EDISON

Imugene

AACR clinical update

HER-Vaxx Phase II underway

Pharma & biotech

Imugene presented positive clinical Phase Ib data for its HER-Vaxx B-cell vaccine at American Association for Cancer Research (AACR) conference earlier this month. Vaccination successfully broke immune tolerance and stimulated production of HER2-specific antibodies in a dose-dependent fashion; the antibodies inhibited a key component of HER2 signalling. Imugene has initiated a randomised Phase II study of HER-Vaxx in gastric cancer with interim results expected in 2020. It is on track to initiate a Phase I study of KEY-Vaxx, a B-cell vaccine that aims to induce production of antibodies that block PD-1 signalling, in Q419. We increase our valuation to A$159m or 4.4 cents per share.

Year end	Revenue (A$m)	PBT* (A$m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
06/17	1.2	(2.5)	(0.1)	0.0	N/A	N/A
06/18	1.8	(3.9)	(0.1)	0.0	N/A	N/A
06/19e	2.4	(6.1)	(0.2)	0.0	N/A	N/A
06/20e	3.3	(8.2)	(0.2)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding exceptional items.

HER-Vaxx Phase Ib clinical data

Imugene's presentation at the AACR conference showed that its HER-Vaxx B-cell vaccine broke immune tolerance and stimulated production of polyclonal antibodies specific for the self-HER2 molecule in a dose-dependent fashion. The antibodies were shown to be biologically active, inhibiting HER2 phosphorylation, a key step in HER2 signalling. Even though the subjects in the study received standard chemotherapy treatment in addition to HER-Vaxx, in our view it is very encouraging that there was a strong positive correlation between HER2-specific antibody levels and tumour responses in the highest dose cohort.

HER-Vaxx gastric cancer Phase II underway

Imugene initiated a randomised Phase II study of HER-Vaxx in March. Patients with HER2-positive metastatic gastric cancer will be randomised into two arms of either HER-Vaxx plus standard chemotherapy or standard chemotherapy alone. Interim study data are expected in 2020.

KEY-Vaxx Phase I to commence in Q419

The company had a productive pre-IND meeting with the FDA in February and aims to initiate a Phase I study of its KEY-Vaxx PD-1 B-cell vaccine in Q419. KEY-Vaxx aims to produce an anticancer effect similar to immune checkpoint inhibitor such as Keytruda and Opdivo. A successful clinical study of KEY-Vaxx with evidence of efficacy would likely attract considerable interest from potential partners.

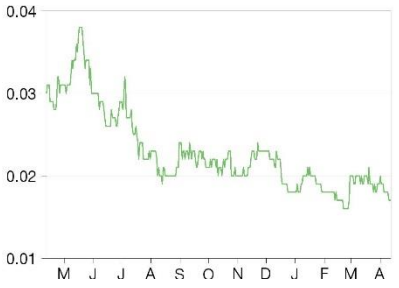
Valuation: A$159m or 4.4 cents per share

We value Imugene at A$159m (vs A$147m) or 4.4 cents/share (vs 4.1 cents/share), including milestones and royalties for HER-Vaxx plus an indicative valuation of KEY-Vaxx. With cash of A$24m at 31 December 2018, it is funded beyond our FY20 forecast horizon.

15 April 2019

Price	**A$0.017**
Market cap	**A$61m**
	US$0.76/A$
Net cash (A$m) at 31 December 2018	24.1
Shares in issue	3,609.8m
Free float	69%
Code	IMU
Primary exchange	ASX
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(15.0)	(15.0)	(43.0)
Rel (local)	(16.2)	(21.9)	(46.9)
52-week high/low		A$0.04	A$0.02

Business description

Imugene is developing B-cell vaccines that aim to induce polyclonal antibody responses against important cancer targets, as an alternative to monoclonal antibodies. HER-Vaxx, a proprietary HER2 +ve cancer vaccine, is in a Phase Ib dose-finding study ahead of a gastric cancer Phase II.

Next events

Updates on HER-Vaxx Phase II	2019
Submit KEY-Vaxx IND	Q319
Initiate KEY-Vaxx Phase I	Q419

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Imugene is a research client of Edison Investment Research Limited

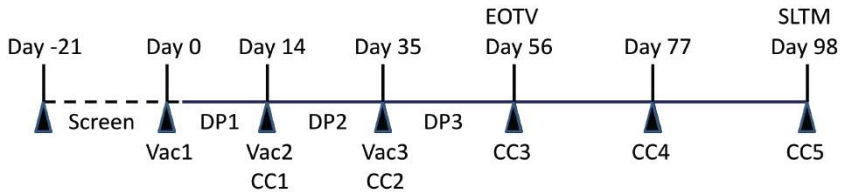
HER-Vaxx Phase Ib results at AACR

New data on the Phase Ib study of Imugene's HER-Vaxx B cell cancer vaccine were presented at the AACR 2019 Annual Meeting in Atlanta, Georgia on 2 April by Professor Ursula Wiedermann from the Medical University Vienna, the lead-inventor of HER-Vaxx and member of Imugene's Scientific Advisory Board.

