Microbix Biosystems Inc.
- VP, Finance & CFO, Teva Novopharm Limited
- VP, Finance & Administration, Bayer Healthcare
- Director, Finance and Administration & CFO, Zeneca Pharma Inc.

Martin Schmieg, CPA, Director

- Current: CEO, ClearIT, LLC
- CFO: Sirna Therapeutics, Inc., & Isolagen, Inc.
- CEO, Freedom-2, Inc. (now PharmaCyte, Inc.)
- Advisor, Caladrius Biosciences, Inc., Beckman Coulter Genomics, Calimmune, Inc., Cryoport, Inc., Vetbiologics, a division of U.S. Stem Cell, Inc., Sapientia Pharmaceuticals, Inc., & Rokk3r Labs, LLC

CEO involved in eleven drug approvals

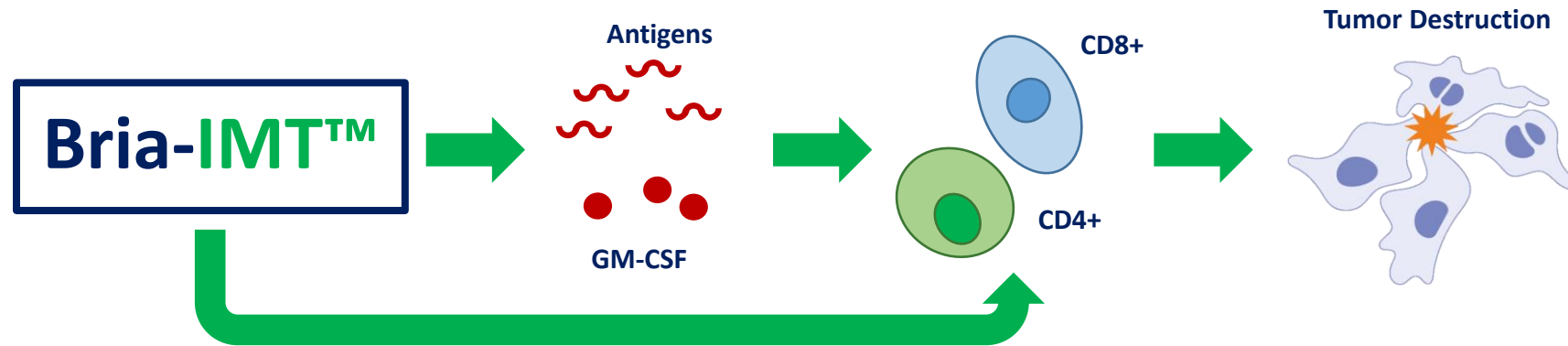
Therapeutic	Indication	Preclinical	Phase I	Phase II	Phase III	Anticipated Milestones	
Bria-IMT™ combined with Incyte Compounds	Advanced Breast Cancer (3 rd + line)	Phase I/II 					Further safety and efficacy data through 2021
Bria-OTS™	Breast Cancer						IND filing 2021
NICL1*	Prostate Cancer						IND Filing 2022 [§]
NICL2*	Non-Small Cell Lung Cancer						IND Filing 2022 [§]
NICL3*	Melanoma						IND Filing 2022 [§]
Bria-TILsRx™	Prostate Cancer						IND Filing 2022 [§]
Bria-TILsRx™	Epithelial and Glandular						IND Filing 2022 [§]
PKCδi**	RAS Transformed Cancers						Candidate Selection 2021

*NICL = Novel Immunotherapy Cell Lines **PKCδi = Protein kinase C delta inhibitor

[§]Each of these IND filings would require an additional ~\$1M above the minimal budget

BriaCell's Patented Immunotherapy: Bria-IMT™

Bria-IMT™ (developed from a breast cancer cell line) is a patented (USPTO) immunotherapy approach that is believed by us to directly stimulate the body's own cancer-fighting cells to attack and destroy breast cancer tumors.



