July 10, 2015

WELLS FARGO SECURITIES

Equity Research

Immune Design Corp.

IMDZ: We Are Resuming Coverage With An Outperform Rating
Novel In Vivo Immuno-Oncology Platforms Remain Undervalued

Outperform / V

Sector: Biotechnology
Market Weight

- **Summary:** We are resuming coverage of IMDZ with an Outperform rating and a $35.00-37.00 valuation range. While Phase I data for LV305 and G305 at the 2015 American Society of Clinical Oncology (ASCO) Meeting are early, we believe they provide initial clinical proof-of-concept for IMDZ's novel *in vivo* immuno-oncology (IO) approach of targeting patients' dendritic cells in order to generate robust and durable NY-ESO-1-specific cytotoxic CD8 T-cell and CD4 helper T-cell immunogenic responses via its ZVex and GLAAS platform technologies, respectively. Importantly both therapies appear to be safe, elicited the appropriate immunogenic responses (primarily CD8 for LV305 and CD4 and antibodies for G305), and generated signals of clinical activity as monotherapy in dose-escalation in refractory solid tumors. While the Ph. I data are not completely clinically de-risking, they have allowed initiation of a Ph. I study for CMB305 (LV305 + G305) with initial data expected later in 2015, as well as initiation of a potential randomized Ph. II study with a programmed death-1 or programmed-death ligand-1 (PD-1/PD-L1) checkpoint inhibitor (CPI) in soft tissue sarcoma (STS) later in 2015. We believe H2 2015 is catalyst rich with various additional clinical and regulatory updates, as well. IMDZ's other therapeutic program, G100, is less of a value driver for the company at this time, in our view, but bears watching as more data emerge late in 2015/2016, especially in non-Hodgkin's Lymphoma. We believe the IO field is still very wide open and believe we are in the early innings (to use a trite sports analogy) of how various therapeutic approaches will be used in both hematologic cancers and solid tumors, and we feel that IMDZ's novel platforms will ultimately find a role longer-term role individually (e.g., CMB305, G100, 2nd generation ZVex) and/or in synergistic combinations with a number of the various PD-1/PD-L1 CPIs, engineered T-cell receptor (TCR) and chimeric antigen receptor (CAR-T) agents, and/or oncolytic viruses, as these technologies can work together to attack the different ways a tumor cell evades and survives destruction by a patient's immune system. As a result, we see IMDZ as under-valued longer term. We estimate FY2015 and 2016 EPS of -$2.10 and -$2.18, respectively.
- *(Continued on the following page.)*

Resumption of Coverage

EPS	2014A	2015E Curr.	2015E Prior	2016E Curr.	2016E Prior
Q1 (Mar.)	($0.81)	($0.56) A	NC	NE	
Q2 (June)	(0.60)	(0.39)	NE	NE	
Q3 (Sep.)	(0.55)	(0.48)	NE	NE	
Q4 (Dec.)	(0.78)	(0.46)	NE	NE	
FY	($4.56)	**($2.10)**	**NE**	($2.18)	
CY	($4.56)	($2.10)		($2.18)	
FY P/EPS	NM	NM		NM	
Rev.(MM)	$6	$4		$0	

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters
NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful
V = Volatile, = Company is on the Priority Stock List

Due to share count, the secondary stock offering in Q2 2015, and rounding, the sum of FY 2015 1/4's does not equal our full-year FY 2015 EPS estimate.

Ticker	IMDZ
Price (07/09/2015)	$21.04
52-Week Range:	$11-41
Shares Outstanding: (MM)	19.9
Market Cap.: (MM)	$418.7
S&P 500:	2,051.31
Avg. Daily Vol.:	120,278
Dividend/Yield:	$0.00/0.0%
LT Debt: (MM)	$0.0
LT Debt/Total Cap.:	0.0%
ROE:	NM
3-5 Yr. Est. Growth Rate:	NE
CY 2015 Est. P/EPS-to-Growth:	NM
Last Reporting Date:	05/14/2015 Before Open

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters

Valuation Range: $35.00 to $37.00 from NE to NE
We blend P/E (28-33x) and P/S (5.5-6x) applied to 2025E EPS and revenue of $4.37 and $367MM discounted at 12-15%. Risks include: LV305, CMB305, and G100 failing to show clinical efficacy, a safety signal, immunotherapy competition, and manufacturing.

Investment Thesis:
We believe IMDZ is undervalued based on the promise of its ZVex/GLAAS as novel immunotherapy platforms for cancer.

Matthew J. Andrews, Senior Analyst
(617) 603-4218
matthew.j.andrews@wellsfargo.com

Please see page 12 for rating definitions, important disclosures and required analyst certifications
All estimates/forecasts are as of 07/10/15 unless otherwise stated.

Continued from Front Page

Phase I monotherapy, dose-escalation results for LV305 in STS patients exceeded management's expectations and have helped set the stage for IMDZ's ongoing clinical program for CMB305. Ph. I data at the 2015 ASCO Meeting demonstrate early proof-of-concept with LV305's ability to generate a robust CD8 NY-ESO-1-specific cellular immunogenicity response (55% and 67% at the mid- and high-doses, respectively), a modest CD4 T-cell response (only one of six patients in the two highest dose cohorts had a measurable increase), no humoral (antibody) response (as expected due to LV305's mechanism of targeting broad generation of CD8 and not CD4 T-cells or antibodies), and disease stabilization (SD) in 67% of patients, with median duration of SD of 205 days (roughly seven months). Generation of the CD8 Cytotoxic T-cells (CTLs) was an important outcome for the study as these CTLs are key to improved tumor killing potential by a patient's immune system, and ultimately may differentiate LV305 (and CMB305) from other previously unsuccessful cancer vaccine approaches (which did not increase CTLs as robustly or at all). Precedence for generation of CD4 cells with other cancer vaccine approaches had previously been demonstrated by GSK/Agenus' failed MAGE A-3 vaccine and other programs. No safety concerns were noted with Grade 1/2 (Gr1/2) fatigue being the most common side effect. (*Refer to Exhibit #1 for additional top-line results.)*

Other encouraging data to emerge in the study include: (1) 14% tumor shrinkage in a patient at the lowest dose; (2) disease progression-free rates (PFR) at three and six months of 67% and 42% (compared to historical PFR results of 44-77% and 30-56% per Van Glabbeke et al. 2002); (3) four of six patients whom had evidence of pre-therapy tumor growth achieved SD with LV305 and their tumors stopped progressing; and (4) generation of T-cell responses against unknown (and known) NY-ESO-1 epitopes. In light of the advanced stage of the 12 enrolled STS patients, dose-escalation design, and the study's primary focus on safety and immunogenicity, the case of tumor shrinkage and broad SD responses exceeded management's expectations. Unlike G305 and G100 -- where IMDZ had insights into their safety profiles due to Glucopyranosyl Lipid A's [GLA] use in 1,200+ patients -- the LV305 study represented the 1st human study where its novel lentivirus vector was assessed in humans. These Ph. I data have led to cohort expansion with LV305 being studied in non-small cell lung (NSCLC), ovarian, and melanoma patients, as well as additional STS patients. In addition, a Ph. I dose-escalation study of CMB305 (LV305 + G305) was initiated in late Q1 2015. While updated results from the LV305 and initial results from CMB305 studies will help further define both programs' future clinical development, STS appears to be the lead indication for CMB305, driven by early clinical results and high-expression of NY-ESO-1 (roughly 80% of certain sub-types express NY-ESO-1).

