

## Xencor (XNCR)

### Q4 Update - XmAb7195 Data YE:14, Attractive Immuno-Oncology Platform of Bi-Specifics and Advanced Antibodies Underappreciated - Reiterate OUTPERFORM

- Xencor reported FY 2013 revenues of \$10M and EPS of (\$3.85). The company ended 2013 with \$78M in cash and equivalents. Current cash is estimated to fund operations through 2016; we estimate a 2014 net cash burn of \$23M.
- XmAb7195 is a Xolair (omalizumab) bio-superior for the treatment of allergic asthma and other IgE mediated diseases that is set to enter the clinic in H1:14 with data by YE:14. In '7195 XNCR's Fc-modifications impart two novel mechanisms of action to '7195, resulting in superior clearance and reduction of IgE levels compared to Xolair and high-affinity anti-IgE candidates in the clinic.
- Importantly, we believe that XmAb7195, though just entering the clinic, is likely to be safe and have anti-IgE activity given that the component FC domain module is currently in Phase II trials with XmAb5871 and the CDR region of the FV domain has been validated in the case of Xolair. We believe the Street has overestimated the risk in this candidate and we expect Phase I data in Q4:14 to represent a significant derisking event for this compound.
- Xencor will advance a bi-specific candidate into IND-enabling studies by mid-2014 and plans an IND in 2015. Xencor has disclosed two bi-specific candidates with targets CD3xCD38 and CD3xCD123. We anticipate bi-specific antibodies to substantially drive the value of the company as they enter the clinic. Xencor's Fc-engineered antibody technologies enable the creation of potentially best-in-class, novel, long-half-life bispecifics that we believe have been overlooked. Importantly, experts we spoke with highlighted the need for long-lived bi-specifics; emphasizing half-life over potency may be necessary to elicit maximal clinical effect. Incorporation of Xencor's Fc-domains allows for bi-specifics with antibody-like half-lives and high production yields that are potentially superior to previous generations of bi-specific technology.
- Upcoming catalysts include clinical trial data for '7195, YE:14, data for MOR208 in ALL and NHL potentially at ASH and top-line data from XmAb5871 in rheumatoid arthritis in H2:14.
- Reiterating our OUTPERFORM rating and \$18 price target. Our \$18 price target is derived from the sum of multiples on sales and royalties from XNCR's proprietary and partnered products each discounted back to YE:14 (Pg 2).

March 25, 2014

Price  
**\$11.47**

Rating  
**OUTPERFORM**

12-Month Price Target  
**\$18**

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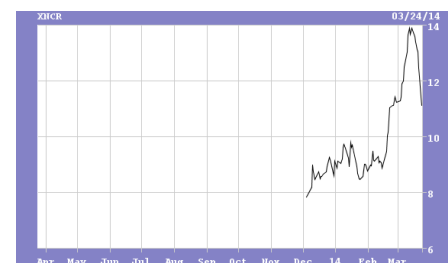
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#### Company Information

Shares Outst (M)	31.4
Market Cap (M)	\$359.7
52-Wk Range	\$5.75 - \$10.90
Book Value/sh	\$10.67
Cash/sh	\$2.49
Enterprise Value (M)	\$281.7
LT Debt/Cap %	0.0
Cash Burn (2014) (M)	\$23.2
Current Cash (M)	\$78.0

#### Company Description

Xencor is a clinical-stage biopharmaceutical company focused on discovering and developing engineered monoclonal antibodies to treat severe and life-threatening diseases with unmet medical needs.



Source: Thomson Reuters

FYE Dec	2013E	2014E			2015E		
REV	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	-A	\$2.5E		\$1.7E	2.5E		\$2.1E
Q2 Jun	-A	2.5E		\$1.7E	2.5E		\$2.1E
Q3 Sep	8.4A	2.5E		\$1.7E	2.5E		\$2.1E
Q4 Dec	1.7E	\$2.5E		\$1.7E	2.5E		\$2.1E
Year*	\$10.2E	\$10.0E		\$1.7E	\$10.0E		\$2.1E
Change	49%	--		--	--		--
EPS	2013E	2014E			2015E		
	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	-A	(\$0.14)E	(\$0.09)E	(\$0.12)E	(\$0.16)E		(\$0.16)E
Q2 Jun	-A	(\$0.14)E	(\$0.11)E	(\$0.12)E	(\$0.16)E		(\$0.16)E
Q3 Sep	(782.22)A	(\$0.15)E	(\$0.12)E	(\$0.12)E	(\$0.15)E		(\$0.16)E
Q4 Dec	(0.17)E	(\$0.17)E	(\$0.14)E	(\$0.12)E	(\$0.15)E		(\$0.16)E
Year*	(\$3.85)E	(\$0.60)E	(\$0.14)E	(\$0.12)E	(\$0.62)E		(\$0.16)E
P/E	--	--		--	--		--
Change	98%	--		--	--		--

