



BriaCell Therapeutics Corp.

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The Future of Cancer Immunotherapy

TSX-V: BCT
OTCQB: BCTXF

Investor Presentation
April 2019

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 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.

Investors are cautioned not to rely on these forward-looking statements and are encouraged to read BriaCell’s continuous disclosure documents, including its financial statements which are available on SEDAR at www.sedar.com.

- Corporate Highlights
- Advanced Breast Cancer Market
- Bria-IMT™ → Phase I/IIa Positive Results
- Bria-IMT™ Combined With KEYTRUDA® (by Merck & Co., Inc.)
- Collaboration with Incyte Corporation
- Bria-OTS™ → “Off-The-Shelf” Immunotherapy Tailored to Each Patient
- Development Timeline
- Management & Corporate Information

- BriaCell utilizes an **immunotherapy** approach; immunotherapy is a type of cancer treatment that boosts the ability of the body's own cancer-fighting cells to destroy cancerous tumors
- Market focus: **Advanced breast cancer** (the cause of >40,000 deaths in the U.S. in 2017)
- **Bria-IMT™ Phase I/IIa** clinical trial completed December 2018; Outstanding safety & efficacy data
- **Bria-IMT™ combined with KEYTRUDA® (Merck)** → Phase I/IIa combination study in progress
 - Excellent safety and evidence of additive or synergistic activity
- **Incyte Corporation** → Clinical trial collaboration and supply agreement
- **Developing Bria-OTS™**, an *“Off-The-Shelf Personalized”* immunotherapy tailored to each patient
 - Patients are matched to 1 of 15 choices based on a simple identification test
- CEO Dr. William Williams and his team have been involved in dozens of drug approvals

BriaCell has advanced a remarkable breast cancer immunotherapy breakthrough with potential application to multiple cancer types

Big Pharmaceutical Companies Are Very Active

- Significant partnership & collaboration opportunities exist in the advanced breast cancer oncology market... Particularly in immunotherapies, which directly stimulate the body's own cancer-fighting cells to attack and destroy breast cancer tumors.
- **BriaCell's approach is Targeted Immunotherapy; not CAR-T or gene therapy.**
- **BriaCell has been advancing collaboration discussions with several 'Big Pharma' companies.**
 - 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.



Lilly eyes more cancer deals, but wary of CAR-T, gene therapy

Eli Lilly and Co remains in the hunt for cancer drugs even after announcing an \$8 billion purchase of Loxo Oncology this week...

-- Reuters; January 11, 2019

GlaxoSmithKline to look for early-stage assets: CEO

GlaxoSmithKline Plc will actively look to buy early-stage assets and partner with companies, the drugmaker's chief executive officer said Tuesday. ... she said GlaxoSmithKline had almost doubled the size of its immuno-oncology pipeline over the past few months.

-- Reuters; January 8, 2019

Bristol-Myers Reports Higher Sales but Another Lung-Cancer Setback

Merck's Keytruda immunotherapy scored a major advantage when it received U.S. approval for newly diagnosed lung-cancer patients, while Bristol's Opdivo immunotherapy failed a trial to show its effectiveness in the patients..

