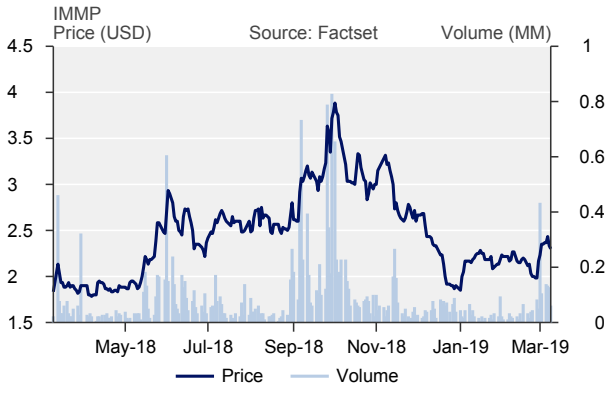
Biotechnology

IMMP - NASDAQ March 8, 2019

Closing Price 03/7/2019	**$2.29**
Rating:	Buy
12-Month Target Price:	$7.00
52-Week Range:	$1.70 - $4.21
Market Cap (M):	76.5
Shares O/S (M):	33.4
Float:	NA
Avg. Daily Volume (000):	48
Debt (M):	$6.2
Dividend:	$0.00
Dividend Yield:	0.0%
Risk Profile:	Speculative
Fiscal Year End:	June

Total Expenses ('000)

	2018A	2019E	2020E
H1	7,058	8,364A	8,515
H2	7,032	8,531	9,225
FY	14,090	16,895	17,739



Immutep Limited

Buy

Checkpoints on the Flipside of Immune Oncology... Autoimmune disease - Immutep's LAG-3 IMP761 Highlighted at ECCO

Summary

- **Immutep presented new positive *in vivo* data on its LAG-3 agonist (IMP761) that is in development for autoimmune diseases (AIDs) at this year's European Crohn's and Colitis Organisation Conference (ECCO).**
- **Compelling preclinical data, in our view. The takeaway is that subcutaneous administrations of two different doses of IMP761 (n=12) in a monkey model used to measure inflammatory response demonstrated that IMP761 significantly decreased inflammatory T cell infiltration (CD3+ or CD8+ T cells) vs. control (n=6). In autoimmune disease, memory T cells become self-reactive, accumulate at the disease site, and attack self-tissues. Thus, IMP761 has activity and can target these T-cells *in vivo* – a positive.**
- **Important to note, making a checkpoint agonist (unlike an antagonist/inhibitor) is not easy. We are aware of one checkpoint agonist (CC-90006, a PD-1 agonist) from AnaptysBio (ANAB – NR) that has been advanced by its partner Celgene (CELG – NR) into the clinic for inflammatory disease (psoriasis). Positive data from this program, as well as GlaxoSmithKline's (GSK – NR,) depleting antibody (partnered to IMMP), serves as benchmarks for the IMP761 program, in our view.**
- **Conclusion. Though anti-TNFs are presently the standard of care for many inflammatory diseases, with some accompanied by blockbuster sales such as AbbVie's (ABBV – NR) Humira (adalimumab), these agents only treat the symptoms of inflammation. In contrast, IMP761 has the potential to treat the root cause of autoimmune disease. IMP761 is early stage but thus far the data (preclinical) are compelling and we look forward to this program moving into the clinic as Immutep diversifies its LAG-3 portfolio beyond immune oncology.**

Details

GSK2831781 (depleting antibody) vs. IMP761 (agonist). The differences between these distinct antibodies are highly nuanced. One is a cytotoxic depleting antibody that employs more of a severe approach to the treatment of inflammatory disease, whereas IMP761 is an agonist that "switches off", which one might describe as more delicate (and perhaps even an elegant approach) to autoimmune disease (AID). As a result of these characteristics, GSK2831781 can be dosed less frequently. However, the drug will linger longer in the body. In contrast, IMP761 will require more frequent administrations. Correspondingly, they will lead to two key differences: 1) dosing; and 2) potential side effects. Nonetheless, though these antibodies are different, GSK's product candidate (derived from IMP731) can serve as a point of reference for IMP761 and both have potential in autoimmune disease(s). Therefore, what is good for GSK is good for Immutep and Immutep also now has its own in-house LAG-3 targeting autoimmune disease(s).