We believe that Bria-IMT™:

1. Produces **antigens** (proteins made by breast cancer cells).
2. Further boosts the immune response through secretion of a protein called **GM-CSF**.
3. The antigens are 'presented' to **CD4+ and CD8+ T-cells**, cells known for tumor destruction.
4. Also **directly stimulates cancer-fighting T-cells**, further boosting the response.

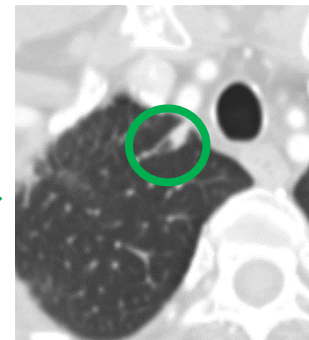
How we believe it works: *Specific Immune Activation* directly stimulates cancer-fighting cells in advanced breast cancer

Mechanism of Action & Proof-of-Concept

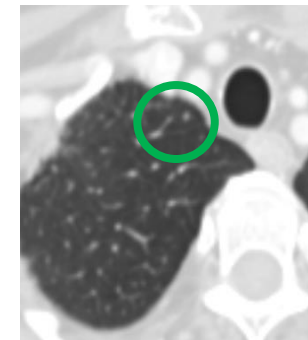
- 4 patients treated by Dr. Wiseman in 2004-2005 (original patients), including one remarkable responder
- 23 patients were dosed in 2017-2018 (phase I/IIa), all very heavily pre-treated (with chemotherapy).
- **Safety & Efficacy Data:** We believe the data was similar or superior to those of other advanced or approved drugs for breast cancer when they were at a similar clinical stage of development.
- **Findings:** BriaCell has closed enrollment for this Bria-IMT™ monotherapy study.

HLA-Type Matching and Biological Activity (original patients + phase I/IIa data)

Patients	HLA Match	Disease Control*	Disease Control in Immune Responders**
N=6	≥ 2	50%	75%
N=20	≥ 1	25%	33%
N=7	0	29%	29%



Pre-Treatment



Post-Treatment

Patient 01-002 – Two HLA Matches

Patient 01-002 was treated with the Bria-IMT™ regimen and had what we conclude was a robust response, specifically substantial tumor regression in 20 lung metastases that all either disappeared or shrunk to tiny scars.

*Includes 1 PR and 7 SD

**Immune response measured by delayed-type hypersensitivity.

HLA Matching Hypothesis: We believe tumor regression is most pronounced in patients who match Bria-IMT™ at specific HLA-types & develop an immune response

How Do Checkpoint Inhibitors Work?

- PD-L1 molecules block immune cells from attacking cancer cells
- Immune checkpoint inhibitors (such as pembrolizumab (KEYTRUDA®)) are designed to neutralize this immune suppression in cancer patients

Why did we combine Bria-IMT™ with immune checkpoint inhibitors?

- BriaCell has observed PD-L1 expression on circulating cancer cells & cancer-associated cells in >90% of our patients
- We believe Bria-IMT™ *increases the immune response* while checkpoint inhibitors such as KEYTRUDA® *decrease immune suppression*
- BriaCell believes that Bria-IMT™ has exerted additive or synergistic tumor-directed effects with checkpoint inhibitors
- **BriaCell's hypothesis:** We believe that checkpoint inhibitors act by "awakening" a component of the immune system, while Bria-IMT™ "puts the foot on the gas" of the immune system, which we believe may lead to more powerful anti-tumor activity

BriaCell is currently dosing Bria-IMT™ with Incyte's selected compounds under a corporate collaboration



Phase I/IIa Combination Study

- Patients were treated with the combination of Bria-IMT™ and anti-PD-1 antibody KEYTRUDA®.
- **We believe that an excellent safety and tolerability profile** on the first 11 patients was observed.
- All 11 patients were very heavily pre-treated with a median of 5 prior systemic therapy regimens (such as chemotherapy).
 - Most had very weak immune systems, further emphasizing the importance of what we believe were the positive results observed.
 - As BriaCell had been purchasing the KEYTRUDA® for the study from Merck without a supply agreement, the study was switched to evaluating combination therapy with Incyte drugs and the combination with KEYTRUDA® was discontinued