-- The Wall Street Journal; January 25, 2019

Agenus shares soar after cancer therapy deal with Gilead

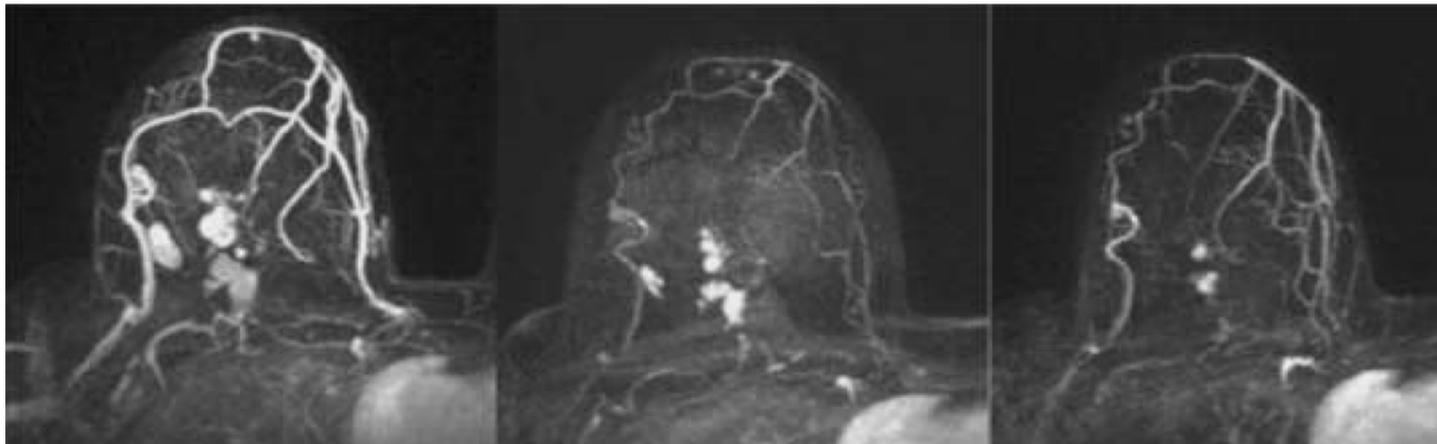
...the company said it would develop and market up to five of its immuno-oncology therapies in partnership with Gilead Sciences Inc.

-- Reuters; December 20, 2018

Positive Human Proof-of-Concept Trials in Advanced Breast Cancer

- 1999-2003 & 2004-2006, Dr. Charles Wiseman (current BriaCell Director)
- Bria-IMT™ was developed from a breast cancer cell line called SV-BR-1

	1999 – 2003	2004 – 2006
Patients	N=14 late stage	N=4 late stage
Safety Profile	Well tolerated; no severe AEs	Well tolerated; no severe AEs
Median Survival	12.1 months	35 months



Baseline

3 Inoculations (2 months)

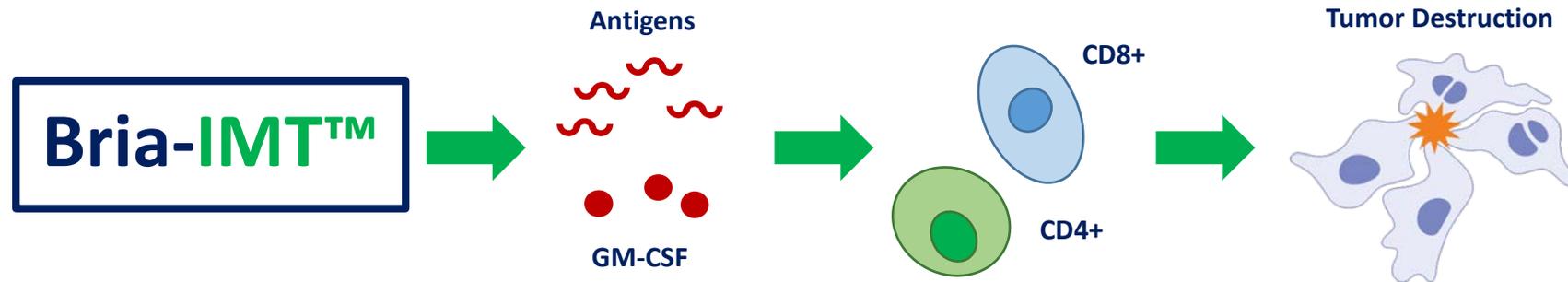
6 Inoculations (5 months)

Patient A002 – Robust Responder

Patient A002 was treated with the Bria-IMT™ regimen and had a robust response with substantial tumor regression in the breast and bone, and complete clearance in the lungs and soft tissues.

Is this the KEY?... Patient A002 had key HLA-types that matched with Bria-IMT™

Bria-IMT™ is a patented (USPTO) immunotherapy approach that directly stimulates the body's own cancer-fighting cells to attack and destroy breast cancer tumors.



