The Blood-Brain Barrier Company

xB³ ™ Proprietary Platform Technology

December 2018

BTI.V (TSX), BIOAF (OTCQB)
Forward Looking Information

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of Canadian securities legislation. This information and these statements, referred to herein as “forward-looking statements”, are made as of the date of this presentation or as of the date of the effective date of information described in this presentation, as applicable. The forward-looking statements herein relate to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as “expects”, “anticipates”, “plans”, “projects”, “estimates”, “envisages”, “assumes”, “intends”, “strategy”, “goals”, “objectives” or variations thereof or stating that certain actions, events or results “may”, “can”, “could”, “would”, “might” or “will” be taken, occur or be achieved, or the negative of any of these terms and similar expressions).

All forward-looking statements are based on current beliefs as well as various assumptions made by, and information currently available to Bioasis. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks exist that estimates, forecasts, projections and other forward-looking statements will not be achieved or that assumptions do not reflect future experience. For a description of some of the risks that could cause our actual results to vary from those anticipated by forward-looking statements, please refer to the risk factors described in our filings with Canadian securities regulators, available at www.sedar.com. We caution any person reviewing this presentation not to place undue reliance on these forward-looking statements as a number of important factors could cause the actual outcomes to differ materially from the beliefs, plans, objectives, expectations, anticipations, estimates assumptions and intentions expressed in such forward-looking statements.
**Overview**

Focused on the delivery of therapeutics across blood-brain barrier (BBB) for the treatment of CNS diseases by utilizing the proprietary xB³ platform technology; The BBB is a major challenge in developing novel CNS therapeutics; OTCQB & TSX.V listed

**Novel, cutting-edge, platform technology**

xB³ Platform Technology:
Works via receptor-mediated transcytosis, 12 amino acid peptide; Strong pre-clinical data demonstrating improved BBB penetration

**Developing wholly owned programs as well as selective partnering in significant markets**

Initial focus in neurodegeneration and brain cancers; Business Development Opportunities to out-license technology to improve treatments across CNS space; Licensing agreement with Prothena

**Highly qualified, experienced management team and Board of Directors**

Management Team, Board of Directors and strategic consultants with deep corporate and industry experience; HQ in greater New Haven area
The Bioasis Team

**Board of Directors**
Diverse backgrounds, strong pharma and business leaders, focused on creating value for the company

**Leadership Team**
Strong pharma development expertise with the common goal of creating new medicines for patients suffering from CNS disorders

**Scientific Advisory Board**
World-class leaders across multiple, diverse aspects of neurological disease and disorders

**Scientific & Clinical Consultants**
Respected pharma leaders in their fields, focused on operations and driving development programs into the clinic

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Mark Day, Ph.D.
Director, President and Chief Executive Officer

Caroline Clairmont, Ph.D.
SVP, Head of R&D Operations

Mei Mei Tian, Ph.D.
VP, Head of External Research

Catherine London
EVP, Head of Corporate Communications and Investor Relations

TBD
Future Chief Medical Officer
Opportunity

• Fusion of therapeutic molecules to xB³ peptide maximizes brain penetration and creates new molecular entities
• Significantly improved brain penetration of well-established medicines (large markets)
• Actively pursuing licensing and business development opportunities for the advancement of external neuroscience and oncology programs

Technology

• xB³ platform technology has advantages over BBB competitors
• Secure and robust IP coverage through to a minimum of 2034
• Focused internal pipeline covering neurodegeneration and brain cancers
• Pre-clinical studies demonstrated delivery of large antibodies, small molecules, enzyme replacement therapies and siRNA
• Potential for applications in gene therapy currently being evaluated
xB³ Peptide
Derived from an iron-binding human protein found at low concentrations in the blood

- The Bioasis xB³ platform technology, derived from a naturally-occurring protein, has been optimized by Bioasis scientists to its key constituents (12 AA)
- The xB³ platform has shown improved brain penetration over the full-length protein

Mechanism of Action
Translocation via the LRP1 receptor

- High efficiency receptor with fast endocytosis and recycling
- LRP1 is highly expressed in critical brain regions and across multiple cell types
- LRP1 is overexpressed in multiple disease states including cancers, Alzheimer's disease and Parkinson's disease
The xB³ Platform Technology Delivers Therapeutics to the CNS
Independent Validation: Enhanced CNS Uptake and PD Activity

xB³ Delivers IL1RA into the CNS

xB³-NH IgG

Mean ± SEM; n=6 mice/molecule; single IV injection
The xB³ Platform Technology Delivers Therapeutics to the CNS HER2+ Breast Cancer Brain Metastases

xB³-001 Successful Delivery of Trastuzumab to the Target Brain Tissues

1. xB³ Platform Increases the Brain Exposure of Known Medicines - Herceptin® (trastuzumab)
2. xB³ Platform Enables Target Engagement of Relevant Brain Target Tissues
3. xB³ Platform Drives Biological Effect 68% Reduction in Brain Metastases