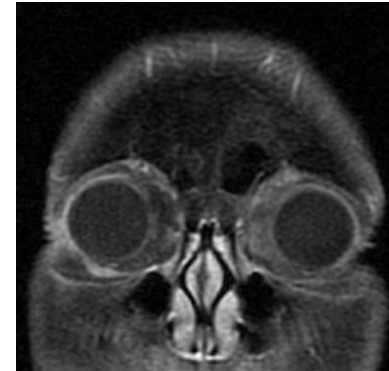
Rolled-over from Bria-IMT™ study

Remarkable Responder announced Sept. 2019
Did not roll over

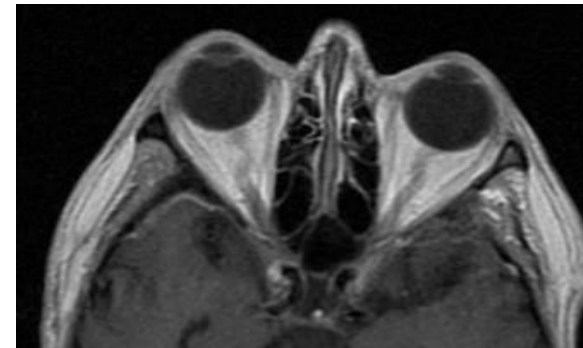
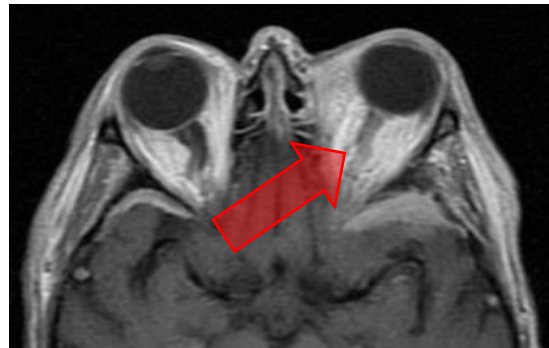
Patient	HLA Match	Observations	Notes
1	0	25% reduction in sum of diameters of target liver metastases (breast cancer tumors in the liver)	<ul style="list-style-type: none"> ▪ 8 prior chemotherapy or biological therapy regimens with extensive tumor growth in her liver. ▪ <u>Not</u> an HLA match with Bria-IMT™ suggesting that—in combination with KEYTRUDA®—tumor reduction may occur without a match.
5	2	70% reduction in sum of diameters of target adrenal metastasis and complete resolution of orbital (behind the eye) metastasis.	<ul style="list-style-type: none"> ▪ Failed 12 prior regimens with 16 agents (13 chemotherapy and 3 hormonal). ▪ Match at HLA-C and HLA-DRB3 loci.

Tumor behind the left eye causing proptosis completely resolves

Baseline
Scans



Six months
On Treatment
Scans

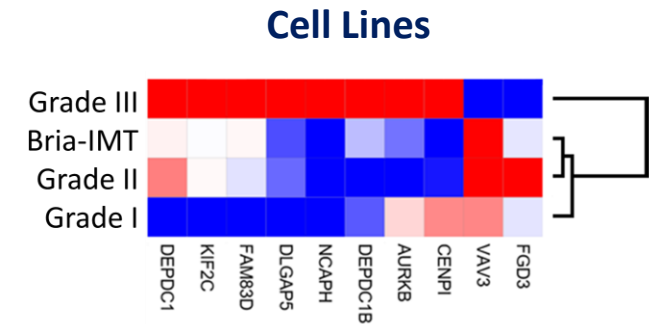


Complete resolution of orbital tumor in a heavily pre-treated patient with 2 HLA matches and a grade II tumor supports remarkable activity of Bria-IMT™