1. Bria-IMT™ produces *antigens* (proteins made by breast cancer cells).
2. Bria-IMT™ further boosts the 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. Bria-IMT™ also directly *stimulates* these cancer-fighting T-cells, further boosting the response.

How It Works: *Specific Immune Activation* directly stimulates cancer-fighting cells in advanced breast cancer

Mechanism of Action & Proof-of-Concept Confirmed (Sept 2018)

Bria-IMT™ regimen in an FDA-approved clinical trial in advanced breast cancer

- BriaCell has confirmed the mechanism of action and achieved proof of concept.
- 23 patients were dosed in the 2017-2018 study, all with very heavily pre-treated (with chemotherapy) advanced breast cancer.
- **Initial Safety Data** appears superior to other advanced or approved drugs for breast cancer when they were at a similar clinical stage of development.
 - Very well tolerated (≥60 doses given to date)
 - Minor local irritation at the injection sites, as expected
- **Initial Efficacy Data** is similar or superior to those of other advanced or approved drugs for breast cancer when they were at a similar clinical stage of development.
- **Conclusive Findings:** BriaCell has closed enrollment for this Bria-IMT™ monotherapy study.

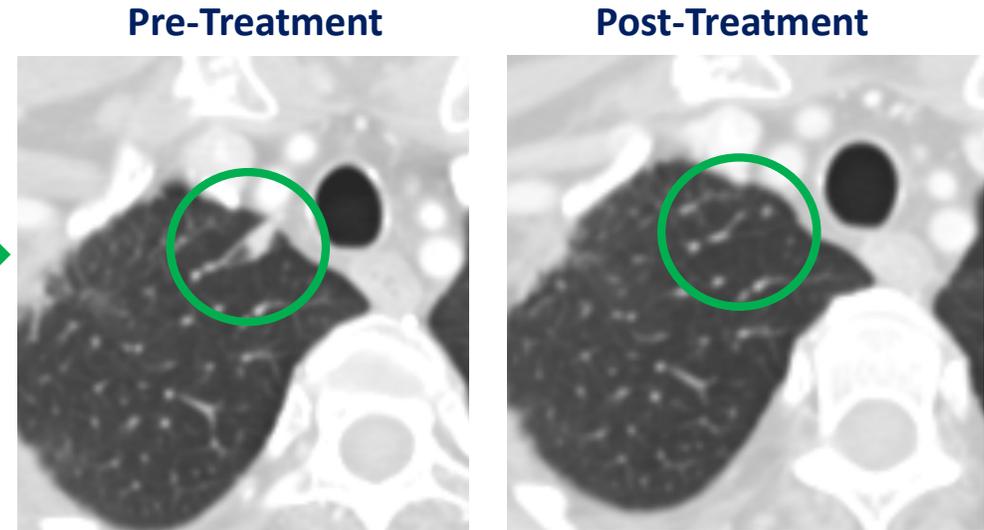
**Tumor regression is most pronounced in patients who match Bria-IMT™
at HLA cell-types – confirming BriaCell's main hypothesis**

Cell-Type Matching and Biological Activity

Bria-IMT™ is most effective in patients who match with Bria-IMT™ at HLA types which further supports our “HLA Matching Hypothesis”

Patients	HLA Match	Tumor Shrinkage	Biological Response*
N=5	≥ 2	40%	60%
N=19	≥ 1	21%	37%
N=8	0	0%	0%

*Biological response includes tumor shrinkage or lower circulating cancer associated cells



Patient 01-002 – Two HLA Matches

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

Patient 01-002 had 2 HLA matches... she experienced substantial tumor regression

Bria-IMT™



KEYTRUDA®
(pembrolizumab) Injection 100 mg
by Merck & Co., Inc.



MERCK

How Does KEYTRUDA® Work?

- PD-L1 molecules block immune cells from attacking cancer cells
- Immune checkpoint inhibitors such as pembrolizumab (KEYTRUDA®; anti-PD-L1) are designed to neutralize immune suppression in cancer patients
- The significance of immune checkpoint inhibitors was recognized by the Nobel committee ([Reuters: Link](#))

Why Combine Bria-IMT™ with KEYTRUDA®?