Consensus estimates are from Thomson First Call.

\* Numbers may not add up due to rounding.

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Risks to the attainment of our price target include 1) failure to reach sales expectations for XmAB7195, XmAb5574, XmAb5871 2) failure in the clinic of either XmAB7195, XmAb5574, XmAb5871, 3) changes or discontinuation of Xencor's partnerships for XmAb5574, XmAb5871 or other partnered programs.

## Investment Thesis

Xencor is a biopharmaceutical protein engineering company focused on developing and commercializing engineered monoclonal antibodies to treat severe and life-threatening diseases with unmet medical needs. The company has developed a substantial antibody toolkit based upon their proprietary Fc-engineering platform. Xencor has systematically and rationally engineered novel antibody Fc-domains that augment the ability of antibodies in several ways including: these include immune inhibitor Fc domains that target inhibitory and clearance functionality (FcγRIIb target); cytotoxic Fc domains, that increase cytotoxicity/ADCC (targeting FcγRIIIa and FcγRIIIa receptors), Xtend Fc domains that extend half-life by targeting receptor FcRn on endothelial cells as well as novel bispecifics. We believe this best-in-class platform, which has produced two partnered products in Phase II studies, 6 internal early stage programs and a total of 7 collaborations is the core of Xencor's value.

Importantly Xencor has also created Fc variants that enable heterodimeric Fv domains for the creation of novel bispecific antibodies. We believe that Xencor's bispecific candidates could represent a significant value driver for the company as they enter the clinic potentially in 2015.

Xencor's lead candidate, XmAb7195, an anti-IgE antibody therapy for the treatment of allergic asthma, employs Fc-modification to enhance FcγRIIb binding up to 400x that enhances liver clearance of IgE and through co-engagement with B-cell bound IgE suppress IgE production. These new functionalities, in our opinion, make XmAb7195 a best-in-class anti-IgE therapy and highlight potential broad utility of Xencor's technology. The Fc-domain in XmAb7195 is also utilized in their Phase II compound XmAb5871, supporting the safety and tolerability of these Fc-modifications. XmAb7195 is in IND-enabling studies and a phase I trial is planned for early 2014. Importantly, with data including IgE levels, a marker of activity and potential clinical benefit expected in H2:14.

We believe, that partnerships with Amgen, Alexion, MorphoSys, Janssen, Merck, Boehringer Ingelheim, CSL are validating of Xencor's approach and efficiently capitalize Xencor's operations with up to \$1.31 billion in milestone payments as well as additional royalties (single to double digit percentages). XmAb5871, Xencor's Phase II candidate for autoimmune disorders, optioned to Amgen, represents a novel targeted strategy for selectively inhibiting B-cells without depletion. XmAb5871 targets both CD19 and FcγRIIb to uniquely inhibit B-cell activity without depletion a potentially broadly applicably and valuable approach in autoimmune disorders and oncology. Top-line data from a Phase 2a study is anticipated late 2014. XmAb5574/MOR208, partnered with MorphoSys is Xencor's other CD19 therapy that employs Fc-engineered higher affinity for FcγRIIIa and FcγRIIIa receptors to potently deplete CD19 expressing B-cells offering utility in B-cell malignancies where CD20 therapies don't work and ahead of depleters such as rituximab.

## Valuation Methodology

We arrive at our \$18 price target by a sum of the parts analysis. We ascribe \$12/share to applying a 6x multiple of our estimated peak revenues of \$1.2 billion (2022) for XmAb7195 in severe asthma and IgE mediated diseases, discounted 45% annually. We ascribe \$6/share to Xencor's two partnered programs XmAb5871 and XmAb5574 based on royalties (mean 10%) from sales in 2022 of \$1 billion and \$600 million discounted 45% and 35% annually, respectively. Similarly we also arrive at our \$6/share value to Xencor's potential milestones based upon the NPV discounted 45% over an estimated 10 year realization period. We do not value Xencor's early stage pipeline novel bi-specifics at this time.