Bria-IMT™ in Grade I/II Tumors

Breast Cancer Grade Correlates with Response

- Bria-IMT™ is derived from a grade II (moderately differentiated) breast cancer.
- Genes expressed by Bria-IMT™ match best with grade I/II-derived Breast Cancer Cell Lines
 - ~40% of recurrent breast cancers are grade I/II



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Monotherapy Study

- Grade I/II patients with immune responses had clinical benefit (5/7 = 71%)
 - Patients very heavily pre-treated, median of 7 prior regimens

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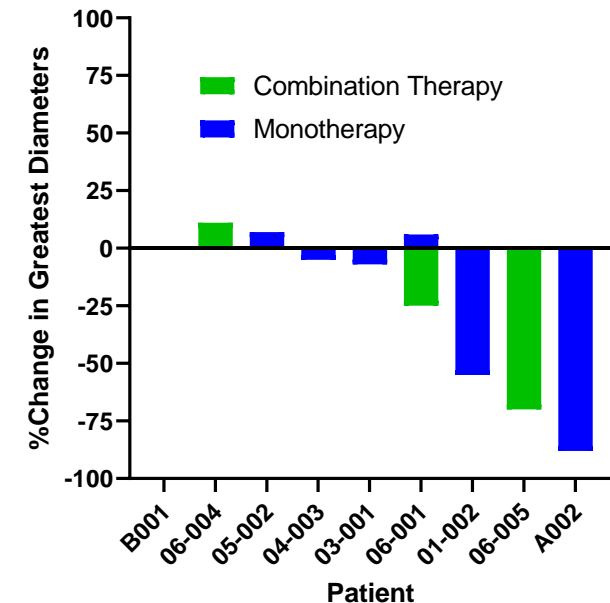
Combination Study

- Grade I/II patients with had clinical benefit (3/3 = 100%)
 - Patients very heavily pre-treated with 14-15 prior regimens

- **Median Overall Survival of 12.5 months**

- Recent publication in 3rd line patients (*Kazmi S et al Breast Cancer Res Treat. 2020 Aug 17*) showed a median overall survival of 7.2 - 9.8 months

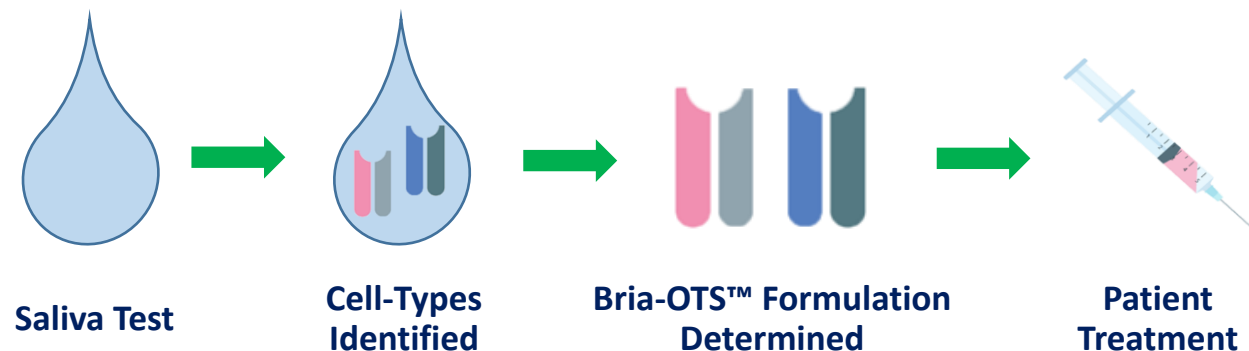
Grade I/II Patients
% Change Lesions



We believe these findings identify a patient population with higher clinical benefit rates