Exhibit 1. LV305 and G305 Monotherapy Ph. I Results

Drug	N of patients; tumor type	Humoral Response	Cellular Immunity Response		Clinical Benefit (Response)		
			CD4+	CD8+	CBR	Duration	Comments
LV305	12 sarcoma	0% (0/12)	45% (n=5)	55% (n=6); 4/6 at two highest doses*	67% SD^	208 days	4 of 6 (with prior tumor growth) had no progression
			n=1 at high dose				One patient: 14% tumor regression through day 347+
G305	12 (7 ovarian; 3 sarcoma)	75% (9/12); seen in all 3 cohorts	45% (n=5)	20%; n=1 at both 5 and 10μg doses	67% SD**	245+ days (2.5 to 8+ months)	4 ongoing at 200+ days
			67% at 5μg; 50% at 10μg				Ovarian patient: CA125 response at day 70; SD for over 1 year

Safety: No dose-limiting toxicities or serious adverse events related to study drug observed in either study. Only Grade 1/2 toxicities with most prevalent (2+ patients): injection site pain/discomfort: 33% (LV305), 100% (G305); fatigue 58% (LV305), 17% (G305).

Note: *= these four patients had no pre-existing measurable CD8+ response at baseline. CBR= clinical benefit rate. SD= disease stabilization. Cancer Antigen 125 (CA125) is a cancer antigen, is elevated in ovarian cancers, and serves as a biomarker. ^= defined as SD for at least 84 days. **= defined as SD for at least 70 days.

Source: Immune Design company reports (June 2 corporate event; Mahipal et al. and Somaiah et al.) and Wells Fargo Securities, LLC

G305, a key component of IMDZ's strategy for advancing CMB305, is safe and generated immunogenic responses and signals of clinical activity in other solid tumors. Ph. I data at ASCO 2015 demonstrate early proof-of-concept with G305's ability to generate a humoral (antibody) response, a robust CD4 NY-ESO-1-specific immunogenic response (67% and 50% at the mid- and high-doses), *de Minimis* CD8 response (as expected due to G305's mechanism of targeting generation of CD4 T-cells), and median duration of SD of 245+ days (roughly 8+ months). *(Refer to Exhibit #1 for additional top-line results).* Similar to LV305, no safety concerns were noted with Gr1/2 injection site reactions being the most common side effect (100%). IMDZ's strategy is to combine G305 with LV305 as part of CMB305, and not advance G305 independently. We don't see GSK's/Agenus's failed MAGE A-3 immunotherapy vaccine program (which also included an adjuvant and a Toll-like receptor (TLR) 9 agonist in the formulation) as a good comparator for G305 or CMB305 as MAGE A-3 was much more effective at generating CD4 T-cell responses (25-36%) compared to CD8 T-cell responses (0-9%; Pujol *JCO* 2012, #7013). By comparison, G305 has generated 50%+ NY-ESO-1-specific CD4 T-cell responses and LV305 has generated 55% NY-ESO-1-specific CD8 T-cell responses, suggesting CMB305 may be more effective at generating CD4 and CD8 cells and mounting a broader immune response (against NY-ESO-1 tumors) as combination therapy, compared to MAGE A-3's effects on CD4 T-cells, but *de Minimis* effects on CD8 T-cells.

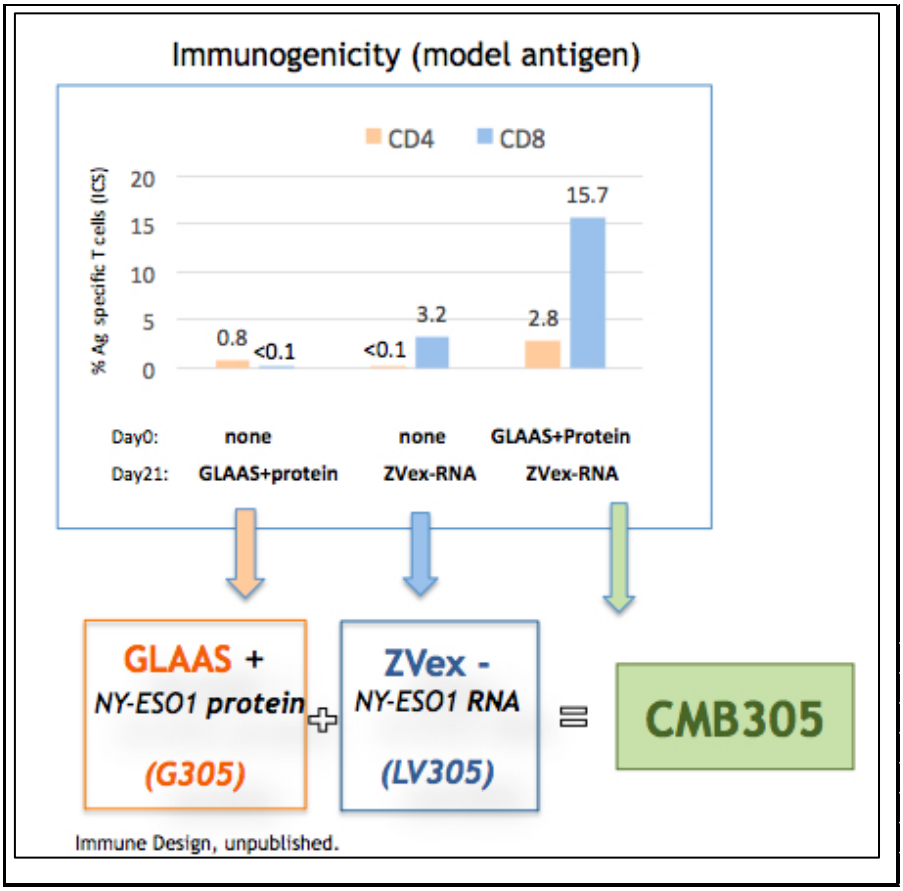
G100 represents a 3rd key program for IMDZ with a study in non-Hodgkin's lymphoma (NHL) set to start soon, and the next major update likely later in 2015. Along with LV305 and G305, updated Ph. I results for G100 were presented at the 2015 ASCO Meeting. *(See Exhibit #6 for more top-line details on this lead therapeutic for IMDZ's Endogenous Antigen (intra-tumoral) approach.)* To date, results in eight Merkel Cell Carcinoma patients (two with loco-regional disease and six with metastatic disease) demonstrate objective responses with four ongoing as of early June 2015. In the two loco-regional patients both responses are durable (467+ and 336+ days) while the two partial responses (PRs) in metastatic patients are less mature (both 150+ days). Similar to the LV305 and G305 studies, safety appears unremarkable with only Gr1/2 toxicities. The remaining two patients have been enrolled in this Ph. I study (one each in the loco-regional and metastatic arms) and we expect an update on all 10 patients later in the year. A Ph. I investigator-initiated study in STS patients is expected to conclude later in 2015 (with potential results thereafter) and IMDZ plans on commencing its next study in NHL patients in early H2 2015 to further characterize this agent. Similar to CMB305 (and possibly LV305), IMDZ is considering studying G100 in combination with PD-1/PD-L1's longer term. While the early ASCO data are encouraging considering two of the PRs occurred in patients with G100 monotherapy prior to administration of radiation and/or surgery, what we believe also bears watching in future G100 studies is its potential to generate a durable abscopal treatment effect. An abscopal effect is a phenomenon in the treatment of metastatic cancer where localized treatment of a tumor (e.g., injection of G100 directly into the tumor) causes not only a shrinking of the treated tumor but also a shrinking of tumors in different compartments from the treated tumor (e.g., distant metastases). If an abscopal effect is observed in future studies, this could suggest that G100 is helping activate a local tumor response which then is able to help mount an immune response broadly throughout the body over time. In the NHL study IMDZ will be specifically looking to see if an abscopal effect is observed.