## Sum-of-the-Parts Valuation Components

Product	Indication	Est. Addressable Market	Penetration	Annual Cost	Sales	Multiple	Royalty rate	Year	Discount rate	Value per share
XmAb7195	Severe asthma	350,000*	15%	\$22K	\$1.2B	6x	NA	2022	45%	\$12
XmAb5574	ALL	16,000	38%	\$100K	\$600M	15x	~10%	2022	35%	\$3
XmAb5871	RA	460,000	10%	\$25K	\$1.2B	15x	~10%	2022	45%	\$3
<b>Total</b>										<b>\$18</b>

\*US market only

## Key Points

- Xencor has developed a differentiated, systematic, Fc-engineering platform that has yielded antibodies capable of both positively and negatively regulating the immune system, extending half-lives, or creating novel bi-specifics
- Xencor's Fc-engineered antibodies feature as much as 1000 fold enhanced ADCC, 3x improvements in half-life and durable B-cell inhibition.
- The company has engineered Fc variants that enable heterodimeric Fv domains for the creation of novel bi-specific antibodies with antibody-like half-life (6-7 days), significant flexibility in targeting domains and improved production yields
- Xencor's unique inhibitory enhanced binding FcγRIIIa domain and co-engagement with Fv-targets facilitates differentiated activity of their two lead candidates from similarly targeted antibodies in the clinic
- XmAb7195 is an IgE targeted mAb that offers differentiated mechanisms of action allowing greater than 10-fold IgE reductions compared to Xolair. We expect XmAb7195 to be safe and well tolerated based on preliminary but informative pre-clinical studies, similarity to Xolair and natural history of genetically IgE deficient patients. Phase I data for '7195 including IgE levels by YE:14
- XmAb5871 for autoimmune disorders inhibits B-cell activation via the co-engagement with the BCR, but does not deplete B-cells.
- Xencor's Fc modification technologies has been validated by several focused partnership worth in excess of \$1.3 billion should all milestones be exercised/achieved that maintain the companies ownership of their platform

## Milestones

H1:14	Initiation of a Phase Ia trial of XmAb7195 (IgE, immune inhibitor Fc) in healthy subjects
Q2:14	PDUFA date for Xolair in Chronic Idiopathic Urticaria
Mid-2014	Initiation of IND-enabling studies for a bispecific candidate
H2:14	Top-line data from the Phase II trial of XmAb5574/MOR208 (CD19, enhanced ADCC Fc) in ALL
H2:14	Top-line data from the Phase IIa trial of XmAb5871 (CD19, immune inhibitor Fc) in rheumatoid arthritis
Dec 6-9, 2014	Potential full data from a Phase II trial of MOR208 in ALL at ASH
Dec 6-9, 2014	Potential interim data from a Phase II trial of MOR208 in NHL at ASH
YE:14	Top-line data from the Phase Ia trial of XmAb7195 in healthy subjects including IgE reduction
H2:15	Complete recruitment in Phase II trial of MOR208 in CLL
2015	IND filing for a bispecific candidate
2015	Complete recruitment in Phase II trial of MOR208 in NHL
2015	Initiation of a Phase IIb proof-of-concept trial of XmAb5871 (CD19, immune inhibitor Fc) in rheumatoid arthritis
2015	IND filing and first-in-human clinical trials for Xencor's first clinical bispecific candidates
Q1:16	Potential top-line data from the Phase Ib trial of XmAb7195 in mild to moderate asthma
2016	Initiation of a Phase IIb proof-of-concept trial of XmAb7195 in poorly controlled asthma
2017	Potential top-line data from the Phase IIb POC trial of XmAb7195 in patients with poorly controlled asthma
2017	Potential top-line data from the Phase IIb trial of XmAb5871 in patients with rheumatoid arthritis
2017	Potential exercise of Amgen's option to license XmAb5871