HER-Vaxx aims to replicate the efficacy of approved monoclonal antibodies that target HER2, such as Herceptin (trastuzumab, Roche), Perjeta (pertuzumab, Roche) and Kadcyla (trastuzumab emtansine, Roche). Herceptin is used in breast and gastric cancers. Herceptin in combination with chemotherapy adds 2.7 months to median survival in gastric cancer.

In the HER-Vaxx Phase Ib study, doses of 10, 30 and 50µg were tested in three cohorts of three to five patients with HER2-positive gastric cancer. Each patient received three injections of the selected dose of HER-Vaxx. Patients were treated with standard chemotherapy in combination with HER-Vaxx; the first HER-Vaxx injection was administered two weeks before the start of chemotherapy and the second and third were administered during the first two cycles of chemotherapy, as shown in Exhibit 1.

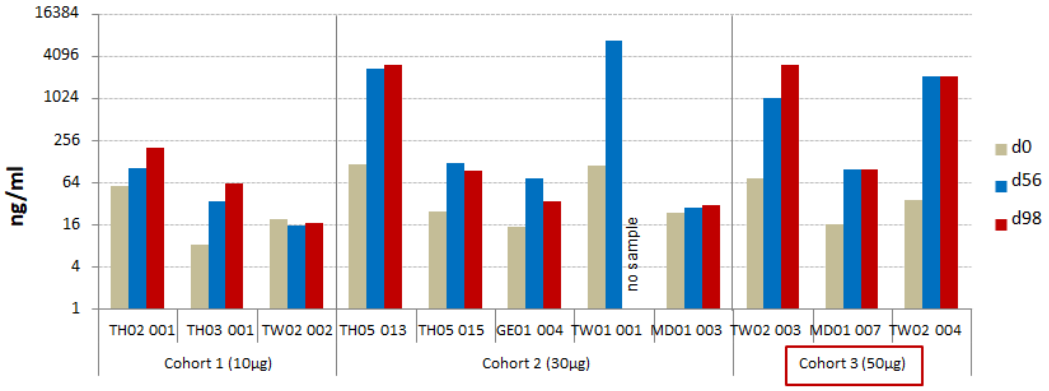
Exhibit 1: Timeline for HER-Vaxx Phase 1b dose-escalation study



Source: Imugene. Notes: DP: dose period; CC: chemotherapy cycle; Vac: Imu-131 (HER-Vaxx) administration; EOTV: end of treatment visit; SLTM: start of long-term maintenance.

Exhibit 2 shows the HER-Vaxx vaccinations stimulated increased production of HER2-specific antibodies in all but one subject; that subject received the lowest dose of HER-Vaxx. There was a clear dose response, in that higher HER2-specific antibody levels were observed in the 30µg and 50µg cohorts than were seen in the 10µg cohort. In the 50µg cohort, two of the three subjects recorded approximately 50-fold increases in HER2-specfic antibody levels.

Exhibit 2: Higher HER2-specific antibody levels in the higher HER-Vaxx dose cohorts



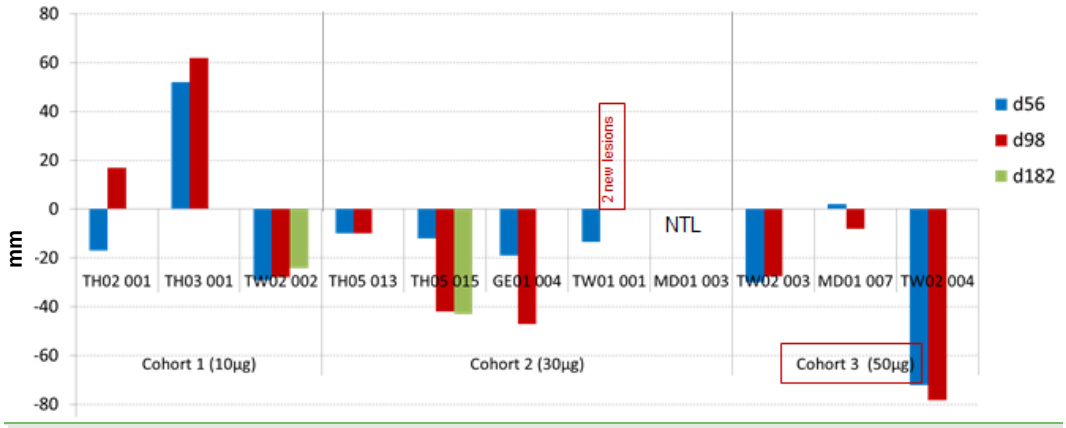
Source: Imugene. Notes: HER2-specific IgG antibodies measured in sera obtained at day 0, 56 and 98; concentrations in ng/ml calculated from a Herceptin Standard Curve Dilution.