CMB305 combination with PD-1/PD-L1's in STS could represent IMDZ's initial Ph. II study and path to market. By early H2 2015, IMDZ expects the dose-escalation phase of the Ph. I CMB305 study will be completed. The study assesses sequential dosing of LV305 at (10^9 vector genomes (vg) and 10^10 vg) and 5 micrograms of G305. Dosing commenced in late Q1 2015. Three STS patients will be assessed at each LV305 + G305 dose. Over 90 days patients will receive alternating doses of LV305 (four doses) and G305 (three doses). LV305 is dosed at baseline followed by a 2nd dose and then G305 (followed by alternating doses of both). Based on preclinical data, LV305 10^10 vg Ph. I efficacy and safety data to date, and IMDZ's ability to manufacture at 10^10 vg scale, management appears confident this is likely the go-forward LV305 dose. To enroll in the CMB305 study patients must express NY-ESO-1 at 5% or higher. If the combination is deemed to be safe, cohort expansion in STS and other solid tumors will commence in Q3 2015.

The clinical rationale for pursuing STS with CMB305 in combination with PD-1 and PD-L1 antibodies is supported by (1) early LV305 STS data (previously discussed), (2) high expression of NY-ESO-1 (roughly 80%), and (3) a paper by Kim et al. (*Plos One* 2013) which discusses the correlation between PD-1 positivity and PD-L1 expression and the poor prognosis for STS. Specifically Kim's research in 105 Korean STS patients revealed that intra-tumoral infiltration of PD-1-positive lymphocytes and PD-L1 expression were observed in 58% and 65% of STS patients. Forty-two percent of patients were both PD-1 and PD-L1 expression positive. Importantly patients with the PD-1+/PD-L1+ phenotype had five-year overall survival (OS) of 13% compared to the PD-1-/PD-L1- phenotype's 90%. Not surprisingly both PD-1 and PD-L1 expression positivity were prognostic factors for shortened event-free survival, too. Key questions for the Ph. II STS study tentatively planned to start later in 2015 (pending CMB305 dose escalation and early expansion cohort data) will include: (1) size [n=100-150?], (2) design (randomized or single-arm), (3) comparator arm (if randomized), and (4) the most appropriate endpoint (objective response rate [ORR] or progression-free survival [PFS]), considering well-documented clinical issues like pseudo-progression with PD-1/PD-L1's, which suggest RECIST criteria for ORR may not be a good efficacy measure in PD-1/PD-L1+ tumors.

In the near term, dose-escalation data from the Ph. I/II study with CMB305 in Q3 2015 will provide an early read in STS and allow for comparison to the ASCO 2015 LV305 results. By early July, IMDZ expects to have completed dose-escalation of CMB305 in six STS patients. Assuming CMB305 is deemed to be safe, cohort expansion will ensue with up to roughly 32 STS, ovarian, melanoma, and NSCLC patients. Similar to the Ph. I LV305 and G305 studies, IMDZ will primarily be assessing humoral response, immunogenicity, safety, and clinical benefit (e.g., ORR). Based on preclinical data (refer to Exhibit #2) and LV305 and G305's mechanisms of action, IMDZ believes synergistic effects should be observed (additive effects at a minimum), thus leading to improved outcomes, although it is unknown how quickly objective responses will take to occur. In the preclinical data in Exhibit #2, the sequential administration of LV305 and G305 led to five times higher number of CTLs as compared to CD4 helper T-cells. These CTLs are key to generating higher tumor cell kill. The dose-escalation CMB305 data and initial STS cohort expansion data -- likely available later in Q3/early Q4 -- will help IMDZ finalize a Ph. II protocol for CMB305, potentially combining it with a PD-1/PD-L1 antibody in STS. Cohort expansion will also help determine what non-orphan solid tumor IMDZ pursues in a 2nd Ph. II study. While we believe there is good rationale for why CMB305 should demonstrate improved benefit vs. LV305 or G305 monotherapy in STS, we believe there does remain some risk that ORR may take longer to occur due to biologic considerations for STS and the advanced disease of the patients to be enrolled in the study.

Exhibit 2. Preclinical Synergy of GLAAS + ZVex; Potential Read-through to CMB305 in STS?



Source: Company reports and reproduced with Immune Design's permission.

Multiple important clinical updates in H2 2015. (1) Dose-escalation data for CMB305 in STS should be available internally at IMDZ sometime during Q3. (2) IMDZ expects to communicate next steps for the Ph. II CMB305 + PD-1/PD-L1 study in STS in H2. (3) Updated Ph. I LV305 and G305 data later in 2015. While not key updates compared to CMB305, they should provide clarity on further durability of SD and humoral and cellular immunity responses. (4) LV305 cohort expansion results in other solid tumors (e.g., NSCLC, ovarian, and PD-1/PD-L1-refractory melanoma). These data may enable IMDZ to pursue monotherapy development for LV305, although CMB305 will be the primary program in its Specific Antigen IO approach. In melanoma patients in this cohort, the combination of LV305 + a PD-1/PD-L1 will be assessed. (5) Initiation of the Ph. II CMB305 + PD-1/PD-L1 study in STS later in 2015. (6) Initial data from the CMB305 cohort expansion in STS, melanoma, NSCLC, and ovarian cancers later in 2015 (potentially early 2016). (7) G100 data in all 10 MCC patients, potential investigator-initiated results in STS, and initial Ph. I/II results from the NHL study (expected to start by early H2).

Next generation lentivirus vector may allow for dual or triple delivery of antigens of interest. Due to the size of the lentivirus vector used with LV305 (and applicable to other antigens of interest), IMDZ believes it may be able to administer up to three genomes as part of a future therapeutic. In addition to including the RNA of the antigens of interest (e.g., currently NY-ESO-1 in LV305), IMDZ believes other cytokines/chemokines, neo-antigens, and PD-1/PD-L1 antibodies could be included inside the vector. Preclinical work is underway with selection of a potential lead candidate later in 2015/early 2016, filing of an Investigational New Drug Application (IND) later in 2016, and initiation of an initial Ph. I study by late 2016/early 2017. The potential Ph. II CMB305 + PD-1/PD-L1 in STS and cohort expansion of LV305 + PD-1/PD-L1 in PD-1/PD-L1 refractory melanoma data in 2016 will provide important proof-of-concept results for both efficacy and especially safety that should help IMDZ tweak aspects of the next generation LV vector formulation, which could include delivery of NY-ESO-1 RNA and a PD-1/PD-L1.