**Figure 1: Xencor's Development Pipeline**

Name	Fv Target	Fc Target	Fc Modification	Indication	Status	Next Event	Partner
XmAb7195	IgE	FcγRIIb	Immune Inhibitor	Allergic Asthma	Phase I	Phase Ia trial initiation in H1:14	-
XmAb5871	CD19	FcγRIIb	Immune Inhibitor	Auto-immune	Phase II	Top-line Phase IIa trial data in RA in H1:14	Amgen
XmAb5574/ MOR208	CD19	FcγRIIIa, FcγRIIIa	ADCC	CLL/ALL/NHL	Phase II	Top-line Phase II trial data in NHL and B-ALL potentially in 2016	MorphoSys
Xtend-TNF	TNF	FcRn	X-tend	Auto-immune	Pre-clinical	IND filing, potentially in 2014	-
CD3 x CD38	CD38	-	Bi-specific	Oncology	Pre-clinical	IND filing, potentially in 2014	-
CD3 x CD123	CD123	-	Bi-specific	Oncology	Pre-clinical	IND filing, potentially in 2014	-
Xtend-CTLA4	CTLA4	FcRn	Xtend	Auto-immune	Pre-clinical	IND filing, potentially in 2014	-
Anti-X/CD32b	-	FcγRIIb	Immune Inhibitor	TBD	Discovery	IND filing	-
Undisclosed	-	FcγRIIIa, FcγRIIIa	ADCC	Oncology	Phase I	-	BI
Undisclosed	-	FcγRIIIa, FcγRIIIa	ADCC	Oncology	Phase I	-	BI
Undisclosed	-	FcγRIIIa, FcγRIIIa	ADCC	Oncology	Phase I	-	CSL
Undisclosed	-	FcRn	Xtend	Hematology	Pre-clinical	-	CSL
Undisclosed	-	FcRn	Xtend	Autoimmune	Pre-clinical	-	Janssen
Undisclosed	-	-	Stability	Autoimmune	Pre-clinical	-	Merck
Undisclosed	-	FcRn	Xtend	Undisclosed	Pre-clinical	-	Undisclosed

Source: Company data, Wedbush Securities, Inc.

## ***XmAb7195 – Indications Beyond Asthma***

Xencor has indicated that they may look to further develop XmAb7195 in other indications beyond severe asthma. We note that a highly effective anti-IgE therapy may have broad utility in IgE mediated diseases. Xolair (omalizumab) has, for example, been tested in several studies beyond labeled indications (Figure 2). We highlight that XmAb7195 may offer efficacy to a greater extent than Xolair in indications other than severe asthma that could potentially offer label expansion opportunities or a more rapid route to registration, possibly including in conditions where Xolair has failed to offer efficacy. We believe that chronic idiopathic urticaria (CIU) a chronic and debilitating form of hives with limited treatment options, mastocytosis a mast-cell a rare disorder with a debilitating symptomology caused by mast-cell degranulation, and atopic dermatitis may offer either faster routes to registration or additional label opportunities. In CIU, the FDA approved Genentech/Roche's supplement BLA for Xolair in CIU. We highlight several case reports in systemic mastocytosis that have indicated improvement in symptoms and laboratory findings after treatment with Xolair. We note that efficacy in systemic mastocytosis could be profound and life-altering potentially supporting a rapid route to registration for XmAb7195. Additionally, case reports of Xolair administration in atopic dermatitis are promising, and a 21 patient pilot study found an improvement in an investigator assessed index (IGA).

**Figure 2: Anti-IgE Therapy May be Effective in a Broad Range of Disorders**

Author	Indication	Report type	N	Efficacy
Sheinkopf (2008)	Atopic Dermatitis	Pilot study	21	All pts showed improvement in investigator assessed index
Velling (2011)	Atopic Dermatitis with allergic asthma	Pilot study	9	Dermatitis related QoL (DLQI) improved ~12 points after 52 weeks
Maurer (2013)	Chronic idiopathic or spontaneous Urticaria	Phase III, RCT	323	Itch-severity score improved 9.8 points in 300mg vs. 5.1 points in placebo (p < 0.01) DLQI improved 10.2 pts vs. 6.1 points (p < 0.01)
London (2012)	Bullous pemphigoid	Case reports	2	Successful treatment
Dufour (2012)				
Lebecqu (2012)	allergic bronchopulmonary aspergillosis (ABPA) exacerbation of cystic fibrosis	Case reports	2	Successful treatment
Molderings (2011)	systemic mast cell activation disease	Case reports	4	2 pts achieved persistent clinical response, 1 achieved gradual improvement, 1 discontinued
Kibsgaard (2013)	Systemic Mastocytosis	Case report	4	Several case reports indicate lower frequency of anaphylaxis in SM with Xolair treatment
Douglass (2010)				
Foster (2011)	Gastroenteritis	Pilot study	9	Xolair did not diminish allergen specific T cell response

Source: Company data, Wedbush Securities, Inc.

