

## Bioasis Technologies Inc.

(BIOAF - OTC)

### More xB<sup>3</sup> Milestones This Quarter

Based on our DCF model and a 15% discount rate, Bioasis is valued at approximately \$0.60 per share. Our model applies a weighted 8% probability of ultimate approval and commercialization for xB<sup>3</sup>-001 and xB<sup>3</sup>-007 and partnered compounds in a variety of indications including HER2+ metastatic breast cancer and Gaucher Disease. The model includes contributions from global sources.

Current Price (2/8/2021) **\$0.34**  
 Valuation (\$USD) **\$0.60**

### OUTLOOK

Bioasis is developing a platform that enables therapeutics to cross the BBB designated xB<sup>3</sup>. The most advanced preclinical programs underway target HER2+ breast cancer metastases and treatment of Gaucher Disease. The first, xB<sup>3</sup>-001, combines the xB<sup>3</sup> platform with trastuzumab and may be awarded accelerated approval. The second, xB<sup>3</sup>-007, is in combination with Cerezyme and is undergoing proof of concept studies. Other candidates are also in development internally and with partners.

Bioasis' technology transports molecules using receptor-mediated endocytosis via the LRP1 receptor. The transport molecule is the xB<sup>3</sup> peptide, which is derived from the iron-binding human protein melanotransferrin found in the blood. LRP1 is widely expressed in critical brain regions and is over-expressed in many disease states. We expect clinical trials to begin in 2021 for both candidates.

The company has forged several partnerships with the Chiesi Group, Prothena and other pharmaceutical companies. The partners provide external validation of the platform, upfront funding, candidate development and the opportunity for future royalty revenues.

Our valuation assumes a 2030 approval and launch of xB<sup>3</sup>-001, xB<sup>3</sup>-007 and later for other candidates globally through collaborator efforts.

### SUMMARY DATA

52-Week High **0.54**  
 52-Week Low **0.09**  
 One-Year Return (%) **88.9**  
 Beta **0.61**  
 Average Daily Volume (sh) **27,590**

Shares Outstanding (mil) **71.8**  
 Market Capitalization (\$mil) **24.4**  
 Short Interest Ratio (days) **0.2**  
 Institutional Ownership (%) **0.0**  
 Insider Ownership (%) **2.4**

Annual Cash Dividend **\$0.00**  
 Dividend Yield (%) **0.00**

5-Yr. Historical Growth Rates  
 Sales (%) **N/A**  
 Earnings Per Share (%) **N/A**  
 Dividend (%) **N/A**

P/E using TTM EPS **N/A**  
 P/E using 2020 Estimate **N/A**  
 P/E using 2021 Estimate **N/A**

Zacks Rank **N/A**

Risk Level **Above Average**  
 Type of Stock **Small-Growth**  
 Industry **Med-Biomed/Gene**

### ZACKS ESTIMATES

#### Revenue

(In millions of CAD)

|      | Q1      | Q2      | Q3      | Q4      | Year    |
|------|---------|---------|---------|---------|---------|
|      | (May)   | (Aug)   | (Nov)   | (Feb)   | (Feb)   |
| 2019 | \$0.2 A | \$0.2 A | \$0.2 A | \$0.0 A | \$0.6 A |
| 2020 | \$0.0 A | \$4.1 A | \$0.0 A | \$0.0 E | \$4.1 E |
| 2021 |         |         |         |         | \$1.6 E |
| 2022 |         |         |         |         | \$1.8 E |

#### Earnings per Share

|      | Q1        | Q2        | Q3        | Q4        | Year      |
|------|-----------|-----------|-----------|-----------|-----------|
| 2019 | -\$0.02 A | -\$0.02 A | -\$0.01 A | -\$0.02 A | -\$0.07 A |
| 2020 | -\$0.02 A | \$0.03 A  | \$0.01 A  | -\$0.02 E | \$0.01 E  |
| 2021 |           |           |           |           | -\$0.04 E |
| 2022 |           |           |           |           | -\$0.04 E |

## WHAT'S NEW

### Third Quarter Operational & Financial Results

Bioasis Technologies Inc. (OTC: BIOAF) filed fiscal year 2021 third quarter operational and financial results on January 27, 2021. During the reporting period, Bioasis was granted new patents, sold a royalty stake in partnered assets and held its annual general meeting (AGM). Since our previous report on November 20<sup>th</sup>, the company has announced AGM results, participated in industry conferences and raised additional capital with a non-brokered private placement.

