Biotechnology

PBMD - NASDAQ August 31, 2017

Closing Price 08/30/2017	**$1.66**
Rating:	Buy
12-Month Target Price:	$7.00
52-Week Range:	$1.40 - $3.26
Market Cap (M):	39
Shares O/S (M):	23.4
Float:	0.0%
Avg. Daily Volume (000):	102
Debt (M):	$0.0
Dividend:	$0.00
Dividend Yield:	0.00%
Risk Profile:	Speculative
Fiscal Year End:	June

Total Expenses ('000)

	2017E	2018E	2019E
H1	3,716A	5,934	6,231
H2	5,000	6,428	6,750
FY	8,716	12,362	12,981

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Prima Biomed Ltd. Buy

Understanding LAG-3 Function in Controlling T Cells- Grant Funding Awarded to Prima

Summary

- **Prima announced that the company and Monash University have received a grant of $285K to conduct a study to 'Investigate the structure of a T cell immune checkpoint molecule.' The study will examine T cell receptors and the role of LAG-3 function in controlling T cell signaling.**
- **Why is this important? LAG-3 is likely the next blockbuster checkpoint that will be combined with PD1s and PD-L1s, in our view. What differentiates LAG-3 is that unlike a PD1 like Keytruda and Opdivo, or a PD-L1 like Tecentriq, a LAG-3 blocking antibody not only "takes the brakes off" of killer T cells, but it also down-regulates T regulatory cells that suppress anti-cancer responses. This study, if successful, will show for the first time exactly how LAG-3 interacted with immune receptors and how LAG-3 blocking antibodies act as immune checkpoint inhibitors for cancer.**
- **Prima is partnered with Novartis to develop IMP701 + PD1 in over 15 solid tumor types. The P1 study has expanded from N=240 to N=416 and data should start to emerge soon. Prima is also developing IMP321. P1 data in melanoma in combination with Keytruda is expected in 4Q17. A P2b registration trial in breast cancer i(N=226) is expected to complete enrollment in 1H18.**
- **Conclusion: We see LAG-3 as the next blockbuster checkpoint. Grant funding to better understand at the molecular level the specific interactions of LAG-3 with immune cells could lead to novel immune oncology agent development. With multiple LAG-3s in hand already and the right big pharma partners, we see Prima ideally positioned to capture value in the next evolution of the checkpoint space.**

Details

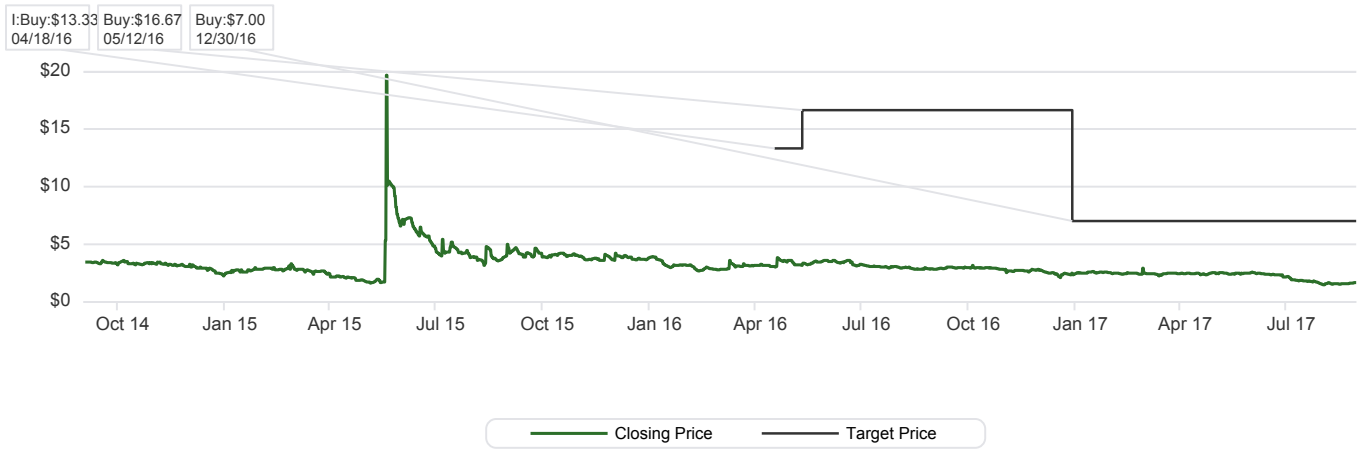
Large indications and the right partners. Novartis (NVS - $82.74 - NR) has licensed IMP701 for development as a combination therapy with PD1 inhibitors in solid tumors. We believe that the ongoing phase I study will expand in its indications, taking a more aggressive timeline to approval. GlaxoSmithKline (GSK - $42.65 - NR) is evaluating IMP731 in a phase I study in psoriasis (data are expected in 2017). Prima will receive single-digit royalties from each partnership. The lead in-house program, IMP321, an antigen-presenting cell (APC) activator that ramps up T-cell production following chemotherapy, already demonstrated POC in breast cancer and is currently in a phase IIb registration study. IMP321 could launch in 2020. A phase I study of an IMP321 combination with Keytruda in melanoma patients is also positive so far, more data in 2017.