## ***XmAb7195 – Severe Allergic Asthma and IgE Mediated Disease***

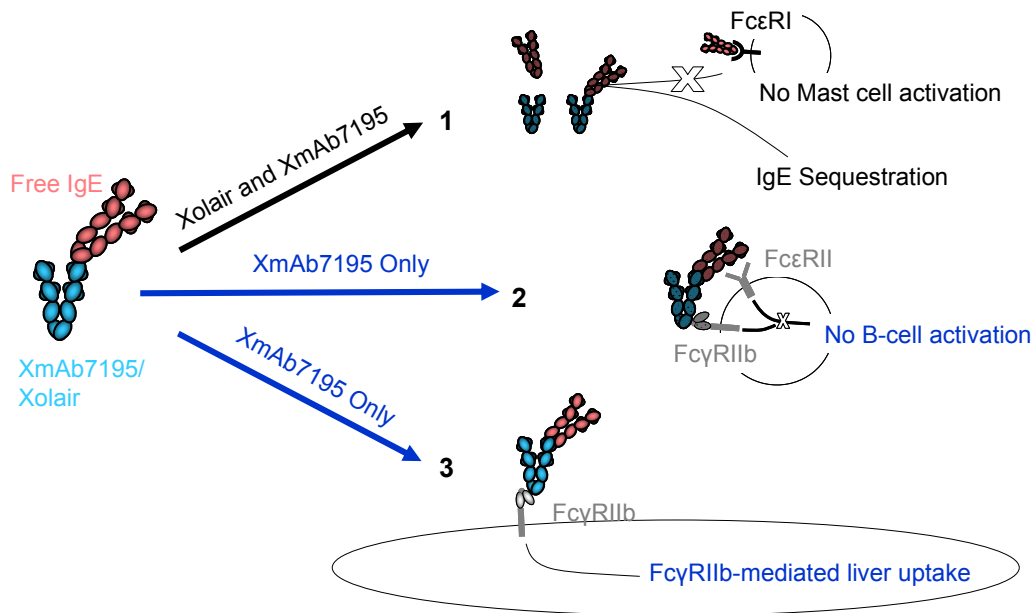
Xencor is planning to file an IND and initiate a Phase Ia single ascending dose trial of XmAb7195 in H1:14. The first-in-human study will assess safety and PK of XmAb7195 administered intravenously (doses to be determined following pre-IND meeting with the FDA) in parallel cohorts including healthy and allergic subjects. The study will assess efficacy in suppression of free and total IgE levels. Following successful safety assessment, a phase Ib multiple ascending dose trial in patients with mild to moderate asthma will be enrolled, potentially in early 2015. Since XmAb7195 shares the same Fc domain as XmAb5871, currently in Phase II studies, we anticipate it will be well tolerated in first-in-human studies. We anticipate data from the Phase 1a study by YE:14.

Xencor also intends to run an intravenous to subcutaneous bridging study in humans to prepare for subcutaneous administration in future clinical trials. The potential Phase II trial of XmAb7195 could occur in patients with poorly controlled asthma, including those ineligible for Xolair due to IgE/BMI restrictions (i.e.: those “off the dosing table”). Trials will likely run for 28-weeks with a 24-week extension to study long-term safety and benefit. Endpoints may include reduction in inhaled corticosteroid (ICS) dose and frequency of asthma exacerbations, similar to the Xolair trials in severe asthma.

