Xencor, Inc (XNCR)

SMALL & MID CAP RESEARCH

Update on the "Class of 2013": Part 2

Given the large number of new public companies over the past 24 months, we are revisiting the names in our coverage that came public last year and assessing their accomplishments and upcoming catalysts.

XNCR came public in December 2013 with plans to advance its proprietary antibody technology platform and its lead proprietary drug XmAb7195 for asthma and allergic diseases.

- **Programs on track with original timelines:** Since its IPO, XNCR has initiated Phase I testing of its asthma drug XmAb7195 (anti-IgE) on time, presented preclinical data on its bispecific program, and completed enrollment in its Phase IIa trial of XmAb5871 in RA with initial data expected by year-end 2014. Partner Merck paid a milestone for starting Phase I with an antibody using XNCR's technology. Partner Morphosys continues its broad development program for MOR208 (anti-CD19) including a new combination trial of MOR208 and Revlimid in CLL, an indication that Morphosys also recently gained Orphan Drug Status.
- **Upcoming catalysts:** We are expecting several early stage proof of concept readouts over the next nine months including (1) XmAb7195 Phase I data including IgE reduction in healthy volunteers and high IgE volunteers in H1:15, (2) early proof of concept data for XmAb5871 in RA by year-end 2014, and (3) updated Phase II data for MOR208 in ALL and NHL potentially at ASH in December 2014.

Rating	**OUTPERFORM* [V]**
Price (09 Jul 14, US$)	10.33
Target price (US$)	14.00[1]
52-week price range	13.90 - 7.55
Market cap. (US$ m)	323.96
Enterprise value (US$ m)	277.16

**Stock ratings are relative to the coverage universe in each analyst's or each team's respective sector.*
[1]Target price is for 12 months.
[V] = Stock considered volatile (see Disclosure Appendix).

Research Analysts
Jason Kantor, PhD
415 249 7942
jason.kantor@credit-suisse.com
Jeremiah Shepard, PhD
415 249 7933
jeremiah.shepard@credit-suisse.com
Ravi Mehrotra PhD
212 325 3487
ravi.mehrotra@credit-suisse.com
Lee Kalowski
212 325 9683
lee.kalowski@credit-suisse.com
Koon Ching PhD
212 325 6286
koon.ching@credit-suisse.com
Anuj Shah
212 325 6931
anuj.shah@credit-suisse.com

Financial and valuation metrics

Year	12/13A	12/14E	12/15E	12/16E
EPS (CS adj.) (US$)	-3.85	-0.72	-0.65	-0.62
Prev. EPS (US$)	—	—	—	—
P/E (x)	-2.7	-14.4	-15.9	-16.8
P/E rel. (%)	-14.9	-87.0	-106.7	-125.1
Revenue (US$ m)	10.2	5.5	7.0	11.0
EBITDA (US$ m)	-9.8	-22.5	-22.7	-26.3
OCFPS (US$)	-0.24	-0.69	-0.43	-0.74
P/OCF (x)	-37.6	-15.0	-23.8	-14.1
EV/EBITDA (current)	-26.0	-11.3	-11.2	-9.7
Net debt (US$ m)	-69	-47	-124	-100
ROIC (%)	-234.14	-439.19	-434.59	-501.84

Number of shares (m)	31.36	IC (current, US$ m)	4.49
BV/share (Next Qtr., US$)	2.2	EV/IC (x)	49.5
Net debt (Next Qtr., US$ m)	-64.8	Dividend (current, US$)	—
Net debt/tot cap (Next Qtr., %)	-92.5	Dividend yield (%)	—

Three important catalysts for internal programs

- **First proof of concept for immune down regulation:** The XmAb5871 Phase IIa trial in RA is fully enrolled and expected to read out in Q4:14. While the trial is relatively small, it should give some initial indication of how well B-cell down regulation compares to other biologic approaches, including B-cell depletion. A positive result could also have a halo effect on the XmAb7195 program, which also relies in part on immune down regulation.
- **Initial IgE reduction data:** The primary value driver for XNCR is its proprietary anti-IgE antibody XmAb7195. This drug works by three mechanisms (1) binding free IgE, (2) reducing total IgE by increasing clearance, and (3) down regulating the production of IgE. The ongoing two-part Phase I trial should provide initial proof of concept in H1:15 in subjects with elevated baseline IgE.
- **Bispecific program could drive increased investor and partnering interest:** XNCR has two preclinical bispecific programs in multiple myeloma (CD38xCD3) and acute myeloid leukemia (CD123xCD3). On its upcoming earnings call (Aug. 2014), XNCR hopes to identify which of the two are its lead bispecific candidate and plans to present preclinical data from both at ASH in December. While an IND is not expected until H2:15, the areas of bispecifics and immune-oncology a particularly "hot" at the moment, and greater appreciation of XNCR's technology in this space could drive near-term value.

