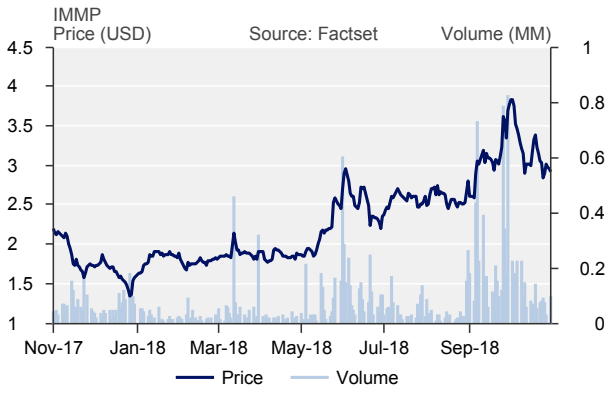
Biotechnology

IMMP - NASDAQ October 30, 2018

Closing Price 10/29/2018	**$2.92**
Rating:	Buy
12-Month Target Price:	$7.00
52-Week Range:	$1.25 - $4.21
Market Cap (M):	88
Shares O/S (M):	30.3
Float:	NA
Avg. Daily Volume (000):	143
Debt (M):	$6.2
Dividend:	$0.00
Dividend Yield:	0.00%
Risk Profile:	Speculative
Fiscal Year End:	June

Total Expenses ('000)

	2017A	2018A	2019E
H1	3,716	7,058	7,101
H2	6,917	7,032	7,693
FY	10,633	14,090	14,795



Immutep Limited

Buy

Pipeline Update, Catalysts Ahead in the LAG-3 Franchise

Summary

- **Immutep provided a corporate update and expected data milestones ahead for the remainder of 2018 and into 2019. The company also has ~$17M (USD) in cash which should be sufficient runway at the current burn rate of ~$14M per year to reach into late 2019.**
- **Lead in-house programs around IMP321 (eftilagimod), a soluble fragment of LAG-3 that acts as an immune activator continues to move forward in melanoma (P1 TACTI-Mel data 4Q18) and breast cancer (P2b AIPAC first PFS data 2019). The first data from TACTI-2 in lung cancer and head & neck cancer is expected in 2019 and early data updates from the INSIGHT study solid tumors is expected in 2019.**
- **Watching partnered LAG-3s. Both Novartis (NVS - NR) and GSK (GSK - NR) are moving Immutep's LAG-3s forward, IMP701 and IMP731, respectively. Novartis is in combination studies in breast cancer and melanoma, additional studies could follow. GSK is moving its LAG-3 into ulcerative colitis with initial data likely in 2020.**

Details

LAG-3 Pipeline Moving Forward

Eftilagimod (IMP321), TACTI-mel study: Phase 1 (N=24) combining efti + Keytruda in patients with unresectable or metastatic melanoma. Part A consists of a single injection of 1mg (cohort 1), 6mg (cohort 2) or 30mg (cohort 3) of efti administered every 2 weeks in addition to Keytruda. In Part B, all patients will receive a single injection of 30mg of efti every 2 weeks in addition to Keytruda, starting at cycle 1 of Keytruda. TACTI-mel is now fully enrolled with the final patient in Part B recruited and dosed with treatment. The study has already demonstrated positive data (from Part A). More data is expected 4Q18

Eftilagimod (IMP321), TACTI-002 study: The Phase 2 collaboration with Merck in lung cancer and H&N cancer that will enroll up to N=120. Patients will receive the combination therapy of efti at the 30mg dose + Keytruda - Initiate 4Q18, initial data 2019.

Eftilagimod (IMP321), AIPAC Study: Phase 2b registration study (N=226) of IMP321 (eftilagimod alpha or "efti") as an adjuvant therapy in combination with frontline paclitaxel therapy in metastatic breast cancer. Progression-free survival (PFS) is the primary endpoint. The randomized portion of the trial is now underway with enrollment expected to complete YE18. Data is expected in 2019.

Eftilagimod (IMP321), collaboration with Merck KGaA (MKKGY - NR) / Pfizer (PFE - NR). The P1 INSIGHT trial of the IMP321 + avelumab in combination in solid tumors should initiate in 4Q18 with data updates likely in 2019.

IMP731 (depleting antibody), partnered to GlaxoSmithKline (GSK - NR): GSK2831781 is a humanized form of IMP321. POC data expected in 2020 in ulcerative colitis.

IMP701 (antagonist antibody), partnered to Novartis (NVS - NR). Novartis initiated a Ph2 study with LAG525 (a humanized antibody of IMP701) in TNBC with enrollment expected in 4Q18.

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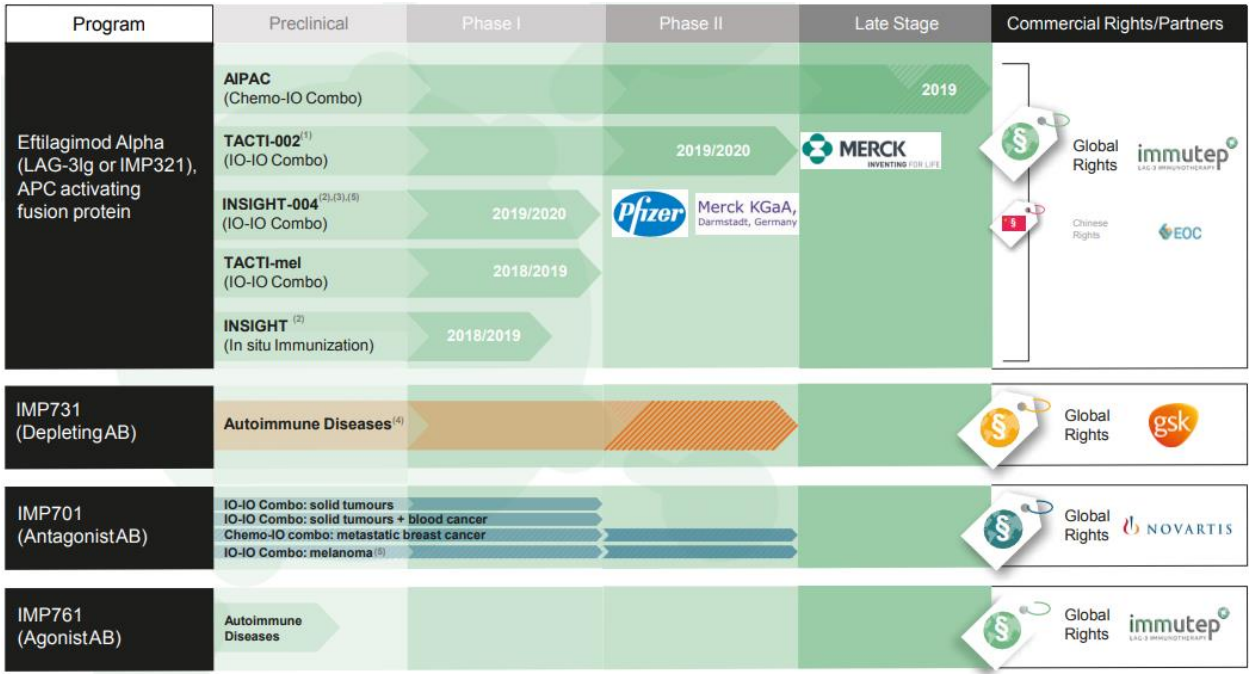
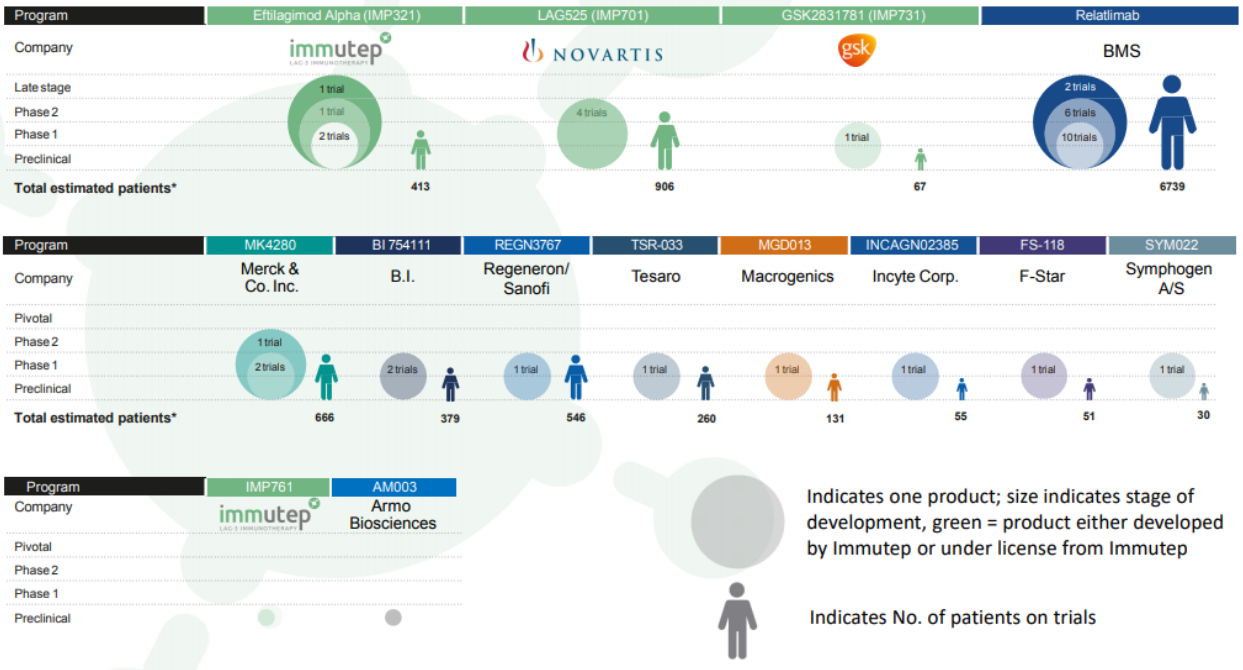
LAG-3, the next checkpoint. Immunotherapy continues to become widely adopted across multiple cancer types from checkpoints like PD-1, PD-L1 and CTLA4 to CAR-T therapies. The immune oncology space is expected to generate over $34B by 2024, with checkpoints accounting for the majority of sales. Targeting checkpoints to "take the brakes off" of anti-cancer immune cells and mitigate immunosuppressive properties of the tumor microenvironment is a fundamental focus of the immune oncology space and novel combinations of immune therapeutic agents are likely to continue to integrate into the treatment paradigm. While much of the focus, particularly for checkpoints has been PD1, PD-L1 and CTLA-4, the question is what checkpoint comes next and what is the effect of targeting multiple checkpoints at once (see Nature paper review of checkpoints by Drew Pardoll – LINK) In our view, LAG-3 or Lymphocyte-activation gene-3, could be the next checkpoint to emerge. Leading that effort is Bristol-Myers Squibb with a LAG-3 checkpoint (relatlimab) in 9 trials across multiple cancer types, including combination therapy with the company's PD1 checkpoint Opdivo. However, Immutep, which has a portfolio of LAG-3 products, has partnerships with Novartis (oncology) and GSK (autoimmune diseases). Immutep is a LAG-3 pure play company with four LAG-3 candidates and more data is expected to emerge over 2018 and 2019. As was the case for the PD1 and PD-L1s, there is likely to be room for multiple players in the LAG-3 space.

Exhibit 1. Immutep Pipeline of LAG-3 Assets. Immutep has 4 LAG-3 related products undergoing development in Immuno-oncology and autoimmune disease: Eftilagimod (Efti, lead candidate), IMP731, IMP701, and IMP761. The company retains the global rights (ex-China) for Efti, and has partnerships with leading global pharma companies such as Merck (MSD - NR), Pfizer (PFE - NR), GSK (GSK - NR), and Novartis (NVS - NR), as well as with Eddingpharm (PRIVATE - NR) for Efti Commercialization in China.



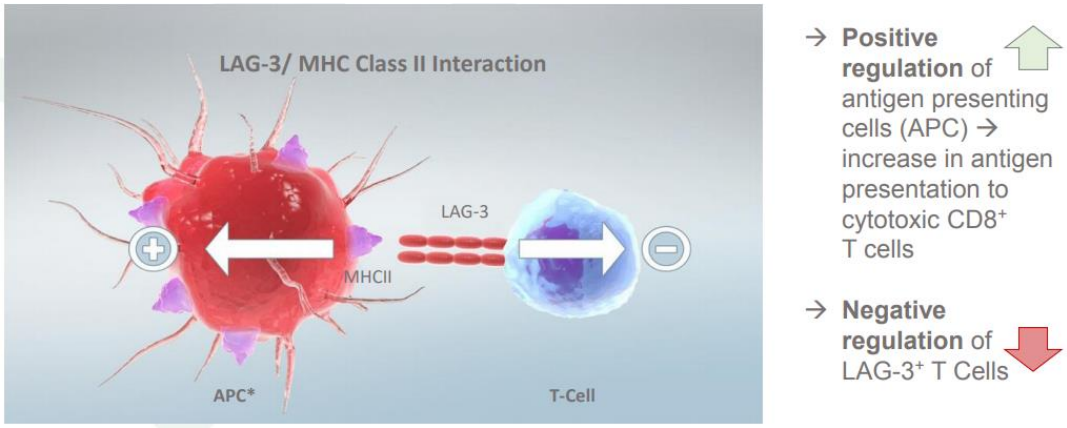
Source: Immutep presentation

Exhibit 2. LAG-3 Therapeutic Landscape. Immutep is one of the leading companies in the LAG-3 therapeutic landscape with a total of 9 clinical trials investigating an Immutep product. The only company with a larger LAG-3 pipeline is Bristol-Meyer Squibb (BMY-NR) with 18 trials ongoing.



