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BriaCell

Therapeutics Corp.

www.BriaCell.com

Market Snapshot

Share Price (4/12/21)	US\$3.92
Basic Shares Out	7.54M
Basic Market Cap	US\$30M
Cash (pro forma for February '21 financing excluding fees)	US\$28.7M

Nasdaq: BCTX, BCTXW

TSXV: BCT

Corporate Highlights:

- BriaCell Therapeutics Corp. is a clinical stage immunotherapy company developing treatments that boost the ability of the body's own cancer-fighting cells to destroy cancerous tumors
- Lead drug candidate Bria-IMT™** is targeting **third-line advanced breast cancer** (the cause of over 40,000 deaths per year in the U.S.) and its associated U.S. patient population of ~70,000 patients
 - 35 patients dosed to-date including robust responses → 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 at similar stages of clinical development
- Incyte Corporation (Nasdaq: INCY)** → Corporate collaboration and supply agreement
 - Non-exclusive clinical trial collaboration to evaluate the effects of combination therapies
 - Bria-IMT™ + immune checkpoint inhibitors (Phase I/IIa)**
 - Bria-IMT™ + pembrolizumab (KEYTRUDA®); dosed 11 patients → transitioned to Incyte combination
 - Bria-IMT™ + 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 that would address ~140,000 third-line breast cancer patients (99% of all third-line patients)
 - R&D Agreement with the **National Cancer Institute** (part of NIH)
- CEO Dr. William Williams has been involved in **11 prior drug approvals**



BriaCell Pipeline

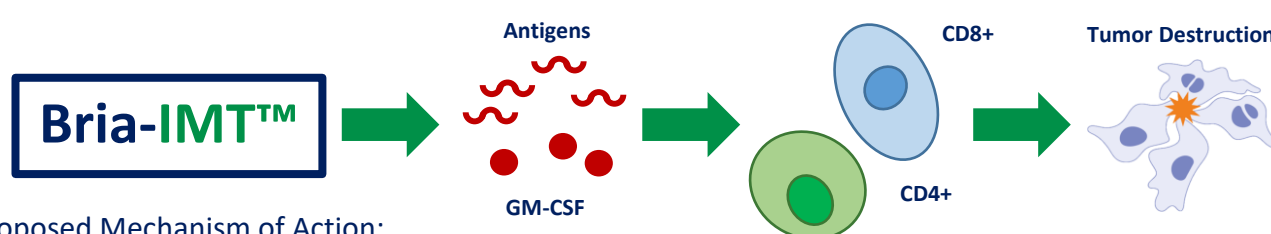
Therapeutic	Indication	Preclinical	Phase I	Phase II	Phase III	Anticipated Milestones
Bria-IMT™ + Incyte Compounds	Advanced Breast Cancer (3 rd + line)	Phase I/II				Further safety and efficacy data through 2021
Bria-OTS™	Breast Cancer					IND filing 2021
NICL1*	Prostate Cancer					IND Filing 2022
NICL2*	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 Line

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

Patented Immunotherapy: Bria-IMT™:

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



Proposed Mechanism of Action:

- Bria-IMT™ produces **antigens** (proteins made by breast cancer cells).
- The antigens are 'presented' to **CD4+ and CD8+ T-cells**, cells known for tumor destruction.
- Bria-IMT™ further boosts the immune response through secretion of a protein called **GM-CSF**.
- Bria-IMT™ also **directly stimulates cancer-fighting T-cells**, further boosting the response.

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Key Leadership



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



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

Bria-IMT™ + Immune Checkpoint Inhibitors

How Do Checkpoint Inhibitors Work?

- PD-L1 molecules block immune cells from attacking cancer cells
- Immune checkpoint inhibitors 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 **decrease immune suppression**
- We believe that Bria-IMT™ has exerted additive or synergistic tumor-directed effects with checkpoint inhibitors
- BriaCell's hypothesis:** 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 may lead to more powerful anti-tumor activity

Summary Clinical Data for Bria-IMT™ in Advanced Breast Cancer Trials

1

Proof-of-concept trial

	POC trial (2004-2006)
Patients	N=4 (stage IV)
Safety Profile	Well tolerated; no severe AEs
Median Survival	35 months

Median **survival was in line or above expected survival** for salvage therapies (6-12 months)

One patient with 2 HLA matches to Bria-IMT™ developed **prompt objective complete remission** of a lung lesion on CT scans and near-complete regression of multiple breast lesions on MRI

2

Phase I/IIa monotherapy

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%

*Includes 1 PR and 7 SD

**Immune response measured by delayed-type hypersensitivity. Note that this includes the 4 patients from the second trial

Bria-IMT™'s data in monotherapy showed **significant disease control** in patients with increasing number of **HLA matches**

PD-L1 expression was seen on Cancer-Associated Macrophage-Like Cells (CAMLs) in 21/23 patients

3

Phase I/IIa combination w/Keytruda®

Patients	HLA match	*Disease Control	**Disease Control in immune responders
N=5	≥2	40%	100%
N=7	≥1	43%	75%
N=4	0	25%	25%

*Includes 1 PR and 3 SD

**Immune response measured by delayed-type hypersensitivity. Note that this includes the 4 patients from the monotherapy trial

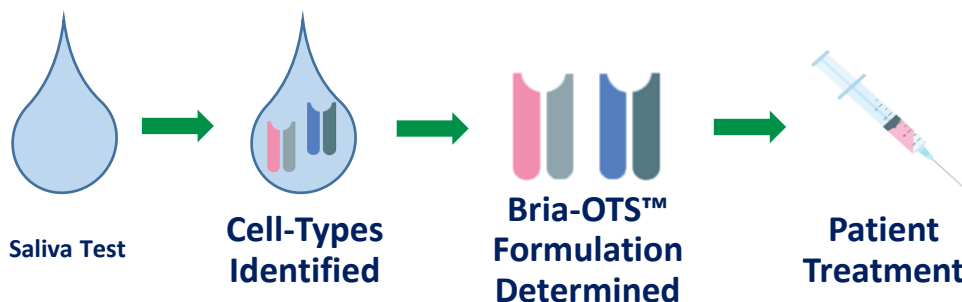
All 3 patients with grade I/II tumors had disease control (100%)

Patients with **grade I or II tumors** and those able to **generate a robust immune response appear more likely to respond** regardless of HLA match, suggesting PD1 inhibitor can compensate for lack of HLA match

Bria-OTS™: Off-the-Shelf Personalized Immunotherapy

Confirmation of "Matching Hypothesis" resulted in BriaCell's "OTS" strategy

- Cooperative Research and Development Agreement (CRADA) with the **National Cancer Institute**, part of the **National Institutes of Health**
- We believe our treatment is most effective when the patient's **HLA-type** matches the Bria-IMT™ **HLA-type**
- We are 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 with advanced breast cancer
- 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
- Similar cell lines in development for prostate cancer, lung cancer, and melanoma, as well as a pre-clinical CRADA with the NCI



Forward Looking Statements

Except for historical information, this presentation contains forward-looking statements, which reflect BriaCell's Therapeutics Corp.'s ("BriaCell") 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 from time to time in our ongoing quarterly and annual filings. 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.

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