## XmAb7195 Reduces IgE Faster, More Potently and for Longer than Xolair

XmAb7195 was designed to work better than the current severe asthma standard of care, Xolair (omalizumab) an anti-IgE antibody. XmAb7195 differs from Xolair by two key mechanisms: 1) inhibiting IgE production by B-cells via binding the inhibitory FcγRIIb receptor and 2) removing bound IgE from the bloodstream via uptake facilitated by FcγRIIb binding to liver sinusoidal endothelial cells (Xolair merely sequesters it). XmAb7195’s differentiated mechanisms reduces IgE 10-fold greater than Xolair *in vivo*. In pre-clinical studies in mice and chimpanzee’s, XmAb7195 resulted in a larger drop and more sustained inhibition of IgE compared to Xolair and was well tolerated. We note that in addition to potential efficacy in severe asthma XmAb7195 may have potential application in other indications beyond those in which Xolair has utility, because of its differentiated mechanisms of action.

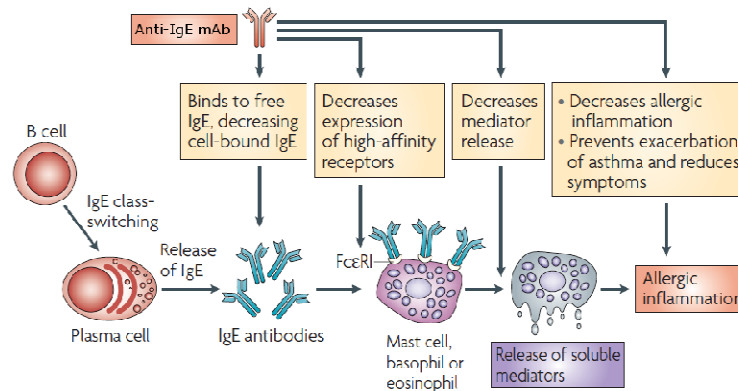
**Figure 3: XmAb7195 – Novel Mechanisms of Action Imparted by Xencor’s Fc-Engineered Technology**



Source: Company data, Wedbush Securities, Inc.

IgE plays a critical role in allergic hypersensitivity reactions (type I hypersensitivity), functionally however, IgE’s role is less clear though it is thought to provide immunity to parasitic infection. IgE is produced by B-cells and starts the allergic cascade by binding to FcεRI on the surface of basophils and mast cells, triggering cytokine release, further B-cell IgE production and ultimately inflammation. Reducing free IgE has been shown to result in profound reductions in elevated white blood cell counts, T-cell and B-cell numbers and FcεR1 receptors on dendritic cells in asthma patients. Additionally, IgE has recently been shown to play a direct role in long-term airway remodeling via interactions with mast cells, dendritic cells, macrophages and B-cells. This raises the possibility that effective anti-IgE therapies will cause long-term benefit independent of their inflammation-mediating effects.

**Figure 4: Anti-IgE Antibodies Function by Mediating Inflammatory Response Pathways**



Source: Holgate and Polosa *Nat Rev Immunol.* 2008 Mar;8(3):218-30

## Financial Model



Christopher N. Marai Ph.D.

3/19/2014

### Xencor Inc.

Annual Financial Results &amp; Projections

(\$ in thousands except per share data)

Ticker: XNCR (Nasdaq)