Positive thesis on broad antibody platform

We continue to believe that XNCR's engineered antibody platform is one of the most diverse in the industry, enabling higher potency antibodies (MOR208 and multiple partnered programs), immune down regulating antibodies (XmAb5871 and XmAb7195), enhanced target clearance (XmAb7195), and longer half-life (Merck program). In total, there are now seven drugs in the clinic using XNCR's antibody technology.

- The emerging bispecific platform provides extra upside beyond the disclosed programs, and could be a major source of future partnerships.
- The most exciting clinical-stage program in our view, is the proprietary anti-IgE antibody (XmAb7195), which could be a much better version of Xolair.
- Our $14 target price is based on a probability-adjusted DCF, assigning a 40% probability of success to XmAb7195 and a 25% probability to XmAb5871. We use a 12% discount rate through the products' lifecycles. The bispecific program is all upside.

XmAb5871 – Proof of concept data by year end

XmAb5871 is a CD19 targeted immune modulating antibody that is designed to down regulate activated B-cells (rather than killing them). The initial proof of concept trial is in patients with active RA who are on a stable dose of non-biologic DMARDs (e.g. methotrexate).

XNCR completed enrollment in this 30-patient Phase IIa trial in H1:14 and expects to have data released in Q4:14.

The trial includes 12 weeks of treatment (6 doses every other week), with standard RA endpoints at 12 and 24 weeks.

A positive result would lead to a larger Phase IIb trial and an additional $12M in funding from AMGN. The Phase IIb trial would be the basis for AMGN to make a decision on its development option for this program.

XmAb7195 – Initiated Phase I trial

Preclinical data presented

In May 2014, XNCR presented preclinical data at the American Thoracic Society meeting (ATS) comparing XmAb7195 to Roche's Xolair. Results demonstrated more rapid and sustained reductions in both free and total IgE versus Xolair and highlighted the three complementary mechanisms of action of XmAb7195 (rapid clearance of IgE, sequestration of soluble IgE, and reduction in IgE production).

Clinical program initiated – proof of concept likely in H1:15

In May 2014, XNCR announced the start of a Phase I trial of XmAb7195 in both healthy volunteers and healthy subjects with a history of allergic rhinitis, conjunctivitis, and/or atopic dermatitis.

The two part Phase I trial has the following features: It is a 64-patient, randomized, placebo-controlled, single ascending dose study.

- Part A is in healthy volunteers, and
- Part B is in patients with a history of allergic diseases.

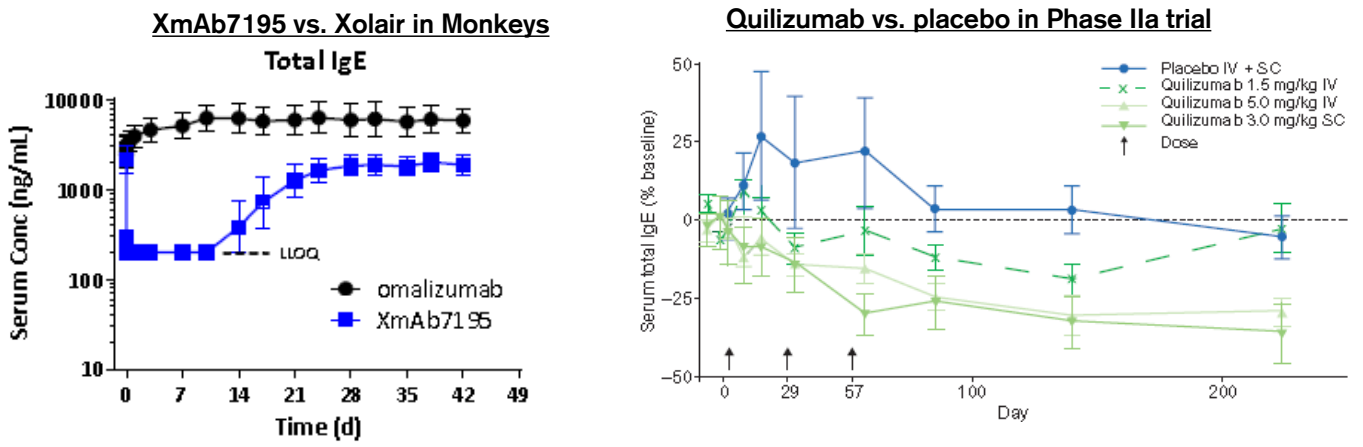
Patients will receive a single IV infusion of XmAb7195 at escalating doses. Given IgE is present in both healthy volunteers and at elevated levels in volunteers with a history of allergic diseases, it may be possible to assess the mechanism of XmAb7195 in a Phase I setting. The trial has an estimated completion date of June 2015, but data from Part A will likely be released prior to completion of the full study.

Competitor data offers insight into potential benefit of targeting IgE production

Genentech recently published results of quilizumab (anti-M1 prime). This novel anti-IgE antibody binds to cell surface bound IgE and shuts down the production of IgE. The data from a Phase IIa trial shows a sustained reduction in total and serum IgE (as would be expected from reducing the production of IgE). Results also showed a clinical benefit and reduction in new IgE in allergic asthma patients who were subjected to an allergen challenge.