- BriaCell has observed PD-L1 expression on circulating cancer cells & cancer-associated cells in >90% of patients
- BriaCell has strong rationale for combining Bria-IMT™ (**increases immune response**) with KEYTRUDA® (**decreases immune suppression**)
- BriaCell believes that Bria-IMT™ can exert additive or synergistic tumor-directed effects with checkpoint inhibitors such as KEYTRUDA®

Combination with KEYTRUDA® may induce a more potent anti-cancer response

Bria-IMT™



KEYTRUDA®
(pembrolizumab) Injection 100 mg
by Merck & Co., Inc.



MERCK

Phase I/IIa Combination Study

Patient dosing is well-underway in a combination study of Bria-IMT™ with KEYTRUDA® in advanced breast cancer.

- Patients are being treated with the combination of Bria-IMT™ and the anti-PD-1 antibody KEYTRUDA®.
- **Excellent safety and tolerability profile** on the first 6 patients has been reported
 - December 6, 2018 and April 3, 2019

“We are highly confident of our strategy to use Bria-IMT™ in combination with KEYTRUDA®, and have already observed synergistic activity of this combination.”

~ Dr. William Williams, CEO of BriaCell

Bria-IMT™



KEYTRUDA®
(pembrolizumab) Injection 100 mg
by Merck & Co., Inc.



MERCK

Bria-IMT™ Combined With KEYTRUDA®

Strong Evidence of Rapid Additive or Synergistic Anti-Tumor Activity

- **Findings support BriaCell's hypothesis:** KEYTRUDA® acts by "awakening" a component of the immune system, while Bria-IMT™ "puts the foot on the gas" of the immune system, leading to more powerful anti-cancer activity.
- All 6 patients were very heavily pre-treated with an average of 5 prior systemic therapy regimens (such as chemotherapy) prior to enrollment in BriaCell's Combination Study – most had very weak immune systems, and yet several were able to develop an immune response to Bria-IMT™ showing it is very potent.

Bria-IMT™ Combined With KEYTRUDA®: Strong Evidence of Rapid Additive or Synergistic Anti-Tumor Activity



Four patients rolled-over from BriaCell's Bria-IMT™ monotherapy study:

- **Top Responder:** One woman with stable disease on monotherapy had been on 8 prior chemotherapy regimens and had extensive tumor growth in her liver.
- **She experienced a 43% reduction in the size of her liver metastases within 2 months and continues on the Combination Study.**
- Of note, she is not an HLA match with Bria-IMT™ suggesting that the combination with KEYTRUDA® may work for patients regardless of HLA matching.

Two patients entered the Combination Study directly without previous Bria-IMT™ treatment:

- One woman achieved stable disease, in spite of 9 prior anti-cancer regimens (including 6 chemotherapy regimens and 3 biological therapy regimens) and therefore appears to have derived clinical benefit from the combination treatment. She matched Bria-IMT™ at one HLA allele.

Bria-IMT™ Combined With KEYTRUDA®: Responses in Heavily Pre-treated “Salvage” Patients

BriaCell & Incyte Collaboration and Supply Agreement

Non-exclusive clinical trial collaboration to evaluate the effects of combinations of novel clinical candidates



- The clinical study will focus on (but not limited to) BriaCell's lead candidate, Bria-IMT™, in combination with Incyte's selected compounds for advanced breast cancer.
- Incyte to provide compounds from its development portfolio, including *INCMGA0012*, an anti-PD-1 monoclonal antibody, and *epacadostat*, an IDO1 inhibitor, for use in combination studies with BriaCell's lead candidate, Bria-IMT™.
- **Incyte (INCY-NASDAQ; ~US\$20Bn market capitalization)** is a global biopharmaceutical company focused on discovering and developing novel therapeutics in oncology and other serious diseases.

BriaCell hypothesizes that checkpoint inhibitors, of which Incyte has several candidates, may significantly amplify the tumor-reducing effects of Bria-IMT™.