It is early innings for IO and we believe IMDZ's ZVex and GLAAS platforms may enable synergistic combinations with other IO approaches longer term. Following our attendance at the 2015 ASCO Meeting it is clear that IO offers a promising approach to improving cancer outcomes but there remains a long way to go in determining which combination of therapeutic approaches will be most effective and safe for specific solid tumors and blood cancers. As we note in Exhibit #3, there are multiple ways to attack the cancer immunity cycle (as defined by Chen and Mellman), and an important consideration in the various therapeutic approaches is enhancing the body's own innate and adaptive immune responses via an increase in CD4 helper T-cell and cytotoxic CD-8 T-cells. While PD-1/PD-L1 antibodies have generated great excitement and offer promise in multiple tumor types, it is estimated that up to 50% of patients do not respond to this therapeutic modality. As a result, there is a clinical and commercial opportunity to improve upon PD-1/PD-L1 CPIs. But more broadly what is the best combination technology for PD-1/PD-L1 or any of the IO therapies? Oncolytic viruses? Chimeric Antigen Receptor and T-cell Receptor adoptive approaches? Indoleamine or arginase inhibitors? LV305 or CMB305 (preclinical data suggest LV305 is synergistic with a PD-1/PD-L1 in a B16 melanoma mouse model)? Combining CMB305 with a PD-1/PD-L1 CPI may enable the immune system to overcome the immuno-suppressive environment around the tumor (driven by regulatory T-cells and PD-L1 expression) and improve outcomes with increased number of CTLs and helper CD4 T-cells, plus antibodies and natural killer cells. Numerous exclusive/non-exclusive collaborations have been announced over the past few years and we expect the trend to continue, and would not be surprised if IMDZ becomes a participant in this wave of collaborative (exclusive and/or non-exclusive) research in the coming months/years based on its novel *in vivo* ZVex and GLAAS platforms.

Exhibit 3. Steps in the Cancer-Immunity Cycle and Potential Targets

The Cancer-Immunity Cycle		Potential Therapeutic Targets
Step 1	Release of cancer cell antigens	Chemotherapy, radiation, targeted therapy
Step 2	Cancer antigen presentation	Vaccines, ZVex/GLAAS, G100, IFN-alpha, GM-CSF, Anti-CD40, TLR agonists
Step 3	Priming and activating in lymph node	Anti-CTLA4, Anti-CD137, Anti-OX40, Anti-CD27, IL-2, IL-12, ZVex/GLAAS, G100
Step 4	Trafficking of T cells to tumor	
Step 5	Infiltration of T cells into tumors	Anti-VEGF, anti-B-Raf (?)
Step 6	Recognition of cancer cells by T cells	Chimeric Antigen Receptors
Step 7	Killing of cancer cells	Anti-PD-L1, Anti-PD-1, IDO, arginase, TIM-3, LAG-3
Step 8	Repeat Step 1 by immunogenic or necrotic cell death (not apoptosis).	

Source: Adapted from Chen and Mellman, *Immunity Review* 2013 and Wells Fargo Securities, LLC

Celldex's NY-ESO-1 CDX-1401 vaccine a potential comp/read-through for CMB305? Comparison of different IO therapeutics and vaccines is, of course, fraught with challenges, especially when comparing Ph. I/II dose-escalation data in heavily pre-treated patients and across studies and different tumor types. Celldex's vaccine is composed of a human monoclonal antibody which targets the CD205 protein expressed on a dendritic cell's surface fused at the C-terminus to full-length NY-ESO-1 and was studied in combination with two adjuvants (resiquimod -- a TLR 7/8 agonist -- and Hiltonol -- an immunostimulant ligand for TLR 3). *(Refer to Exhibit #4 for more details.)* Strong humoral responses were observed; immunogenicity was demonstrated with NY-ESO-1 specific CD4 and 8 responses generated (but not as precisely quantified as IMDZ's Ph. I data); and signals of clinical activity with 29% SD and median duration of up to nearly seven months. Lead investigator Dr. Dhodapkar et al. noted that although measurable humoral and cellular immunity responses were observed, most patients did not experience tumor regression, thus they suggest the need to study patients in earlier stages of disease and combine with other therapies to overcome the immunosuppressive effects in the tumor bed/microenvironment.

Exhibit 4. Selected CDX-1401 Results

N=45; (including: 21 melanoma, 6 ovarian, 5 sarcoma, 14 others)	**Clinical responses:**
64% NY-ESO-1 positive (≥ 5% NY-ESO-1 expression) at baseline	29% (13 cases) of disease stabilization (7 melanoma, 1 sarcoma)
No Grade 3/4 toxicities	6.7 months durability (up to 13.4 months)
10 cases of stable disease received a 2nd six-week course of therapy	2 cases of tumor shrinkage (~20% in melanoma patients)
Humoral response:	N=8 received Yervoy or a CPI within 2-3 months of last CDX-1401 dose
* 79% had increased NY-ESO-1 antibody titers	* All had NY-ESO-1 positive expressing cancers
* Observed in patients regardless of NY-ESO-1 expression at baseline	* Vervoy: 3 Patial responses and 1 Complete response (melanoma)
Cellular immunity:	* CPI: 2 Partial responses (non-small cell lung cancer)
* CD4 and CD8 responses observed even with absent or low levels at baseline	* Unclear from paper if patients had progressed or had ongoing disease stabilization
* Durability: two cases of T-cell response through 7 months	Ph. I/II study with ipilimumab and varlilumab in melanoma is underway

Source: Celldex company reports, Dhodapkar et al. *Science Translational Medicine* 2014, and Wells Fargo Securities, LLC

Note: CPI= checkpoint inhibitor such as nivolumab, pembrolizumab, but was not disclosed in the Dhodapkar paper.

What we find most interesting about the results, and potentially relevant to CMB305's future development, is that six of eight patients who subsequently received either Yervoy or a PD-1/PD-L1 CPI within two to three months of their last CDX-1401 dose generated an objective response. While IMDZ plans to initially study CMB305 + a PD-1/PD-L1 antibody in STS starting later in 2015 -- and STS poses its own challenges as a cancer -- these CDX-1401 data provide some proof of concept that an NY-ESO-1 vaccine plus a PD-1 antibody may generate improved outcomes. In addition, we believe these CDX-1401 data plus IMDZ targeting STS patients with refractory but not progressing disease (essentially stable and healthier patients) and the high expression of NY-ESO-1 by STS patients, provide clinical evidence to suggest the CMB305 + PD-1/PD-L1 study should generate improved outcomes compared to the Ph. I LV305 monotherapy study results presented at the 2015 ASCO Meeting.