The reduction in total IgE is much more rapid and complete with XmAb7195 in experimental animal models because XmAb7195 blocks free IgE, clears bound IgE, and shuts down the production of new IgE. By contrast, the clinical data for quilizumab shows a sustained but less robust reduction in IgE and the full effect takes up to 2 months to achieve (Exhibit 1).

Exhibit 1: Impact on Total IgE



Source: Gauvreau et al. Sci Tranl Med 6, 2014 and Moore et al. ATS poster, 2014.

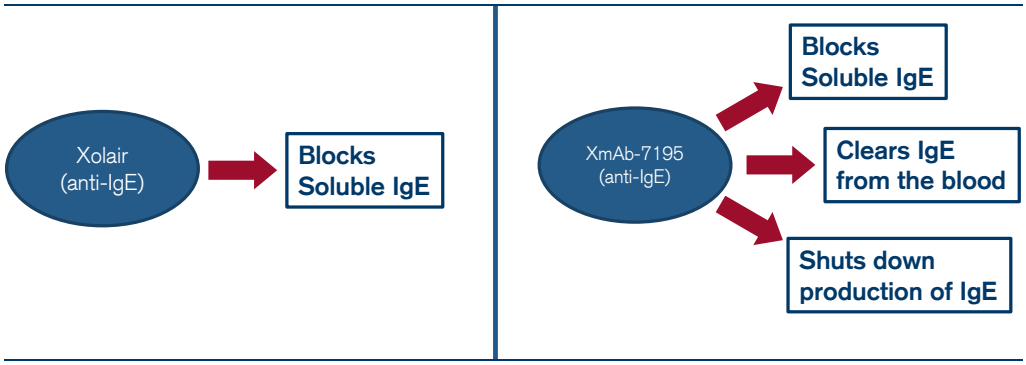
A Better Xolair—XmAb7195 Blocks IgE by Three Mechanisms

XmAb7195 is designed to have the same IgE binding region as Xolair, but its Fc domain has been modified for enhanced activity. While Xolair simply binds soluble IgE, XmAb7195 also shuts down the production of IgE and facilitates the clearance of IgE from the blood (See Exhibit 2). This triple mechanism of action is expected to have a greater impact on IgE levels and therefore asthma symptoms. It is also likely to overcome the dosing problems of Xolair.

The attributes of XmAb7195 have been demonstrated in monkeys who naturally produce high levels of IgE.

- **Xolair Rapidly Reduces Free IgE** (Exhibit 2 left panel): Xolair can effectively bind free IgE. The reduction in free IgE is associated with reduced asthma symptoms. XmAb7195 also binds free IgE and effects even greater reduction in free IgE compared to Xolair.
- **Xolair Has No Impact on Total IgE** (Exhibit 2 – right panel): Total IgE includes both antibody-bound and free IgE. Because Xolair does not induce the clearance of IgE, the bound IgE circulates and the free IgE levels return at the rate of antibody clearance. XmAb7195 lowers total IgE because the bound IgE is cleared from the blood. Total IgE levels recover but at a slower rate because of the immune down-regulation.

Exhibit 2: Three Mechanisms for XmAb7195 vs. One for Xolair



Source: Company data, Credit Suisse Research.

Emerging bispecific program

XNCR is developing a bispecific format that uses a full length Fc, which differentiates it from many of the other bispecifics including AMGN's BiTEs and MGNX's DARTs. REGN is also working on full-length bispecifics.

XNCR has two preclinical candidates.

- **XmAb13694 (CD38xCD3) targets CD38**, a clinically validated antibody target in multiple myeloma. Several "naked" antibodies are advancing in development including daratumumab (Genmab/JNJ), SAR650984 (Sanofi/IMGN), and MOR03087 (Morphosys/CELG).
- **CD123xCD3 targets CD123**, a validated target in AML. CD123 is found on AML cells and on tumor stem cells. Toxin fusions targeting CD123 have shown some evidence of anti-tumor activity.

We expect the following key developments in the bispecific program:

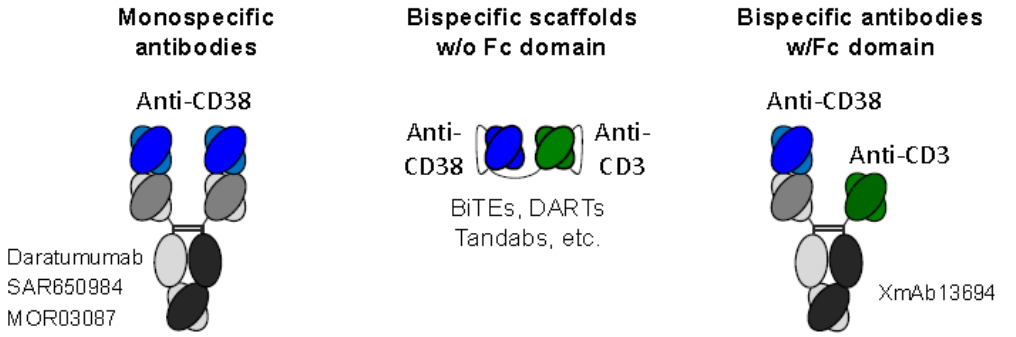
(1) XNCR will announce its lead candidate, most likely on its Q2 earnings call in early August. Our best guess is that it will be the CD38 program, given the high level of interest in the target among investors and potential partners.

