

Reason for report:

## EARNINGS

## IMMUNE DESIGN CORP.

## Continued Progress Toward Potential Proof of Principle Data -- Raising PT

• **Bottom Line:** Yesterday, IMDZ reported its 3Q:14 earnings and reiterated data readout timelines from the three ongoing Phase I studies that include single agents LV305 and G305 in several targeted cancer types, and G100 in Merkel cell carcinoma (MCC). In addition, IMDZ announced that the FDA had granted CMB305 an IND, enabling the start of the combination trial for LV305 and G305 in 1Q:15. In addition to starting CMB305 studies, IMDZ also announced plans to add expansion cohorts for LV305 as a single agent. The company also recently announced a second collaboration with Sanofi's (MP) vaccine division, Sanofi-Pasteur, for developing a herpes simplex virus (HSV) vaccine. IMDZ's development programs look on track heading into potential proof of concept data (available to the company in 1Q:15, potential presentation at ASCO or announced sooner). Despite the recent run-up in the shares, which now appear to factor in some expectations of clinical response, we retain a positive outlook based on the large potential upside associated with clinical proof of principle of the technology platform that could be applied broadly, favorable feedback from MEDACorp key opinion leaders on the platform, and valuation of other companies in the immuno-oncology space. We are raising our 12-month price target (PT) from \$25 to \$40, reflecting a small upward adjustment of the probability of success of one of the potential indications and increased valuation for partnered programs due to recent expansions.

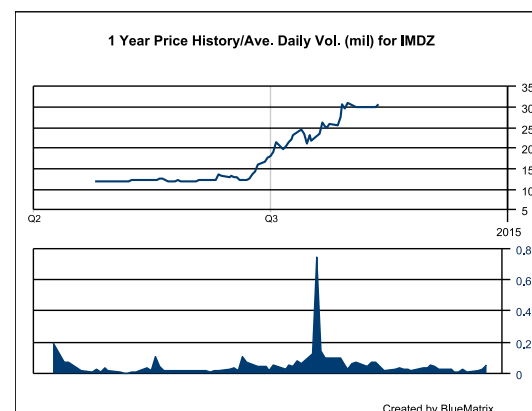
• **Multiple data readouts and trials planned for the early part of 2015.** Currently, IMDZ is conducting three Phase I trials with LV305, G305 and G100. G100 is being evaluated in MCC, and four patients have been dosed so far, the trial is expected to enroll a total of 10 patients, and data from this study will become available in 1H:15. In addition, IMDZ expects to initiate a Phase I study with G100 in non-Hodgkin's lymphoma (NHL) in 2Q:15 in combination with radiation. LV305 and G305 are being evaluated in NY-ESO-1 expressing tumors including synovial sarcoma, melanoma, breast cancer, non-small cell lung cancer (NSCLC) and ovarian cancer. The LV305 study is an open-label, multi-center study that is evaluating safety and immunogenicity, and is expected to complete enrollment of patients in the highest dose cohort by the end of 2014. In addition, contingent on the preliminary results from the Phase I LV305 trial, the trial may be expanded and LV305 may be evaluated as a single agent. Results from the two Phase I trials are expected in 1Q:15, and depending on the timing may either be reported at ASCO 2015 or in the form of a press release.

## Key Stats:

(NASDAQ:IMDZ)

<b>S&amp;P 600 Health Care Index:</b>	<b>1,376.79</b>
<b>Price:</b>	<b>\$30.67</b>
Price Target:	\$40.00 from \$25.00
Methodology:	DCF analysis and probability-weighted sales
52 Week High:	\$33.11
52 Week Low:	\$11.51
Shares Outstanding (mil):	12.1
Market Capitalization (mil):	\$371.1
Book Value/Share:	\$0.00
Cash Per Share:	\$6.80
Dividend (ann):	\$0.00
Dividend Yield:	0.0%

Cash Per Share:



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2013A	--	--	--	--	\$1.6	--	--	--	--	(\$2.28)	NM
2014E - New	0.0A	\$1.1A	\$3.5A	0.0	\$4.6	(\$0.81)A	(\$0.46)A	(\$0.55)A	(\$0.83)	(\$2.17)	NM
2014E - Old	0.0A	0.0	0.0	0.0	0.0	(\$0.81)A	(\$0.54)	(\$0.36)	(\$0.36)	(\$1.42)	NM
2015E - New	--	--	--	--	0.0	--	--	--	--	(\$3.23)	NM
2015E - Old	--	--	--	--	0.0	--	--	--	--	(\$1.41)	NM
2016E - New	--	--	--	--	0.0	--	--	--	--	(\$2.18)	NM
2016E - Old	--	--	--	--	0.0	--	--	--	--	(\$1.11)	NM

Source: Company Information and Leerink Partners LLC Research

Revenues in millions. 2014E quarterly EPS don't total to annual figure due to change in shares outstanding.

## INVESTMENT THESIS

We rate IMDZ Outperform. IMDZ is a clinical-stage biotechnology company focused on immunotherapies for cancer and has two proprietary platforms, ZVex and GLAAS, for activating essential cells of the immune system to enable recognition and elimination of cancer cells. Immune activation and cytotoxic T cell generation likely will have a role in future immunotherapy for cancer. Immuno-oncology is emerging as a new pillar of cancer treatment due to the potential for durable response and functional cure. Despite the remarkable success of checkpoint inhibitors such as PD-1/PDL1 antibodies, currently only a minority of unselected patients with a few types of tumors achieve an objective response. Both the proportion of patients (about half) without tumor-infiltrating lymphocytes (TILs) as well as the adaptive tumor immune escape mechanism of PDL1 expression in response to TILs argue for the need for immune activation to generate tumor-specific cytotoxic T cells. Based on preclinical data, MEDACorp key opinion leaders (KOLs) believe vaccines are among the most important combinations to pursue for checkpoint inhibitors. IMDZ has developed a novel approach for activating immune cells against specific and endogenous tumor antigens. Issues of historical cancer vaccines included limited CD8+ T cell engagement and T cell sequestration associated with ex vivo peptide loading and mineral oil carriers. IMDZ's novel technology of in vivo targeting of antigens specifically to dendritic cells may overcome these limitations. In addition, the second platform, GLAAS, can further strengthen the response via the activation of CD4+ T cells and provide an opportunity for a unique combination. MEDACorp key opinion leaders (KOLs) see IMDZ as one of the strongest early-stage immuno-oncology companies. We received excellent feedback from KOLs on the ZVex platform and preclinical data, GLAAS as a potent adjuvant, as well as the creditability and credentials of the management. There were some questions about NY-ESO-1 as a target, but overall KOLs were enthusiastic about the story. In light of the potential upside in the platforms being applied broadly to other cancer antigens as well as established partnerships with AZN and SNY in infectious diseases and food allergy, we see the valuation of IMDZ as inexpensive in comparison to other IO stories. Clinical data starting in 1Q:15 and continuing throughout 2015 could provide near-term catalysts.

**CMB305 IND granted by the FDA.** IMDZ announced that CMB305, its prime boost candidate, which will combine LV305 and G305, was given permission to enter the clinic by the FDA. IMDZ anticipates initiating a Phase I trial with CMB305 in multiple tumor types in 1Q:15, upon completion and safety and maximum tolerated dose assessment of Phase I trials with LV305 and G305 individually. The identity of the tumor types will be provided by IMDZ at a future date but are most likely to be synovial sarcoma and NSCLC. Data from the Phase I trials in CMB305 are expected to become available in the second half of 2015. Depending on the outcome, there are plans to initiate Phase II trials in high incidence tumor type and an orphan tumor indication, respectively, toward the end of 2015. In addition, IMDZ is also planning to conduct a combination study with CMB305 and PD-L1 in NSCLC.

**Expansion of non-oncology collaborations.** IMDZ recently entered into a second collaboration with Sanofi for developing a HSV vaccine. For the development of the vaccine, Sanofi will provide the HSV vaccine part and IMDZ will provide G103, which is IMDZ's pre-clinical trivalent vaccine agent and the GLA formulation. During this collaboration, various combinations of the three different agents will be tested and the best combination will be selected for further development. According to the terms of the deal, Sanofi Pasteur will bear the costs of all preclinical and clinical development and IMDZ will provide specific formulation of GLA through Phase 2 studies. As part of this collaboration, IMDZ is eligible to receive up to \$168M and tiered royalty sales from approved products.

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**IMDZ Upcoming Catalysts**


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Drug	Timing	Description
G100	1H:15	Phase I data from trial in MCC
	2Q:15	Initiate Phase I trial in follicular lymphoma
LV305	1Q:15	Phase I data
G305	1Q:15	Phase I data
CM305	1Q:15	Initiate Phase I in NY-ESO-1 positive solid tumors
	2H:15	Phase I data
	2H:15	Initiate Phase II

Source: Company Reports and Leerink Partners

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**IMDZ Pipeline**


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Stage of Development	Current Status/Upcoming Developments
<b>LV305 (ZVex + NY-ESO-1)</b>	
Phase I	Data from five solid tumor indications are expected in 1Q:15
<b>G305 (GLAAS + NY-ESO-1)</b>	
Phase I	Phase I safety and immunogenicity expected in 1Q:15
<b>G100</b>	
Phase I	Dosed 4 patients, Phase I data in MCC is expected in 1Q:15
<b>CMB305</b>	
Pre-clinical	Initiation of Phase I trial in 1Q:15

Source: Company Reports and Leerink Partners

## VALUATION

We are increasing our price target from \$25 to \$40 a share based on DCF analysis and probability-weighted sales for G100 in Merkel cell carcinoma and low-grade non-Hodgkin's lymphoma (10-30% probability), and for CMB305 in synovial sarcoma (20% probability), melanoma (10% probability), NSCLC (15% probability, increased from 10%), and ovarian cancer (10% probability) with a 10% discount rate. We believe this discount rate is appropriate as we use probability-weighted sales for the products. In addition, we also assigned \$100M (increased from \$50M due to recent expansions of collaborations) to partnered programs but no value for potential products beyond NY-ESO-1.

## RISKS TO VALUATION

- Early stage of development with uncertainties in efficacy and safety;
- Unknown future landscape in immunotherapy for cancer;
- Initial target (NY-ESO-1) remains to be validated;
- Ability to scale up and manufacture lentivirus as a product;
- Lack of manufacturing capability and reliance on third-party manufacturers;
- Competition from immunotherapeutic approaches.

## Immune Design

(In '000s, except per share items)

	1QA	2QA	3QA	4QE	2014E	2015E	2016E	2017E	2018E	2019E	2020E
<b>REVENUE:</b>											
CMB305 (POS adjusted sales)	-	-	-	-	0	-	-	-	-	-	13,468
G100 (POS adjusted sales)	-	-	-	-	0	-	-	-	11,723	22,628	25,923
Other Product Sales	25	64	44		133						
Product Development and Licensing Agreements		1000	3500		4500						
Contracts and Grants					0						
Product Royalties					0						
Milestone payments					0						
Other, net					0						
<b>Total Revenue</b>	<b>25</b>	<b>1,064</b>	<b>3,544</b>	<b>-</b>	<b>4,633</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11,723</b>	<b>22,628</b>	<b>39,391</b>
<b>OPERATING EXPENSES:</b>											
Cost of product Sales	14	18	31						2,345	4,526	7,878
Research and Development	4,078	3,883	5,988	6,048	19,997	24,678	37,018	55,526	83,290	87,454	91,827
Sales General and Administrative	1,446	1,850	4,082	4,164	11,542	17,329	17,676	57,676	98,049	147,073	161,780
Royalties											
Amortization of Acquired Intangible Assets											
<b>Total Operating Expense</b>	<b>5,538</b>	<b>5,751</b>	<b>10,101</b>	<b>10,212</b>	<b>31,539</b>	<b>42,007</b>	<b>54,693</b>	<b>113,202</b>	<b>181,338</b>	<b>234,527</b>	<b>253,607</b>
<b>Operating Loss</b>	<b>(5,513)</b>	<b>(4,687)</b>	<b>(6,557)</b>	<b>(10,212)</b>	<b>(26,906)</b>	<b>(42,007)</b>	<b>(54,693)</b>	<b>(113,202)</b>	<b>(169,615)</b>	<b>(211,899)</b>	<b>(214,216)</b>
Investment, Interest and Other Income, Net	1		2								
Change in fair value of convertible preferred stock warrant liability	(2,711)		(127)								
Net Income before Taxes	(8,223)	(4,687)	(6,682)	(10,212)	(26,906)	(42,007)	(54,693)	(113,202)	(169,615)	(211,899)	(214,216)
Income tax rate%											
Income Tax											
<b>Net Loss</b>	<b>(8,223)</b>	<b>(4,687)</b>	<b>(6,682)</b>	<b>(10,212)</b>	<b>(26,906)</b>	<b>(42,007)</b>	<b>(54,693)</b>	<b>(113,202)</b>	<b>(169,615)</b>	<b>(211,899)</b>	<b>(214,216)</b>
Earnings per share	(0.81)	(0.46)	(0.55)	(0.83)	(2.17)	(3.23)	(2.18)	(4.46)	(4.51)	(4.41)	(4.42)
Shares Used in Calculating Basic and Diluted Net Loss per Share(pro forma)	10,139	10,240	12,129	12,250	12,373	13,004	25,134	25,385	37,639	48,015	48,495
Dilutive shares	10,139	10,240	12,129	12,250	12,373	13,004	25,134	25,385	37,639	48,015	48,495

Source: Company Reports and Leerink Partners Estimates

## Disclosures Appendix

### Analyst Certification

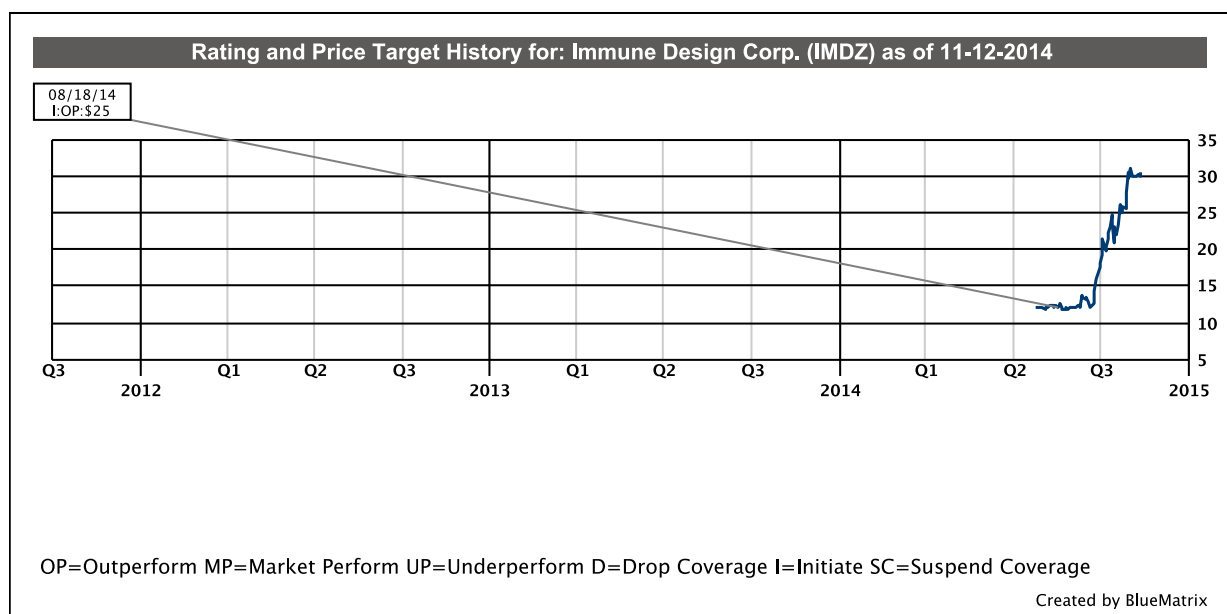
I, Howard Liang, Ph.D., certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