Exhibit 5. Immune Design Corp.'s Upcoming Milestone Chart

Agent	Timing	Event
LV305	End 2015	Present updated Phase I data in sarcoma (n=12).
	End 2015	Ph. I, part 2 expansion data at highest dose (10^10 vector genomes per dose) in lung, ovarian, and melanoma. Melanoma patients are to have had a previous inadequate response to anti-PD1 therapy. LV305 will be combined with an anti-PD1 therapy.
	End 2015	Ph. I data on whether a (neutralizing) antibody response has been generated towards the lentivirus vector (if any).
	2016	IMDZ to determine if it will further develop LV305 as monotherapy (paced by expansion cohort data).
G305	End 2015	Present updated Ph. I data (n=12).
CMB305	End of June 2015	Complete dose-escalation in sarcoma patients (n=6).
	Q3 2015	Once safety is established in dose-escalation, expand the Ph. I study to include sarcoma, melanoma, ovarian, and non-small cell lung cancers (n=27-32).
	Q3 2015	IMDZ to communicate its updated plans around a potential Ph. II randomized study with a PD-1/PDL-1 checkpoint inhibitor in sarcoma.
	End 2015	Initiate a Ph. II study with a PD-1/PDL-1 checkpoint inhibitor in sarcoma.
	Q4 2015+	Initiate a second Ph. II study in a 2nd solid tumor cancer, based on results from the 32-patient cohort expansion (e.g., potentially melanoma).
	Q4/End of 2015	Ph. I safety and immunogenicity data in sarcoma patients (n=6). These data will enable comparison to the 12 LV305 sarcoma patients, presented at the 2015 ASCO Meeting.
	Q4/End of 2015	Ph. I cohort expansion data in multiple solid tumors (up to n=32).
	Q4/End of 2015	Close enrollment in the 32-patient expansion cohort.
	2016	Present Ph. I dose-escalation and cohort expansion data at medical meeting(s).
	End 2016/Q1 2017	Top-level results in Ph. II randomized PD-1/PDL-1 combination study in sarcoma.
2nd generation lentivirus vector	End of 2015	Select lead candidate for advancement.
	2016	File IND for lead vector.
	End of 2016	Initiate Ph. I dosing, safety, and immunogenicity study.
G100	Late June/July 2015	Initiate NHL study (n=30).
	End 2015	Complete the sarcoma study at the Fred Hutchinson Cancer Center.
	End 2015	Updated Ph. I results in Merkel Cell Carcinoma from the loco regional and metastatic disease patients (n=3 and 7 from the two cohorts, respectively).
	2016	Initiate a Ph. II study with a checkpoint inhibitor, following the MCC Ph. I data.
MEDI7510	2015+	MedImmune to report Ph. I(b) data from MEDI7510/influenza vaccine.
GLA for food allergy	2015+	Sanofi to advance into a Ph. I study.
G103/HSV-529	2015+	Sanofi to advance into a Ph. I study.

Source: Company reports and Wells Fargo Securities, LLC estimates

Exhibit 6. Immune Design Corp.'s Pipeline Chart

Immune Design Corp.'s Pipeline Summary		
Candidate	**Indication**	**Stage And Summary**
LV305	Soft tissue sarcomas (synovial and myxoid round cell liposarcoma), melanoma, ovarian cancer, Non-small cell lung (NSCLC), breast cancers	**Phase I -** Lentivirus 305 (LV305) is IMDZ's *in vivo* novel hybrid viral vector gene delivery system (ZVex) which delivers full-length NY-ESO-1 RNA and targets dendritic cells (DC's) *in vivo* in an attempt to stimulate generation of CD8 cytotoxic T-cell lymphocytes (CTLs). ZVex utilizes a sindbis virus envelope by coating the vector particle and specifically targets the DC-SIGN protein receptor (CD209). The LV vector has been designed to be replication incompetent and integration deficient, important for safety considerations. Upon incorporation of the NY-ESO-1 RNA, the antigen is ultimately presented to CD8 cells through major histocompatability complex-I (MHC-I) interaction. IMDZ is initially targeting cancers which over-express NY-ESO-1, although IMDZ believes other antigens can be delivered in ZVex. Cancers which over-express NY-ESO-1 (to varying degrees) are NSCLC, ovarian, melanoma, and soft tissue sarcoma. In the 12-patient Phase I study presented at ASCO 2015, eight cases of disease stabilization (SD) were observed in patients with sarcoma, including three patients at the two highest doses studied (10^9 and 10^10 viral genomes). Four of six patients with prior disease progression had their cancer stop growing and up to 14% tumor regression was observed in one patient (now in SD for 347+ days). NY-ESO-1-specific CD8 responses were observed in six patients (including four at the two highest doses) and only Grade 1/2 (Gr1/2) adverse events (AEs) have been observed (58% fatigue was most prevalent). While the data are early and from 12 patients, three and six-month progression-free rates of 67% and 42%+ compare favorably to historical soft tissue sarcoma studies of 44-77% and 30-56%.
G305	Soft tissue sarcomas, melanoma, ovarian, urothelial cancers	**Phase I -** G305 is based on IMDZ's *in vivo* Glucopyranosyl Lipid A Stable Emulsion Adjuvant Systems (GLAAS) platform. GLAAS is based on a fully synthetic molecule similar to lipid A, called GLA. GLA has strong immune-stimulating properties and is an agonist for the toll-like 4 receptor on DC's. G305 includes a full-length recombinant version of the NY-ESO-1 protein (250 micrograms) combined with (2, 5, or 10 micrograms) GLA (the adjuvant) and is administered to activate innate immunity in order to generate Th1 cytokines and chemokines which can also activate Natural Killer cells. In addition, adaptive immunity is triggered with a humoral (antibody) response and DC's activate CD4 "helper" (and memory) T-cells (which further boost CD8 CTLs). GLA has been safety administered in 1,200+ subjects. In the 12-patient Ph. I study presented at ASCO 2015, eight cases of SD were observed in patients with ovarian, urothelial, melanoma, and sarcoma cancers, with four cases of SD beyond 245+ days. Antibody and NY-ESO-1-specific CD4 responses occurred in nine and five patients and AEs were only Gr1/2. IMDZ does not plan on advancing G305 on its own and will only do so as part of CMB305.
CMB305	Soft tissue sarcomas, melanoma, ovarian cancer, NSCLC	**Phase I -** CMB305 represents IMDZ's "prime-boost" Specific Antigen approach and combines LV305 (prime with CD8 CTLs) and G305 (boost CTLs with CD4). No drug-related serious AE's were observed for the LV305 and G305 monotherapy Ph. I studies. The initial patient for the CMB305 Ph. I study was dosed in late March 2015 and IMDZ will enroll six sarcoma patients to assess safety and immunogenicity, with three each at the 10^9 and 10^10 LV305 doses. The two agents will be dosed sequentially, with four injections of LV305 and three injections of G305 over 90 days. IMDZ is targeting patients who have 5%+ expression of NY-ESO-1. Once safety is established, up to 32 patients with sarcoma, melanoma, ovarian, and NSCLC cancers will be enrolled. IMDZ's clinical strategy is to initially study CMB305 in combination with a PD-1/PDL-1 antibody in Ph. II in sarcoma, and potentially a 2nd tumor (based on Ph. I results).
Next generation Lentivirus vector	To be determined cancers	**Preclinical -** The ZVex vector contains sufficient space/room for delivery of up to three antigens, and potentially an antigen and an immune stimulatory molecule, such as a single-chain checkpoint inhibitor antibody, may be feasible. A next generation vector is being studied preclinically and may be available for Ph. I study by late 2016/H1 2017.
G100	Merkel cell carcinoma (MCC); sarcoma; non-Hodgkin's Lymphoma (NHL)	**Phase I -** G100 represents IMDZ's lead compound for its Endogenous Antigen (intra-tumoral Immune Activation) approach. This approach uses G100 (GLA, a TLR4 agonist) to cause DCs to activate and capture a wide range of endogenous tumor antigens which are released upon lysing of a tumor cell (generally due to another therapeutic, such as radiation). The released endogenous tumor antigens are then recognizable by antigen-presenting cells and help induce a broad local and systemic immune response (e.g., DCs, T, natural killer, and B-cells), with the ultimate goal of increasing the number of CTLs. G100 is injected directly into the tumor and is dosed at 5 micrograms/dose. In an ongoing Ph. I study, partial and complete responses have been observed in patients with loco-regional and metastatic MCC, both as monotherapy and in combination with surgery and/or radiation. A study in sarcoma patients is ongoing and is expected to conclude in late 2015. During mid-2015, IMDZ plans to initiate a study of G100 with radiation in NHL patients.
MEDI7510	Respiratory syncytial virus (RSV)	**Phase I -** On October 26, 2010, IMDZ granted AstraZeneca/MedImmune three exclusive licenses to use GLA as a component in vaccines for three indications (RSV and two undisclosed). MEDI7510 is composed of MedImmune's RSV sF antigen plus IMDZ's GLA. On May 27, 2014, the companies announced the start of a Ph. I(a) single-ascending dose study in RSV. In November 2014, MedImmune started a Ph. I(b) study to assess the safety and immunogenicity for MEDI7510 with an influenza vaccine.
Glucopyranosyl Lipid A (GLA)	Allergy	**Preclinical -** On October 26, 2011, IMDZ and Sanofi announced a collaboration where Sanofi would investigate use of GLA in the field of allergy.
	Food allergy	**Preclinical -** On August 7, 2014, IMDZ granted Sanofi an exclusive license to use its GLAAS platform to develop therapies for an undisclosed food allergy.
G103/HSV-529	Herpes simplex virus (HSV)	**Preclinical -** On October 16, 2014, IMDZ entered a collaboration with Sanofi Pasteur for an HSV immune therapy. Sanofi is contributing HSV-529, a clinical stage replication defective HSV vaccine, and IMDZ is contributing G103, a preclinical trivalent vaccine candidate.
GLA	Pandemic influenza	**Preclinical -** In May 2013, IMDZ granted a non-exclusive license to Medicago for GLA in pandemic flu.