(2) XNCR will present a large set of preclinical data for its bispecific program at ASH in December including data on its CD38 and CD123 programs.

(3) XNCR plans to file an IND to start Phase I testing in late 2015.

(4) XNCR will likely enter into a partnership for the technology or one of its preclinical candidates (potentially in 2015 – no guidance on this topic).

Exhibit 3: XNCR's bispecific format for its anti-CD38



Source: Company data, Credit Suisse

MOR208 – Three ongoing Phase II trials

There are currently three ongoing Phase II trials of MOR208 (Fc engineered anti-CD19 antibody) for a variety of B-cell malignancies. Of the three, the CLL trial was announced and initiated after XNCR's IPO. The next likely data is from the ALL trial, potentially at ASH in December.

- **Acute lymphoblastic leukemia (ALL):** This Phase II trial is expected to recruit up to 30 relapsed/refractory patients. The study is still recruiting patients.
- **Non-Hodgkin lymphoma (NHL):** This trial is expected to recruit up to 30 relapsed/refractory patients in each of several disease specific cohorts, including

follicular lymphoma (FL), mantle cell lymphoma (MCL), diffuse large B-cell lymphoma (DLBCL), and other indolent lymphomas (iNHL).

- **Chronic lymphocytic leukemia (CLL):** This investigator sponsored trial combines MOR208 with Revlimid in both relapsed/refractory and treatment naïve CLL. This trial is being conducted at Ohio State University. This trial was announced and initiated after XNCR's IPO.

Other partnered programs

Boehringer Ingelheim has two drugs in the clinic using XNCR's technology

- **BI 836826 is an anti-CD37 antibody with enhanced ADCC activity.** It is in two Phase I trials for CLL and relapsed/refractory NHL. The NHL trial is expected to complete in November 2014 and the CLL trial is expected to complete in March 2015. It is possible we could see some data at ASH in December 2014.

  A competitor program from IMGN (IMGN529) also targets CD37. This drug has shown anti-tumor activity, though with substantial toxicity.

- **BI 836858 is an anti-CD33 antibody with enhanced ADCC activity.** It is in Phase I testing for relapsed/refractory AML. CD33 is a validated target in AML. Previously, Pfizer marketed Mylotarg, and antibody-drug conjugate targeting CD33.

  SGEN has a competitive program in Phase I. SGN-CD33A is an antibody-drug conjugate targeting CD33. IMGN also has a drug conjugate targeting CD33 in preclinical development.

CSL Limited licensed its anti-CD123 antibody to Janssen

- **CSL362 is an anti-CD123 antibody with enhanced ADCC activity.** It is in Phase I testing for relapsed/refractory AML. The ongoing Phase I trial has a projected completion date of October 2014, and it is possible that initial data could be presented at ASH in December.

  CD123 is also known as the IL3 receptor. It is found on AML cells and on cancer stem cells. Several drugs are in development for CD123 (including a preclinical bispecific program at XNCR).

Exhibit 4: XNCR pipeline

Drug	Target	Technology	Indication	Stage	Partner
XmAb5574/MOR208	CD19	High ADCC	CLL, NHL, ALL	Phase II	Morphosys
XmAb5871	CD19	Immune inhibitory	Autoimmune	Phase I/II	AMGN has option
XmAb7195	IgE	Immune inhibitory	Asthma/Allergy	Phase I	Proprietary
BI 836826	CD37	High ADCC	CLL, NHL	Phase I	Boehringer Ingelheim
BI 836858	CD33	High ADCC	AML	Phase I	Boehringer Ingelheim
CSL362	CD123 (IL3R)	High ADCC	AML	Phase I	CSL/Janssen
ND	ND	Stability	Autoimmune	Phase I	Merck
Xtend-TNF	TNF	Long half-life	Autoimmune	Preclinical	Proprietary
CD3 X CD38	CD38	Bispecific	Oncology	Preclinical	Proprietary
CD3 X CD123	CD123	Bispecific	Oncology	Preclinical	Proprietary
Xtend-CTLA4	CTLA4	Long half-life	Autoimmune	Preclinical	Proprietary
Anti-X/ CD32b	ND	Immune inhibitory	TBD	Discovery Lead	Proprietary
ND	ND	Long half-life	Hematology	Preclinical	CSL
ND	ND	Long half-life	Autoimmune	Preclinical	Janssen
ND	ND	Long half-life	Undisclosed	Discovery Lead	Alexion

