BriaCell Therapeutics Corp.

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TSX: BCT

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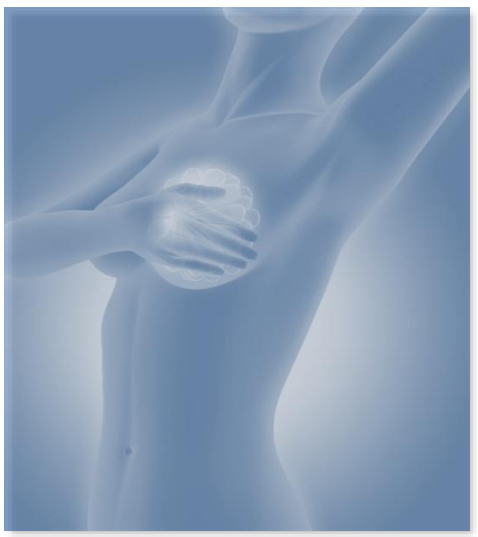
CORPORATE HIGHLIGHTS

- 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™ (Awarded Fast Track designation by FDA)** 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)
    1. Bria-IMT™ + pembrolizumab (KEYTRUDA®); dosed 11 patients → transitioned to Incyte combination
    2. Bria-IMT™ + **Incyte's retifanlimab under corporate collaboration**
- **Registration Study** initiation expected in 2H2022 → 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)
- **Bria-PROS™** "*Off-The-Shelf Personalized*" immunotherapy for prostate cancer patients (34,500 deaths in the U.S.)
- Clinical Strategy Team involved in **19 prior drug approvals**

MARKET SNAPSHOT

Share Price (8/4/22)	**US$6.70**
Basic Shares Out	**15.7M**
Basic Market Cap	**US$105M**
Cash (4/30/22)	**US$44.5M**



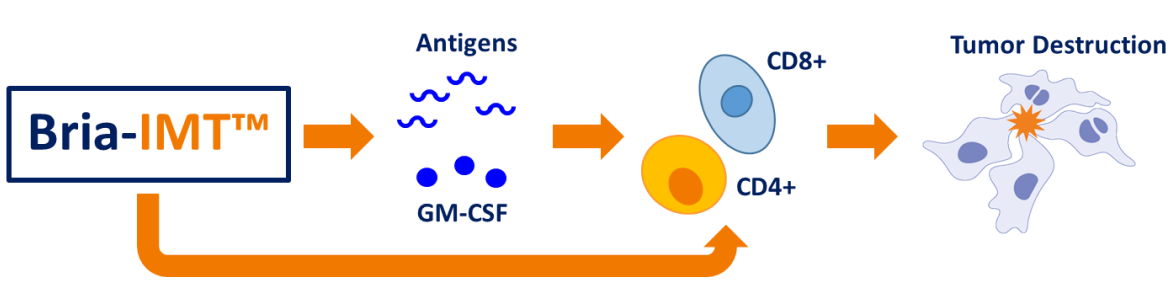
BRIACELL PIPELINE

Therapeutic	Indication	Preclinical	Phase I	Phase II	Phase III	Anticipated Milestones
Bria-IMT™ combined with Incyte's retifanlimab	Advanced Breast Cancer (3rd+ line)	Ph I/II (Fast Track)				Safety & Efficacy Data 2H2022 Registration Study 2H2022
Bria-OTS™	Breast Cancer					IND Filing 2H2022
Bria-Pros™	Prostate Cancer					IND Preparation 2H2022
Bria-Lung™	Non-Small Cell Lung Cancer					IND Preparation 2H2022
Bria-Mel™	Melanoma					IND Preparation 2H2022
sCD80	Solid Tumors					IND Filing 2024
Bria-TILsRx™	Prostate Cancer					IND Filing 2024
Bria-TILsRx™	Epithelial and Glandular					IND Filing 2024
PKCδi*	RAS Transformed Cancers					Candidate Selection 2022

*PKCδi = Protein kinase C delta inhibitor

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:

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

BriaCell Therapeutics Corp.

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

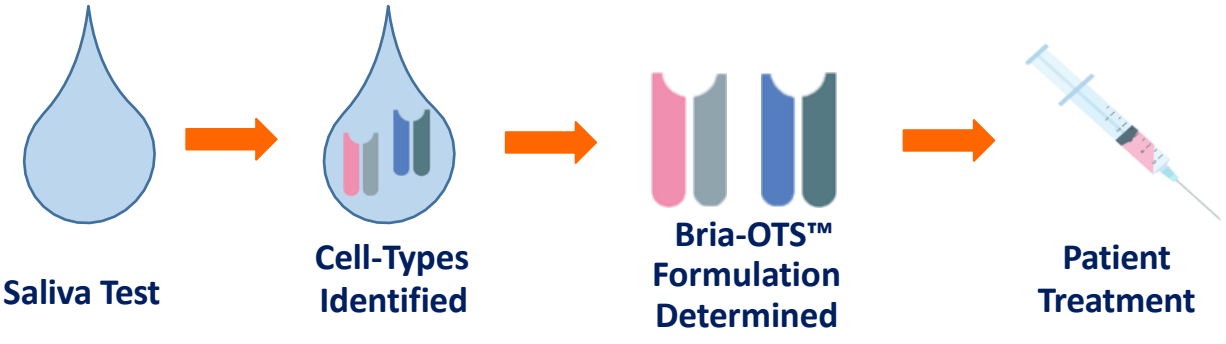
All 3 patients with grade I/II tumors had disease control (100%)

*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

BriaCell Therapeutics Corp. ("BriaCell")

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Our public communications, including this presentation, and SEDAR and SEC filings, may contain statements related to future, not past, events. These forward-looking statements are based upon current beliefs and expectations of the Company's management and are subject to significant risks and uncertainties. These forward-looking statements often, but not always, may be identified by the use of words such as "believes," "estimates," "anticipates," "targets," "expects," "plans," "projects," "intends," "predicts," "may," "could," "might," "will," "should," "approximately," potential" or, in each case, their negative or other variations thereon or comparable terminology, although not all forward-looking statements contain these words. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

These forward-looking statements appear in a number of places throughout this presentation and include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things, our reliance on third parties to carry out a large portion of our business; the possibility that pre-clinical and initial clinical trials will not necessarily be predictive of future results; our ability to obtain additional capital to continue our operations; our reliance on key personal; our success in completing the development of our products, commercializing our products or generating significant revenues; our ability to successfully develop, maintain and protect our proprietary products and technologies; and potential difficulties recruiting or retaining patients in our ongoing and planned clinical trials if patients are affected by the virus or are fearful of visiting or traveling to our clinical trial sites because of the outbreak of COVID-19.

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