



**OTCQB: BCTXF**  
**TSX-V: BCT**

[BriaCell](#) is an immuno-oncology focused biotechnology company developing the first Off-the-Shelf Personalized Immunotherapy for cancer. [Bria-IMT™](#), the Company's lead product candidate, is a genetically engineered targeted immunotherapy derived from a human breast tumor cell line. Bria-IMT™ is believed to activate the immune system to recognize and eliminate cancerous cells by inducing tumor-directed T cell and potentially antibody responses. BriaCell has demonstrated encouraging clinical results, and is intent on building upon these results to further advance Bria-IMT™ through additional FDA-approved clinical trials to help cancer patients with limited therapeutic options. The Company also is conducting clinical work to validate the use of a companion diagnostic – [BriaDX™](#) – to aid in the selection of patients most likely to respond to treatment. [Bria-OTS™](#) is in development to provide the ability to treat ~90% of the population with Off-the-Shelf personalized immunotherapy cell lines.

### Company Highlights

- **Developing the First Off-the-Shelf Personalized Immunotherapy**
- **Targeting Advanced Breast Cancer**
  - Unmet medical need (42,000 women died in U.S. during 2017 from Advanced Breast Cancer)
  - **\$1 Billion to \$5 Billion market opportunity depending on patient treatment stage**
- **Impressive results in 2 completed proof-of-concept human clinical trials:**
  - **Rapid Response Rate; Successful retreatment following a relapse**
  - **Excellent Safety Profile (only ~20% with injection site rash)**
- **Bria-IMT™ has completed confirmatory Phase I human clinical trial**
- **Currently enrolling in Phase IIa trial with rollover into Keytruda® & Yervoy® combos**
- **Bria-OTS™ currently in development along with BriaDX™ companion diagnostic**
  - **Ability to treat ~90% of the population with Off-the-Shelf personalized immunotherapy cell lines**
- **Experienced Management has been involved in over 10 drug approvals**
- **Significant Near-Term Newsflow**
- **Robust pipeline: PKCδ inhibitors, with a potentially synergistic mechanism of action with Bria-IMT™ and Bria-OTS™**
- **Provides Cost-Effective Additional Shot-on-Goal and additional partnership opportunities**

### BriaCell Leadership Team

**William V. Williams, MD**  
President, Chief Executive Officer

**Gadi Levin, CA, MBA**  
Chief Financial Officer

**Markus Lacher, PhD**  
Senior Director, R&D

**Farrah Dean, MSc, MBA**  
Manager, Corp. Development

### Board of Directors

**Saeid Babaei, PhD, MBA**, Chairman  
President & CEO, AbCelex Technologies

**Rahoul Sharan, CA**, Director  
President, KJN Management Ltd.

**Martin Schmiege, CPA**, Director  
General Manager, Soar Ventures

**Charles Wiseman, MD**, Director &  
Co-Founder; Clinical Professor of  
Medicine, Division of Medical Oncology,  
Keck-USC School of Medicine

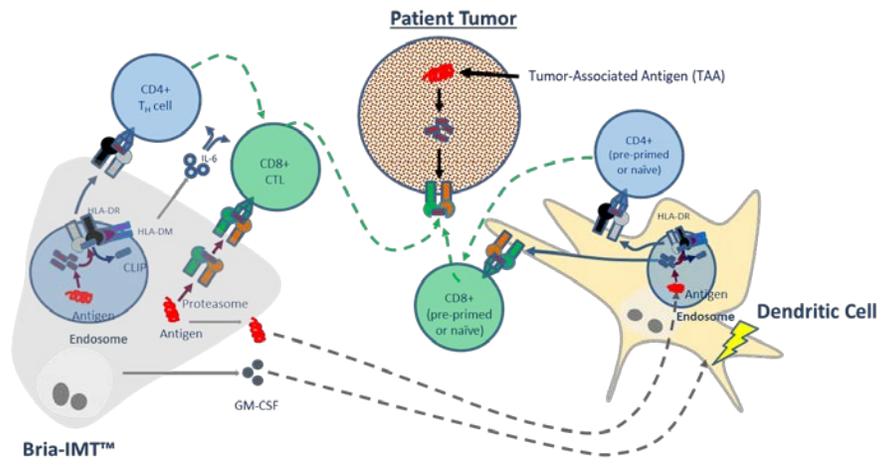
**William V. Williams, MD**, Director  
President & CEO, BriaCell

## Cancer Immunotherapy Landscape

- **Checkpoint Inhibitors:** Keytruda® (anti-PD-1), Yervoy® (anti-CTLA-4) and others reduce the tumor's ability to suppress immune system. They only work in 20%-30% of patients as they depend on a patient's own weakened immune system to kill the tumor.
- **Therapeutic Cancer Vaccines:** Off-the-Shelf therapeutic cancer vaccines have not been successful in solid tumors or blood cancers as they are not specific enough to the patient.
- **Personalized Immunotherapies:** Provenge® is effective for prostate cancer but must be individually manufactured for each patient and as a result of the required manufacturing logistics has not been commercially successful. CAR-T therapies are effective in blood cancers (but not in solid tumors) and must also be individually manufactured in a complex process for each patient (launching in 2018).
- **BriaCell's Off-the-Shelf Personalized Immunotherapy:** Bria-OTS™ consists of 14 individually pre-manufactured genetic alleles. BriaCell's BriaDX™ companion diagnostic reveals a patient's specific HLA-types and the 2 best matching alleles are administered to the patient. **BriaCell's 14 alleles (8 Class I and 6 Class II) cover approximately 90% of the Breast Cancer population while eliminating the complex manufacturing logistics required for other personalized immunotherapies.**