Source: Company data, Credit Suisse

Exhibit 5: XNCR newsflow

Product/Event	Indication	Catalyst	Expected Date
Bispecific	N/A	Announce lead program	Mid-2014
XmAb5871	RA	Phase IIa results	Q4:14
MOR208	ALL, NHL, and CLL	Potential Phase II data at ASH	Dec. 2014
Bispecific	N/A	Presentation of preclinical data at ASH	Dec. 2014
XmAb5871	RA	Start Phase IIb (150-250 pts)	Q1:15
XmAb7195	Asthma	Phase Ia data in patients with asthma and allergic disease (includes high IgE cohort)	H1:15
Bispecific	N/A	IND for proprietary program	H2:15
XmAb7195	Asthma	Phase Ib start	Q1:15
XmAb7195	Asthma	Start Phase II in poorly controlled	late 15/ early 16
MOR208	ALL, NHL, and CLL	IST to complete enrollment of CLL study	H2:15
XmAb5871	RA	Phase IIb data/ AMGN option	late 16/ early 17

Source: Company data, Credit Suisse estimates

Exhibit 6: XNCR Model

	2012A	2013A	Q1:14A	Q2:14E	Q3:14E	Q4:14E	2014E	2015E	2016E	2017E	2018E
Revenues											
US sales of XmAb7195											
Ex-US royalies on XmAb7195											
Royalties on XmAb5871											
Partnering, grants, milestones	**9.5**	**10.2**	2.2	0.8	0.8	1.6	5.5	7.0	11.0	26.1	15.0
Total Revenues	**9.5**	**10.2**	**2.2**	**0.8**	**0.8**	**1.6**	**5.5**	**7.0**	**11.0**	**26.1**	**15.0**
Expenses											
Cost of goods											
Research and development	**12.7**	**17.0**	4.2	5.0	5.6	6.3	21.2	21.7	28.5	31.4	39.3
Sales, general, administrative	**3.1**	**3.7**	1.7	1.8	1.8	1.9	7.1	7.9	8.7	9.9	14.3
Total Operating Expenses	**15.8**	**20.7**	**6.0**	**6.8**	**7.4**	**8.2**	**28.3**	**29.6**	**37.2**	**41.3**	**53.6**
Operating income (loss)	**(6.2)**	**(10.5)**	(3.8)	(5.9)	(6.6)	(6.6)	(22.8)	(22.7)	(26.3)	(15.2)	(38.6)
Total Other Income (Expense)	**(2.4)**	**(49.7)**	0.0				0.0				
Pre Tax Income	**(8.6)**	**(60.3)**	(3.8)	(5.9)	(6.6)	(6.6)	(22.8)	(22.7)	(26.3)	(15.2)	(38.6)
Income tax											
Net Income	**(8.6)**	**(60.3)**	**(3.8)**	**(5.9)**	**(6.6)**	**(6.6)**	**(22.8)**	**(22.7)**	**(26.3)**	**(15.2)**	**(38.6)**
EPS - diluted (proforma)	**($38.31)**	**($3.85)**	**($0.12)**	($0.19)	($0.21)	($0.20)	($0.72)	($0.65)	($0.62)	($0.33)	($0.77)
Shares outstanding - basic (proforma)	**0.22**	**15.65**	**31.36**	31.67	31.99	32.31	31.83	34.88	42.70	46.21	49.98
Shares outstanding - diluted (proforma)	**0.22**	**15.65**	**31.36**	32.91	33.25	33.60	33.08	36.23	44.16	47.80	51.69

Source: Company data, Credit Suisse estimates

CREDIT SUISSE

Companies Mentioned *(Price as of 09-Jul-2014)*

Alexion Pharmaceuticals Inc. (ALXN.OQ, $164.52)
Amgen Inc. (AMGN.OQ, $119.57)
Celgene Corp. (CELG.OQ, $87.52)
GENMAB (GEN.CO, Dkr214.3)
ImmunoGen, Inc. (IMGN.OQ, $11.23)
Johnson & Johnson (JNJ.N, $106.04)
Merck & Co., Inc. (MRK.N, $58.55)
Regeneron Pharmaceutical (REGN.OQ, $310.93)
Sanofi (SASY.PA, €76.38)
Xencor, Inc (XNCR.OQ, $10.33, OUTPERFORM[V], TP $14.0)

Disclosure Appendix

Important Global Disclosures

Jason Kantor, PhD, Ravi Mehrotra PhD and Lee Kalowski each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for Xencor, Inc (XNCR.OQ)

XNCR.OQ	Closing Price	Target Price	
Date	(US$)	(US$)	Rating
03-Dec-13	8.34		R
03-Jan-14	9.15	14.00	O *

** Asterisk signifies initiation or assumption of coverage.*

The analyst(s) responsible for preparing this research report received Compensation that is based upon various factors including Credit Suisse's total revenues, a portion of which are generated by Credit Suisse's investment banking activities

As of December 10, 2012 Analysts' stock rating are defined as follows:

Outperform (O) : The stock's total return is expected to outperform the relevant benchmark*over the next 12 months.

Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.

Underperform (U) : The stock's total return is expected to underperform the relevant benchmark* over the next 12 months.

**Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin American and non-Japan Asia stocks, ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark; prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, 12-month rolling yield is incorporated in the absolute total return calculation and a 15% and a 7.5% threshold replace the 10-15% level in the Outperform and Underperform stock rating definitions, respectively. The 15% and 7.5% thresholds replace the +10-15% and -10-15% levels in the Neutral stock rating definition, respectively. Prior to 10th December 2012, Japanese ratings were based on a stock's total return relative to the average total return of the relevant country or regional benchmark.*

Restricted (R) : In certain circumstances, Credit Suisse policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of Credit Suisse's engagement in an investment banking transaction and in certain other circumstances.

Volatility Indicator [V] : A stock is defined as volatile if the stock price has moved up or down by 20% or more in a month in at least 8 of the past 24 months or the analyst expects significant volatility going forward.

Analysts' sector weightings are distinct from analysts' stock ratings and are based on the analyst's expectations for the fundamentals and/or valuation of the sector* relative to the group's historic fundamentals and/or valuation:

Overweight : The analyst's expectation for the sector's fundamentals and/or valuation is favorable over the next 12 months.

Market Weight : The analyst's expectation for the sector's fundamentals and/or valuation is neutral over the next 12 months.

Underweight : The analyst's expectation for the sector's fundamentals and/or valuation is cautious over the next 12 months.

**An analyst's coverage sector consists of all companies covered by the analyst within the relevant sector. An analyst may cover multiple sectors.*

Credit Suisse's distribution of stock ratings (and banking clients) is:

Global Ratings Distribution

Rating	Versus universe (%)	Of which banking clients (%)
Outperform/Buy*	45%	(54% banking clients)
Neutral/Hold*	39%	(49% banking clients)
Underperform/Sell*	13%	(48% banking clients)
Restricted	3%	

**For purposes of the NYSE and NASD ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.*

Credit Suisse's policy is to update research reports as it deems appropriate, based on developments with the subject company, the sector or the market that may have a material impact on the research views or opinions stated herein.

Credit Suisse's policy is only to publish investment research that is impartial, independent, clear, fair and not misleading. For more detail please refer to Credit Suisse's Policies for Managing Conflicts of Interest in connection with Investment Research: http://www.csfb.com/research and analytics/disclaimer/managing_conflicts_disclaimer.html

Credit Suisse does not provide any tax advice. Any statement herein regarding any US federal tax is not intended or written to be used, and cannot be used, by any taxpayer for the purposes of avoiding any penalties.

Price Target: (12 months) for Xencor, Inc (XNCR.OQ)

Method: Our $14 target for XNCR is derived using a probability-adjusted DCF (discounted cash flow), including $9 for XmAb7195 (40% POS), $3 for XmAb5871 (25% POS), and $1 each for MOR208 and the technology licensees. We us a 12% discount rate and model through the products' entire lifecycle.

Risk: Risks to our $14 target price for Xencor, Inc include: 1) unexpected negative result for proprietary or partnered clinical programs, 2) financing risk from expected future equity raises, 3) competition in the CD19 and asthma programs, and 4) significant delay in one or more clinical programs that pushes potential approval timeline(s) out.

Please refer to the firm's disclosure website at https://rave.credit-suisse.com/disclosures for the definitions of abbreviations typically used in the target price method and risk sections.

See the Companies Mentioned section for full company names

The subject company (XNCR.OQ, IMGN.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ, JNJ.N) currently is, or was during the 12-month period preceding the date of distribution of this report, a client of Credit Suisse.

Credit Suisse provided investment banking services to the subject company (XNCR.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ) within the past 12 months.

Credit Suisse provided non-investment banking services to the subject company (IMGN.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ) within the past 12 months

Credit Suisse has managed or co-managed a public offering of securities for the subject company (XNCR.OQ, CELG.OQ, AMGN.OQ) within the past 12 months.

Credit Suisse has received investment banking related compensation from the subject company (XNCR.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ) within the past 12 months

Credit Suisse expects to receive or intends to seek investment banking related compensation from the subject company (XNCR.OQ, IMGN.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ, JNJ.N, ALXN.OQ) within the next 3 months.

Credit Suisse has received compensation for products and services other than investment banking services from the subject company (IMGN.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ) within the past 12 months

As of the date of this report, Credit Suisse makes a market in the following subject companies (XNCR.OQ, IMGN.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ, JNJ.N, ALXN.OQ).

Credit Suisse has a material conflict of interest with the subject company (MRK.N) . Credit Suisse Securities (USA) LLC is acting as financial advisor to Merck (NYSE: MRK) on its announced proposed acquisition of Idenix Pharmaceuticals Inc. (NASDAQ: IDIX).

For other important disclosures concerning companies featured in this report, including price charts, please visit the website at https://rave.credit-suisse.com/disclosures or call +1 (877) 291-2683.

Important Regional Disclosures

Singapore recipients should contact Credit Suisse AG, Singapore Branch for any matters arising from this research report.

The analyst(s) involved in the preparation of this report have not visited the material operations of the subject company (XNCR.OQ, SASY.PA, IMGN.OQ, CELG.OQ, REGN.OQ, MRK.N, AMGN.OQ, JNJ.N, ALXN.OQ) within the past 12 months

Restrictions on certain Canadian securities are indicated by the following abbreviations: NVS--Non-Voting shares; RVS--Restricted Voting Shares; SVS--Subordinate Voting Shares.