	FY:12A	FY:13E	Q1:14	Q1:14	Q3:14	Q4:14	FY:14E	FY:15E	FY:16E	FY:17E	FY:18E	FY:19E	FY:20E
Revenue:													
XmAB7195 Sales	0	0	0	0	0	0	0	0	0	0	0	0	85,738
Royalty Revenues	0	0	0	0	0	0	0	0	0	0	0	15,000	20,000
Collaboration revenue*	9,524	10,172	2,500	2,500	2,500	2,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000
<b>Total Revenues</b>	<b>\$9,524</b>	<b>\$10,172</b>	<b>\$2,500</b>	<b>\$2,500</b>	<b>\$2,500</b>	<b>\$2,500</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$25,000</b>	<b>\$120,738</b>
Cost and Expenses:													
Costs of goods sold	0	0	0	0	0	0	0	0	0	0	0	0	12,861
Research and Development	12,668	17,001	5,500	5,500	5,500	6,000	22,500	22,000	23,000	27,000	29,000	28,000	30,000
Sales, General and Administrative	3,086	3,691	1,600	1,700	1,900	2,100	7,300	9,200	10,000	12,000	12,000	12,000	14,000
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Costs and Expenses</b>	<b>\$15,754</b>	<b>\$20,692</b>	<b>\$7,100</b>	<b>\$7,200</b>	<b>\$7,400</b>	<b>\$8,100</b>	<b>\$29,800</b>	<b>\$31,200</b>	<b>\$33,000</b>	<b>\$39,000</b>	<b>\$41,000</b>	<b>\$40,000</b>	<b>\$56,861</b>
Operating Income (loss)	(6,230)	(10,520)	(4,600)	(4,700)	(4,900)	(5,600)	(19,800)	(21,200)	(23,000)	(29,000)	(31,000)	(15,000)	0
Net Interest Income (Expense)	(2,450)	(1,206)	234	217	201	183	835	691	861	1,054	1,201	900	777
Other income / (Expense)	86	(48,532)	0	0	0	0	0	0	0	15	26	22	0
Income Before Income Taxes	(8,594)	(60,258)	(4,366)	(4,483)	(4,699)	(5,417)	(18,965)	(20,509)	(22,139)	(27,931)	(29,773)	(14,078)	777
<b>Net Income</b>	<b>(\$8,594)</b>	<b>(\$60,258)</b>	<b>(\$4,366)</b>	<b>(\$4,483)</b>	<b>(\$4,699)</b>	<b>(\$5,417)</b>	<b>(\$18,965)</b>	<b>(\$20,509)</b>	<b>(\$22,139)</b>	<b>(\$27,931)</b>	<b>(\$29,773)</b>	<b>(\$14,078)</b>	<b>\$777</b>
<b>GAAP Net Income</b>	<b>(\$8,594)</b>	<b>(\$60,258)</b>	<b>(\$4,366)</b>	<b>(\$4,483)</b>	<b>(\$4,699)</b>	<b>(\$5,417)</b>	<b>(\$18,965)</b>	<b>(\$20,509)</b>	<b>(\$22,139)</b>	<b>(\$27,931)</b>	<b>(\$29,773)</b>	<b>(\$14,078)</b>	<b>\$777</b>
GAAP Basic EPS with sFAS123	-	(3.85)	(0.14)	(0.14)	(0.15)	(0.17)	(0.60)	(0.62)	(0.64)	(0.75)	(0.78)	(0.37)	0.02
GAAP Diluted EPS with sFAS123	-	(3.85)	(0.14)	(0.14)	(0.15)	(0.17)	(0.60)	(0.62)	(0.64)	(0.75)	(0.78)	(0.37)	0.02
Weighted shares outstanding	72	15,646	31,357	31,382	31,407	31,432	31,357	32,995	34,595	37,320	38,295	38,395	38,495
Fully diluted shares outstanding	72	15,646	31,357	31,382	31,407	31,432	31,395	32,995	34,595	37,320	38,295	38,395	38,495
Cash Burn	(6,230)	(60,258)	(4,366)	(4,483)	(4,699)	(5,417)	(18,965)	(20,509)	(22,139)	(27,931)	(29,773)	(14,078)	-
Cash Balance	2,312	77,975	72,334	66,851	61,151	54,735	54,735	79,649	57,510	110,947	81,139	66,468	63,980

\*Milestone payments not modeled

Source: Wedbush Securities and PacGrow Life Sciences



## Analyst Biography

Chris Marai is an Analyst covering the Biotechnology/Biopharmaceuticals/BioDefense sector. Prior to Wedbush PacGrow Life Sciences, Dr. Marai was at Morgan Stanley where he specialized in quantitative modeling; he has also consulted for structure-based drug design companies and biotechnology startups.

Dr. Marai holds a B.S. in Chemistry from Trinity College, University of Toronto and a Ph.D. in Biochemistry and Structural Biology from Stony Brook University, New York.

Christopher's Edge: Dr. Marai has covered a wide range of therapeutic technologies and disease areas including novel antibody and antibody drug conjugates, reformulated and novel delivery of therapies for oncology, auto-inflammatory disease, rare diseases and CNS disorders.