Tumour shrinkage and an apparent dose response

Exhibit 3 shows that 11 subjects were evaluable for tumour responses. One had no evaluable target lesions, one subject showed a complete response, five showed partial responses and four showed stable disease.

It is not possible to draw any definitive conclusions about the efficacy of HER-Vaxx from the study, because patients also received concurrent chemotherapy. However, looking across the three cohorts there appears to be a dose response, with greater tumour growth in the low-dose cohorts and greater tumour shrinkage in the high-dose cohort.

Exhibit 3: Change in tumour size in three HER-Vaxx cohorts



Source: Imugene. Notes: d56: day 56; d98: day 98; d182: day 182; the y-axis shows change in tumour size (sum of diameters) in mm.

Patient HER2-specific antibodies inhibited HER2 phosphorylation

In an important finding, the HER2-specific antibodies from one of the subjects in the high-dose cohort were effective at inhibiting HER2 phosphorylation. Exhibit 4 shows that when HER2-expressing gastric cancer cells were incubated with serum samples from subject TW02 004, serum from day 56 post vaccination inhibited phosphorylation by 18% compared to pre-vaccination serum. While the degree of inhibition was less than the 64% observed with Herceptin, it is evidence that the HER2-specific antibodies induced by the HER-Vaxx vaccinations are having the desired biological effect. HER2 phosphorylation is a key step in the HER2 signalling pathway, and an ability to block HER2 phosphorylation implies an ability to block HER2 signalling.

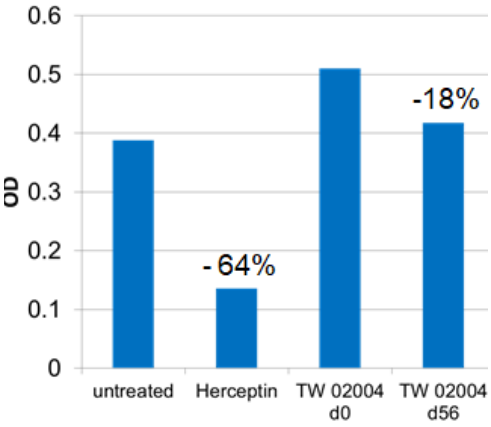
Tumour responses correlated with antibodies in high dose cohort

Exhibit 5 shows that among the three evaluable subjects in cohort three (50µg dose), the reduction of tumour size in millimetres was very strongly correlated with serum HER2 antibody levels (r^2=1.00). This analysis is based on the change in tumour size in millimetres, but tumour responses are more commonly assessed based on the percentage change in tumour size from baseline. Using this criterion, the two subjects in cohort three with partial responses both had similar percentage changes in tumour size (reductions of 45% and 41% respectively).

We have independently performed a similar correlation analysis of the standard tumour response criterion of percentage change in tumour size from baseline, using antibody concentrations read off the graph shown in Exhibit 5. While we estimated the correlation using this response criterion to be somewhat lower (r^2=0.79 vs r^2=1.00), this would still be considered to be a strong positive correlation between tumour shrinkage and HER2 antibody levels.

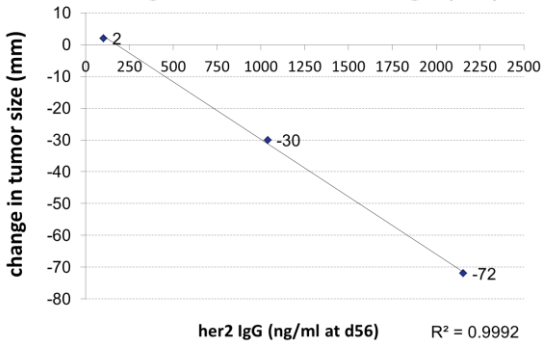
The authors of the poster presentation commented that there was only a moderate correlation between antibody levels and tumour responses in cohort two.