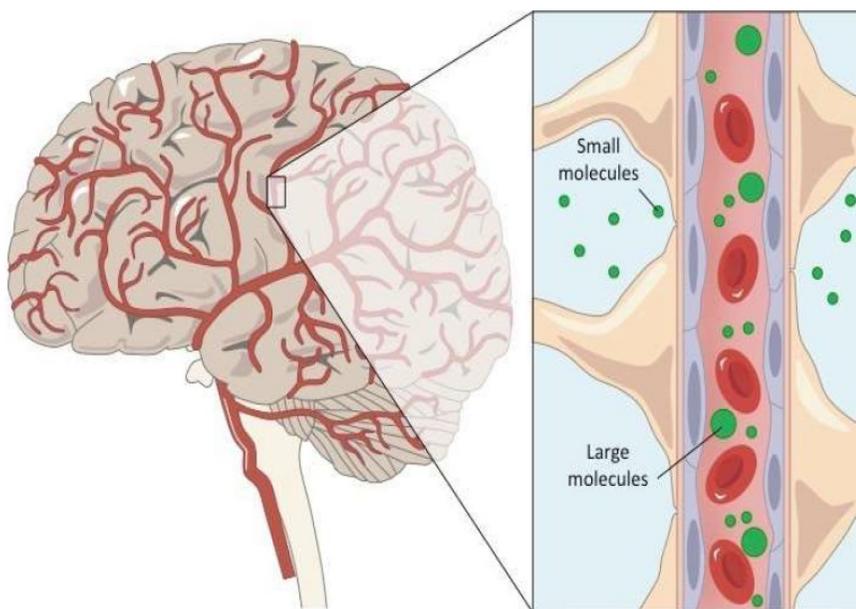
No revenues were reported in 3Q:21, compared to revenues of \$183,000<sup>1</sup> in 3Q:20, which were received as license revenues from a leading pharmaceutical company. General and administrative expense was \$537,000, up 10% on increases in office, insurance and amortization, salaries and consulting, legal, professional and regulatory expenses, investor relations, marketing and travel. This was partially offset by a decrease in share-based compensation. Research and development expanded to \$292,000, up 41%. Increases in patent maintenance, legal and filing fees, and preclinical research expenses contributed to the change. Decreases in salaries, consulting fees, benefits and share based compensation tempered the increase. Expenses rose due to the initiation of three new programs and legal expenses escalated due to a greater number of patent filings in FY:21. Other income was \$1.7 million, largely due to a \$1.6 million gain on the sale of Chiesi program royalty rights to Xoma.

Cash burn in the third quarter was (\$860,000) with the difference between earnings and the cash measure almost entirely due to the impact from the gain on sale of royalty rights. Cash and equivalents were \$2.7 million on November 30, 2020, up from \$1.9 million at the end of the fiscal second quarter. Contributions from investing cash flows related to the royalty sale contributed to the quarter over quarter increase in cash balance. Following the end of the quarter, Bioasis completed a \$200,000 non-brokered private placement.

### Challenges of Delivering Drugs to the Brain

Since our last update, Bioasis penned a commentary on the challenges of drug delivery to the human brain and xB<sup>3</sup>'s ability to overcome this hurdle. Many programs have pursued diseases of the brain, but have experienced low success rates, due in part to the difficulty of therapeutics successfully crossing the blood brain barrier (BBB). This is due to the endothelial cells that form the BBB which create physical and metabolic barriers that regulate brain homeostasis.