Bria-OTS™: *Off-The-Shelf* Personalized Immunotherapy

- BriaCell's immunotherapy treatment is most effective when the patient's **HLA-type** matches the Bria-IMT™ **HLA-type**
- **Bria-OTS™** involves a simple method to determine the **HLA-type** of each patient
 - Each patient is then treated with the appropriate pre-manufactured **Bria-OTS™** formulation
- BriaCell is engineering 15 unique HLA types, collectively referred to as **Bria-OTS™**, allowing for treatment of over 99% of patients



Each patient will be treated with a tailored formulation based on HLA-type

Unique Immunotherapy Tailored to Each Patient

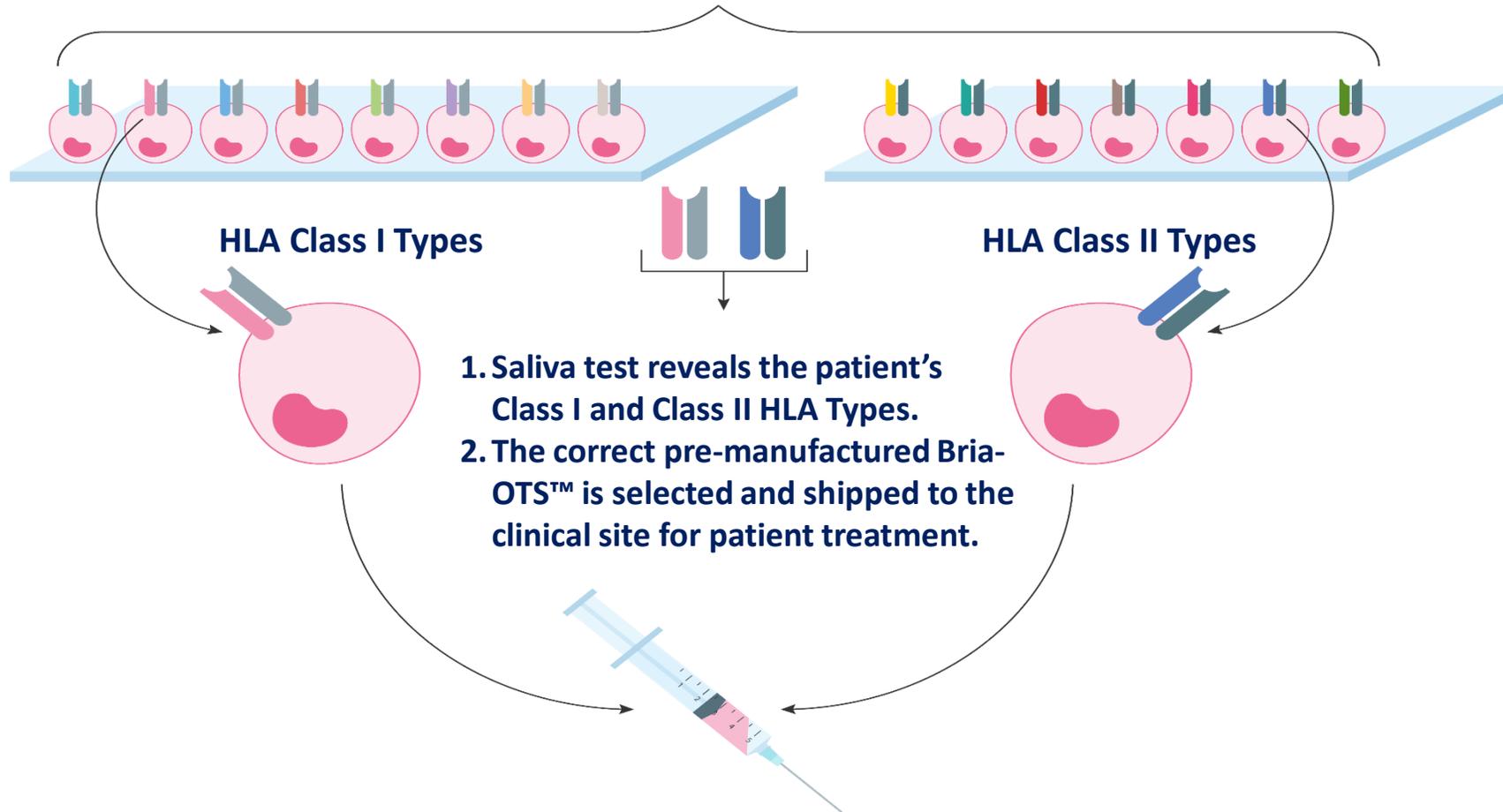
Confirmation of “Matching Hypothesis” resulted in BriaCell’s “OTS” strategy