Exhibit 4: Serum from a cohort three subject inhibited HER2 phosphorylation



Source: Imugene

Exhibit 5: Change in tumour size in cohort three was correlated with HER2 antibody levels



Source: Imugene. Notes: HER2 antibody titres and tumour size measured at day 56.

Lower levels of anti-HER2 antibodies may be offset by higher potency of antibodies induced by HER-Vaxx

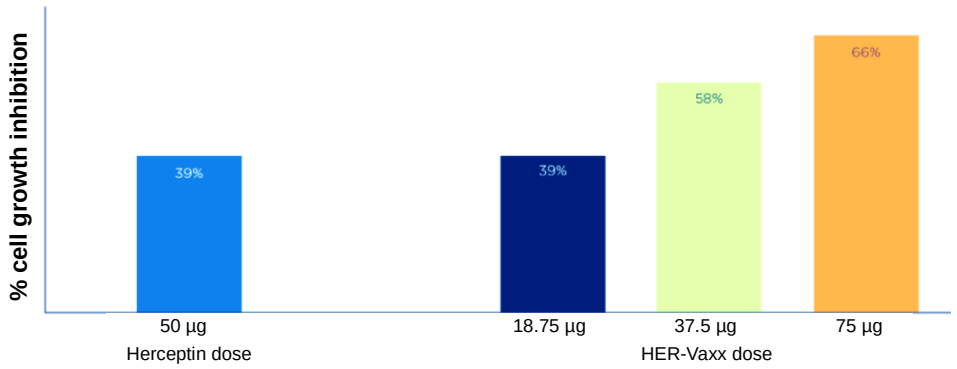
We can see from Exhibit 2 on page 2 that the subjects with the highest HER2-specific antibody production reported levels in the range of about 1,000–5,000 ng/ml (or 1–5 µg/ml). If we compare these levels to the steady-state levels in the bloodstream reported from the Phase III study of the marketed monoclonal antibody Herceptin in gastric cancer patients[1] (average minimum concentration 33ug/ml and average maximum of 131ug/ml) we can see that the HER2-specific antibody concentrations in the HER-Vaxx high responders were around one to two orders of magnitude lower than those reported in the Herceptin Phase III study.

However, evidence from previous preclinical studies suggests that these lower HER2 specific antibody levels in patients following HER-Vaxx vaccination may be offset, at least in part, by higher potency.

Data from a previous preclinical study showed that polyclonal antibodies produced following vaccination with HER-Vaxx were more potent than Herceptin at inhibiting the growth of breast cancer cells. Exhibit 6 shows that less than half the dose of HER-Vaxx-stimulated antibodies was required to inhibit cancer cell growth to the same degree as Herceptin; 18.75µg of polyclonal antibodies isolated from the serum of rabbits that had been immunised with HER-Vaxx inhibited the growth of breast cancer cells to the same degree (39%) as 50µg of the Herceptin monoclonal antibody.

1 https://www.gene.com/download/pdf/herceptin_prescribing.pdf

Exhibit 6: HER-Vaxx antibodies are more potent than Herceptin at inhibiting breast cancer cell growth in vitro



Source: Company announcement. Note: Chart reproduced by Imugene from patent EP 1 844 788 A1, fig 7&8. Data previously published in Wagner et al, Breast Cancer Res Treat (2007) 106:29–38.

Open label Phase II HER-Vaxx study underway

The first patient was dosed in Imugene's open-label Phase II study of HER-Vaxx in gastric cancer in March. The Phase II study will measure the efficacy, safety and immune response in 68 patients with metastatic gastric cancer overexpressing the HER2 protein (clinical trials.gov ID: NCT02795988). Patients will be randomised into two arms of either HER-Vaxx plus standard chemotherapy or standard chemotherapy alone. The primary endpoint is overall survival, with progression-free survival as a secondary endpoint.

The study will enrol subjects at multiple centres across Asia, Eastern Europe and India. In these countries there is a higher incidence of gastric cancer and patients have difficulty accessing approved anti-HER2 antibody treatment such as Herceptin and Perjeta. The company aims to complete the study in 2020.

Guidance for KEY-Vaxx clinical development from FDA

KEY-Vaxx is a PD-1 B-cell vaccine that Imugene in-licensed from Ohio State University (OSU) in 2018. It aims to induce the body to produce polyclonal antibodies that block PD-1 signalling and thus produce an anticancer effect similar to Keytruda, Opdivo and the other immune checkpoint inhibitor monoclonal antibodies that are transforming treatment of a range of cancers.