Exhibit I – Blood Brain Barrier<sup>2</sup>



<sup>1</sup> Financial statement items are denominated in \$CAD in contrast to our target price which is in \$USD.

<sup>2</sup> Source: Bioasis February 2021 corporate presentation.

Many drugs that have been effective for disease in one part of the body have not been able to provide the same efficacy in the brain. One example of this is trastuzumab (Herceptin), which is used for human epidermal growth factor receptor 2 (HER2) positive breast cancer. While the drug can address the disease in the breast, it is not able to fight the same cancer when it metastasizes to the brain. In response to this limitation, Bioasis has developed a technology that is able to transport antibodies, enzymes, small interfering RNA and small molecules across the barrier to treat disease in the brain.

### **XOMA Transaction**

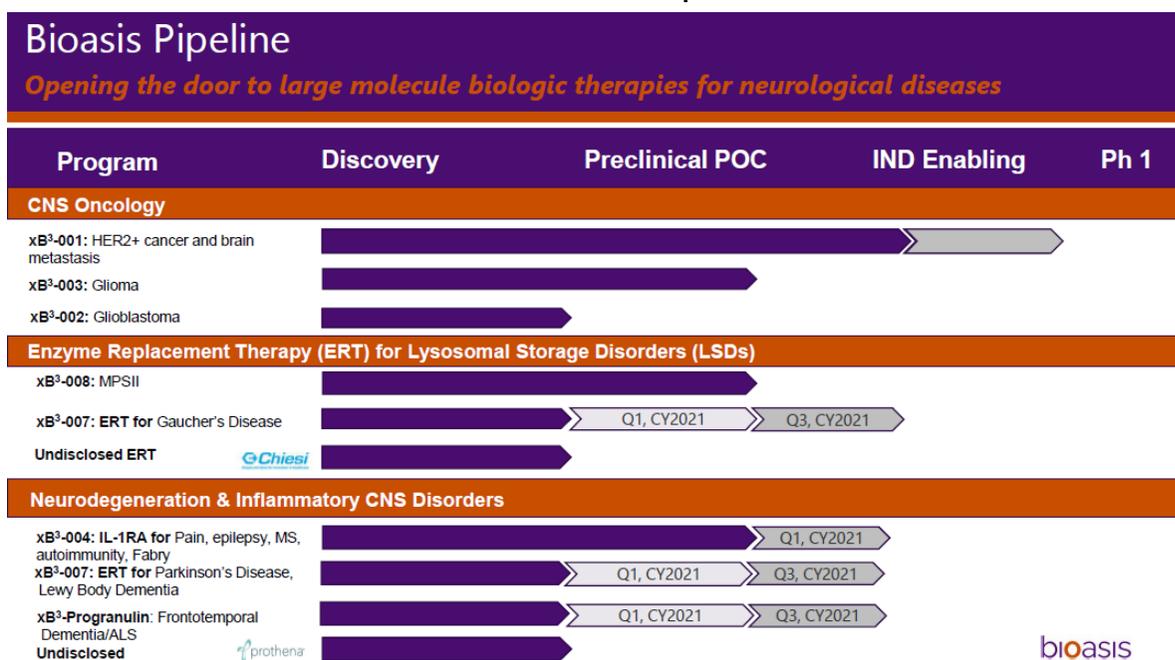
Bioasis entered into an arrangement with royalty aggregator XOMA, LLC, in February 2019 where XOMA paid US\$300,000 for the rights to future royalties and milestones related to the Prothena agreement. On November 3<sup>rd</sup>, Bioasis announced another [agreement](#) with XOMA, selling rights to future milestone and royalty revenues related to the assets being developed by Chiesi Group which leverage the xB<sup>3</sup> platform. XOMA has paid its agreed upon US\$1.2 million upfront payment to Bioasis in return for the rights to a low single digit royalty on net sales of the four xB<sup>3</sup>-linked enzymes produced in collaboration with Chiesi. The cash from this transaction will be used to advance unpartnered assets in the Bioasis pipeline, including Parkinson’s disease, Lewy Body Dementia and frontotemporal lobe dementia.