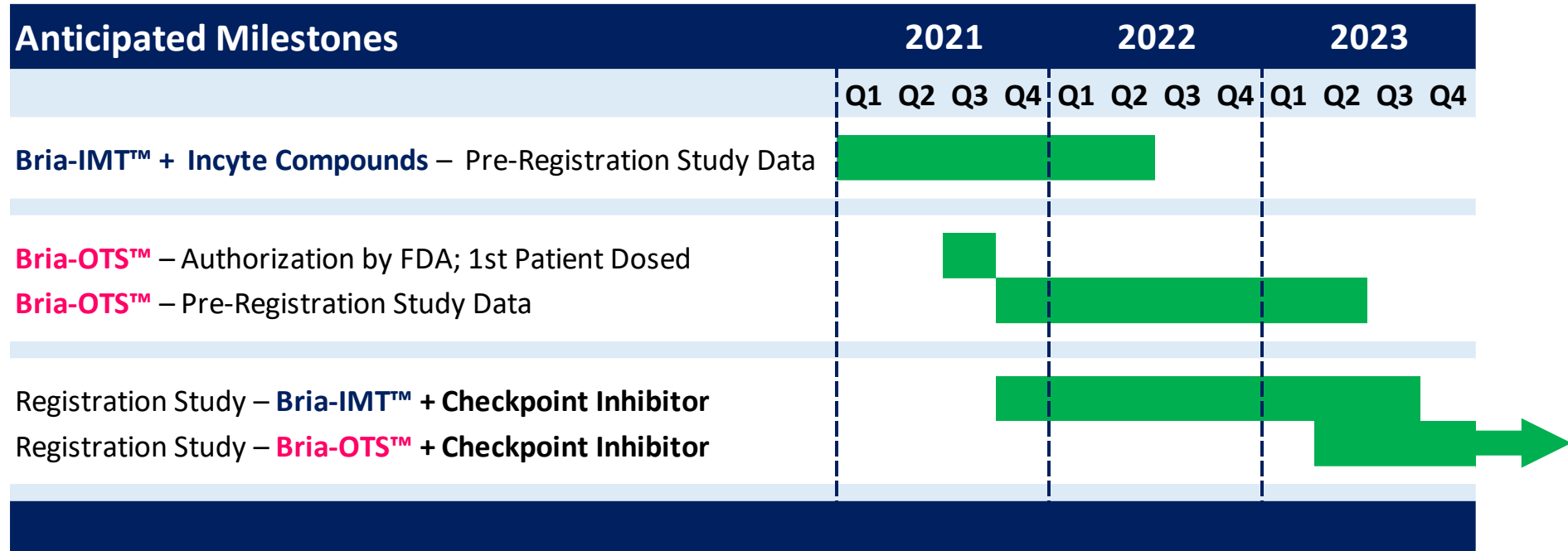
Bria-OTS™: *Off-The-Shelf* Personalized Immunotherapy *Confirmation of “Matching Hypothesis” resulted in BriaCell’s “OTS” strategy*

- Cooperative Research and Development Agreement with the **National Cancer Institute**, part of the **National Institutes of Health**
- We believe BriaCell’s treatment is most effective when the patient’s **HLA-type** matches the Bria-IMT™ **HLA-type**
- **Bria-OTS™** involves a simple saliva test to determine the **HLA-type** of each patient
 - Each patient will then be treated with the appropriate pre-manufactured **Bria-OTS™** formulation
- BriaCell is engineering **15 unique HLA types (molecules)**, collectively referred to as **Bria-OTS™**, allowing for what we believe will be matching and treatment of over 99% of patients
- Similar cell lines in development for prostate cancer, lung cancer and melanoma as well as a pre-clinical Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute (USA)



We anticipate each patient will be treated with a pre-manufactured formulation based on HLA-type

Key Clinical Programs: Development Timeline



Clinical data to be submitted to key scientific meetings including AACR, ASCO and the San Antonio Breast Cancer Meeting

Outstanding Securities

Common Shares	771,960
Warrants (WAEP \$44.26)	192,318
Options (WAEP \$46.09)	18,052

Insider Ownership*

Jamieson Bondarenko	119,856	15.5%
Dr. William Williams	66,886	8.7%
Dr. Charles Wiseman	44,604	5.8%
Other	10,333	1.3%

* Based on 771,960 common shares outstanding and common shares owned (does not include warrants and options)



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Thank you