1. xB³ Platform Increases the Brain Exposure of Known Medicines - Herceptin® (trastuzumab)

<table>
<thead>
<tr>
<th>TZM</th>
<th>xB³-001</th>
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<tr>
<td>72.9ng/g</td>
<td>109.2ng/g</td>
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<tr>
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<td>110.2ng/g</td>
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<td>25.1ng/g</td>
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Preferential uptake of radio-labeled xB³-001 conjugate into tumors compared with BDT

**P<0.0001 (Mean/SEM)**


Herceptin® is a registered trademark of Genentech, Inc.
The $xB^3$ Platform Technology Appears to Facilitate a More Selective Peripheral Distribution Pattern of TZM in Naïve Non-Human Primate

$xB^3$-001 shows similar peripheral distribution as TZM alone, but with much cleaner profile as well as penetration of lymphatic system.

PET/CT images of peripheral body distribution of Iodine-124 labelled trastuzumab alone (left) and $xB^3$-001 ($xB^3$-TZM fusion protein; right) in wild type male cynomolgus monkey at 24 hours after single intravenous administration. Red arrow indicating location of cervical lymph nodes.
The xB³ Platform
Advantages Over Competing BBB Technologies

Transcytosis across *in vitro* BBB model (BBCEC)

<table>
<thead>
<tr>
<th>Features</th>
<th>Bioasis xB³ Platform</th>
<th>Armagen</th>
<th>Genentech</th>
<th>Roche</th>
<th>Denali</th>
<th>Angiochem</th>
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<tr>
<td>% injected dose in brain</td>
<td>4-6%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
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<td>Mode of Action</td>
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<td>Tfr and IR</td>
<td>Tfr</td>
<td>Tfr</td>
<td>Tfr</td>
<td>LRP1</td>
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Diversification and De-Risking of Internal and External Development

The xB³ Platform Technology

In-House Development

Well-established medicines

• Wholly-owned assets
  • Initial focus on xB³-001 (HER2+ breast cancer brain metastases) and xB³-007 (Gaucher’s Disease)

Business Development

New drug candidates

• Working on partnerships with strategically-selected biotech/pharma companies, academic institutions, non-profit organizations with the need for BBB translocation
  • Several active non-binding term sheet (NBTS) discussions

Early Proof-of-Concept

Non-commercial target engagement milestone can be determined early in the clinical program, establishing brain penetration; target-based exclusivity is available for additional investment

Gated Investments

“Go/No-Go” investment decisions require small amount of pre-clinical investment to reach probability of success estimates
### Internal Lead Program Focus and Timeline

**xB³-001 (TZM) HER2+ Breast Cancer Brain Metastasis**

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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- Orphan disease with a high unmet medical need
- Focus on improving well-established, efficacious treatment for HER2+ breast cancer brain metastases ($5B in sales 2017) through enhanced delivery and efficacy
- Potential to be new standard of care for HER2+ breast cancer brain metastases
No effective treatments for the neurological symptoms are currently available

- Current data demonstrates the ability of an active xB³-enzyme fusion to cross the BBB
- Next step is to repeat pre-clinical proof-of-concept
- The genetic basis (GBA loss of function) will open doors to additional indications with
Undervalued platform technology with broad applications designed to transform therapies for brain disease

- Ability to establish pre-clinical POC early with minimal investment
- Strong pre-clinical data demonstrating improved BBB penetration over competitors
- Initial focus on existing products in significant markets (brain metastases, Gaucher’s Disease)
- Opportunities to out-license technology to improve treatments across CNS space
  - Technology validated by MedImmune collaboration
  - Licensing agreement with Prothena executed
- Next key milestone for the internal xB³-001 program: pre-IND FDA meeting (mid-2019)
APPENDIX
Bioasis Team

- Management
- Board of Directors
- Scientific Advisory Board
- R&D Consultants
Our Management Team

Mark Day, Ph.D.
Director,
President and
Chief Executive
Officer, Interim
Chief Financial
Officer