- As confirmed in BriaCell’s Phase I/IIa monotherapy study, Bria-IMT™ is most effective in patients who match with Bria-IMT™ at HLA types
- Bria-OTS™ cell lines are being developed to express 15 different HLA types
 - **≥1 Match:** >99% of the patient population will be covered
 - **≥2 Match:** ~90% of the patient population will be “double-matched”, as with the *Robust Responders*
- A simple saliva test will determine the appropriate *off-the-shelf* immunotherapy to select
- Each patient will have a personalized therapy without the need for expensive personalized manufacturing
- **Bria-OTS™ is expected to enter FDA clinic trials in 2019**
- Although not currently under study, Bria-OTS™ is expected to synergize with checkpoint inhibitors such as KEYTRUDA®

Several remarkable responses have been seen in late stage breast cancer patients who match Bria-IMT™ at ≥2 HLA types.

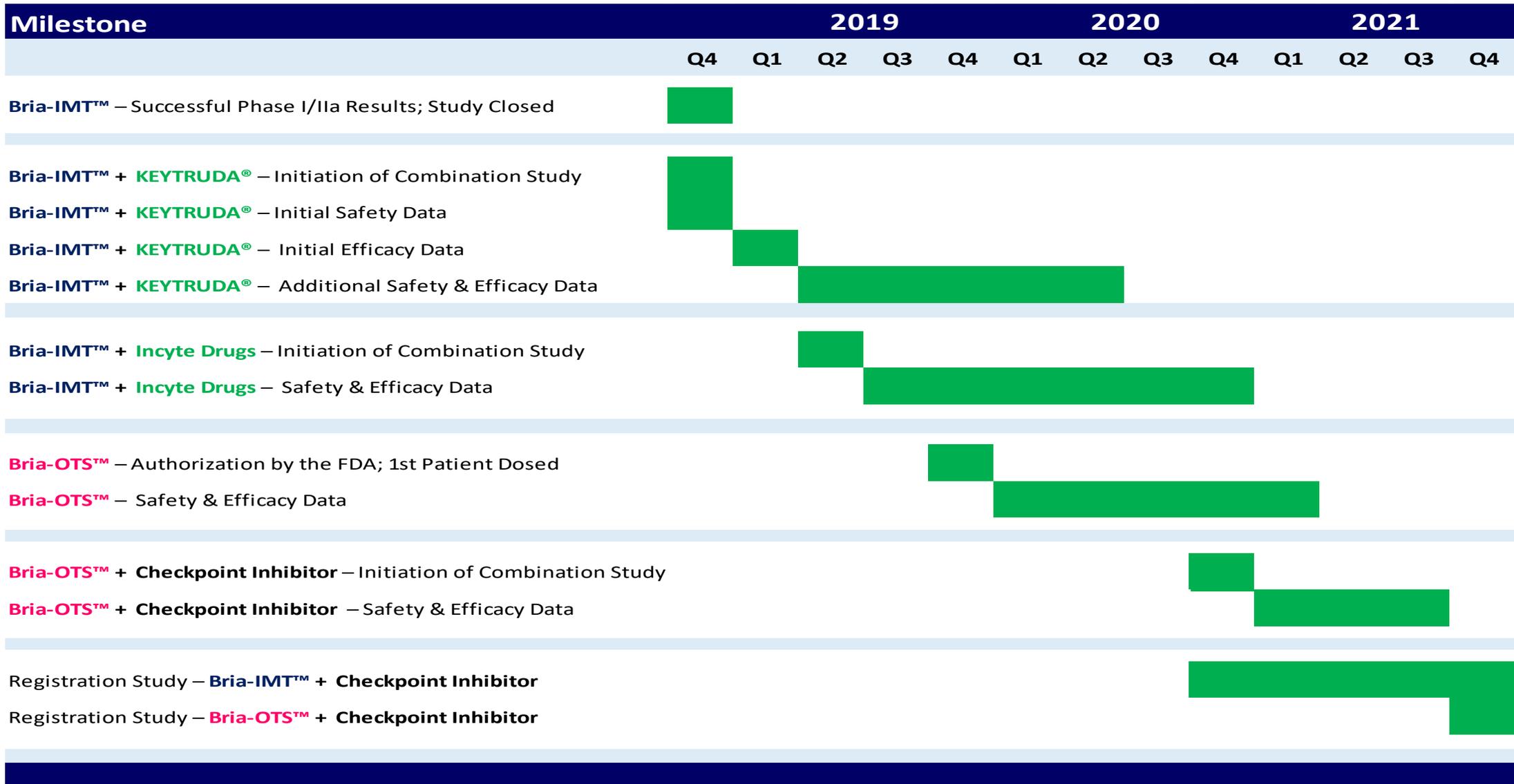
15 Unique HLA Types for Tailored Immunotherapies