## Bria-IMT™ and Bria-OTS™ Differentiated MOA

Bria-IMT™ is an allogeneic whole-cell targeted immunotherapy derived from a Her2/neu-positive breast cancer cell line with features of immune cells. Bria-IMT™ has been engineered to secrete granulocyte macrophage-colony stimulating factor (GM-CSF), an immune system activator that can stimulate dendritic cells which in turn stimulate T cells to recognize the tumor cells as foreign and eliminate them. Bria-IMT™ also has been shown to express immune-stimulatory factors (incl. HLA class I and II components) and overexpress multiple tumor-associated antigens (incl. HER2 and PRAME).



## Completed Human Proof-of-Concept Trials

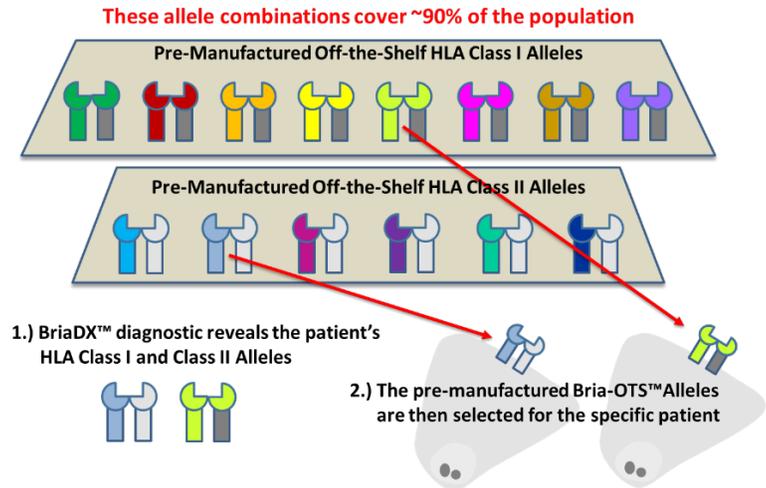
BriaCell's flagship program has generated [promising early clinical data](#) in two previous proof-of-concept clinical trials (one with a precursor cell line not genetically engineered to produce GM-CSF and one with Bria-IMT™), demonstrating initial safety and efficacy results in patients with advanced, refractory breast cancer. Most notably, one patient with metastatic breast cancer responded to Bria-IMT™ with substantial reduction in tumor burden, including lung and brain metastases. This patient matched Bria-IMT™ at 2 HLA loci, suggesting a way to select patients (BriaDX™).

## Bria-IMT™ Market Opportunity (US)

- In 2016, there were ~2.8M women living with breast cancer in the US
- 80% of breast cancer patients had invasive disease (~ 2.2M cases in the US)
- 22% of invasive breast cancer patients had metastatic disease (~490,000 cases in the US)
- 20% of metastatic breast cancer patients will need 2<sup>nd</sup> line therapy (~98,000 patients)
- 42,000 women died in U.S. during 2017 from Advanced Breast Cancer
- **\$1 Billion to \$5 Billion market opportunity depending on patient treatment stage**

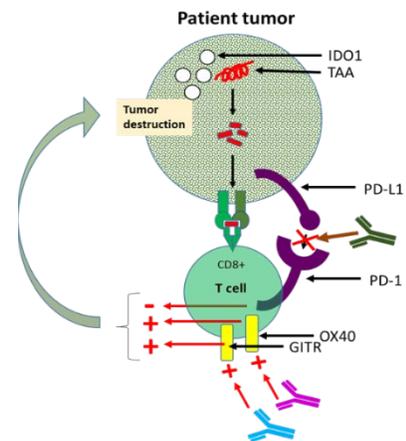
## Bria-OTS™ Off-the-Shelf Personalized Immunotherapy

- Bria-OTS™ expresses both GM-CSF and interferon-α PLUS patient-specific matching HLA types
  - Cell lines will be pre-manufactured which express HLA alleles covering ~90% of the overall population
  - Using the BriaDX™ companion diagnostic, the off-the-shelf alleles will be matched and selected for each specific patient prior to treatment
  - Therefore, each patient will have a personalized mix and match of off-the-shelf alleles
- ✓ **Personalized therapy without the need for personalized manufacturing.**