## Analyst Certification

I, Christopher N. Marai, Ph.D., Gregory R. Wade, Ph.D., David M. Nierengarten, Ph.D., certify that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

Disclosure information regarding historical ratings and price targets is available at <http://www.wedbush.com/ResearchDisclosure/DisclosureQ413.pdf>

## Investment Rating System:

Outperform: Expect the total return of the stock to outperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Neutral: Expect the total return of the stock to perform in-line with the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Underperform: Expect the total return of the stock to underperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

The Investment Ratings are based on the expected performance of a stock (based on anticipated total return to price target) relative to the other stocks in the analyst's coverage universe (or the analyst's team coverage).\*

Rating Distribution (as of December 31, 2013)	Investment Banking Relationships (as of December 31, 2013)
Outperform: 54%	Outperform: 18%
Neutral: 43%	Neutral: 2%
Underperform: 3%	Underperform: 0%

The Distribution of Ratings is required by FINRA rules; however, WS' stock ratings of Outperform, Neutral, and Underperform most closely conform to Buy, Hold, and Sell, respectively. Please note, however, the definitions are not the same as WS' stock ratings are on a relative basis.

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## Wedbush Equity Research Disclosures as of March 25, 2014

Company	Disclosure
Xencor	1,3,5,7

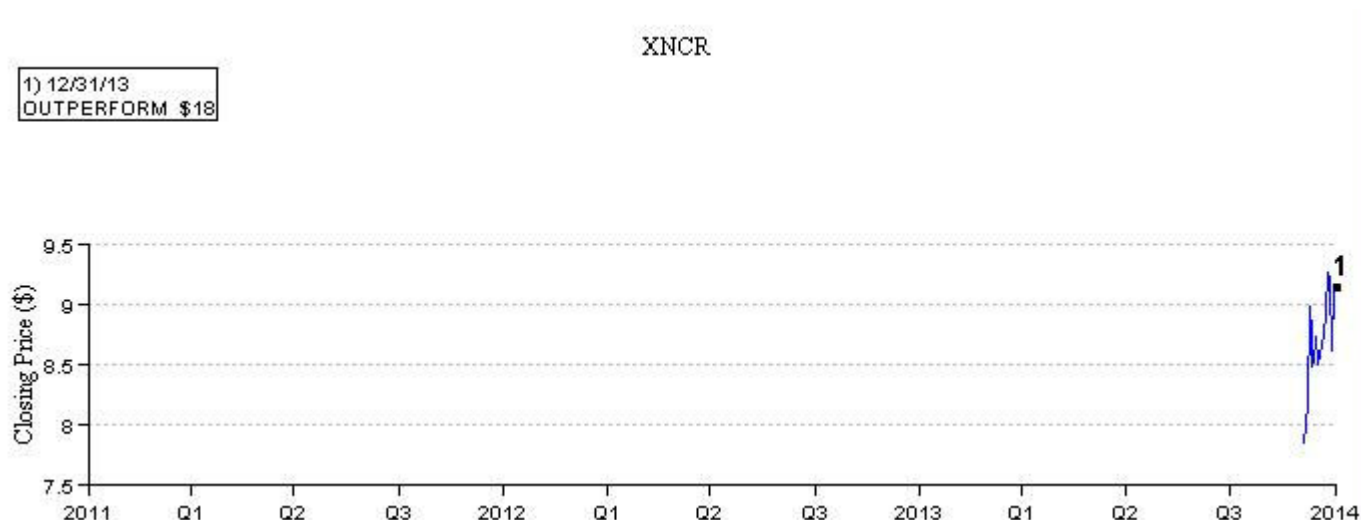
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1. WS makes a market in the securities of the subject company.
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## Price Charts

Wedbush disclosure price charts are updated within the first fifteen days of each new calendar quarter per FINRA regulations. Price charts for companies initiated upon in the current quarter, and rating and target price changes occurring in the current quarter, will not be displayed until the following quarter. Additional information on recommended securities is available on request.



\* WS changed its rating system from (Strong Buy/Buy/Hold/Sell) to (Outperform/ Neutral/Underperform) on July 14, 2009.

Please access the attached hyperlink for WS' Coverage Universe: <http://www.wedbush.com/services/cmg/equities-division/research/equity-research> Applicable disclosure information is also available upon request by contacting Ellen Kang in the Research Department at (213) 688-4529, by email to [ellen.kang@wedbush.com](mailto:ellen.kang@wedbush.com), or the Business Conduct Department at (213) 688-8090. You may also submit a written request to the following: Business Conduct Department, 1000 Wilshire Blvd., Los Angeles, CA 90017.

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