April 10, 2014

OUTPERFORM

Reason for report:

COMPANY UPDATE

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ONCOMED PHARMACEUTICALS, INC.

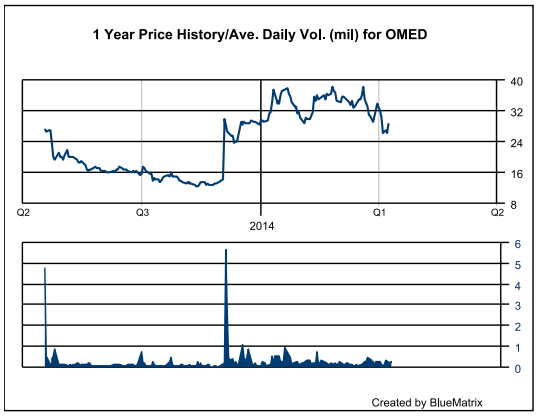
AACR Updates Showcase Early Candidates and Biomarker Strategies

• **Bottom Line:** We were in attendance at the 2014 AACR conference that concluded yesterday, where OMED had 8 poster presentations on its broad pipeline of clinical and preclinical candidates as well as an invited talk at a methodology workshop. Our takeaways include an early look at OMED's RSPO (cancer pathway) program, data supporting dual targeting of DLL4/VEGF pathway with a biospecific antibody as well as biomarker data that could support patient selection approaches in the clinical stage programs, including demcizumab (anti-DLL4, Notch pathway), vantictumab (anti-Fzd7, WNT pathway), OMP-54F28 (Fzd8-Fc, WNT pathway), OMP-59R5 (anti-Notch2/3, Notch pathway). In total, OMED has 15 clinical trials targeting five anti-cancer stem cell therapeutics. We see further advancement in clinical development with rich catalysts in the next 6-12 months. We reiterate OP rating and $37 valuation for OMED.

• **Anti-RSPO3, the lead candidate in the RSPO program, shows good preclinical activities in colon cancer models (#1764).** Three antibodies against RSPO1, RSPO2, RSPO3 were tested in xenograft nude mouse models with various tumor cells including ovarian, pancreatic, colon, and lung cancers. Generally antibody monotherapy had some activity in each of the tumor types except for anti-RSPO2 in a lung cancer model. The activity of anti-RSPO3 is especially notable in colon cancer with RSPO overexpression where complete growth suppression was seen. Combination of an anti-RSPO antibody with chemotherapy generally outperformed chemotherapy or the antibody alone and was impressive for anti-RSPO3 / chemo combination in colon and ovarian cancer models and resulted in tumor regression. An IND filing for the anti-RSPO3 antibody is planned for late 2014 / early 2015 and as a target RSPO has generated considerable interest in the industry.

• **Updated preclinical data support additive activity of dual targeting DLL4/VEGF bispecific antibody (#207).** OMED presented preclinical data of a novel bi-specific antibody against DLL4 and VEGF pathways, both of which play a critical role in anti-angiogenesis and tumor growth. The bi-specific antibody showed significant anti-tumor activity in various xenograft tumor models. The activity against vasculature appears more dominant than anti-DLL4 activity. The bi-specific antibody also showed additive tumor inhibition vs. individual component. These update data continue to support clinical development for the DLL4/VEGF bi-specific antibody in a variety of cancers and an IND is on track for 2H:14.

Key Stats:	**(NASDAQ:OMED)**
S&P 600 Health Care Index:	**1,272.09**
Price:	**$28.78**
Price Target:	$37.00
Methodology:	Probability weighted NPV, 10% discount rate
52 Week High:	$42.34
52 Week Low:	$12.07
Shares Outstanding (mil):	28.4
Market Capitalization (mil):	$817.4
Book Value/Share:	$(5.41)
Cash Per Share:	$11.15
Dividend (ann):	$0.00
Dividend Yield:	0.0%



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2013A	$2.9	$2.9	$12.9	$19.0	$37.8	($0.39)	($0.43)	($0.15)	($0.15)	($1.93)	NM
2014E - New	**$16.5**	**$17.5**	**$17.5**	**$17.5**	**$69.0**	**($0.19)**	**($0.19)**	**($0.22)**	**($0.25)**	**($0.85)**	**NM**
2014E - Old	--	--	--	--	$69.0	--	--	--	--	$0.25	NM
2015E	--	--	--	--	$70.0	--	--	--	--	($0.87)	NM

Source: Company Information and Leerink Partners LLC Research
Revenues in M; EPS are GAAP. OMED went public via an IPO on 7/18/13.