ECCO data. Immutep's IMP761 demonstrated downregulation of circulating CD3+ or CD8+ T cells at both doses (n=6, 0.03 mg/kg and n=6, 0.3 mg/kg) tested versus control (n=6, PBS), when injected in a delayed type hypersensitivity (DTH) cynomolgus monkey model used to measure immune responses. There was significant inhibition of CD3+ T cells with both doses; while the 0.3mg/kg was also able to decrease CD8+ T cell infiltration. Therefore, IMP761 down-modulated the (increased) auto-immune T cells stimulated by the self-peptides, which are characteristic of sites of chronic inflammation.

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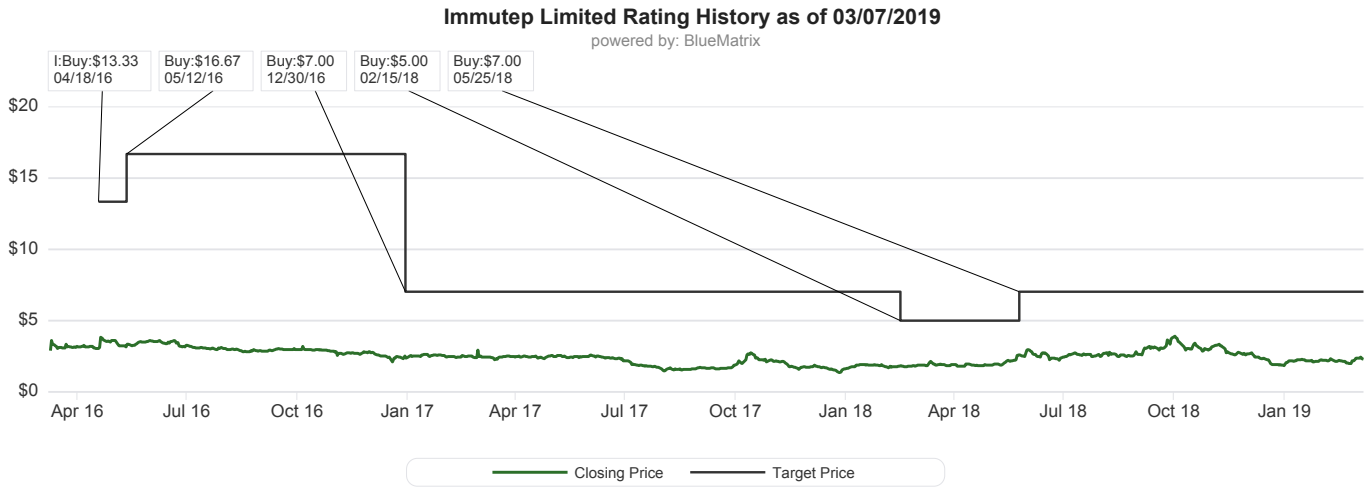
DISCLOSURES



Maxim Group LLC Ratings Distribution		As of: 03/07/19	
		% 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.	**84%**	**37%**
Hold	Fundamental metrics are currently at, or approaching, industry averages. Therefore, we expect this stock to neither outperform nor underperform its relevant index over the next 12 months.	**15%**	**22%**
Sell	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months.	**1%**	**0%**
	**See valuation section for company specific relevant indices*		

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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 Immutep Limited

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

IMMP: For Immutep, we use the BTK (Biotechnology Index) as the relevant index.

Valuation Methods

IMMP: Our therapeutic model assumes a royalty structure for each LAG-3 product, initially with IMP701 and IMP731 in 2020 and followed by IMP321 in 2023 (breast cancer). 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

IMMP: Aside from general market and other economic risks, risks particular to our price target and rating for Immutep 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; (5) Collaborative—The company has ongoing collaborations with large pharmaceutical companies who could back out of the partnerships, setting back development on product lines and increasing costs; (6) High volatility of the company's stock price.

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.

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