Source: Company reports and Wells Fargo Securities, LLC

Key Risks

- **Clinical risk.** While IMDZ has generated early Phase I proof-of-concept data for LV305, G305, and G100, this has been in fewer than 50 patients and there is a significant amount of clinical development work that remains for CMB305 (LV305 + G305), LV305 (if advanced individually), and G100 in the coming years. LV305's ability to target dendritic cells (DC) has been well demonstrated in animal models, in human DCs in vitro, and in initial Ph. I study, but we believe it will be key to show that this technology platform and targeting of human DC is sufficiently high enough and able to stimulate CD8 cytotoxic T-cell (CTL) response in humans, and that this translates to a clinical antitumor response. If CMB305 and LV305 are unable to induce sufficient CTL responses in humans, IMDZ's platform would likely be deemed less differentiated compared with other immunotherapy platforms, and may not ultimately succeed clinically.
- **Regulatory risk.** The ZVex platform (LV305 and CMB305) utilizes lentiviral vectors to stimulate the immune system, similar to gene therapy approaches. The U.S. Food and Drug Administration (FDA) has never reviewed or approved a drug using viral vectors, which we believe adds regulatory uncertainty. We believe there could be a higher bar for safety as this novel therapeutic modality has a relatively limited safety record. Additionally, given that there are several immunotherapies with some overlapping features, any setbacks associated with other modalities might negatively affect the regulatory standards for the whole class.
- **Commercial risk.** ZVex-NY-ESO-1-based therapy is to be targeted to patients with tumors that express the target antigen. While a significant number of tumors that IMDZ is targeting express a meaningful level of NY-ESO-1, it is possible that even smaller subset of these patients might respond to treatment, which could further limit the addressable market. Additionally, given that the company is still in the early development phase, it is difficult to predict the competitive landscape when a ZVex-based therapy reaches the market. As there are several other competing immunotherapies, the target market could be significantly more crowded, leading to a potential lower end-market share.
- **Manufacturing risk.** Because the gene therapy field is still in a relatively nascent stage of development and there are no FDA-approved commercial products yet available, industrial-scale manufacturing technology and capacity remain limited to only a few specialized manufacturers. Due to the limited number of available suppliers, any disruption in the supply chain could significantly delay clinical development, regulatory approval, and/or commercial supply. Cost of goods is also likely to be more expensive than more traditional therapies such as small molecules.

Exhibit 7. Immune Design Corp.'s Income Statement

Immune Design Corp. (IMDZ)

Statement of Operations (Income Statement)

FY Ends December 31

(In 000's except per share amounts)