## Bria-IMT™ and Bria-OTS™ Combination with Other Immunotherapies

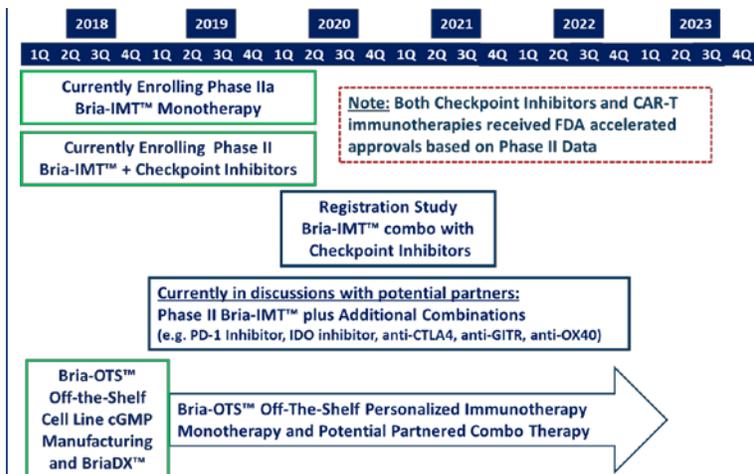
- Bria-IMT™/OTS™ should synergize well with other immunotherapies
- This includes check point inhibitors, such as antibodies to PD-1, CTLA4, and IDO inhibitors, which eliminate immunosuppression
- Immunostimulatory antibodies to molecules such as GITR and OX40 should enhance responses to Bria-IMT™/OTS™
- Development plan calls for multiple combinations to establish the most efficacious combinations.



## Bria-IMT™/Bria-OTS™ Clinical Development Plan

### Clinical Trial Status:

- Phase I portion completed, now enrolling Phase IIa
- Rollover Combination Therapy Study with Yervoy®, or Keytruda® open for enrollment
- GMP manufacturing sites: UC Davis, and KBI
- Clinical CRO Cancer Insight LLC
- Three clinical sites open 2 additional sites opening
- Interim Data is expected in 1Q2018 on the first 10 patients in the Bria-IMT™ Monotherapy Study



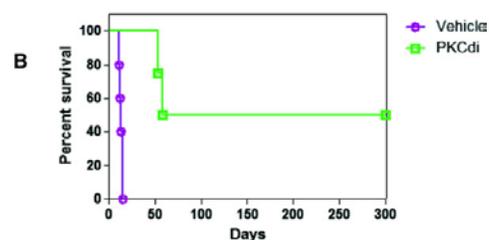
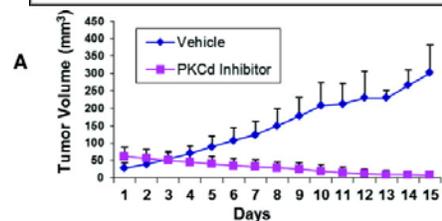
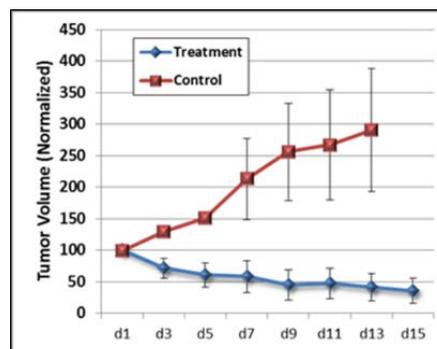
## Data from Ongoing Clinical Trial (Bria-IMT™ in Advanced BC) Anticipated in 1Q18

- Open label, single arm, monotherapy study expected to enroll 25 to 40 patients with second line recurrent or metastatic breast cancer
- There are approx. 98,000 2nd line metastatic breast cancer patients in the US alone
- Ongoing investigation of HLA matching and other markers to help predict best responders (BriaDX™)
- Patients administered Bria-IMT™ every two weeks for first month, then monthly up to one year
- **Primary endpoint:** Safety; **Key secondary endpoints:** Tumor size reduction, Progression-free survival, and Overall survival; for more information, please see [clinicaltrials.gov](http://clinicaltrials.gov) and search for BriaCell
- Roll-over protocol permits treatment with a checkpoint inhibitor if progressive disease after 3 months
- Anticipate data from the first 10 patients in 1Q18

## Small Molecule Program: Protein Kinase C delta Inhibitors For Cancer

### Early Stage Pre-Clinical Program

- 30% of all human malignancies display activating RAS mutations with another 60% showing over-activity of Ras-signaling pathways.
- BriaCell's novel, proprietary PKC $\delta$  inhibitors have shown activity against multiple RAS transformed tumors.
- This target has an attractive safety profile based on in vivo studies and knock out mouse studies.
- PKC $\delta$  also has potential activity as an immunotherapeutic by blocking TGF $\beta$  signaling.
- PKC $\delta$  inhibitors are applicable to specific niche tumor types which provide an accelerated clinical development plan.
- Could be in clinic within 24 months
- Activity demonstrated against multiple tumor types including human lung cancer (top panel) and pancreatic cancer (bottom 2 panels)
- **Provides Cost-Effective Additional Shot-on-Goal and additional partnership opportunities**



## Market Potential for PKC $\delta$ Inhibitors

- PKC $\delta$  Inhibitors are active against RAS transformed cancers (~30% of all cancers have RAS transformation); Activity demonstrated against lung cancer, pancreatic cancer, melanoma, neuroendocrine tumors, breast cancer; Estimated peak-year sales of **\$250M to >\$1B per indication**