### **Upcoming Milestones**

Below we have provided the anticipated timeline for events related to portfolio candidates.

- Royalty purchase agreement with XOMA for Chiesi assets – November 2020
- Biotech Showcase – January 2021
- LSX World Congress – February 2021
- BIO CEO & Investor – February 2021
- xB<sup>3</sup>-004 IL-1RA EAE Multiple Sclerosis model read out – 1Q:21
- xB<sup>3</sup>-007 glucocerebrosidase enzyme replacement therapy (ERT), BBB data – 1Q:21
- xB<sup>3</sup>-Progranulin BBB data – 1Q:21
- xB<sup>3</sup>-007 disease model read out – 3Q:21
- xB<sup>3</sup>-Progranulin FTD disease model read out – 3Q:21

**Exhibit II – Bioasis’ Pipeline<sup>3</sup>**



<sup>3</sup> Source: February 2021 Corporate Slide Deck

## Key Reasons to Own Bioasis Shares

- **Best in class xB<sup>3</sup> blood brain barrier penetrating technology**
  - **Non-transferrin based transcytotic pathway**
- **Addresses a major hurdle to CNS therapy**
- **High selectivity for BBB and CNS parenchyma**
- **Preserves payload function and pharmacodynamics**
- **Can deliver antibodies, enzymes, siRNA and small molecules**
- **Lead indications in HER2+ metastatic breast cancer and Gaucher Disease**
- **Broad licensing and funding opportunities with partners**
  - **Chiesi Group**
  - **Prothena Corporation**
  - **Leading pharma company**
- **Diversified preclinical portfolio able to address multiple CNS disorders**
- **120+ patents and pending applications across 10+ patent families**

## Company and Platform

Bioasis has developed an important carrier platform, designated xB<sup>3</sup>, able to ferry several types of molecules across the blood brain barrier where they can treat diseases of the brain. It consists of a twelve amino acid peptide based on the iron-binding human protein melanotransferrin. The carrier binds to the LRP1 receptor, which enables transcytosis of the peptide and linked therapy carrying them across the BBB and into the brain parenchyma. xB<sup>3</sup> can be linked to antibodies, enzymes, siRNA and small molecules and may serve an important unmet need to deliver in-development and existing medicines into the brain, which otherwise could not cross.

Substantial preclinical research has been conducted demonstrating xB<sup>3</sup>'s superiority relative to transferrin and other competing platforms in both the quantity of dose and types of drugs that can be transported into the brain. Additional *in vivo* work has shown xB<sup>3</sup>'s ability to shuttle Herceptin into the brains of mice with HER2+ breast cancer brain metastases and significantly reduce both the tumor number and size in the organ. Similar work has been conducted transporting enzymes across the BBB, also in mice, as indicated above in an MPS-II disease model.

Bioasis offers several candidates that are being developed in house and by partners. The two leading internal compounds are xB<sup>3</sup>-001 and xB<sup>3</sup>-007. xB<sup>3</sup>-001 is a fusion protein containing Herceptin and is indicated for HER2+ cancer and HER2+ brain metastases while xB<sup>3</sup>-007 is combined with Cerezyme and intended to treat neuropathic forms of Gaucher Disease, as well as GBA-associated Parkinson's Disease and Lewy Body Dementia. These two candidates are expected to enter the clinic in fiscal year 2022. Bioasis' partnerships are with the rare diseases division of Chiesi Group, Prothena Corporation and an unidentified leading pharmaceutical company. These partnerships are focused on lysosomal storage disorders and neurodegenerative diseases. The company is also internally developing its xB<sup>3</sup> Progranulin program targeting neuronal ceroid lipofusinoses, frontotemporal dementia (FTD) and amyotrophic lateral sclerosis (ALS). We expect multiple readouts on the Progranulin program in the current quarter and later this year.