INVESTMENT THESIS

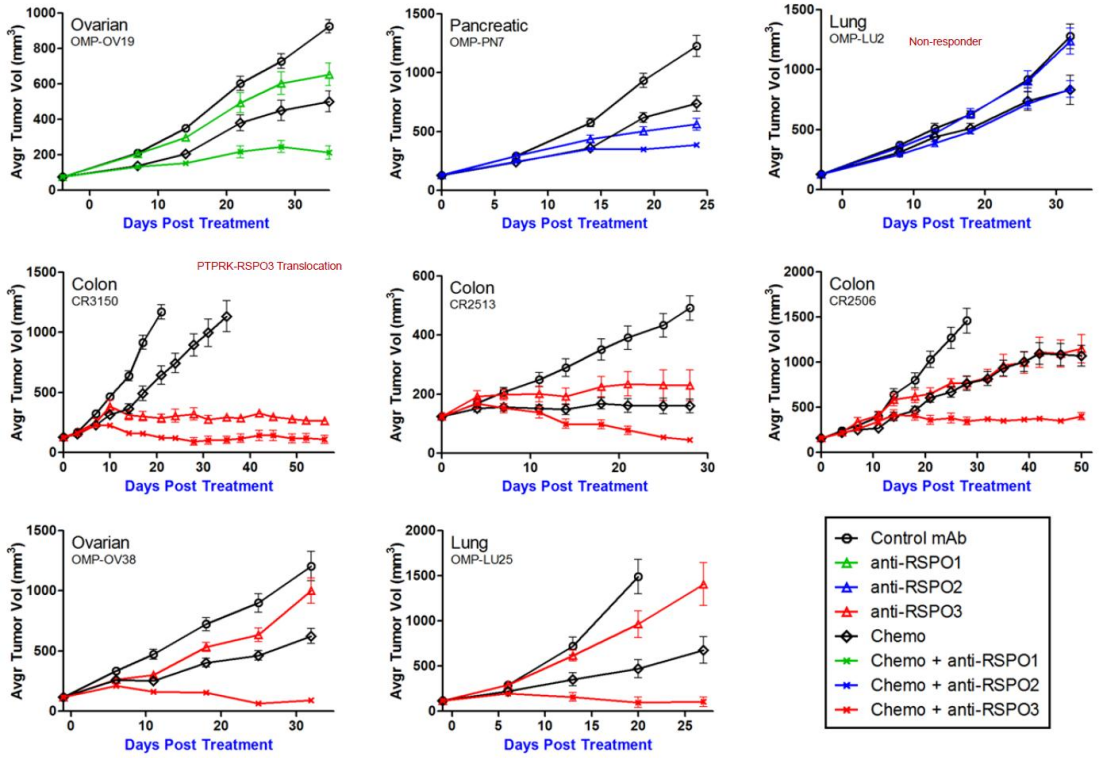
OMED is the longest-standing cancer stem cell (CSC)-focused biotech company. It has a strong technology platform centered on the identifying and targeting of the critical pathways for cancer stem cells, coupled with monitoring specific surface markers. OMED has developed full pipeline assets internally and possesses a portfolio of 5 anti-CSC monoclonal antibodies in clinical development. The breadth of the pipeline with a sharp focus on CSC provides multiple shots on goal. All 5 of OMED's clinical candidates are first in class. Together with 2 additional candidates that are also likely first in class and could enter the clinic in 2014, OMED's portfolio of agents systematically target several of critically important pathways in cancer -- Notch, Wnt, and RSPO-LGR. Although the ultimate success remains to be proven clinically, validations of these targets include mutations identified in genome sequencing. All of OMED's candidates are antibodies or protein-based macromolecules, and its portfolio represents one of the largest clusters of biologics in a small-cap biotech company. OMED has formed partnerships with GSK (MP), Bayer and CELG (OP) to co-develop CSC therapeutics targeting the Notch, Wnt, RSPO-LGR and other undisclosed signaling pathways. The deals provided a cost-effective development path for OMED. In addition, these partnerships provide an independent validation for the platform and targeted CSC therapies. The partnership formed with CELG on Demcizumab, the most advanced anti-Dll4 antibody targeting the Dll4/Notch signaling pathway, may alleviate some concerns on cardiovascular risk (seen as a class toxicity) which could be manageable through truncated dosing. Additionally, the bi-specific Dll4/VEGF candidate could provide enhanced activity while potentially mitigating CV toxicity owing to its VEGF target.