Individuals receiving this report from a Canadian investment dealer that is not affiliated with Credit Suisse should be advised that this report may not contain regulatory disclosures the non-affiliated Canadian investment dealer would be required to make if this were its own report.

For Credit Suisse Securities (Canada), Inc.'s policies and procedures regarding the dissemination of equity research, please visit http://www.csfb.com/legal_terms/canada_research_policy.shtml.

The following disclosed European company/ies have estimates that comply with IFRS: (SASY.PA).

Credit Suisse has acted as lead manager or syndicate member in a public offering of securities for the subject company (XNCR.OQ, CELG.OQ, MRK.N, AMGN.OQ) within the past 3 years.

As of the date of this report, Credit Suisse acts as a market maker or liquidity provider in the equities securities that are the subject of this report.

Principal is not guaranteed in the case of equities because equity prices are variable.

Commission is the commission rate or the amount agreed with a customer when setting up an account or at any time after that.

For Credit Suisse disclosure information on other companies mentioned in this report, please visit the website at https://rave.credit-suisse.com/disclosures or call +1 (877) 291-2683.

CREDIT SUISSE

References in this report to Credit Suisse include all of the subsidiaries and affiliates of Credit Suisse operating under its investment banking division. For more information on our structure, please use the following link: https://www.credit-suisse.com/who_we_are/en/This report may contain material that is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Credit Suisse AG or its affiliates ("CS") to any registration or licensing requirement within such jurisdiction. All material presented in this report, unless specifically indicated otherwise, is under copyright to CS. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of CS. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of CS or its affiliates. The information, tools and material presented in this report are provided to you for information purposes only and are not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. CS may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. CS will not treat recipients of this report as its customers by virtue of their receiving this report. The investments and services contained or referred to in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about such investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you. CS does not advise on the tax consequences of investments and you are advised to contact an independent tax adviser. Please note in particular that the bases and levels of taxation may change. Information and opinions presented in this report have been obtained or derived from sources believed by CS to be reliable, but CS makes no representation as to their accuracy or completeness. CS accepts no liability for loss arising from the use of the material presented in this report, except that this exclusion of liability does not apply to the extent that such liability arises under specific statutes or regulations applicable to CS. This report is not to be relied upon in substitution for the exercise of independent judgment. CS may have issued, and may in the future issue, other communications that are inconsistent with, and reach different conclusions from, the information presented in this report. Those communications reflect the different assumptions, views and analytical methods of the analysts who prepared them and CS is under no obligation to ensure that such other communications are brought to the attention of any recipient of this report. Some investments referred to in this report will be offered solely by a single entity and in the case of some investments solely by CS, or an associate of CS or CS may be the only market maker in such investments. Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgment at its original date of publication by CS and are subject to change without notice. The price, value of and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments. Investors in securities such as ADR's, the values of which are influenced by currency volatility, effectively assume this risk. Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assuming the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility, and the credit quality of any issuer or reference issuer. Any investor interested in purchasing a structured product should conduct their own investigation and analysis of the product and consult with their own professional advisers as to the risks involved in making such a purchase. Some investments discussed in this report may have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realised. Those losses may equal your original investment. Indeed, in the case of some investments the potential losses may exceed the amount of initial investment and, in such circumstances, you may be required to pay more money to support those losses. Income yields from investments may fluctuate and, in consequence, initial capital paid to make the investment may be used as part of that income yield. Some investments may not be readily realisable and it may be difficult to sell or realise those investments, similarly it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed. This report may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the report refers to website material of CS, CS has not reviewed any such site and takes no responsibility for the content contained therein. Such address or hyperlink (including addresses or hyperlinks to CS's own website material) is provided solely for your convenience and information and the content of any such website does not in any way form part of this document. Accessing such website or following such link through this report or CS's website shall be at your own risk. This report is issued and distributed in Europe (except Switzerland) by Credit Suisse Securities (Europe) Limited, One Cabot Square, London E14 4QJ, England, which is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. This report is being distributed in Germany by Credit Suisse Securities (Europe) Limited Niederlassung Frankfurt am Main regulated by the Bundesanstalt fuer Finanzdienstleistungsaufsicht ("BaFin"). This report is being distributed in the United States and Canada by Credit Suisse Securities (USA) LLC; in Switzerland by Credit Suisse AG; in Brazil by Banco de Investimentos Credit Suisse (Brasil) S.A or its affiliates; in Mexico by Banco Credit Suisse (México), S.A. (transactions related to the securities mentioned in this report will only be effected in compliance with applicable regulation); in Japan by Credit Suisse Securities (Japan) Limited, Financial Instruments Firm, Director-General of Kanto Local Finance Bureau (*Kinsho*) No. 66, a member of Japan Securities Dealers Association, The Financial Futures Association of Japan, Japan Investment Advisers Association, Type II Financial Instruments Firms Association; elsewhere in Asia/ Pacific by whichever of the following is the appropriately authorised entity in the relevant jurisdiction: Credit Suisse (Hong Kong) Limited, Credit Suisse Equities (Australia) Limited, Credit Suisse Securities (Thailand) Limited, regulated by the Office of the Securities and Exchange Commission, Thailand, having registered address at 990 Abdulrahim Place, 27th Floor, Unit 2701, Rama IV Road, Silom, Bangrak, Bangkok 10500, Thailand, Tel. +66 2614 6000, Credit Suisse Securities (Malaysia) Sdn Bhd, Credit Suisse AG, Singapore Branch, Credit Suisse Securities (India) Private Limited (CIN no. U67120MH1996PTC104392) regulated by the Securities and Exchange Board of India (registration Nos. INB230970637; INF230970637; INB010970631; INF010970631), having registered address at 9th Floor, Ceejay House, Dr.A.B. Road, Worli, Mumbai - 18, India, T- +91-22 6777 3777, Credit Suisse Securities (Europe) Limited, Seoul Branch, Credit Suisse AG, Taipei Securities Branch, PT Credit Suisse Securities Indonesia, Credit Suisse Securities (Philippines) Inc., and elsewhere in the world by the relevant authorised affiliate of the above. Research on Taiwanese securities produced by Credit Suisse AG, Taipei Securities Branch has been prepared by a registered Senior Business Person. Research provided to residents of Malaysia is authorised by the Head of Research for Credit Suisse Securities (Malaysia) Sdn Bhd, to whom they should direct any queries on +603 2723 2020. This report has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (each as defined under the Financial Advisers Regulations) only, and is also distributed by Credit Suisse AG, Singapore branch to overseas investors (as defined under the Financial Advisers Regulations). By virtue of your status as an institutional investor, accredited investor, expert investor or overseas investor, Credit Suisse AG, Singapore branch is exempted from complying with certain compliance requirements under the Financial Advisers Act, Chapter 110 of Singapore (the "FAA"), the Financial Advisers Regulations and the relevant Notices and Guidelines issued thereunder, in respect of any financial advisory service which Credit Suisse AG, Singapore branch may provide to you. This research may not conform to Canadian disclosure requirements. In jurisdictions where CS is not already registered or licensed to trade in securities, transactions will only be effected in accordance with applicable securities legislation, which will vary from jurisdiction to jurisdiction and may require that the trade be made in accordance with applicable exemptions from registration or licensing requirements. Non-U.S. customers wishing to effect a transaction should contact a CS entity in their local jurisdiction unless governing law permits otherwise. U.S. customers wishing to effect a transaction should do so only by contacting a representative at Credit Suisse Securities (USA) LLC in the U.S. Please note that this research was originally prepared and issued by CS for distribution to their market professional and institutional investor customers. Recipients who are not market professional or institutional investor customers of CS should seek the advice of their independent financial advisor prior to taking any investment decision based on this report or for any necessary explanation of its contents. This research may relate to investments or services of a person outside of the UK or to other matters which are not authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority or in respect of which the protections of the Prudential Regulation Authority and Financial Conduct Authority for private customers and/or the UK compensation scheme may not be available, and further details as to where this may be the case are available upon request in respect of this report. CS may provide various services to US municipal entities or obligated persons ("municipalities"), including suggesting individual transactions or trades and entering into such transactions. Any services CS provides to municipalities are not viewed as "advice" within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. CS is providing any such services and related information solely on an arm's length basis and not as an advisor or fiduciary to the municipality. In connection with the provision of the any such services, there is no agreement, direct or indirect, between any municipality (including the officials, management, employees or agents thereof) and CS for CS to provide advice to the municipality. Municipalities should consult with their financial, accounting and legal advisors regarding any such services provided by CS. In addition, CS is not acting for direct or indirect compensation to solicit the municipality on behalf of an unaffiliated broker, dealer, municipal securities dealer, municipal advisor, or investment adviser for the purpose of obtaining or retaining an engagement by the municipality for or in connection with Municipal Financial Products, the issuance of municipal securities, or of an investment adviser to provide investment advisory services to or on behalf of the municipality. If this report is being distributed by a financial institution other than Credit Suisse AG, or its affiliates, that financial institution is solely responsible for distribution. Clients of that institution should contact that institution to effect a transaction in the securities mentioned in this report or require further information. This report does not constitute investment advice by Credit Suisse to the clients of the distributing financial institution, and neither Credit Suisse AG, its affiliates, and their respective officers, directors and employees accept any liability whatsoever for any direct or consequential loss arising from their use of this report or its content. Principal is not guaranteed. Commission is the commission rate or the amount agreed with a customer when setting up an account or at any time after that.

Investment principal on bonds can be eroded depending on sale price or market price. In addition, there are bonds on which investment principal can be eroded due to changes in redemption amounts. Care is required when investing in such instruments.

When you purchase non-listed Japanese fixed income securities (Japanese government bonds, Japanese municipal bonds, Japanese government guaranteed bonds, Japanese corporate bonds) from CS as a seller, you will be requested to pay the purchase price only.