## Summary

Bioasis has a broad portfolio built on its technology platform that can be developed both internally and with partners for many therapies demonstrating brain activity. The blood brain barrier is effective at obstructing both the bad and the good; however, when there is disease in the brain, the xB<sup>3</sup> peptide can shuttle needed medicines into this protected space. We anticipate parallel development of several xB<sup>3</sup> compounds that will enter the clinic over the next several years. Our valuation work assumes median drug revenue for each of the programs underway and applies a discount related to the anticipated 8% weighted probability of success. We maintain our valuation of \$0.60 per share. Please refer to our initiation [here](#) for detail on the company and fuller discussion of our thesis.

## PROJECTED FINANCIALS

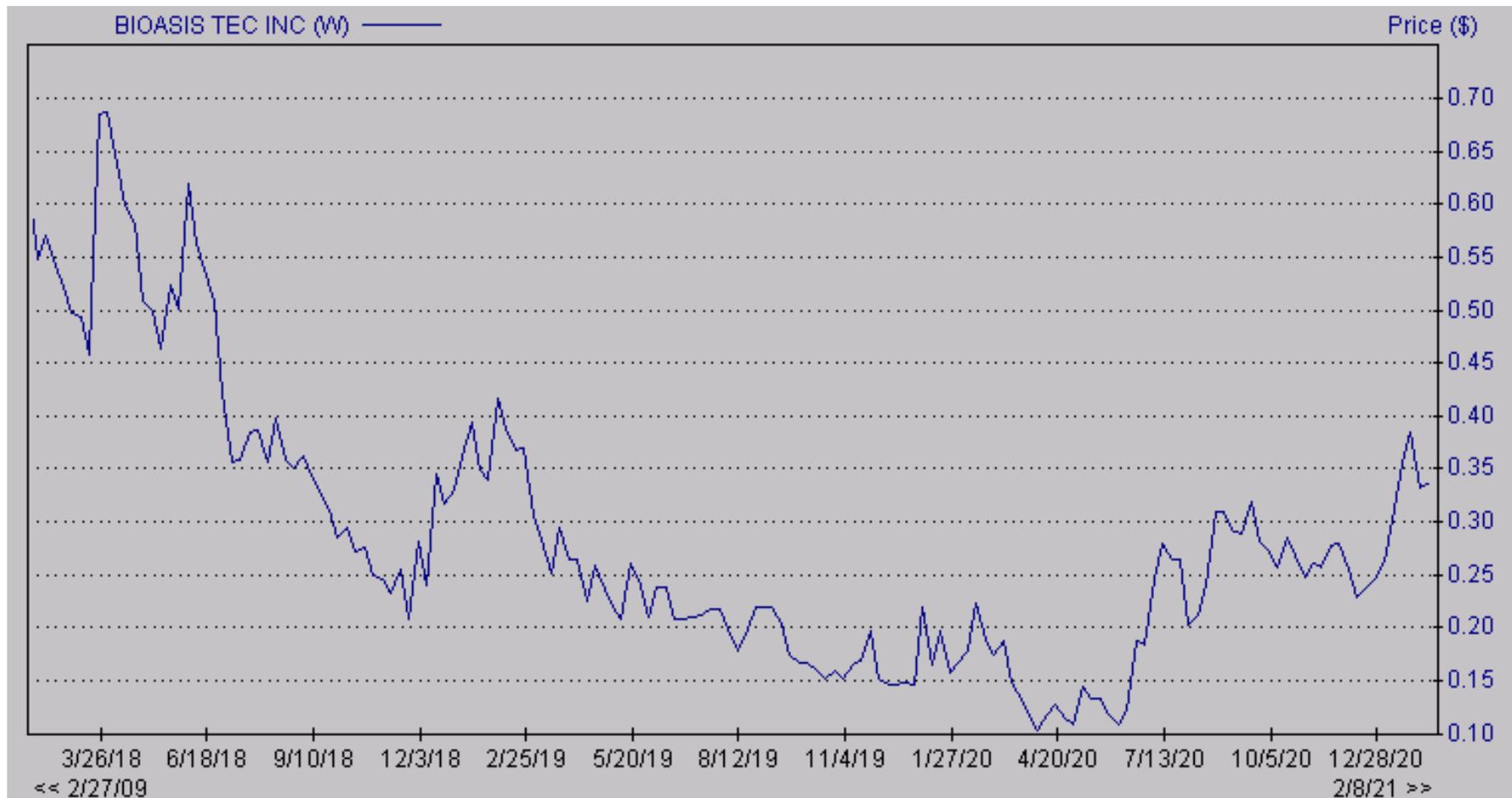
### Bioasis Technologies Inc. - Income Statement