Imugene had a productive pre-IND meeting with the FDA in February, which provided a clear roadmap for a successful IND submission and subsequent clinical development of KEY-Vaxx.

The meeting was aimed at obtaining guidance as to the preclinical, chemistry, manufacturing and controls and the Phase I clinical development plan to be included in the IND submission for KEY-Vaxx.

The researchers from the KEY-Vaxx programme at OSU presented a poster (Abstract 1453) summarising the preclinical development of KEY-Vaxx at AACR earlier this month. We previously summarised the key features of the KEY-Vaxx preclinical studies, including impressive efficacy in an industry-recognized colon cancer mouse model, in our report published in August 2018. In that study, KEY-Vaxx inhibited cancer growth to a greater extent that the gold-standard mouse anti-PD-1 antibody that was used in preclinical testing of Keytruda and Opdivo. The inhibition reached 90% when KEY-Vaxx was combined with a HER2 B-cell vaccine.

Imugene plans to commence a Phase I study of KEY-Vaxx in Q419. The company has mentioned non-small cell lung cancer as one of the clinical indications under consideration for KEY-Vaxx.

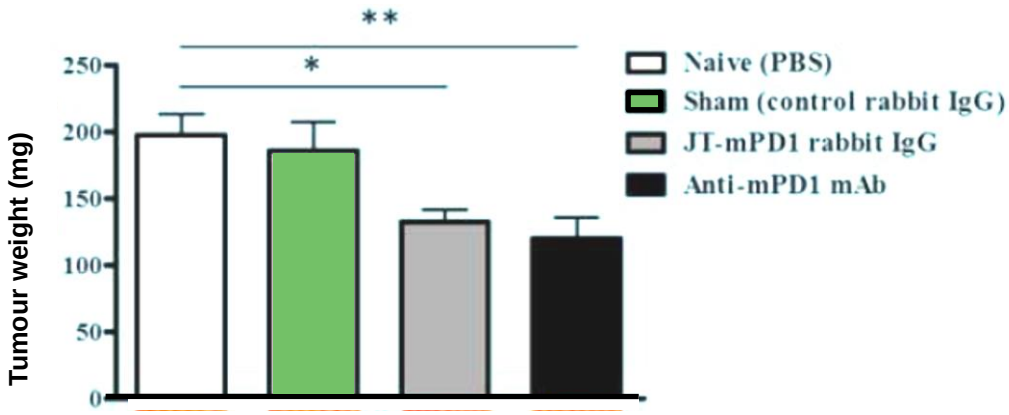
In-house PD-1 mimotope validates KEY-Vaxx approach

Imugene had already commenced an in-house programme to develop a PD-1 B cell mimotope vaccine before it in-licensed KEY-Vaxx from OSU. The programme was led by Professor Wiedermann at the Medical University Vienna. Imugene, together with the Medical University Vienna, presented findings that provide proof of concept and validation for KEY-Vaxx in a poster at AACR on 3 April.

As part of a proof of concept study, the researchers designed a B-cell vaccine (mimotope) that was specific for the mouse PD-1 molecule (vs KEY-Vaxx, which is specific for the human PD-1 molecule).

Firstly, they demonstrated that antibodies produced when rabbits were vaccinated with the mouse PD1 mimotope were as effective as an industry standard mouse anti-PD1 monoclonal antibody at inhibiting tumour growth in mice (Exhibit 7).

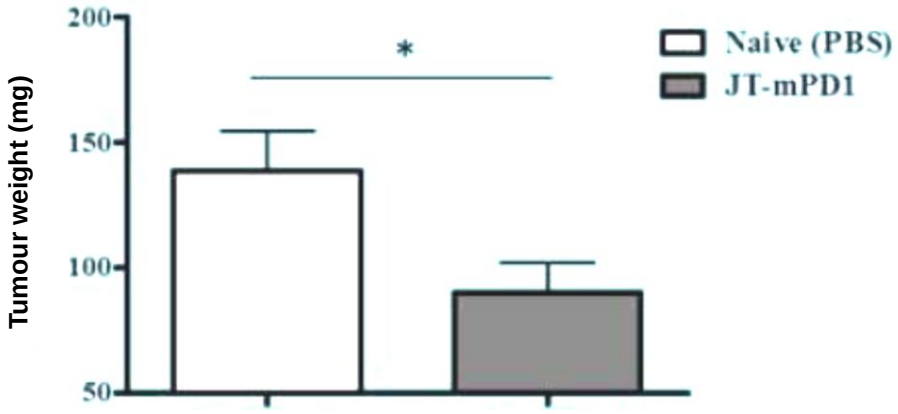
Exhibit 7: Antibodies against mouse PD1 mimotope strongly inhibit tumour growth



Source: Imugene. Notes: JT-mPD1 rabbit IgG: antibodies produced when rabbits were vaccinated with the mouse PD1 mimotope; Anti-mPD1 mAb: mouse anti-PD1 monoclonal antibody; PBS: saline control.

Secondly, they showed that active immunisation of mice with the mouse PD1 mimotope inhibited breast cancer tumour growth compared to injection with a saline control (Exhibit 8). The immunised mice also had higher levels of PD1-expressing immune cells in the tumours.

Exhibit 8: Vaccination with mouse PD1 mimotope inhibited tumour growth



Source: Imugene. Note: JT-mPD1: mouse PD1 mimotope; PBS: saline control.

Taken together, these two studies provide proof of concept and validation for the strategy underpinning the KEY-Vaxx human PD-1 B-cell cancer vaccine.

US$7bn HER2 deal for Daiichi Sankyo

In March 2019 AstraZeneca signed a US$6.85bn co-development deal with Daiichi Sankyo for trastuzumab deruxtecan (DS-8201). The terms include US$1.35bn upfront and US$5.5bn of potential milestone payments.

DS-8201 is an antibody-drug conjugate of Herceptin linked to a topoisomerase I inhibitor payload. It reported impressive results in a Phase I study in patients with a range of HER2 positive tumours that had failed treatment with Herceptin or Kadcyla. In the Phase I study in HER2, positive solid tumours including breast and gastric cancer the overall response rate (ORR) was 51% (81/160), with the highest ORR of 64% achieved in HER2-positive breast cancer.

The deal highlights the ongoing interest from big pharma in drugs that can successfully target HER2

B-cell vaccine clinical development timeline

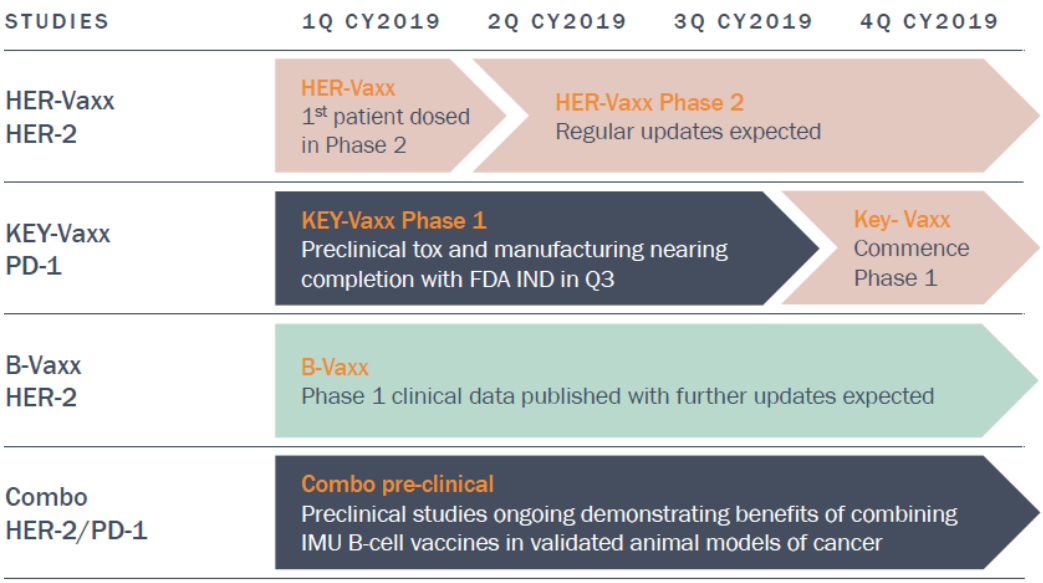
Imugene's ongoing clinical development programme is focused on HER-Vaxx and KEY-Vaxx (Exhibit 9). It commenced the Phase II study of HER-Vaxx in gastric cancer in March and aims to complete the study in 2020. It aims to submit an FDA IND for KEY-Vaxx in Q319 and commence a Phase I study in Q419.

These two programmes will provide initial clinical proof of concept for its B-cell vaccine platform, as well as being promising potential therapeutics in their own right.

Imugene has also in-licensed the B-Vaxx HER-2 B cell vaccine from OSU. B-Vaxx has completed a Phase I study and is currently enrolling patients into a Phase II study. This is fully funded by OSU.