IMP321 is Prima Biomed's lead LAG-3 candidate, and it is in development as an immune adjuvant or immune stimulator. IMP321 is a soluble dimeric recombinant form of LAG-3Ig, a fusion protein used to increase the immune response to tumors by stimulating dendritic cells through high affinity binding to MHC class II molecules on the dendritic cell surface. LAG-3 is one of two proteins shown to be able to properly condition dendritic cells (and monocytes) to undergo maturation and step up the stimulation of antigen targeting T cells (the other is CD40 ligand). What's important to note is that both LAG-3 and CD40 can do this without inflammation. IMP321 was developed by Dr. Frédéric Triebel in the late 1990s as a dendritic-cell activator. IMP321 has been shown to be highly efficacious as a vaccine adjuvant to inhibit tumor growth in a number of models of both cancer and infectious disease. The protein is safe and non-immunogenic, and has already shown efficacy in humans. When used at low doses, it can be used as a T-cell adjuvant for cancer vaccines. At higher doses, IMP321 can be combined with cancer chemotherapy to ramp up the immune response by driving dendritic cells and monocytes to increase tumor antigen presentation.

DISCLOSURES

Prima Biomed Ltd. Rating History as of 08/30/2017

powered by: BlueMatrix



Maxim Group LLC Ratings Distribution			**As of: 08/30/17**
		% of Coverage Universe with Rating	**% of Rating for which Firm Provided Banking Services in the Last 12 months**
Buy	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to outperform its relevant index over the next 12 months.	**76%**	**38%**
Hold	Fundamental metrics are currently at, or approaching, industry averages. Therefore, we expect this stock to neither significantly outperform nor underperform its relevant index over the next 12 months.	**20%**	**20%**
Sell	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months.	**3%**	**17%**
	**See valuation section for company specific relevant indices*		

I, Jason McCarthy, Ph.D., attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

I, Jason Kolbert, attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

I, Gabrielle Zhou, attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

The research analyst(s) primarily responsible for the preparation of this research report have received compensation based upon various factors, including the firm's total revenues, a portion of which is generated by investment banking activities.

Maxim Group makes a market in Prima Biomed Ltd.

Maxim Group managed/co-managed/acted as placement agent for an offering of the securities for Prima Biomed Ltd. in the past 12 months.

Maxim Group received compensation for investment banking services from Prima Biomed Ltd. in the past 12 months.

Maxim Group expects to receive or intends to seek compensation for investment banking services from Prima Biomed Ltd. in the next 3 months.

PBMD: For Prima Biomed, we use the BTK (Biotechnology Index) as the relevant index.

Valuation Methods

PBMD: Our therapeutic model assumes a royalty structure for each LAG-3 product, initially with IMP701 and IMP321 in 2020 and followed by IMP731 in 2023. Our models assume risk adjustments for each product based on the stage(s) of development. Our therapeutic models assume a risk adjustment. We then apply a 30% discount to our free-cash-flow, discounted EPS, and sum-of-the-parts models, which are equally weighted to derive a price target.

Price Target and Investment Risks

PBMD: Aside from general market and other economic risks, risks particular to our price target and rating for Prima Biomed include: (1) Development—To date, LAG-3 checkpoint modulators have not been approved; (2) Regulatory—The company's ongoing and future studies may not be sufficient to gain approval; (3) Commercial—The company lacks commercial infrastructure to support a launch if approved; (4) Financial—The company is not yet profitable and may need to raise additional capital to fund operations.

RISK RATINGS

Risk ratings take into account both fundamental criteria and price volatility.

Speculative – Fundamental Criteria: This is a risk rating assigned to early-stage companies with minimal to no revenues, lack of earnings, balance sheet concerns, and/or a short operating history. Accordingly, fundamental risk is expected to be significantly above the industry. Price Volatility: Because of the inherent fundamental criteria of the companies falling within this risk category, the price volatility is expected to be significant with the possibility that the investment could eventually be worthless. Speculative stocks may not be suitable for a significant class of individual investors.

High – Fundamental Criteria: This is a risk rating assigned to companies having below-average revenue and earnings visibility, negative cash flow, and low market cap or public float. Accordingly, fundamental risk is expected to be above the industry. Price Volatility: The price volatility of companies falling within this category is expected to be above the industry. High-risk stocks may not be suitable for a significant class of individual investors.

Medium – Fundamental Criteria: This is a risk rating assigned to companies that may have average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to approximate the industry average.

Low – Fundamental Criteria: This is a risk rating assigned to companies that may have above-average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to be below the industry.

DISCLAIMERS

Some companies that Maxim Group LLC follows are emerging growth companies whose securities typically involve a higher degree of risk and more volatility than the securities of more established companies. The securities discussed in Maxim Group LLC research reports may not be suitable for some investors. Investors must make their own determination as to the appropriateness of an investment in any securities referred to herein, based on their specific investment objectives, financial status and risk tolerance.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

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