| Bioasis Technologies Inc.     | 2020 A           | Q1 A             | Q2 A           | Q3 A          | Q4 E             | 2021 E         | 2022 E           | 2023 E           |
|-------------------------------|------------------|------------------|----------------|---------------|------------------|----------------|------------------|------------------|
| <b>Total Revenues (\$CAD)</b> | <b>\$606</b>     | <b>\$0</b>       | <b>\$4,078</b> | <b>\$0</b>    | <b>\$0</b>       | <b>\$4,078</b> | <b>\$1,600</b>   | <b>\$1,750</b>   |
| General & Administrative      | \$3,174          | \$579            | \$904          | \$537         | \$502            | \$2,521        | \$2,117          | \$2,420          |
| Research & Development        | \$2,034          | \$445            | \$115          | \$292         | \$750            | \$1,602        | \$2,490          | \$2,568          |
| Income from operations        | (\$4,602)        | (\$1,024)        | \$3,060        | (\$829)       | (\$1,252)        | (\$45)         | (\$3,007)        | (\$3,238)        |
| Other Income                  | \$592            | (\$7)            | (\$1,103)      | \$1,728       | \$0              | \$618          | \$0              | \$0              |
| Interest Income               | (\$47)           | (\$25)           | (\$10)         | (\$2)         | \$0              | (\$36)         | \$0              | \$0              |
| Pre-Tax Income                | (\$4,056)        | (\$1,055)        | \$1,947        | \$898         | (\$1,252)        | \$537          | (\$3,007)        | (\$3,238)        |
| Provision for Income Tax      | \$0              | \$0              | \$0            | \$0           | \$0              | \$0            | \$0              | \$0              |
| Tax Rate                      | 0.0%             | 0.0%             | 0.0%           | 0.0%          | 0.0%             | 0.0%           | 0.0%             | 0.0%             |
| <b>Net Income</b>             | <b>(\$4,056)</b> | <b>(\$1,055)</b> | <b>\$1,947</b> | <b>\$898</b>  | <b>(\$1,252)</b> | <b>\$537</b>   | <b>(\$3,007)</b> | <b>(\$3,238)</b> |
| Net Margin                    | -669%            |                  |                |               |                  |                |                  |                  |
| <b>Reported EPS</b>           | <b>(\$0.07)</b>  | <b>(\$0.02)</b>  | <b>\$0.03</b>  | <b>\$0.01</b> | <b>(\$0.02)</b>  | <b>\$0.01</b>  | <b>(\$0.04)</b>  | <b>(\$0.04)</b>  |
| YOY Growth                    |                  |                  |                |               |                  |                |                  |                  |
| Basic Shares Outstanding      | 62,271           | 64,824           | 64,937         | 64,892        | 68,320           | 65,743         | 72,200           | 88,125           |

Source: Company Filing // Zacks Investment Research, Inc. Estimates

## HISTORICAL STOCK PRICE

### Bioasis Technologies Inc. – Share Price Chart



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