OMP-59R5 (Notch2/3) screening methodology and preclinical data continue supporting trials in pancreatic and small cell lung cancers (#910 & #3048). OMP-59R5 is a partnered program with GSK and currently in Phase Ib/II development. A screening technology in pancreas tumor model appears to show consistent results of NOTCH3 level across different specimen types, which is important for the ALPINE trial in pancreatic cancer (#910). In a patient derived xenograft model from small cell lung cancer (SCLC) tumors, OMP-59R5 significantly reduced tumor recurrence when in combination with chemotherapy (#3048). A serial transplantation study showed that OMP-59R5 reduced the cancer stem cell (CSC) frequency and modulated the gene expression associated with Notch signaling both in the tumor and in the microenvironment. These updated finding continue to support the ongoing PINNACLE trial in SCLC.

A 6-gene biomarker identified in breast cancer may help improve clinical success for vantictumab (OMP-18R5, Fzd7) (#2830). OMED identified a 6-gene biomarker (FBXW2/WIF1/CCND2/DKK1/RHOU /CTBP2) using breast cancer xenograft models (mostly triple negative breast cancer, TNBC). Data from additional 6 breast cancer xenograft models (HER2-negative) showed successful prediction when applying these biomarkers in prediction of response for vantictumab in combination with paclitaxel. The 6-gene biomarker was estimated to present ~60% of HER2-negative and 55% of TNBC patients. These data are supportive to use the 6-gene biomarker as a select biomarker evaluating vantictumab/paclitaxel in metastatic HER2- breast cancer.

Model Updates. OMED reported 4Q:13 earnings on March 18, 2014. Total revenue was $19.0M vs. our estimate of $20.5M. EPS was ($0.15) vs. our estimate of $0.04. OMED reported $316M in cash as of 4Q:13, including a capital raise with net proceeds of $22M and $155M milestone payment from CELG. Together with potential milestone payments, OMED's cash position could support operation through clinical development and commercialization for key products. We update our model to reflect the deal terms and these changes. As a result, our 2014 revenue estimates remains the same, $69M and our EPS forecast changes from 0.25 to ($0.85) for 2014.

Inhibition of RSPO Signaling Reduces Tumor Growth in Xenograft Models



Source: Gurney et al, 2014 AACR, #1764

OMED – Upcoming Events

Drug	Time	Event
Notch Pathway		
OMP-59R5 (anti-Notch2/3)	2Q:14	Advancing ALPINE in front line pancreatic cancer and PINNACLE in front line small cell lung cancer
Demcizumab ('21M18, anti-DLL4)	2014	Initiation of Phase 2 (Paclitaxel+DEM) in platinum resistant ovarian cancer in NSCLC and pancreatic cancer
DLL4/VEGF	2H:14	IND filing
Wnt Pathway		
Vantictumab ('18R5, anti-Fzd7)	2014	Complete enrollment in 3 Phase I trials
OMP-54F28 (anti-Fzd8-Fc)	2014	Complete enrollment in 3 Phase I trials
RSPO-LGR Pathway		
	Late'14/early'15	IND filing

Source: Company Reports

VALUATION

Our valuation is $37 for OMED. We assume the demcizumab, anti-DLL4/VEGF program and the other 8 partner candidates launch in the front-line settings for pancreatic cancer, NSCLC (non-small cell lung cancer) and ovarian cancer in 2019-22 in the U.S. and in 2020-23 in the EU. Our royalty assumption is 12-15% for two Notch inhibitors, 12-16% for the first Wnt inhibitor, 5-10% for the second Wnt inhibitor, 10-15% for demcizumab, 5-13% for other four biologic candidates partnered with CELG. Our projection for peak penetration is 12% for NSCLC, 20% for pancreatic cancer, and 18% for ovarian cancer in the U.S. Our projection for probability-weighted (10%) sales for each asset reaches $245M by 2030, two years after patent expiration. We also assign 2X terminal value multiple to account for challenging generic entry for large molecule drugs. Our valuation is based on NPV and sum-of-the-part analysis using a discount rate of 10%, which we believe is appropriate given probability-weighted sales projection.

RISK TO VALUATION

- Development risk – All of pipeline assets are still in early-stage clinical or preclinical development and they could fail at each development stage. OMED's agents have been all first-in-class. While this improved the upside upon success, the developmental risk may be higher.
- As therapies targeting cancer stem cells by design may only affect a small subpopulation of the tumor cells, observing an anti-tumor signal in early clinical development may be more challenging and demonstration of clinical efficacy may require a randomized study with a longer follow-up.
- Financing risk – OMED's cash could be sufficient to fund operations through the readout of most current ongoing/planned Phase I/II trials.

OMED Income Statement	2011A	2012A	Mar-13A	Jun-13A	Sep-13A	Dec-13A	2013A	Mar-14E	Jun-14E	Sep-14E	Dec-14E	2014E	2015E	2016E	2017E
Collaboration revenue - related party	3,365	15,970	493	493	493	493	1,972	493	493	493	493	1,972	0		
Collaboration revenue	28,000	8,689	2,439	2,439	12,439	18,490	35,807	16,000	17,000	17,000	17,000	67,000	70,000	72,000	142,000
Grant revenue	44	22	0	0	0	0	0					0			
Demcizumab sales															
Royalties															
Total revenue	31,409	24,681	2,932	2,932	12,932	18,983	37,779	16,493	17,493	17,493	17,493	68,972	70,000	72,000	142,000
COGS															
% of revenue															
R&D	40,058	39,893	9,576	10,475	13,126	16,871	50,048	17,000	18,000	19,000	20,000	74,000	76,220	78,507	80,862
G&A	6,591	7,157	1,985	1,952	3,175	4,518	11,630	5,000	5,000	5,000	5,000	20,000	20,600	22,660	24,926
% of revenue															
Total operating expenses	46,649	47,050	11,561	12,427	16,301	21,389	61,678	22,000	23,000	24,000	25,000	94,000	96,820	101,167	105,788
Net income (loss) from operations	(15,240)	(22,369)	(8,629)	(9,495)	(3,369)	(2,406)	(23,899)	(5,507)	(5,507)	(6,507)	(7,507)	(25,028)	(26,820)	(29,167)	36,212
Interest expenses	(38)	(6)	0	0	0	0	0					0	0	0	
Other income	244	140	31	(149)	(117)	7	(228)					0	0	0	
Total other income (expenses)	206	134	31	(149)	(117)	7	(228)	0	0	0	0	0	0	0	0
Net income (loss) before income taxes	(15,034)	(22,235)	(8,598)	(9,644)	(3,486)	(2,399)	(24,127)	(5,507)	(5,507)	(6,507)	(7,507)	(25,028)	(26,820)	(29,167)	36,212
Provision (benefit) for income taxes	0	0	0	0	0	1,944	1,944					0	0		
Tax rate															
Net income (loss)	(15,034)	(22,235)	(8,598)	(9,644)	(3,486)	(4,343)	(26,071)	(5,507)	(5,507)	(6,507)	(7,507)	(25,028)	(26,820)	(29,167)	36,212
Net loss per share	**(15.40)**	**(21.30)**	**(0.39)**	**(0.43)**	**(0.15)**	**(0.15)**	**(1.93)**	**(0.19)**	**(0.19)**	**(0.22)**	**(0.25)**	**(0.85)**	**(0.87)**	**(0.90)**	**0.99**
Basic shares	976	1,044	22,265	22,272	23,179	28,361	13,530	29,480	29,483	29,486	29,489	29,484	30,959	32,507	34,132
Dilutive shares			24,885	24,854	26,150	31,291	26,795	31,980	31,983	31,986	31,989	31,984	33,484	35,057	36,708

Source: Company Reports and Leerink Partners

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

Our valuation is $37 for OMED. We assume the demcizumab, anti-DLL4/VEGF program and the other 8 partner candidates launch in the front-line settings for pancreatic cancer, NSCLC (non-small cell lung cancer) and ovarian cancer in 2019-22 in the U.S. and in 2020-23 in the EU. Our royalty assumption is 12-15% for two Notch inhibitors, 12-16% for the first Wnt inhibitor, 5-10% for the second Wnt inhibitor, 10-15% for demcizumab, 5-13% for other four biologic candidates partnered with CELG. Our projection for peak penetration is 12% for NSCLC, 20% for pancreatic cancer, and 18% for ovarian cancer in the U.S. Our projection for probability-weighted (10%) sales for each asset reaches $245M by 2030, two years after patent expiration. We also assign 2X terminal value multiple to account for challenging generic entry for large molecule drugs. Our valuation is based on NPV and sum-of-the-part analysis using a discount rate of 10%, which we believe is appropriate given probability-weighted sales projection.

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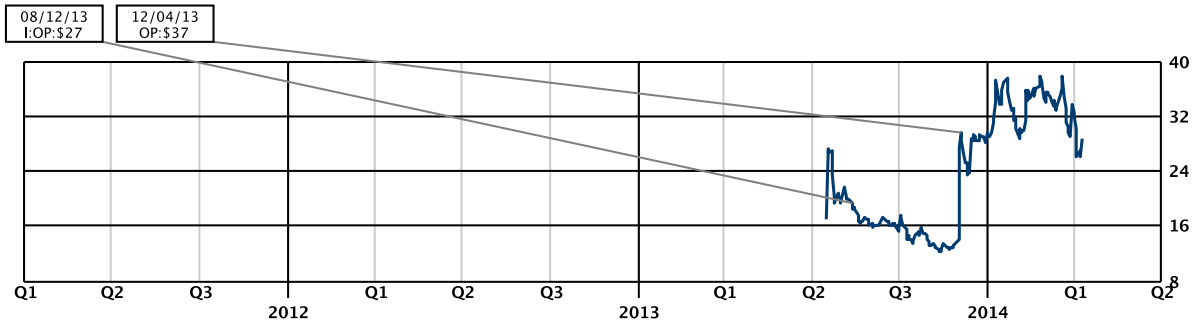
Rating and Price Target History for: OncoMed Pharmaceuticals, Inc. (OMED) as of 04-09-2014

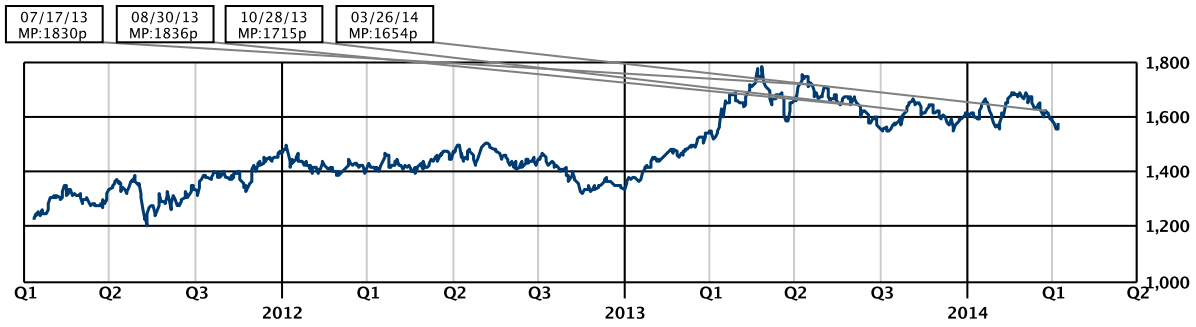


On June 11, 2013, Leerink Swann began a transition to specific price targets for the stocks under its coverage, replacing valuation ranges.

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

Created by BlueMatrix

Rating and Price Target History for: GlaxoSmithKline plc (GSK LN) as of 04-09-2014



Leerink Swann initiated coverage of GSK LN with a Market Perform rating on Nov. 24, 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

Distribution of Ratings/Investment Banking Services (IB) as of 03/31/14				
			IB Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY [OP]	131	68.23	46	35.11
HOLD [MP]	61	31.77	3	4.92
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 OncoMed Pharmaceuticals, Inc. .

Leerink Partners LLC makes a market in OncoMed Pharmaceuticals, Inc.

Leerink Partners LLC is willing to sell to, or buy from, clients the common stock of GlaxoSmithKline plc on a principal basis.

In the past 12 months, an affiliate of the Firm, Leerink Swann Consulting LLC, has received compensation for providing non-securities services to: GlaxoSmithKline plc.

Leerink Partners LLC has acted as the manager for a public offering of OncoMed Pharmaceuticals, Inc. in the past 12 months.

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