Matthew J. Andrews 617-603-4218

	2014A	1QA	2QE	3QE	4QE	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Revenues																
Licensing revenues (1)	$4,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Product sales/royalties (2)	$881	$89	$75	$75	$75	$314	$345	$380	$418	$460	$506	$556	$612	$673	$740	$814
Other, net (3)	$1,052	$1,849	$1,500	$0	$0	$3,349	$0	$0	$10,000	$10,000	$35,000	$35,000	$10,000	$10,000	$10,000	$10,000
U.S. sales of CMB305 (Probability-adjusted)	$0	$0	$0	$0	$0	$0	$0	$0	$2,855	$10,888	$45,920	$84,747	$136,123	$187,814	$241,150	$300,492
Royalties on ex-U.S. sales of CMB305 (Probability-adjusted)									$0	$887	$3,383	$9,660	$19,649	$33,633	$44,555	$55,685
Total revenues	**6,433**	**1,938**	**1,575**	**75**	**75**	**3,663**	**345**	**380**	**13,273**	**22,234**	**84,809**	**129,963**	**166,384**	**232,120**	**296,445**	**366,991**
Expenses																
Cost of products sold	$638	$79	$56	$56	$56	$236	$259	$285	$770	$2,087	$7,727	$13,129	$20,877	$28,677	$36,728	$45,685
Research and development	$22,746	$7,463	$6,250	$7,000	$7,000	$27,713	$38,798	$48,498	$55,772	$58,561	$61,489	$64,564	$67,792	$71,181	$74,740	$78,477
Selling, general and administrative	$12,927	$3,802	$3,000	$2,750	$2,500	$12,052	$12,655	$16,451	$27,967	$36,357	$40,901	$46,014	$51,766	$58,236	$65,516	$73,705
Total operating expenses	**$36,311**	**$11,344**	**$9,306**	**$9,806**	**$9,556**	**$40,001**	**$51,712**	**$65,234**	**$84,509**	**$97,005**	**$110,117**	**$123,707**	**$140,435**	**$158,094**	**$176,984**	**$197,867**
Operating income/loss	**($29,878)**	**($9,406)**	**($7,731)**	**($9,731)**	**($9,481)**	**($36,338)**	**($51,366)**	**($64,854)**	**($71,237)**	**($74,770)**	**($25,307)**	**$6,256**	**$25,950**	**$74,025**	**$119,461**	**$169,123**
Interest and other income	$4	$0	$1	$2	$1	$5	$113	$124	$138	$106	$83	$101	$107	$145	$226	$348
Change in fair value of convertible preferred stock warrant liability	($4,277)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
(Loss) income before benefit from income taxes	**($34,151)**	**($9,406)**	**($7,730)**	**($9,730)**	**($9,480)**	**($36,333)**	**($51,253)**	**($64,730)**	**($71,098)**	**($74,664)**	**($25,224)**	**$6,357**	**$26,056**	**$74,170**	**$119,686**	**$169,471**
Benefit (expense) from income taxes												($127)	($782)	($3,709)	($8,378)	($16,947)
Net (loss) income	**($34,151)**	**($9,406)**	**($7,730)**	**($9,730)**	**($9,480)**	**($36,333)**	**($51,253)**	**($64,730)**	**($71,098)**	**($74,664)**	**($25,224)**	**$6,230**	**$25,275**	**$70,462**	**$111,308**	**$152,524**
Earnings Per Share (GAAP)	**($4.56)**	**($0.56)**	**($0.39)**	**($0.48)**	**($0.46)**	**($2.10)**	**($2.18)**	**($2.45)**	**($2.66)**	**($2.75)**	**($0.83)**	**$0.19**	**$0.75**	**$2.07**	**$3.23**	**$4.37**
Shares Outstanding (Basic)	7,495	16,945	19,879	20,473	20,573	17,269	23,473	26,373	26,773	27,173	30,573	30,973	31,373	31,773	32,173	32,573
Shares Outstanding (Diluted)	17,264	19,254	22,188	22,782	22,882	19,578	25,782	28,682	29,082	29,482	32,882	33,282	33,682	34,082	34,482	34,882

Source: Company reports and Wells Fargo Securities, LLC estimates

Note: 2014/2015 quarterly EPS do not equal annual EPS due to calculation of EPS based on diluted vs. basic shares.

(1) Related to MedImmune collaboration

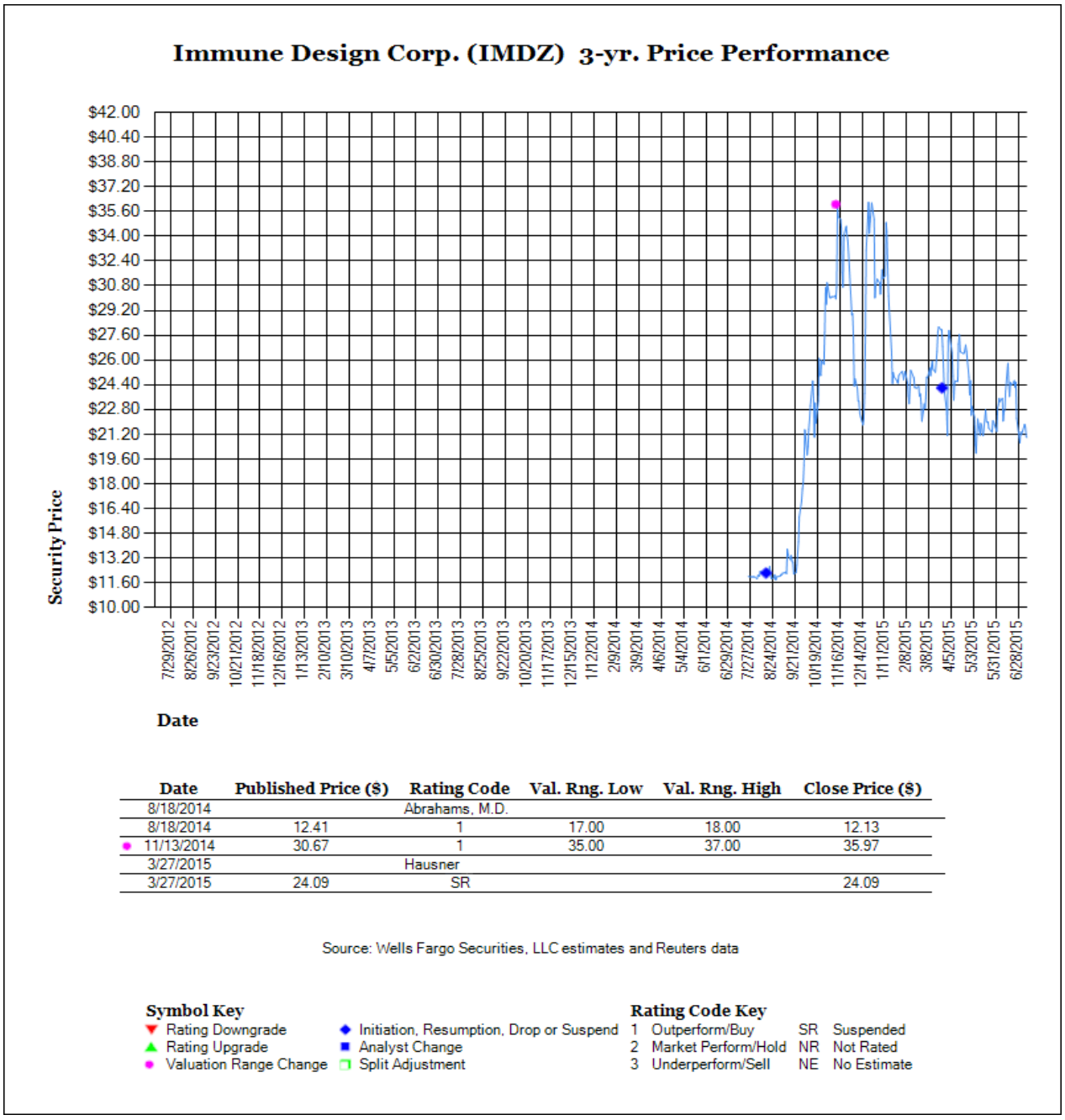
(2) Reflects sales of GLAAS to collaborators

(3) Includes amortization of potential upfront for ex-U.S. CMB305 partnership, potential milestones

Company Description:

Immune Design Corporation (IMDZ) is a clinical stage biopharmaceutical company (San Francisco, CA, and Seattle, WA) which is developing novel immunotherapies for cancer and infectious diseases. IMDZ is developing an in vivo targeting approach to specifically target key regulatory immune cells called dendritic cells (DCs) to enable the body's own immune system to fight cancer and other diseases. IMDZ's technology platform consists of two main components, ZVex and GLAAS. ZVex is a virus-based cell targeting vector that specifically delivers tumor (or other immunogen) antigen of interest to DCs such that robust induction of cytotoxic T-cells in effect fights the disease. IMDZ's other platform is Glucopyranosyl Lipid A Stable Emulsion Adjuvant Systems (GLAAS). GLAAS is based on a fully synthetic molecule similar to lipid A, called GLA. GLA has strong immune-stimulating properties and is an agonist for the toll-like 4 receptor on DC's. There are several pipeline products under clinical development: Phase I studies are underway for LV305 (ZVex-NY-ESO-1), G305 (GLAAS-NY-ESO-1) in solid tumors, CMB305 (ZVex-NY-ESO-1 plus GLAAS) in solid tumors, and G100 (GLAAS) in Merkel cell carcinoma, sarcoma, and non-Hodgkin's Lymphoma.