Caroline Clairmont, Ph.D.
VP, Head of
External
Research

Mei Mei Tian, Ph.D.
SVP, R&D
Operations

Catherine London
EVP, Head of
Corporate
Communications
and Investor
Relations

Warren K. Volles, Esq.
IPraxus Legal
IP Counsel

Michael Partridge
Goodmans LLP
Canadian
Securities
Counsel

External Legal Counsel
Our Board of Directors

Deborah Rathjen, Ph.D., MAICD, FTSE
Executive Chair
Chief Executive Officer and Managing Director, Bionomics

Mark Day, Ph.D.
Director
President and Chief Executive Officer, Bioasis
Previous BMS, Abbvie, GSK, Alexion, (BD and R&D)

Nancy Stagliano, Ph.D.
Director
Previous Chief Executive Officer, True North, iPierian & CytomX

John E. Curran, CPA
Director
Former Partner, Deloitte & Touche LLP

David M. Wurzer, CPA
Director
Executive Vice President and Chief Investment Officer, Connecticut Innovations
Our Scientific Advisory Board

Prof. John H. Krystal, M.D.
Chair
Yale University School of Medicine
Yale-New Haven Hospital

Jeffery L. Cummings, M.D.
Member
Cleveland Clinic, Center for Neurodegeneration and Translational Neuroscience

Mario Saltarelli, M.D., Ph.D.
Member
Former Chief Medical Officer, Syntimmune

Jack Hoppin, Ph.D.
Member
Co-founder and Chief Executive Officer, Invicro

Sue O’Connor, B.Sc. (Hons), Ph.D.
Member
Vice President, Neuroscience Research, Bionomics Ltd.

John P. Wikswo, Jr., Ph.D.
Member
Vanderbilt University, Vanderbilt Institute for Integrative Biosystems Research and Education
Our Strategic Consultants

Bonnie Goldmann, M.D.
(Goldmann Consulting, LLC), previously Johnson & Johnson and Merck, is our strategic regulatory advisor who will oversee regulatory strategy. Dr. Goldmann brings 30 years of pharmaceutical industry experience with 10 years as president of Goldmann Consulting, LLC.

Arin Bose, Ph.D.
(AbiologicsB, LLC), previously of Pfizer, is serving as our CMC strategic advisor and will support the selection and oversight of the antibody clinical manufacturing. Dr. Bose has served as the chair of the biologics and biotechnology leadership committee of the Pharmaceutical Research and Manufacturers of America (PhRMA), the chief advocacy arm of the U.S. pharmaceutical industry.

Stanley Roberts, Ph.D.
(SAR Safety Assessment, LLC), previously of Abbott and CovX/Pfizer, is serving as our pre-clinical safety and PK strategic advisor and will support and oversee our toxicology program. Dr. Roberts has over 35 years of experience in scientific and management positions in large (Sandoz, Abbott & Pfizer) and small (CovX) pharmaceutical companies.

Patrick Yeramian, M.D., Ph.D.
Previously of Viragen Inc, G.D. Searle Pharmaceuticals and the Vaccine and Gene Therapy Institute of Florida, is our clinical strategic advisor and will oversee the GCP clinical programs. Dr. Yeramian brings 30 years of industry and academic experience in drug and vaccine clinical development with a focus on infectious diseases and oncology.
Patent portfolio covers Bioasis’ platform technologies (their uses and indications)

- Comprises over 120 patents and pending applications (10+ patent families) covering xB^3, p97, fusion proteins of p97 or xB^3 with antibodies, including trastuzumab, bevacizumab, and other payloads
- Key xB^3 patent granted in U.S. (expires in 2034; additional patent term extension up to 5 years)
- Patents have been filed in major geographic markets and have expiration dates in 2034-2035 (plus patent term extensions)

Patent pending for xB^3-trastuzumab (xB^3-001) - and uses/indications

- Patents have been filed in major geographic markets with expiration date in 2035 (plus patent term extensions)

Additional patents planned for xB^3-related innovations
Bioasis Current Capital Structure:

- 58,587,429 shares outstanding
- 8,906,228 options outstanding (exercise price per common share $0.47 - $1.33)
- 12,643,272 warrants (exercise price per common share $0.69 - $1.00)
- 33,333 shares issuable pursuant to RSUs
- Fully Diluted Shares: 80,170,262 (as of Oct. 26, 2018)

Average Daily Volume (based previous 30 trading days): 40,804

Trading (as of December 11, 2018):

- 52 Week (Hi/Low): $0.97/$0.26 / Last: $0.37 (CAD)