A simple test determines the correct “off-the-shelf” immunotherapy to select



Personalized Therapy without the need for Personalized Manufacturing

Development Timeline & Catalysts



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

- VP, Exploratory Development, Incyte Corporation
- VP, Experimental Medicine, GlaxoSmithKline
- Head, Rheumatology Research, University of Pennsylvania
- Facilitated entry of over 20 compounds into the clinic including ruxolitinib (Jakafi), baricitinib, & epacadostat. NDAs including Jakafi, Boniva, Bexxar
- Author of over 120 peer-reviewed publications & over 20 patents



Charles Wiseman, MD, Co-Founder & Director

- Director, Immunotherapy Lab, St. Vincent Medical Center
- Chief, Breast Cancer Basic Research Lab, Univ. of Texas MD Anderson Hospital & Tumour Institute
- Assist. Prof., Dept of Molecular Carcinogenesis & Virology, MD Anderson
- Acting Chief, Div. of Oncology, White Memorial Medical Center, LA

Markus Lacher, PhD, Senior Director, R&D

- Founder, T cell Therapeutics, Inc., an immuno-oncology company
- Sr. Clinical Scientist, Cesca Therapeutics, Inc.
- Scientist at BioTime, Inc. and OncoCyte Corporation
- Editorial advisory board; Recent Patents on Anti-Cancer Drug Discovery

Brian Metcalf, Ph.D., Scientific Advisory Board

- Recently retired as CSO from Global Blood Therapeutics
- Former Head of Research & Development, Incyte Corporation
- Former Head of Medicinal Chemistry, SmithKline Beecham

Jamieson Bondarenko, CFA, CMT, Acting Chairman

- Current: Advisor to Lexaria Bioscience Corp., MustGrow Biologics Corp.
- Previous Equity Capital Markets and Corporate Finance roles with Eight Capital, Dundee Securities, Wellington West Capital Markets, HSBC Securities

Rebecca A. Taub, M.D., Director

- Current: CMO, Director, Founder, former CEO 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

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.

Involved in bringing dozens of drugs to market

BCT: TSX Venture

BCTXF: OTCQB

Recent Share Price	\$0.135
Basic Shares Outstanding (MM)	194.3
Fully-Diluted Shares Outstanding (MM)	286.0
Basic Market Capitalization (C\$MM)	\$26.2
Cash and Short Term Investments (C\$MM)	\$3.1

Insiders	Shares	% Basic
Jamieson Bondarenko	23,290,500	12.0%
Dr. Charles Wiseman	13,381,287	6.9%
Dr. William Williams	11,447,849	5.9%
TOTAL	48,119,636	29.2%

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Data as of April 3, 2019

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BriaCell has advanced a remarkable breast cancer immunotherapy breakthrough by identifying its mechanism of action, replicating the results, and proving the concept in a Phase I/IIa study



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Thank you

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