### Valuation

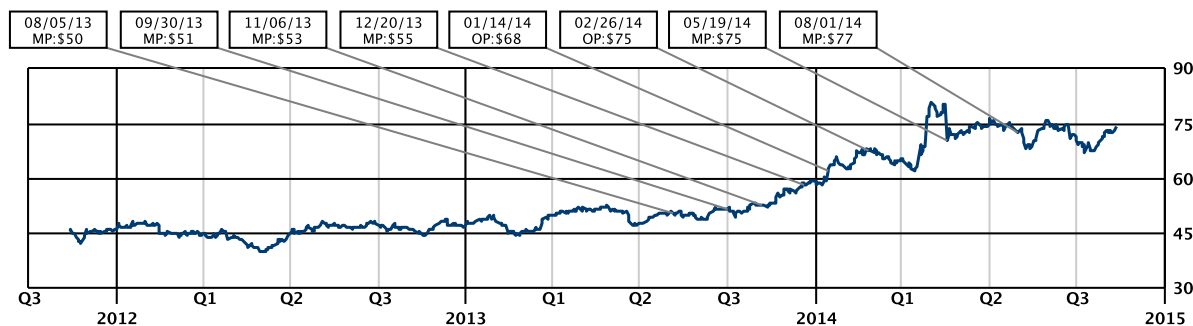
We are increasing our price target from \$25 to \$40 a share based on DCF analysis and probability-weighted sales for G100 in Merkel cell carcinoma and low-grade non-Hodgkin's lymphoma (10-30% probability), and for CMB305 in synovial sarcoma (20% probability), melanoma (10% probability), NSCLC (15% probability, increased from 10%), and ovarian cancer (10% probability) with a 10% discount rate. We believe this discount rate is appropriate as we use probability-weighted sales for the products. In addition, we also assigned \$100M (increased from \$50M due to recent expansions of collaborations) to partnered programs but no value for potential products beyond NY-ESO-1.

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•Early stage of development with uncertainties in efficacy and safety; •Unknown future landscape in immunotherapy for cancer; •Initial target (NY-ESO-1) remains to be validated; •Ability to scale up and manufacture lentivirus as a product; •Lack of manufacturing capability and reliance on third-party manufacturers; •Competition from immunotherapeutic approaches.



### Rating and Price Target History for: AstraZeneca PLC (AZN) as of 11-12-2014

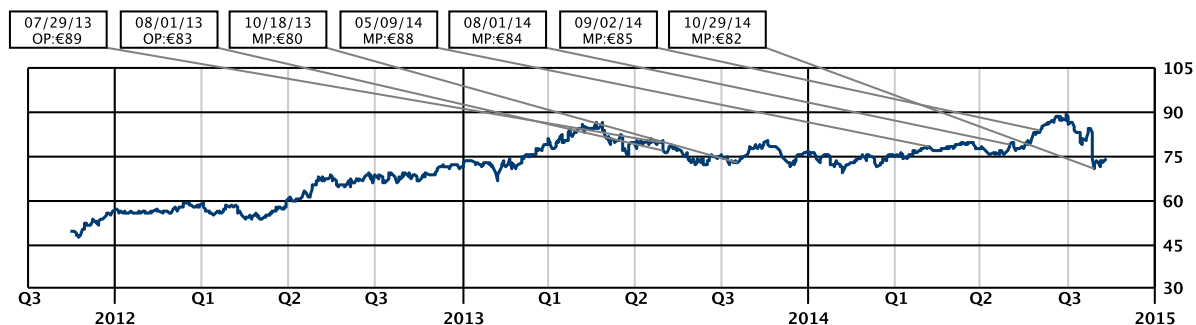


Leerink Swann initiated coverage of AZN with a Market Perform rating on Sept. 30, 2009. On June 11, 2013, Leerink Swann began a transition to specific price targets for the stocks under its coverage, replacing valuation ranges.

OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

### Rating and Price Target History for: Sanofi (SAN FP) as of 11-12-2014



Leerink Swann initiated coverage of SAN FP with an Outperform rating on February 26, 2010. On June 11, 2013, Leerink Swann began a transition to specific price targets for the stocks under its coverage, replacing valuation ranges.

OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

Distribution of Ratings/Investment Banking Services (IB) as of 09/30/14				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	138	69.30	51	37.00
HOLD [MP]	61	30.70	2	3.30
SELL [UP]	0	0.00	0	0.00

## Explanation of Ratings

**Outperform (Buy):** We expect this stock to outperform its benchmark over the next 12 months.

**Market Perform (Hold/Neutral):** We expect this stock to perform in line with its benchmark over the next 12 months.

**Underperform (Sell):** We expect this stock to underperform its benchmark over the next 12 months. The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than \$2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over \$2 billion.

## Important Disclosures

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In the past 12 months, the Firm has received compensation for providing investment banking services to Immune Design Corp. .

Leerink Partners LLC makes a market in Immune Design Corp.



**Leerink Partners LLC is willing to sell to, or buy from, clients the common stock of AstraZeneca PLC and Sanofi on a principal basis.**

**Leerink Partners LLC has acted as the manager for a public offering of Immune Design Corp. in the past 12 months.**

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