Imugene is planning to conduct several preclinical studies to investigate combinations between its existing pipeline products and between its pipeline and other marketed therapies. However, we do not expect any decision to be made regarding clinical development of a combination until after initial clinical data from KEY-Vaxx monotherapy studies are available.

Exhibit 9: Clinical development and milestones



Source: Imugene

Valuation

Our valuation of Imugene has increased to A$159m (from A$147m). We last published on Imugene in August 2018. We have rolled our model forward in time and included the FY19e net cash balance in our valuation (we previously used FY18e cash). Our other valuation assumptions remain unchanged. We have incorporated the FY18 financial results, but our financial forecasts are broadly unchanged.

Our valuation is based on a risk-adjusted discounted cash flow model, which includes net cash plus our estimates of the future milestone payments and royalty streams for HER-Vaxx and KEY-Vaxx. We have extended our cash flow forecasts out to 2039 (supported by 12 years of biological market exclusivity in the US and 10 years in Europe) but have not included any terminal valuation. We assume that HER-Vaxx sales decline at 20% per year after market exclusivity expires in 2037. We assume a long-term exchange rate of US$0.76/A$ and apply a 12.5% discount rate.

Our valuation is equal to 4.4 cents per share (vs 4.1 cents per share) on an undiluted basis and 4.2 cents per share (vs 4.0 cents per share) after diluting for the 624m options on issue (exercise prices range from 1.25 to 4.5 cents).

Our valuation of the HER2 B-cell vaccine programmes is based on HER-Vaxx in the gastric cancer indication, which is the subject of the randomised Phase II trial that commenced in Q119. The detailed assumptions for individual gastric cancer markets are shown in Exhibit 11.

For our valuation of KEY-Vaxx we assume an indicative present-day sales potential of US$1,000m as the lead indication is not yet known. Given that the two leading anti-PD-1 drugs, Keytruda and Opdivo, both achieved sales of over US$6.5bn in 2018, we believe this is a conservative estimate of the sales that KEY-Vaxx could potentially achieve if it is shown to be safe and effective.

Exhibits 10 and 11 show our market assumptions for HER-Vaxx and KEY-Vaxx and the rNPV for each product. We have offset the risk-adjusted trial cost against revenue for each indication.

Exhibit 10: Imugene sum-of-the-parts DCF

	Base case likelihood (%)	rNPV (A$m)	rNPV/sh (A$)	Assumptions
HER-Vaxx in gastric cancer	20%	74.5	$0.021	Present-day sales potential in gastric cancer US$649m, growing to global peak sales of US$930m in 2030, assuming 3% market growth rate. Detailed market assumptions shown in Exhibit 9, which assumes 20% of gastric cancers are HER2+, 75% of which are eligible for HER-Vaxx therapy; market launch 2025; assume receives 15% gross royalty, pays 18% of royalty and milestone income to Biolife until 2026. R&D cost: A$8m for Phase II, then out-license.
KEY-Vaxx indicative valuation	10%	73.2	$0.020	Present-day indicative sales potential US$1,000m, growing to global peak sales of US$1,510m in 2032, assuming 3% market growth rate; market launch 2027; assume net 12% royalty after pay-aways to OSU. R&D cost: A$10m to FY21, then out-license.
SG&A		-9.2	-$0.003	
Portfolio total		**138.4**	**$0.038**	
FY19e cash (30 June 2019)		20.1	$0.006	
Enterprise total		**158.6**	**$0.044**	

Source: Edison Investment Research. Note: NPV adjusted for tax at an effective tax rate of 25%. We assume the addressable markets grow at 3% per year.

Exhibit 11: Present-day market opportunity for HER-Vaxx in gastric cancer (in 2018 dollars)

Market (US$ unless otherwise stated)	Cases	Eligible	Uptake (%)	Number treated	Price (US$000s)	Sales potential in 2018 (US$m)
US	21,200	3,180	30%	954	50.0	48
Japan	107,900	16,185	30%	4,856	65.0	316
Western EU	62,240	9,336	40%	3,734	40.0	149
Eastern EU	18,360	2,754	25%	689	25.0	17
Eastern Europe and Russia	59,000	8,850	25%	2,213	25.0	55
China	405,000	60,750	5%	3,038	12.5	38
Other E Asia	40,000	6,000	5%	300	12.5	4
Other	238,300	35,745	5%	1,787	12.5	22
Total	**952,000**	**142,800**		**17,570**		**649**

Source: Market data references[2,3] and Edison Investment Research

We assume upfront/milestones of US$84m/US$520m for a licence deal for Imugene's product pipeline. We assume half of the milestone payments in the benchmark licence deals (ie US$260m) are for clinical and regulatory milestones and half are sales-based milestones. We do not include the potential sales-based milestones in our forecasts, and instead model a 15% gross royalty rate on net sales.

We split the US$84m upfront and US$260m clinical and regulatory milestones between the HER-Vaxx and KEY-Vaxx programmes, weighted according to peak sales. We assume a 50% probability of entering a licence deal, with the probability of subsequent milestones declining gradually to 20% for approval milestones.

2 Jemal, A. et al. Global cancer statistics. CA. Cancer J. Clin. 61, 69–90.

3 Ferlay, J. et al. Cancer incidence and mortality patterns in Europe. Eur. J. Cancer 49, 1374–403 (2013).

Exhibit 12: Financial summary

A$'000s	2016	2017	2018	2019e	2020e
Year end 30 June	AASB	AASB	AASB	AASB	AASB
PROFIT & LOSS					
Sales, royalties, milestones	0	0	0	0	0
Other (includes R&D tax rebate)	1,525	1,164	1,841	2,400	3,280
Revenue	1,525	1,164	1,841	2,400	3,280
R&D expenses	(2,698)	(2,472)	(4,148)	(6,000)	(9,000)
SG&A expenses	(1,596)	(1,232)	(1,718)	(2,326)	(2,396)
Other	0	0	0	0	0
EBITDA	(2,769)	(2,540)	(4,025)	(5,926)	(8,116)
Operating Profit (before GW and except.)	(2,770)	(2,542)	(4,028)	(5,927)	(8,136)
Intangible Amortisation	0	0	0	(282)	(271)
Exceptionals	0	0	0	0	0
Operating Profit	(2,770)	(2,542)	(4,028)	(6,209)	(8,407)
Net Interest	39	35	94	78	201
Profit Before Tax (norm)	(2,731)	(2,507)	(3,934)	(6,131)	(8,206)
Profit Before Tax (reported)	(2,731)	(2,507)	(3,934)	(6,131)	(8,206)
Tax benefit	0	0	0	0	0
Profit After Tax (norm)	(2,731)	(2,507)	(3,934)	(6,131)	(8,206)
Profit After Tax (reported)	(2,731)	(2,507)	(3,934)	(6,131)	(8,206)
Average Number of Shares Outstanding (m)	1,449.0	2,069.0	2,637.9	3,232.4	3,609.8
EPS - normalised (c)	(0.19)	(0.12)	(0.15)	(0.19)	(0.23)
EPS - diluted	(0.19)	(0.12)	(0.15)	(0.19)	(0.23)
Dividend per share (A$)	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET					
Fixed Assets	6,623	6,623	7,081	6,898	6,707
Intangible Assets	6,600	6,600	7,057	6,775	6,504
Tangible Assets	3	3	4	103	182
Investments	20	20	20	20	20
Current Assets	2,913	6,054	9,833	22,696	14,682
Stocks	0	0	0	0	0
Debtors	1,313	1,220	1,915	2,474	3,354
Cash	1,583	4,814	7,822	20,126	11,232
Other	18	20	96	96	96
Current Liabilities	(694)	(297)	(438)	(438)	(438)
Creditors	(657)	(232)	(343)	(343)	(343)
Short term borrowings	0	0	0	0	0
Other	(36)	(65)	(96)	(96)	(96)
Long Term Liabilities	(985)	(985)	(1,001)	(1,001)	(1,001)
Long term borrowings	0	0	0	0	0
Other long term liabilities	(985)	(985)	(1,001)	(1,001)	(1,001)
Net Assets	7,857	11,395	15,475	28,156	19,950
CASH FLOW					
Operating Cash Flow	(3,089)	(2,708)	(4,508)	(6,475)	(8,996)
Net Interest	39	35	46	78	201
Tax	0	0	0	0	0
Capex	(71)	(2)	(461)	(100)	(100)
Acquisitions/disposals	0	0	0	0	0
Equity Financing	2,735	5,928	7,930	19,095	0
Dividends	0	0	0	0	0
Other	(20)	(0)	0	(294)	0
Net Cash Flow	(385)	3,253	3,008	12,598	(8,894)
Opening net debt/(cash)	(1,957)	(1,583)	(4,814)	(7,822)	(20,126)
HP finance leases initiated	0	0	0	0	0
Other	11	(21)	0	0	0
Closing net debt/(cash)	(1,583)	(4,814)	(7,822)	(20,126)	(11,232)

Source: Edison Investment Research, Imugene accounts

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