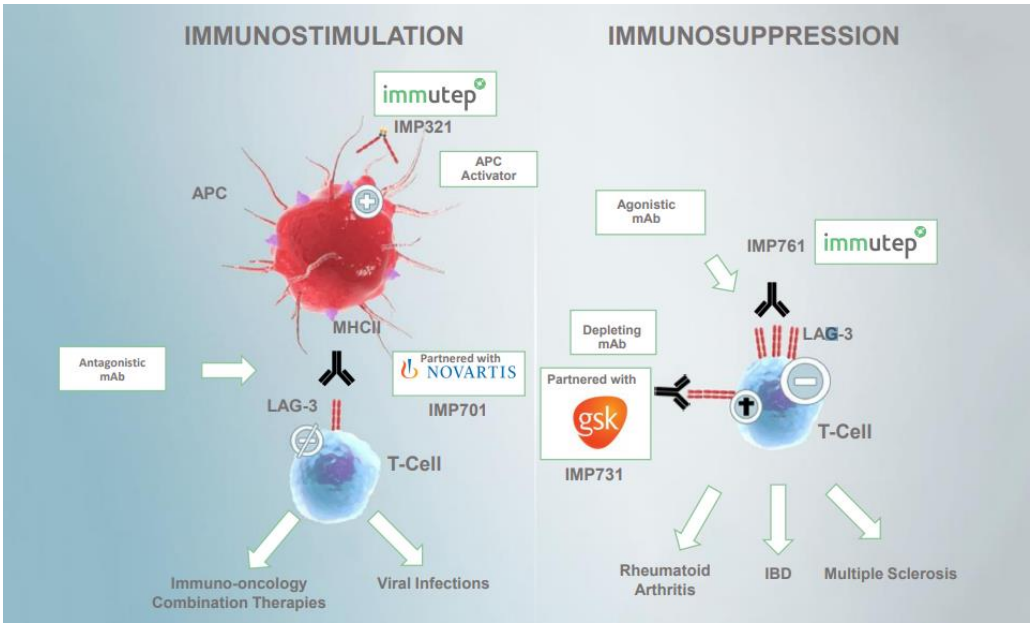
Source: Immutep Presentation

Exhibit 3. LAG-3 as a Therapeutic Target. LAG-3 is widely expressed on tumor infiltrating T cells (TILs) and cytotoxic T cells. As such it's an ideal target for checkpoint blockade. Functionally, LAG-3 is similar to CTLA-4 (target of Yervoy) and PD-1 (Keytruda, Opdivo). Shown below: 1- Positive regulation of antigen presenting cells (APC) increases antigen presentation to cytotoxic CD8 T cells (tumor killing) and 2- Negative regulation by the tumor leads to a decrease in T cells.



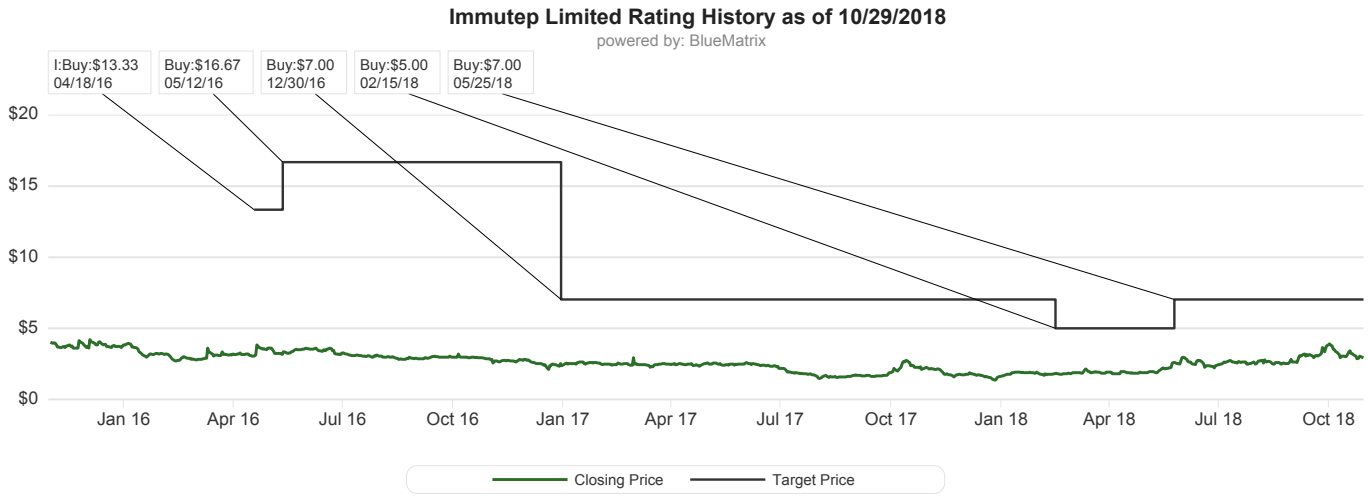
Source: Immutep Presentation

Exhibit 4. Targeting LAG-3- In-house (IMP321) and partnered programs to Novartis and GSK. Targeting LAG-3 has potential in multiple oncology (Novartis partnership) and autoimmune indications (GSK partnership), as well as an antigen presenting cell activator (Immutep, in-house).



Source: Immutep Presentation

DISCLOSURES



Maxim Group LLC Ratings Distribution		As of: 10/29/18	
		% 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.	**83%**	**36%**
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.	**16%**	**23%**
Sell	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months.	**2%**	**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.

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.

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