Required Disclosures



Date	Published Price ($)	Rating Code	Val. Rng. Low	Val. Rng. High	Close Price ($)
8/18/2014		Abrahams, M.D.			
8/18/2014	12.41	1	17.00	18.00	12.13
11/13/2014	30.67	1	35.00	37.00	35.97
3/27/2015		Hausner			
3/27/2015	24.09	SR			24.09

Source: Wells Fargo Securities, LLC estimates and Reuters data

Symbol Key

- Rating Downgrade
- Rating Upgrade
- Valuation Range Change
- Initiation, Resumption, Drop or Suspend
- Analyst Change
- Split Adjustment

Rating Code Key

1	Outperform/Buy	SR	Suspended
2	Market Perform/Hold	NR	Not Rated
3	Underperform/Sell	NE	No Estimate

Additional Information Available Upon Request

I certify that:
1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
2) No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by me in this research report.

- Wells Fargo Securities, LLC maintains a market in the common stock of Immune Design Corp.

- Wells Fargo Securities, LLC or its affiliates managed or comanaged a public offering of securities for Immune Design Corp. within the past 12 months.
- Wells Fargo Securities, LLC or its affiliates intends to seek or expects to receive compensation for investment banking services in the next three months from Immune Design Corp.
- Wells Fargo Securities, LLC or its affiliates received compensation for investment banking services from Immune Design Corp. in the past 12 months.
- Immune Design Corp. currently is, or during the 12-month period preceding the date of distribution of the research report was, a client of Wells Fargo Securities, LLC. Wells Fargo Securities, LLC provided investment banking services to Immune Design Corp.

IMDZ: Risks include: LV305, CMB305, and G100 failing to show clinical efficacy, a safety signal, immunotherapy competition, and manufacturing.

Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC's research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm, which includes, but is not limited to investment banking revenue.

STOCK RATING

1=Outperform: The stock appears attractively valued, and we believe the stock's total return will exceed that of the market over the next 12 months. BUY
2=Market Perform: The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
3=Underperform: The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

SECTOR RATING

O=Overweight: Industry expected to outperform the relevant broad market benchmark over the next 12 months.
M=Market Weight: Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
U=Underweight: Industry expected to underperform the relevant broad market benchmark over the next 12 months.

VOLATILITY RATING

V = A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: July 10, 2015

45% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Outperform.	Wells Fargo Securities, LLC has provided investment banking services for 43% of its Equity Research Outperform-rated companies.
54% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Market Perform.	Wells Fargo Securities, LLC has provided investment banking services for 32% of its Equity Research Market Perform-rated companies.
1% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Underperform.	Wells Fargo Securities, LLC has provided investment banking services for 36% of its Equity Research Underperform-rated companies.

Important Disclosure for International Clients

EEA – The securities and related financial instruments described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL a regulated person under the Act. WFSIL does not deal with retail clients as defined in the Markets in Financial Instruments Directive 2007. The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

Australia – Wells Fargo Securities, LLC is exempt from the requirements to hold an Australian financial services license in respect of the financial services it provides to wholesale clients in Australia. Wells Fargo Securities, LLC is regulated under U.S. laws which differ from Australian laws. Any offer or documentation provided to Australian recipients by Wells Fargo Securities, LLC in the course of providing the financial services will be prepared in accordance with the laws of the United States and not Australian laws.

Canada – This report is distributed in Canada by Wells Fargo Securities Canada, Ltd., a registered investment dealer in Canada and member of the Investment Industry Regulatory Organization of Canada (IIROC) and Canadian Investor Protection Fund (CIPF).

Hong Kong – This report is issued and distributed in Hong Kong by Wells Fargo Securities Asia Limited ("WFSAL"), a Hong Kong incorporated investment firm licensed and regulated by the Securities and Futures Commission of Hong Kong ("the SFC") to carry on types 1, 4, 6 and 9 regulated activities (as defined in the Securities and Futures Ordinance (Cap. 571 of The Laws of Hong Kong), "the SFO"). This report is not intended for, and should not be relied on by, any person other than professional investors (as defined in the SFO). Any securities and related financial instruments described herein are not intended for sale, nor will be sold, to any person other than professional investors (as defined in the SFO). The author or authors of this report is or are not licensed by the SFC. Professional investors who receive this report should direct any queries regarding its contents to Mark Jones at WFSAL (email: wfsalresearch@wellsfargo.com).

Japan – This report is distributed in Japan by Wells Fargo Securities (Japan) Co., Ltd, registered with the Kanto Local Finance Bureau to conduct broking and dealing of type 1 and type 2 financial instruments and agency or intermediary service for entry into investment advisory or discretionary investment contracts. This report is intended for distribution only to professional investors (Tokutei Toushika) and is not intended for, and should not be relied upon by, ordinary customers (Ippan Toushika).

The ratings stated on the document are not provided by rating agencies registered with the Financial Services Agency of Japan (JFSA) but by group companies of JFSA-registered rating agencies. These group companies may include Moody's Investors Services Inc., Standard & Poor's Rating Services and/or Fitch Ratings. Any decisions to invest in securities or transactions should be made after reviewing policies and methodologies used for assigning credit ratings and assumptions, significance and limitations of the credit ratings stated on the respective rating agencies' websites.

About Wells Fargo Securities
Wells Fargo Securities is the trade name for the capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including but not limited to Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of NYSE, FINRA, NFA and SIPC, Wells Fargo Institutional Securities, LLC, a member of FINRA and SIPC, Wells Fargo Prime Services, LLC, a member of FINRA, NFA and SIPC, Wells Fargo Securities Canada, Ltd., a member of IIROC and CIPF, Wells Fargo Bank, N.A. and Wells Fargo Securities International Limited, authorized and regulated by the Financial Conduct Authority.

This report is for your information only and is not an offer to sell, or a solicitation of an offer to buy, the securities or instruments named or described in this report. Interested parties are advised to contact the entity with which they deal, or the entity that provided this report to them, if they desire further information. The information in this report has been obtained or derived from sources believed by Wells Fargo Securities, LLC, to be reliable, but Wells Fargo Securities, LLC does not represent that this information is accurate or complete. Any opinions or estimates contained in this report represent the judgment of Wells Fargo Securities, LLC, at this time, and are subject to change without notice. For the purposes of the U.K. Financial Conduct Authority's rules, this report constitutes impartial investment research. Each of Wells Fargo Securities, LLC and Wells Fargo Securities International Limited is a separate legal entity and distinct from affiliated banks.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE