

Xencor Inc

CORTELLIS COMPANY DETAILED PIPELINE REPORT

A comprehensive coverage of the the company's drug pipeline portfolio including detailed product records.

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GLOSSARY

Number of Drugs in Active Development

Number of drugs associated with the company or subsidiary that are currently in active development, i.e. the development status for the drug(s) is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

Number of Inactive Drugs

Number of drugs associated with the company or subsidiary that are currently classified as inactive, i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.

Number of Patents as Owner

Number of patents associated with the company where the company is listed as owner; i.e. the relationship type (or way the patent refers to the company) is: Patent Assignee/Owner, Patent owner (not assignee), Licensee for development and marketing, Licensee – marketing only (Distributor), Patent assignee of family member, Inferred assignee.

Number of Patents as Third Party

Number of patents associated with the company where the company is listed as third party; i.e. the relationship type (or way the patent refers to the company) is: Patent assignee (not owner), Ex-Licensee for development and marketing, Ex-Licensee marketing only (Distributor), Customer of technology, Ex-Customer of technology, Patent opponent or infringer, Affiliate organization of inventor, Owner of underlying technology.

Patents summary table

This table represents a summary of the core patent coverage for this company covering Therapeutic EP, US and WO patents since 1990 only.

Number of Deals

A count of deals where the company or one of its subsidiaries is the primary company.

Key Indications

Displays top ten key indications for the company and its subsidiaries based on frequency (indications occurring with high and identical frequency are always included, and this may result in more than ten Key Indications being listed). Includes both indications associated with patents where the company is patent owner and indications associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

Key Target-based Actions

Displays top ten key target-based actions for the company and its subsidiaries based on frequency (actions occurring with high and identical frequency are always included, and this may result in more than ten Key Target-based Actions being listed). Includes both target-based actions associated with patents where the company patent owner and target-based actions associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended. A target-based action is one that is associated with a target.

Key Technologies

Displays top ten key technologies for the company and its subsidiaries based on frequency (technologies occurring with high and identical frequency are always included, and this may result in more than ten Key Technologies being listed). Includes both key technologies associated with patents where the company relationship is patent owner and key technologies associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

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Xencor Inc

COMPANY OVERVIEW

Company Name	Xencor Inc
Parent Company Name	Xencor Inc
Website	http://www.xencor.com/
Country	US
Number of Drugs in Active Development	11
Number of Inactive Drugs	15
Number of Patents as Owner	66
Number of Patents as Third Party	1
Number of Deals	26
Key Indications	Cancer, Autoimmune disease, Rheumatoid arthritis, Systemic lupus erythematosus, Allergy, Asthma, Acute myelogenous leukemia, B-cell lymphoma, Solid tumor, Infectious disease, Inflammatory disease
Key Target-based Actions	B-lymphocyte antigen CD19 inhibitor, B-lymphocyte antigen CD20 modulator, TNF antagonist, Immunoglobulin gamma Fc receptor IIB antagonist, TNF alpha ligand inhibitor, Immunoglobulin E antagonist, VEGF ligand inhibitor, ADP ribosyl cyclase-1 modulator, Bone marrow stromal antigen 2 modulator, CD30 antagonist, CD40 ligand inhibitor, CD80 antagonist, CD86 antagonist, CDw123 modulator, Cytotoxic T-lymphocyte protein-4 stimulator, EpCAM inhibitor, Epidermal growth factor ligand inhibitor, Erbb2 tyrosine kinase receptor modulator, Folate receptor alpha antagonist, Immunoglobulin gamma Fc receptor IIB modulator, Osteoclast differentiation factor ligand inhibitor, T-cell surface glycoprotein CD5
Key Technologies	Biological therapeutic, Parenteral formulation unspecified, Monoclonal antibody humanized, Protein recombinant, Monoclonal antibody, Multivalent antibody, Small molecule therapeutic, Peptide, Monoclonal antibody human, Chimeric monoclonal antibody, Infusion

COMPANY PROFILE

SUMMARY

Xencor Inc is a privately held biotechnology company founded in October 1997 by Stephen Mayo and Bassil Dahiyat with \$5 million in venture capital. It was set up to create, develop and commercialize designed proteins as biotechnology products and research tools for the human therapeutic, high throughput screening assay and industrial enzyme markets. Xencor's proprietary tools are ProCode and Protein Design Automation (PDA). ProCode allows the simultaneous analysis of the entire proteome of a cell by creating protein expression libraries where each protein is covalently linked to its corresponding cDNA.

TECHNOLOGY

Xmab technology is the company's proprietary platform to produce a portfolio of drug candidates from an antibody with high selectivity for a target antigen by enhancing the antibody-dependent cell cytotoxicity.

LICENSING AGREEMENTS

In November 2009, Centocor Research & Development to use Xencor's XmAb and Xtend technologies to optimize its antibody drug candidates. Xencor was to receive an upfront payment and was eligible to receive milestones and royalties on product commercialization.

In March 2009, Xencor granted Merck & Co an exclusive license to its Xtend technology for the development of antibodies towards an undisclosed Merck drug target. Xencor would receive an upfront license fee of \$3 million, a payment on selection of an Xtend variant, milestone payments and royalties.

In March 2009, Xencor signed an agreement with Pfizer to optimize the performance of therapeutic monoclonal

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antibodies.

In February 2009, Xencor licensed access to its XmAb technology to CSL, for use in advancing the antibody-dependent cell cytotoxicity (ADCC) effector function of CSL's own therapeutic antibodies. The initial phase of the alliance would allow CSL broad access to the technology, to apply towards its complete antibody portfolio. CSL also had commercial licenses in place for the advanced development and commercialization of any antibodies incorporating XmAb; Xencor would receive an upfront payment, plus milestone and royalty payments on each of these antibodies.

In February 2008, Xencor agreed to use its XmAb technology to optimize Human Genome Sciences's monoclonal antibodies against selected targets. Xencor would receive an upfront payment, and was eligible to receive additional milestone payments and royalties on any resulting products that Human Genome commercializes.

In February 2007, Xencor agreed to use its XmAb technology to optimize Boehringer Ingelheim's monoclonal antibodies against selected targets. Xencor would receive an upfront payment, and was eligible to receive additional licence fees, milestones and a royalty payment on any resulting products that Boehringer commercializes.

In February 2006, Xencor granted Centocor a non-exclusive multiyear license to use its ImmunoFilter technology to evaluate the potential immunogenicity of therapeutic proteins, in return for annual license fees.

In January 2006, Xencor granted Eli Lilly a non-exclusive, multiyear license to use its ImmunoFilter technology to evaluate the immunogenicity risk of Lilly's therapeutic proteins.

In December 2005, Xencor gained an exclusive license to technology developed at Cambridge University for making monoclonal antibodies with greatly enhanced potency. The technology included specific Fc variants that complement Xencor's XmAb engineered Fc domains, which could be inserted into antibody candidates against any antigen and may improve effector functions such as enhanced antibody-mediated tumor cell killing, sustained half-life and increased structural stability.

In December 2005, Xencor licensed its XmAb engineered Fc domains to MedImmune for use in the creation of monoclonal antibodies against preclinical tumor targets. Xencor received an upfront payment, as well as license fees, milestones and royalties.

In July 2005, Xencor and Centocor agreed to codevelop monoclonal antibodies with improved anticancer efficacy. Xencor would use its XmAb engineered antibody Fc domains to create drug candidates; Centocor would evaluate these against an oncology target. Xencor was to receive an upfront payment, license fees, and milestone and royalty payments.

In April 2005, Lilly exercised its option to develop one or more therapeutic proteins created by Xencor, which would receive an upfront license fee, milestone payments and royalties. In February 2004, Xencor and Lilly entered a collaboration to optimize the physical and biochemical properties of a protein therapeutic. Xencor would use its PDA technology to create variants of the protein to meet criteria for clinical development. Lilly would have the option to develop the resulting candidates.

In January 2005, Xencor and Roche Holding AG signed a collaboration agreement to use Xencor's XmAb with Roche's antibodies against a cancer target. Xencor would receive technology access and license fees, and future license fees, milestones and royalties if Roche advanced candidates into development; in January 2006, the companies extended the collaboration, allowing Roche to further its research efforts to enhance the therapeutic efficacy of an antibody against a cancer target. Xencor would receive additional fees for the extension.

In January 2005, Xencor and Chugai Pharmaceutical Co Ltd formed a collaboration to use Xencor's XmAb in combination with Chugai's antibodies against a cancer target. Xencor would receive technology access, license fees, milestones and royalties.

In December 2004, Xencor Inc and Genentech entered a collaboration to create next-generation therapeutic antibodies for cancer and autoimmune diseases. Xencor would grant Genentech an exclusive, worldwide license to use its XmAb technology, a suite of engineered antibody Fc domains that can be incorporated into therapeutic candidates, to develop and commercialize products directed against CD20, Her2 and a third undisclosed antigen. In return, Xencor would receive a \$5 million upfront fee, annual licensing fees and milestone payments.

In January 2004, Xencor and Protein Design Labs (PDL) entered into an agreement to generate monoclonal antibodies with enhanced potency. The multiyear collaboration allowed PDL to apply Xencor's XmAb technology to a number of preclinical antibodies against various targets. Xencor was to receive technology access and license fees, development milestone payments and royalties. PDL would be responsible for development and commercialization of the resulting products.

In September 2003, Chromos Molecular Systems Inc and Xencor entered into a non-exclusive research license agreement to develop cell lines that expressed Xencor's monoclonal antibodies and other recombinant protein product candidates. Chromos would receive an upfront payment and annual maintenance fees.

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In October 2003, it was reported that Xencor was anticipating partnering a number of its technologies, whilst continuing to develop a number of inhouse projects.

Xencor has ongoing collaborations with the California Institute of Technology (Caltech) and the Massachusetts Institute of Technology (MIT).

IP NEWS

In January 2008, Xencor announced that the USPTO had granted US-7317091B1 (WO-03074679 and WO-2004029207) which covered its protein design automation technology. The issuance was the first from a series of applications covering Xencor's XmAb antibody Fc engineering technology.

In September 2003, Xencor was issued US-06627186, covering nucleic acids and protein variants of G-CSF with granulopoietic activity'.

FINANCIAL

In October 2013, Xencor filed a registration statement for an IPO of shares and applied for listing on the NASDAQ stock market under the symbol 'XNCR'. In December 2013, Xencor priced its IPO of 12,730,000 shares of its common stock at a public offering price of \$5.50 each. The underwriters were granted a 30-day option to purchase up to an additional 1,909,500 shares of common stock. The shares began trading on the NASDAQ global market under the symbol 'XNCR'. At that time, the offering was expected to close on December 6, 2013. Later that month, the offering was closed; at that time, gross proceeds of approximately \$72.5 million were raised by the company.

In October 2007, the company raised an additional \$15 million in extended series E financing, bringing the total raised to \$60 million.

In October 2006, Xencor raised \$45 million from a private financing. The funds included a \$6 million bridge financing that was announced in July 2006. Xencor would use the proceeds for the clinical development of two biologics; XPro1595 was to enter the clinic in 2006 for inflammation, and XmAb-2513 was to begin clinical trials for Hodgkin's disease in 2007.

In July 2006, Xencor raised \$6 million in a bridge financing led by Novo Nordisk, which committed to invest a further \$6 million in future financings.

By October 2005, Xencor had raised \$20 million through a series D round of financing. The funds would be used to initiate a phase I trial of XPro-1595 and conduct preclinical development of antibody therapeutics.

R&D GRANTS

In October 2002, Xencor was awarded a \$2 million advanced technology program grant from the National Institute of Standards and Technology to support the discovery of safer and more effective protein therapeutics. The 3-year federal grant, titled "Rational Design of Non-immunogenic Proteins," would support the development of Xencor's ImmunoPDA technology to create new, non-immunogenic proteins optimized for therapeutic use and to eliminate immunogenicity from known protein drugs.

In June 2001, Xencor was awarded a \$0.5 million SBIR phase II grant from the National Science Foundation. The grant would allow Xencor to further develop its enabling technology for computer directed high-throughput screening of proteins.

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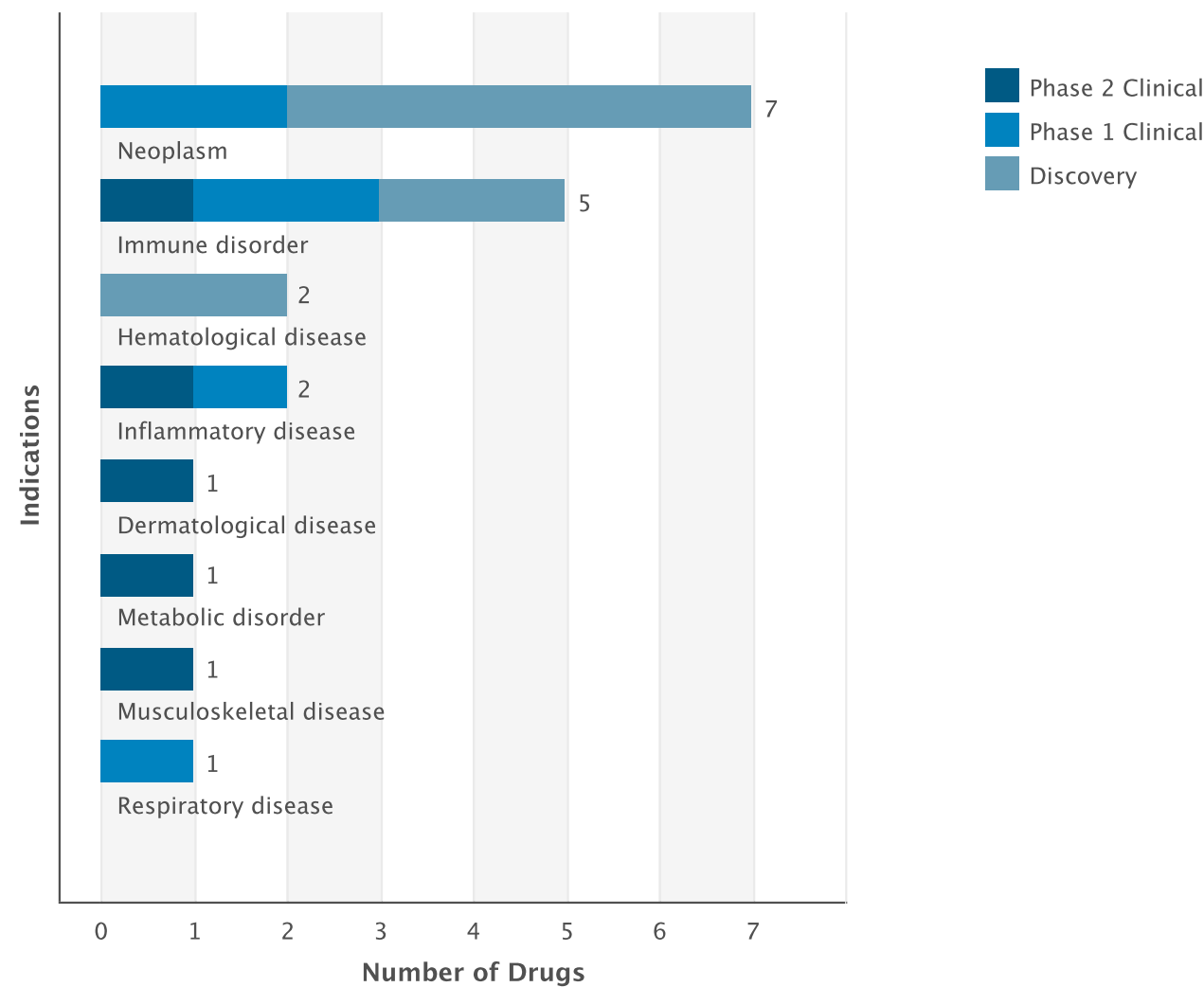


PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



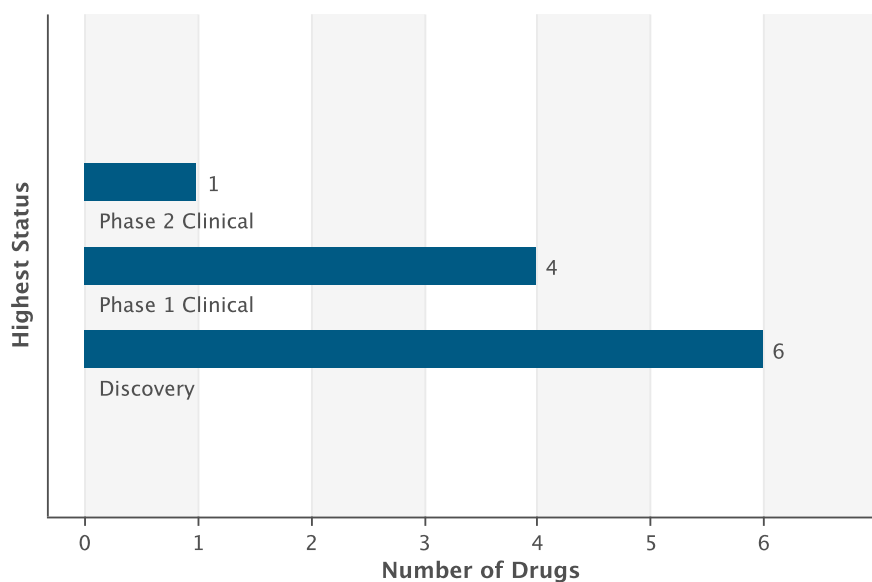
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Drugs by Indication Table

Indication	Active	Inactive	Total
Neoplasm	7	10	17
Immune disorder	5	8	13
Hematological disease	2	6	8
Musculoskeletal disease	1	4	5
Inflammatory disease	2	3	5
Endocrine disease	0	3	3
Gynecology and obstetrics	0	2	2
Degeneration	0	1	1
Neurological disease	0	1	1
Genitourinary disease	0	1	1
Dermatological disease	1	0	1
Ocular disease	0	1	1
Metabolic disorder	1	0	1
Respiratory disease	1	0	1

Drugs by Highest Status

Active Drugs by Highest Status Chart



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Drugs by Highest Status Table

Development Status	Number of Drugs
Phase 2 Clinical	1
Phase 1 Clinical	4
Discovery	6
Discontinued	4
No Development Reported	11

DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Drug - Discovery/Design	1	0	1	0	2
Technology - Other Proprietary	11	0	1	0	12
Patent - Non-Exclusive Rights	1	0	0	0	1
Drug - Funding	2	0	0	0	2
Drug - Screening/Evaluation	1	0	0	0	1
Drug - Early Research/Development	2	0	0	0	2
Drug - Development/Commercialization License	3	0	0	0	3
Drug - Manufacturing/Supply	0	0	1	0	1
Technology - Delivery/Formulation	1	0	0	0	1
Technology - Target Validation	1	0	0	0	1

CLINICAL TRIALS

Trials by Condition Studied

Condition Studied	Ongoing	All
Immune disorder	0	5
Inflammatory disease	0	2
Musculoskeletal disease	0	2
Neoplasm	0	2
Hematological disease	0	2

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Trials by Phase

Phase	Ongoing	All
Phase 2	0	2
Phase 1	1	4

Phase Definitions

Phase 3 Clinical

Includes Phase 3, Phase 3b, Phase 3a, Phase 2/3 (where enrolment count is 300 or over)

Phase 2 Clinical

Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

Phase 1 Clinical

Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

PATENTS *

Indication	As Owner	As Third Party	Total
Cardiovascular disease	10	0	10
Endocrine disease	10	0	10
Gastrointestinal disease	13	0	13
Genitourinary disease	2	0	2
Growth disorder	2	0	2
Hematological disease	12	0	12
Degeneration	2	0	2
Immune disorder	44	0	44
Musculoskeletal disease	19	0	19
Neoplasm	53	0	53
Ocular disease	2	0	2
Genetic disorder	2	0	2
Metabolic disorder	13	0	13
Mouth disease	4	0	4
Neurological disease	23	0	23
Nutritional disorder	2	0	2
Respiratory disease	6	0	6

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Infectious disease	31	0	31
Injury	2	0	2
Inflammatory disease	34	0	34
Otorhinolaryngological disease	3	0	3
Gynecology and obstetrics	3	0	3
Dermatological disease	10	0	10

* This table represents a summary of the core patent coverage for this company covering Therapeutic EP, US and WO patents since 1990 only.

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PRODUCT PORTFOLIO DRUG PIPELINE DETAIL

PLEASE NOTE: Highest status refers to highest development of that drug for one of the active companies

XmAb-5871

XmAb-5871 SNAPSHOT

Drug Name	XmAb-5871
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	Amgen Inc
Highest Status	Phase 2 Clinical
Active Indications	Rheumatoid arthritis;Systemic lupus erythematosus;Autoimmune disease
Target-based Actions	B-lymphocyte antigen CD19 inhibitor;Immunoglobulin gamma Fc receptor IIB antagonist
Other Actions	Immunomodulator;Anti-inflammatory
Technologies	Monoclonal antibody humanized;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	11-Nov-2014

XmAb-5871 DEVELOPMENT PROFILE

SUMMARY

Xencor is developing XmAb-5871, a humanized mAb dual inhibitor of the B-cell receptors CD19 and CD32b (Fc-gammaRIIb), which comprises a high-affinity CD19-binding variable domain with an XmAb Fc domain that selectively engages CD32b, using Xencor's XmAb technology, for the potential treatment of autoimmune disease including systemic lupus erythematosus (SLE). In February 2013, phase Ib/IIa trial for rheumatoid arthritis (RA) was initiated ; in November 2014, top-line data were expected by the end of 2014. In October 2014, Xencor disclosed that it did not plan to start a phase IIb rheumatoid arthritis trial in 2015. Instead, it planned to focus on B-cell inhibition-associated autoimmune disorders including IgG4-related disease, for which clinical testing was scheduled to start in 2015 .

Amgen was a previous collaborator ; however, in October 2014, it withdrew its involvement after Xencor changed its development plan for the agent. At that time, Amgen held a right of first negotiation for licensing the agent in the future .

XmAb-5871 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Rheumatoid arthritis	US	Phase 2 Clinical	13-Feb-2013

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Company	Indication	Country	Development Status	Date
Xencor Inc	Systemic lupus erythematosus	US	Phase 2 Clinical	28-Oct-2014
Xencor Inc	Autoimmune disease	US	Discovery	07-Dec-2007
Amgen Inc	Rheumatoid arthritis	US	Discontinued	28-Oct-2014

XmAb-5871 DRUG NAMES

Names	Type
anti-CD32B/CD19 inhibitor (autoimmune disease), Xencor/Amgen	
XmAb-5871	Research Code

XmAb-5871 CLINICAL TRIALS

Trials by Phase and Condition Studied

Phase 4 Clinical		Phase 3 Clinical		Phase 2 Clinical		Phase 1 Clinical		Phase Unspecified		Total	
On-going	All	On-going	All	On-going	All	On-going	All	On-going	All	On-going	All
Rheumatoid arthritis											
0	0	0	0	0	2	0	0	0	0	0	2
Autoimmune disease											
0	0	0	0	0	0	0	1	0	0	0	1

Total Trials by Phase and Status

Phase 4 Clinical		Phase 3 Clinical		Phase 2 Clinical		Phase 1 Clinical		Phase Unspecified		Total	
On-going	All	On-going	All	On-going	All	On-going	All	On-going	All	On-going	All
Total by Phase and Status											
0	0	0	0	0	2	0	1	0	0	0	3

Phase Definitions

Phase 3 Clinical

Includes Phase 3, Phase 3b, Phase 3a, Phase 2/3 (where enrolment count is 300 or over)

Phase 2 Clinical

Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

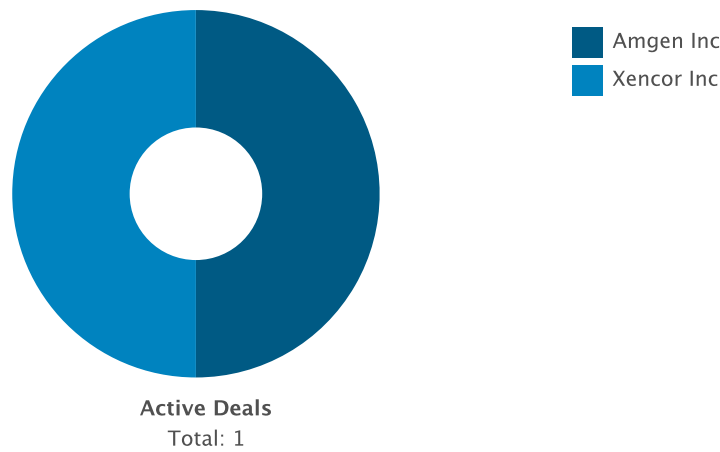
Phase 1 Clinical

Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

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DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Amgen Inc	0	0	1	0	1
Xencor Inc	1	0	0	0	1

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Deals by Type Chart



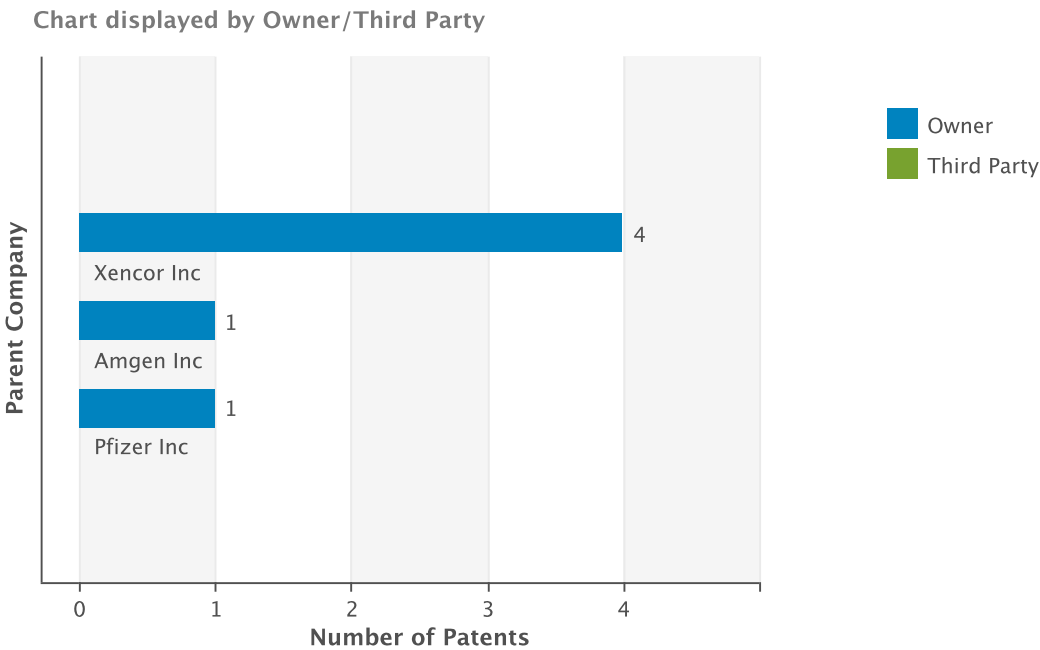
Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Development/Commercialization License	1	0	1

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PATENTS

Patents by Parent Company Chart

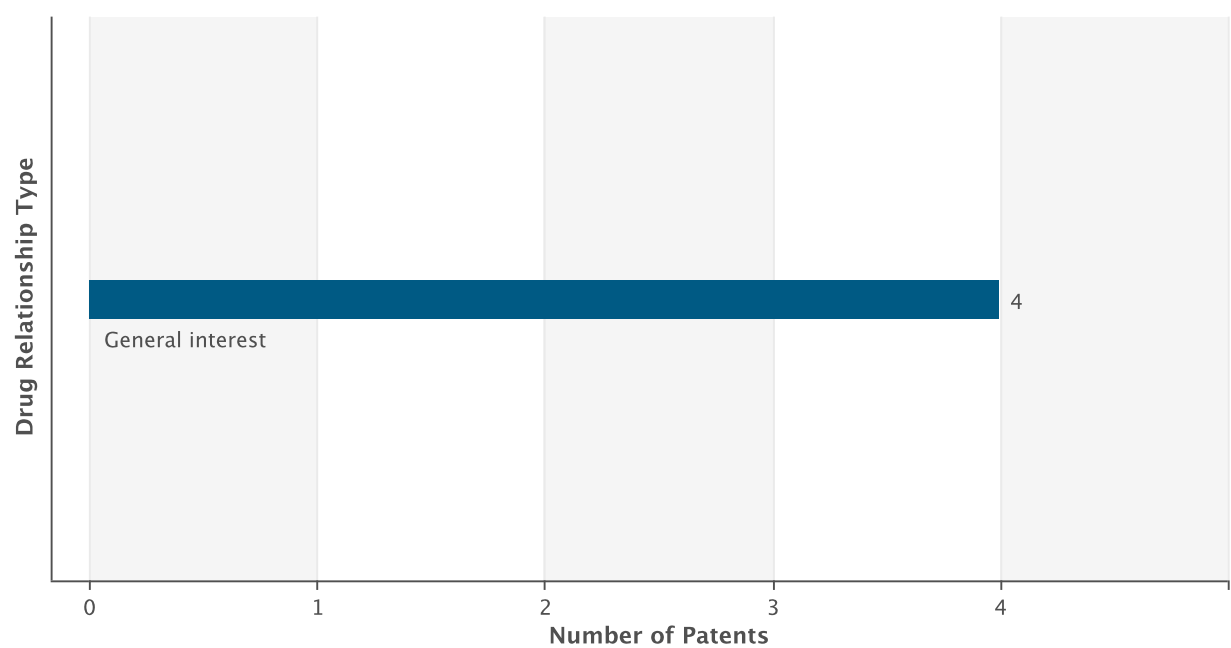


Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Xencor Inc	4	0	4
Amgen Inc	1	0	1
Pfizer Inc	1	0	1

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	4

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anticancer monoclonal antibody (1), (Xmab), Boehringer

anticancer monoclonal antibody (1), (Xmab), Boehringer SNAPSHOT

Drug Name	anticancer monoclonal antibody (1), (Xmab), Boehringer
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc;Boehringer Ingelheim Corp
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Cancer
Target-based Actions	
Other Actions	Anticancer monoclonal antibody;Unspecified drug target
Technologies	Monoclonal antibody;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	24-Sep-2013

anticancer monoclonal antibody (1), (Xmab), Boehringer DEVELOPMENT PROFILE

SUMMARY

Xencor and Boehringer Ingelheim are developing a monoclonal antibody, optimized using Xencor's XmAb antibody technology, for the potential treatment of cancer. In June 2012, the antibody was listed as being in phase I development ; in September 2013, this was still the case.

anticancer monoclonal antibody (1), (Xmab), Boehringer DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Boehringer Ingelheim Corp	Cancer	Germany	Phase 1 Clinical	12-Jun-2012
Xencor Inc	Cancer	US	Phase 1 Clinical	12-Jun-2012

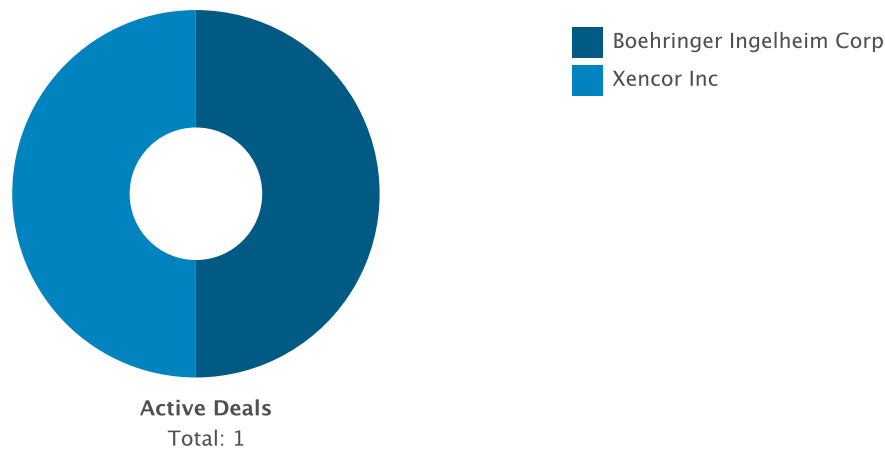
anticancer monoclonal antibody (1), (Xmab), Boehringer DRUG NAMES

Names	Type
anticancer monoclonal antibody (1), (Xmab), Boehringer	

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DEALS

Deals by Parent Company Chart

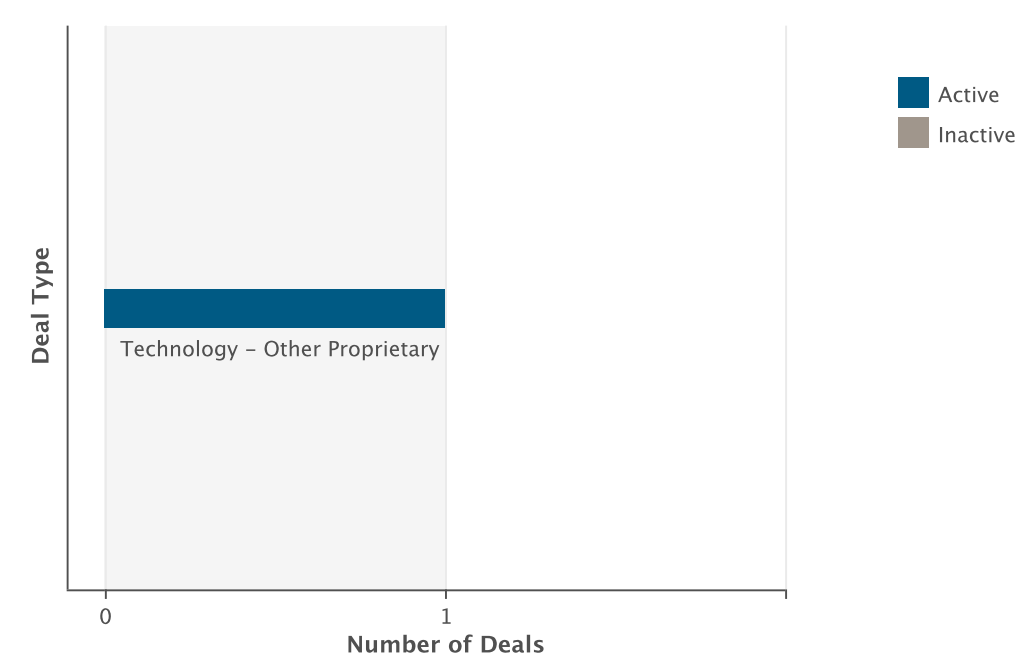


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Xencor Inc	1	0	0	0	1
Boehringer Ingelheim Corp	0	0	1	0	1

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Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Technology - Other Proprietary	1	0	1

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omalizumab biosuperior, Xencor

omalizumab biosuperior, Xencor SNAPSHOT

Drug Name	omalizumab biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Allergy;Asthma
Target-based Actions	Immunoglobulin gamma Fc receptor IIB modulator;Immunoglobulin E antagonist
Other Actions	Anti-inflammatory
Technologies	Monoclonal antibody humanized;Biological therapeutic;Parenteral formulation unspecified;Protein recombinant
Last Change Date	11-Nov-2014

omalizumab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is developing XmAb-7195, presumed to be Xencor's biobetter version of omalizumab (Xolair), a humanized antibody that targets IgE and co-engages CD32b, created using the company's XmAb gammaRIIb Fc domain technology, for the potential treatment of asthma and allergy. In March 2014, the company was planning to file an IND to initiate phase Ia development in the first half of 2014 with preliminary data anticipated by the end of 2014 ; in May 2014, a phase Ia trial was initiated ; in November 2014, preliminary IgE reduction data were expected in January 2015. In November 2010, the company planned on seeking to outlicense the antibody ; in June 2012, this was still the case .

omalizumab biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Allergy	US	Phase 1 Clinical	22-May-2014
Xencor Inc	Asthma	US	Phase 1 Clinical	09-Nov-2010

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omalizumab biosuperior, Xencor DRUG NAMES

Names	Type
XmAb-7195	Research Code
IgE inhibitor (asthma/allergy), Xencor	
omalizumab biobetter, Xencor	
omalizumab biosuperior, Xencor	

omalizumab biosuperior, Xencor CLINICAL TRIALS

Total Trials by Phase and Status

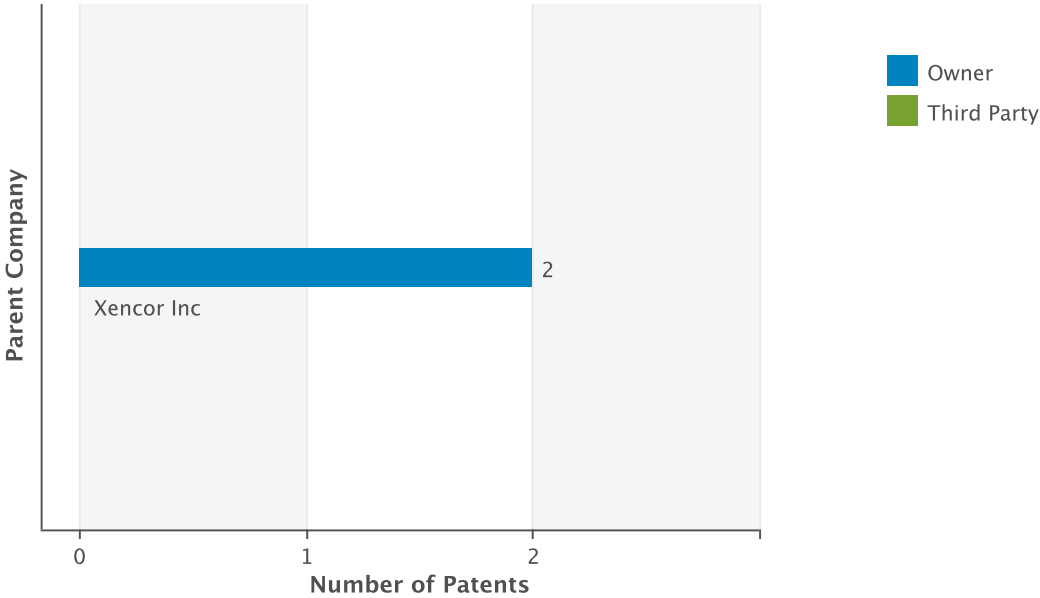
Phase 4 Clinical		Phase 3 Clinical		Phase 2 Clinical		Phase 1 Clinical		Phase Unspecified		Total	
On-going	All	On-going	All	On-going	All	On-going	All	On-going	All	On-going	All
Total by Phase and Status											
0	0	0	0	0	0	1	1	0	0	1	1

omalizumab biosuperior, Xencor DEALS AND PATENTS

PATENTS

Patents by Parent Company Chart

Chart displayed by Owner/Third Party

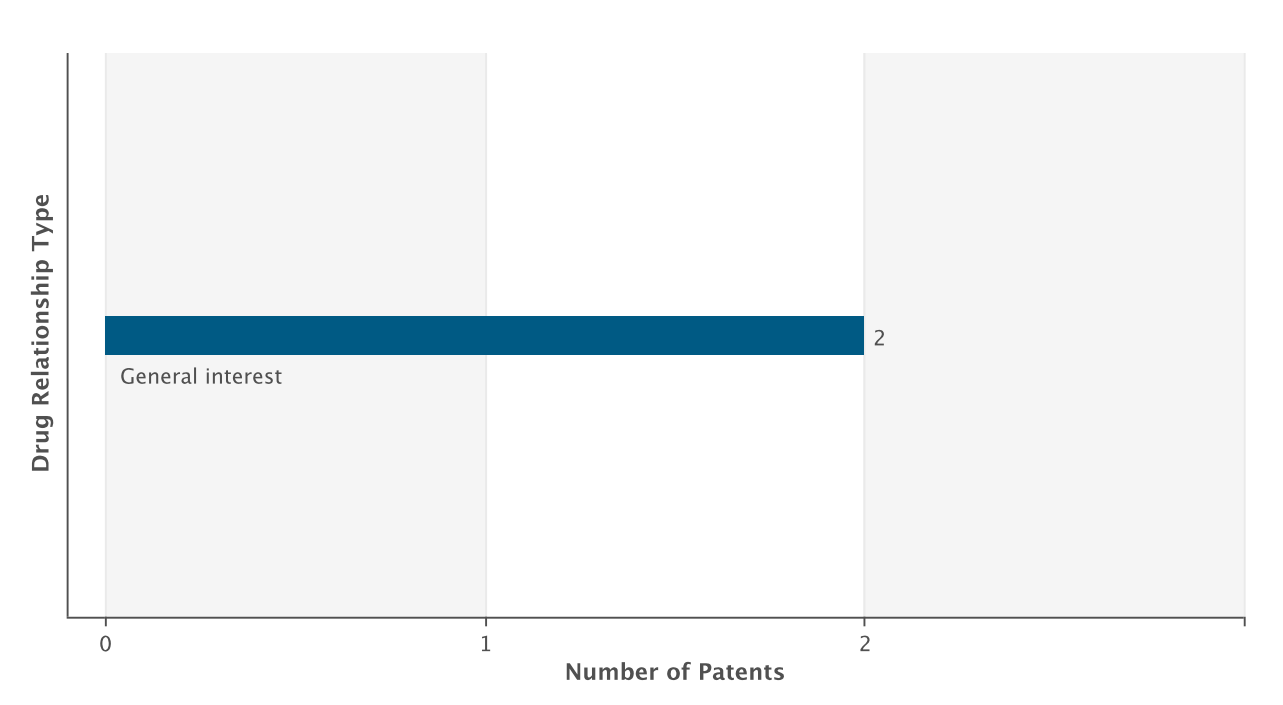


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Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Xencor Inc	2	0	2

Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	2

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monoclonal antibody (autoimmune disease), Xencor/Merck

monoclonal antibody (autoimmune disease), Xencor/Merck SNAPSHOT

Drug Name	monoclonal antibody (autoimmune disease), Xencor/Merck
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc;Merck & Co Inc
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Autoimmune disease
Target-based Actions	
Other Actions	Immunomodulator;Unspecified drug target
Technologies	Monoclonal antibody;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	13-Apr-2014

monoclonal antibody (autoimmune disease), Xencor/Merck DEVELOPMENT PROFILE

SUMMARY

Xencor and licensee Merck are developing a monoclonal antibody against an undisclosed target using Xencor's XmAb technology for the potential treatment of autoimmune disorders. By April 2014, a phase I trial had been initiated.

monoclonal antibody (autoimmune disease), Xencor/Merck DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Merck & Co Inc	Autoimmune disease	US	Phase 1 Clinical	10-Apr-2014
Xencor Inc	Autoimmune disease	US	Phase 1 Clinical	10-Apr-2014

monoclonal antibody (autoimmune disease), Xencor/Merck DRUG NAMES

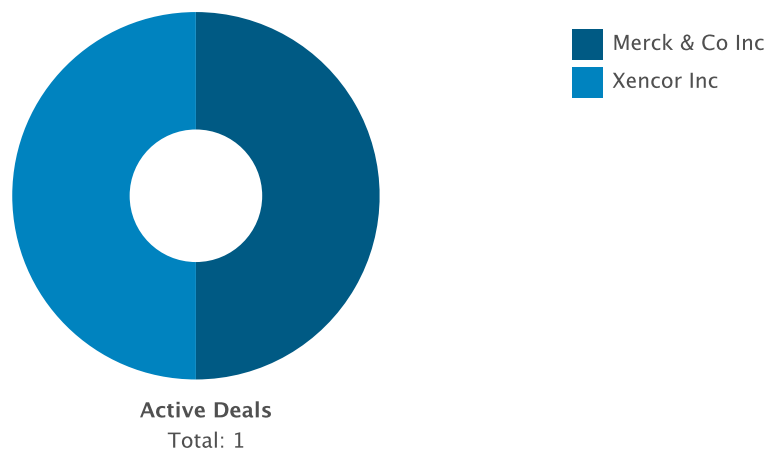
Names	Type
monoclonal antibody (autoimmune disease), Xencor/Merck	

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DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Xencor Inc	1	0	0	0	1
Merck & Co Inc	0	0	1	0	1

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Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Patent - Non-Exclusive Rights	1	0	1

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monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim

monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim SNAPSHOT

Drug Name	monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Boehringer Ingelheim Corp;Xencor Inc
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Cancer
Target-based Actions	
Other Actions	Anticancer monoclonal antibody;Unspecified drug target
Technologies	Monoclonal antibody;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	25-Sep-2013

monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim DEVELOPMENT PROFILE

SUMMARY

Xencor and Boehringer Ingelheim are developing a monoclonal antibody, optimized using Xencor's XmAb technology, for the potential treatment of cancer. In September 2013, the antibody was listed as being in phase I.

monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Boehringer Ingelheim Corp	Cancer	Germany	Phase 1 Clinical	24-Sep-2013
Xencor Inc	Cancer	US	Phase 1 Clinical	24-Sep-2013

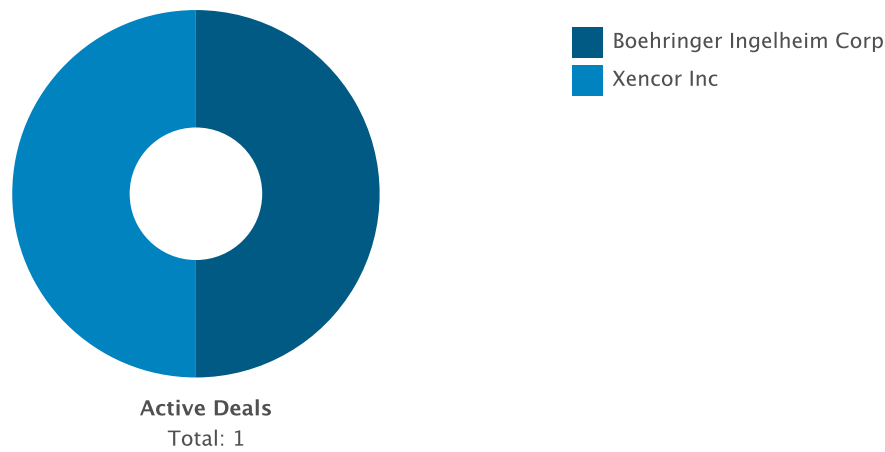
monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim DRUG NAMES

Names	Type
monoclonal antibody (2) (Xmab, cancer), Xencor/Boehringer Ingelheim	

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DEALS

Deals by Parent Company Chart

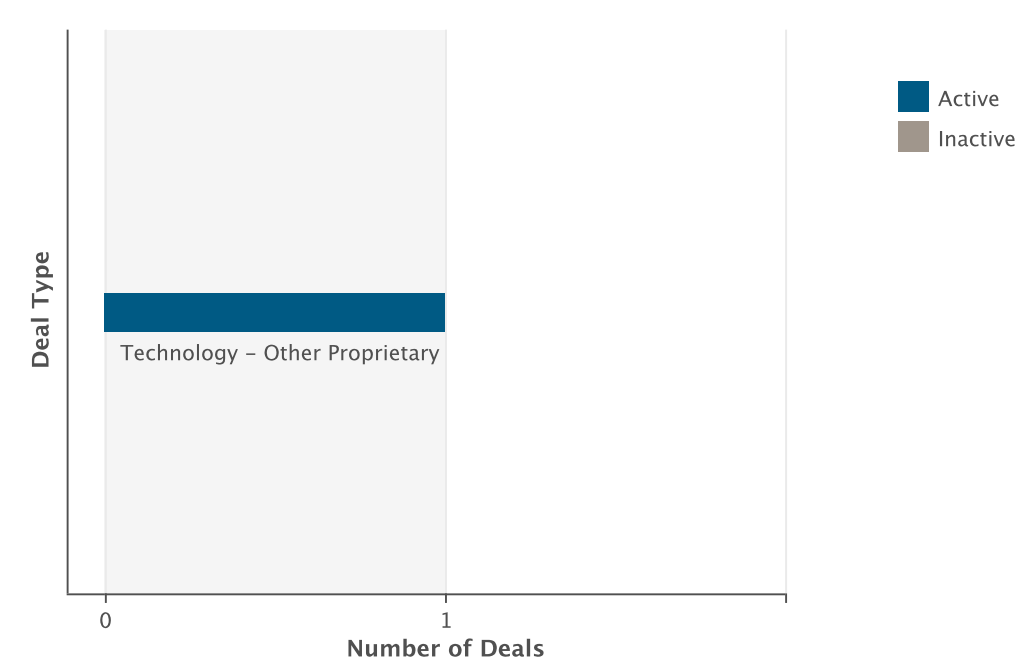


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Boehringer Ingelheim Corp	0	0	1	0	1
Xencor Inc	1	0	0	0	1

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Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Technology - Other Proprietary	1	0	1

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cetuximab biosuperior, Xencor

cetuximab biosuperior, Xencor SNAPSHOT

Drug Name	cetuximab biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Cancer
Target-based Actions	Epidermal growth factor ligand inhibitor
Other Actions	Anticancer monoclonal antibody
Technologies	Chimeric monoclonal antibody;Biological therapeutic;Parenteral formulation unspecified;Protein recombinant
Last Change Date	28-Sep-2012

cetuximab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-EGFR (Xtend-cetuximab), a biosuperior version of cetuximab (Erbix), a chimeric mAb targeting EGFR, developed using the company's XmAb and Xtend technologies, for the potential treatment of cancer including colon cancer, NSCLC. In June 2012, the antibody was listed as being in preclinical development. In August 2010, the company was planning on seeking to outlicense the program.

cetuximab biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Cancer	US	Discovery	19-Jan-2010

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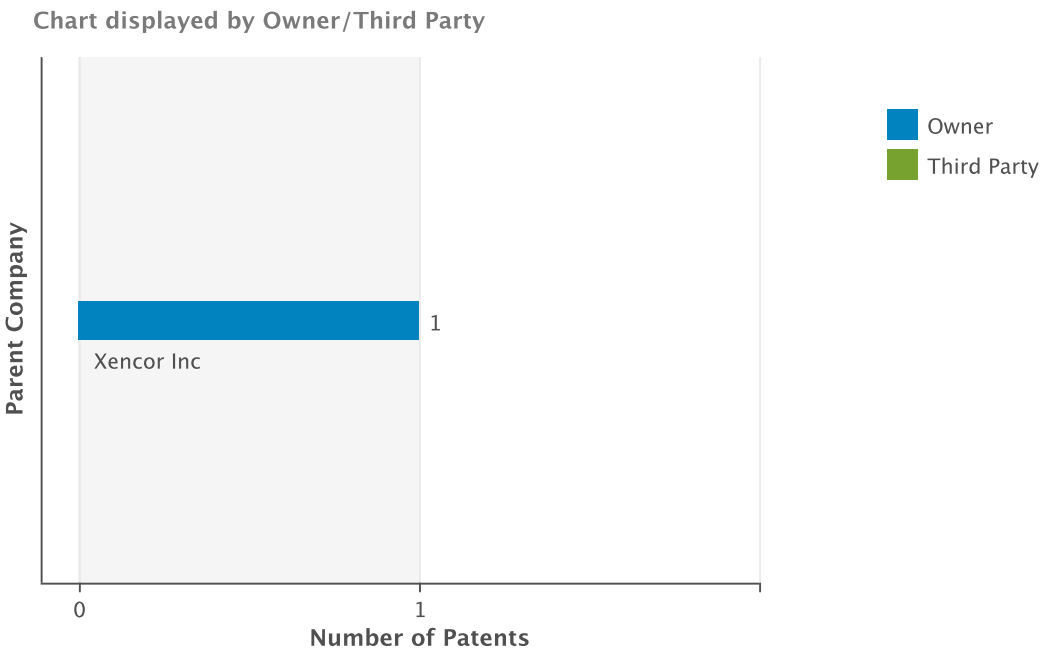
cetuximab biosuperior, Xencor DRUG NAMES

Names	Type
anti-EGFR humanized mAbs (cancer), Xencor	
cetuximab biosuperior, Xencor	
anti-EGFR humanized monoclonal antibodies (cancer), Xencor	
Xtend-EGFR	
Xtend-cetuximab	
cetuximab biobetter, Xencor	

cetuximab biosuperior, Xencor DEALS AND PATENTS

PATENTS

Patents by Parent Company Chart

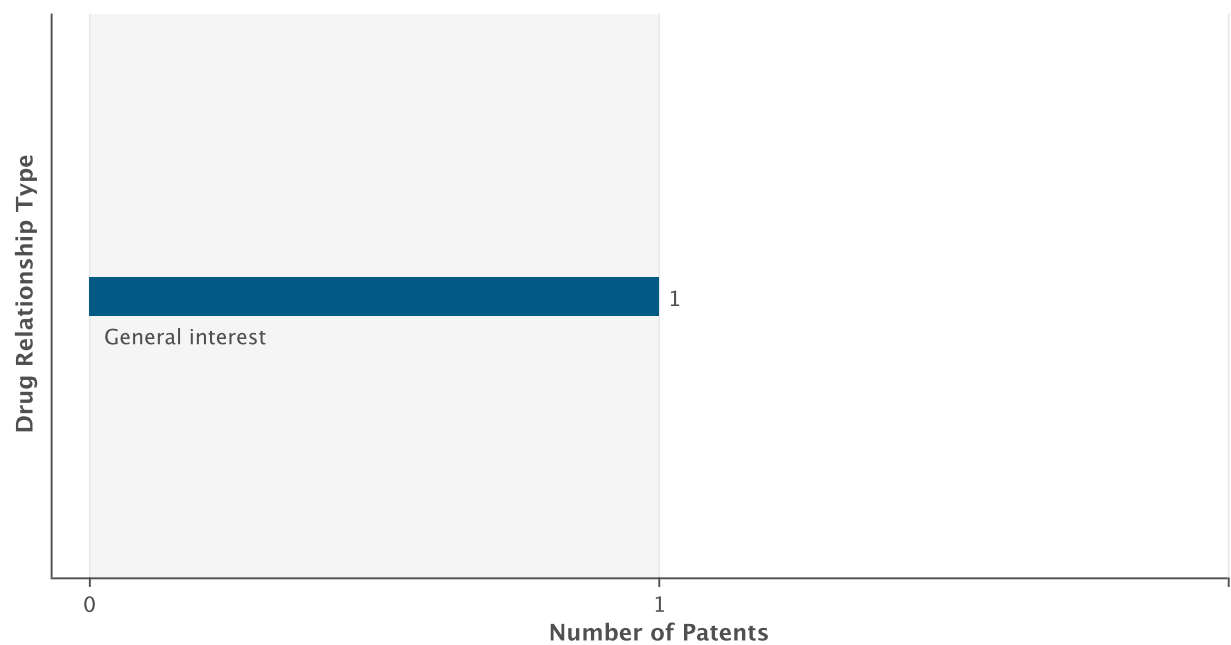


Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Xencor Inc	1	0	1

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	1

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adalimumab biosuperior, Xencor

adalimumab biosuperior, Xencor SNAPSHOT

Drug Name	adalimumab biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Autoimmune disease
Target-based Actions	TNF antagonist
Other Actions	Immunomodulator
Technologies	Monoclonal antibody human;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	24-Sep-2013

adalimumab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-TNF, a biosuperior version of Humira, a fully human mAb targeting TNF, using the company's Xtend technology, for the potential treatment of autoimmune diseases. In August 2010, the program was listed as being in preclinical development, ; in September 2013, this was still the case. In February 2012, a phase I trial was planned in 2013. In August 2010, the company was seeking to outlicense the program.

adalimumab biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Autoimmune disease	US	Discovery	03-Aug-2010

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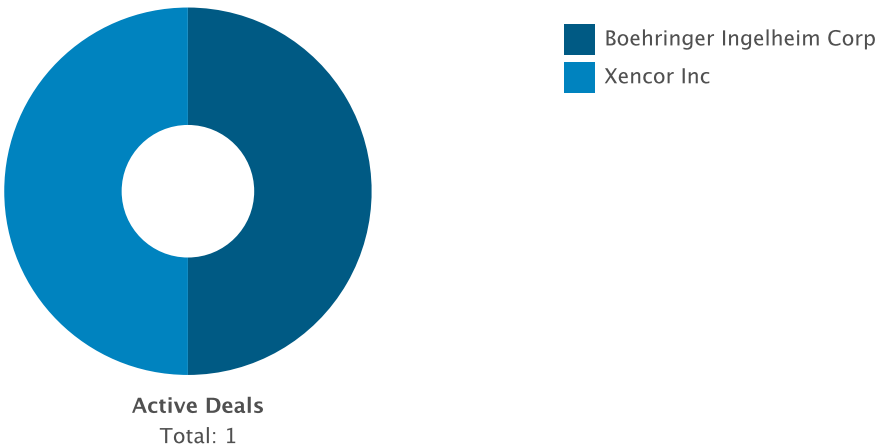
adalimumab biosuperior, Xencor DRUG NAMES

Names	Type
adalimumab biosuperior, Xencor	
biosuperior anti-TNF human mAb (autoimmune disease), Xencor	
biosuperior anti-TNF human monoclonal antibody (autoimmune disease), Xencor	
Xtend-TNF	

adalimumab biosuperior, Xencor DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Xencor Inc	0	0	1	0	1
Boehringer Ingelheim Corp	1	0	0	0	1

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Deals by Type Chart



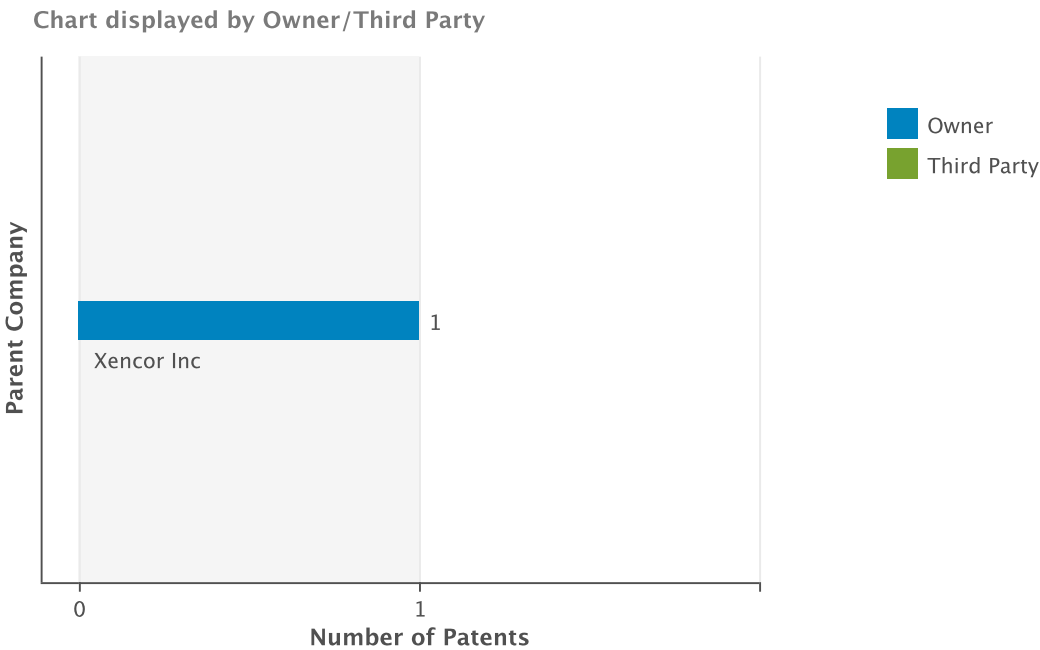
Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Manufacturing/Supply	1	0	1

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PATENTS

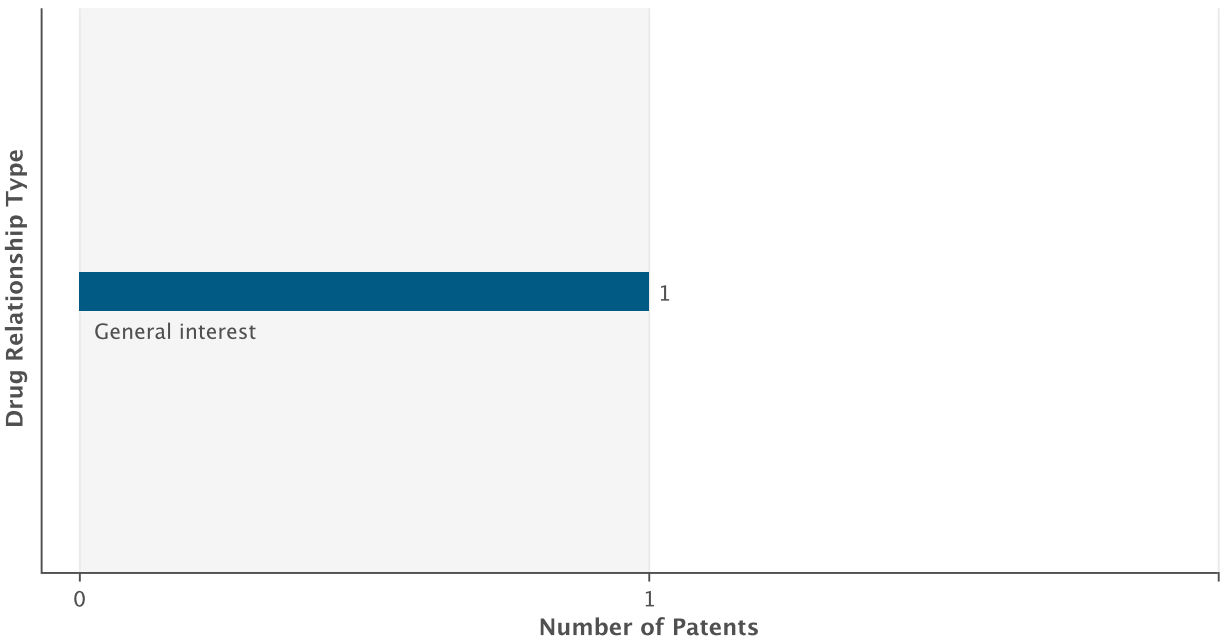
Patents by Parent Company Chart



Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Xencor Inc	1	0	1

Patents by Drug Relationship Type Chart



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Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	1

XmAb-14045

XmAb-14045 SNAPSHOT

Drug Name	XmAb-14045
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Acute myelogenous leukemia
Target-based Actions	CDw123 modulator
Other Actions	CD3 modulator;Anticancer antibody
Technologies	Multivalent antibody;Biological therapeutic
Last Change Date	11-Nov-2014

XmAb-14045 DEVELOPMENT PROFILE

SUMMARY

Xencor Inc is investigating XmAb-14045, a lead from a bispecific antibody program, targeting CD3 and CD123 for the potential treatment of acute myelogenous leukemia,. In November 2014, preclinical data were reported. At that time, clinical trials were planned by mid-2016.

The company is also investigating an antibody targeting CD3 and CD38 from the bispecific antibody program for the potential treatment of cancer.

XmAb-14045 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Acute myelogenous leukemia	US	Discovery	14-May-2014

XmAb-14045 DRUG NAMES

Names	Type
bispecific antibody program (CD3 x CD123 target, acute myelogenous leukemia), Xencor Inc	
XmAb-14045	Research Code

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bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc

bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc SNAPSHOT

Drug Name	bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Cancer
Target-based Actions	ADP ribosyl cyclase-1 modulator
Other Actions	Anticancer antibody;CD3 modulator
Technologies	Multivalent antibody;Biological therapeutic
Last Change Date	11-Nov-2014

bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc DEVELOPMENT PROFILE

SUMMARY

Xencor Inc is investigating an antibody, from a bispecific antibody program, targeting CD3 and CD38 for the potential treatment of cancer. In November 2014, preclinical data were reported.

The company is also investigating an antibody targeting CD3 and CD123 from the bispecific antibody program for the potential treatment of acute myelogenous leukemia

bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Cancer	US	Discovery	14-May-2014

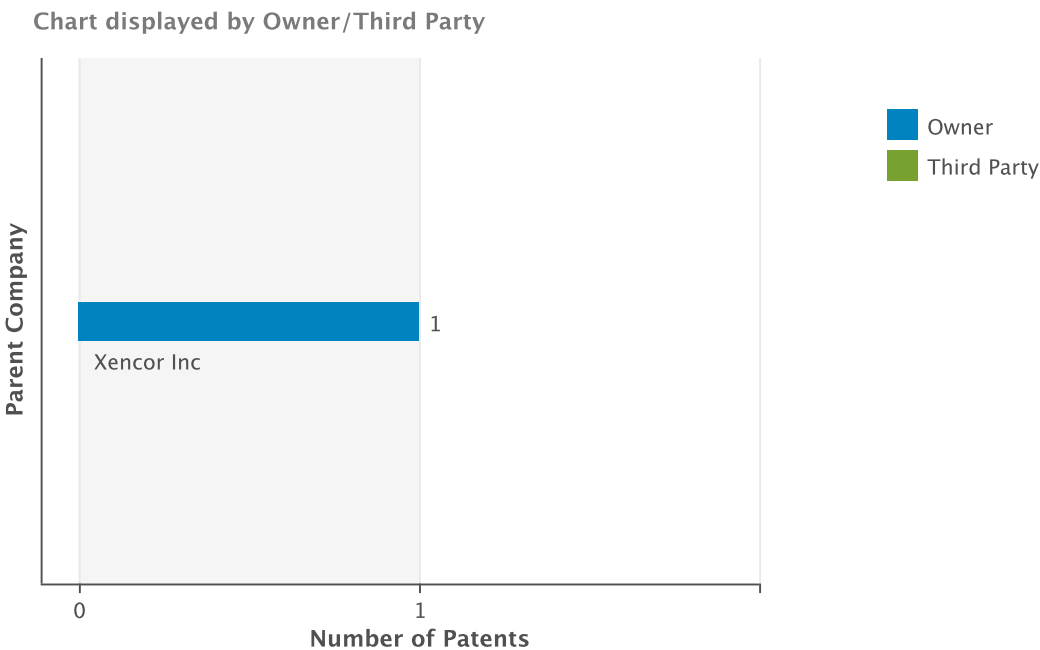
bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc DRUG NAMES

Names	Type
bispecific antibody program (CD3 x CD38 target, cancer), Xencor Inc	

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Patents by Parent Company Chart

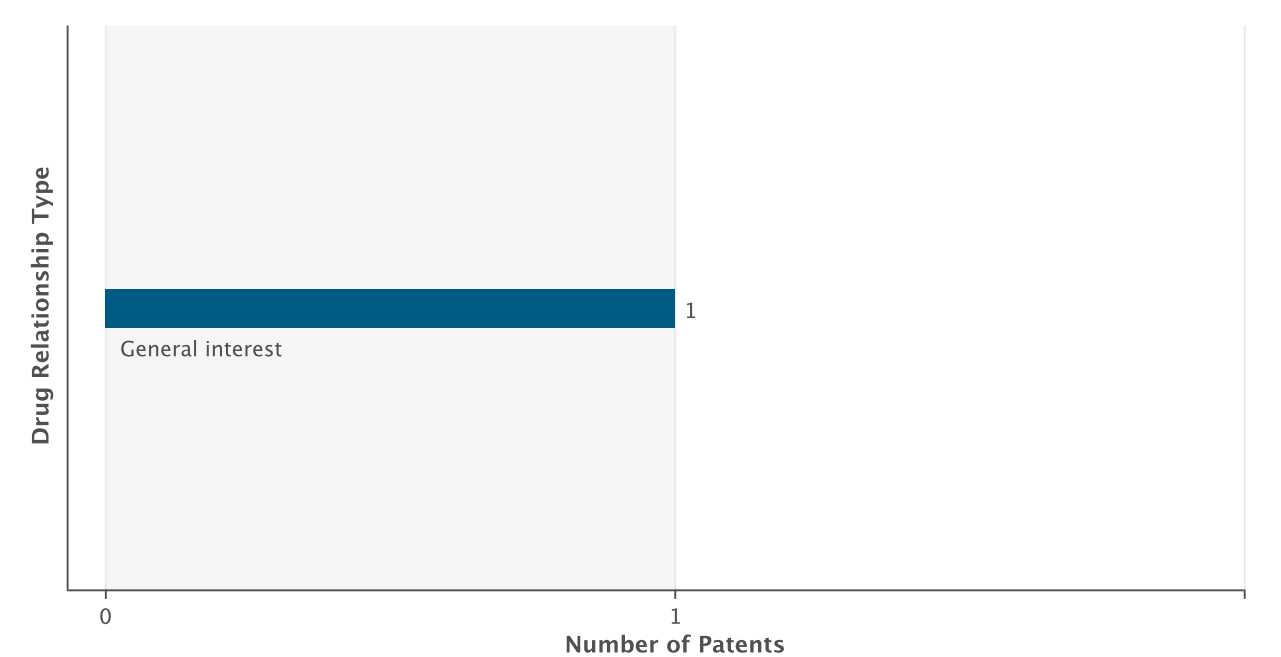


Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Xencor Inc	1	0	1

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	1

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bevacizumab biosuperior, Xencor

bevacizumab biosuperior, Xencor SNAPSHOT

Drug Name	bevacizumab biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Solid tumor
Target-based Actions	VEGF ligand inhibitor
Other Actions	Anticancer monoclonal antibody
Technologies	Monoclonal antibody human;Biological therapeutic;Parenteral formulation unspecified;Protein recombinant
Last Change Date	28-Sep-2012

bevacizumab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-VEGF (Xtend-bevacizumab), a biosuperior version of bevacizumab (Avastin), a fully human mAb targeting VEGF, using the company's Xtend technology, for the potential treatment of solid tumors,. In August 2010, the program was listed as being in preclinical development ; in June 2012, this was still the case. In August 2010, the company was seeking to outlicense the program.

bevacizumab biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Solid tumor	US	Discovery	19-Jan-2010

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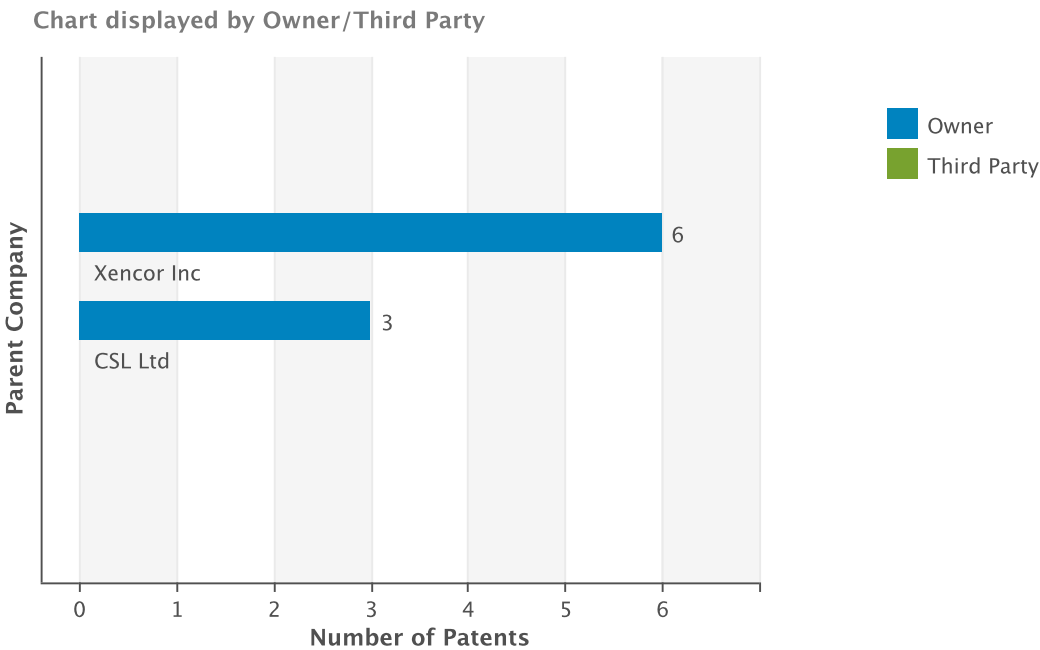
bevacizumab biosuperior, Xencor DRUG NAMES

Names	Type
Xtend-bevacizumab	
anti-VEGF human monoclonal antibodies (solid tumor), Xencor	
bevacizumab biosuperior, Xencor	
anti-VEGF human mAbs (solid tumor), Xencor	
Xtend-VEGF	
XENP-9493	Research Code
bevacizumab analogs (cancer), Xencor	
bevacizumab biobetter, Xencor	

bevacizumab biosuperior, Xencor DEALS AND PATENTS

PATENTS

Patents by Parent Company Chart

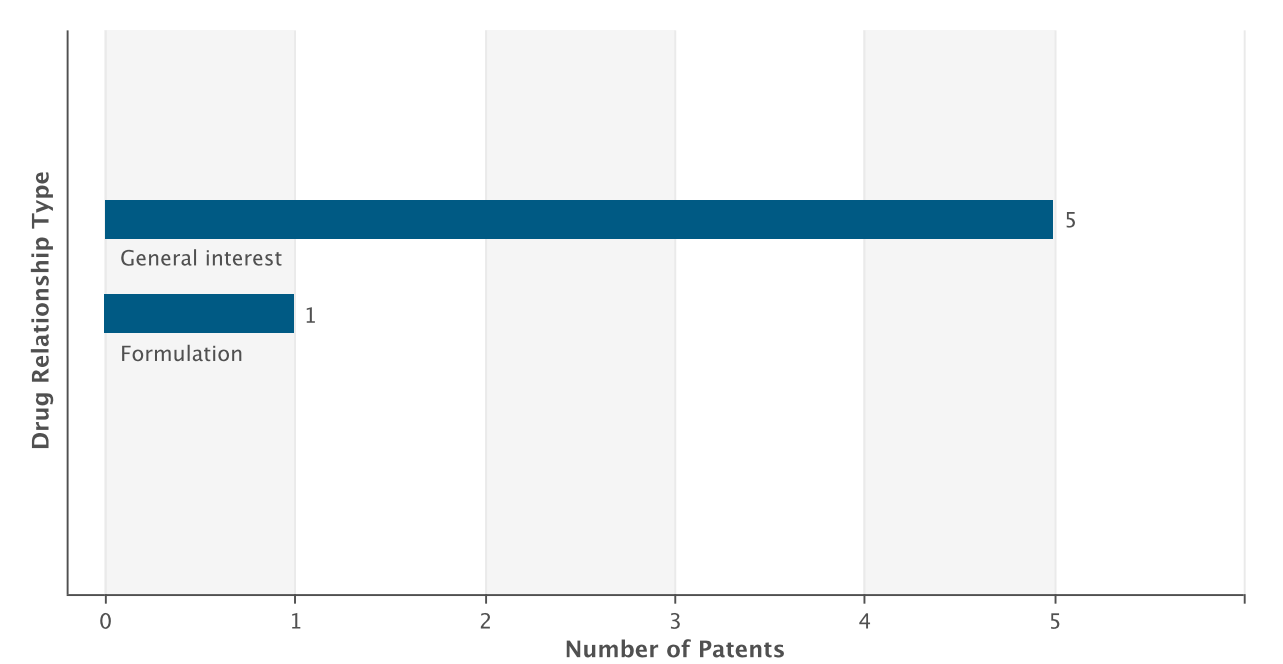


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Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Xencor Inc	6	0	6
CSL Ltd	3	0	3

Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	5
Formulation	1

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bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc

bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc SNAPSHOT

Drug Name	bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	B-cell lymphoma
Target-based Actions	B-lymphocyte antigen CD20 modulator
Other Actions	Anticancer antibody;CD3 modulator
Technologies	Multivalent antibody;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	08-Dec-2014

bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc DEVELOPMENT PROFILE

SUMMARY

Xencor Inc is investigating an antibody, from a bispecific antibody program, including XmAb-13676 and XmAb-13677, which target CD3 and CD20 for the potential treatment of B-cell lymphoma,. In November 2014, preclinical data were reported.

The company is also investigating antibodies targeting CD3 x CD38, and CD3 x CD123 from the bispecific antibody program for the potential treatment of cancer.

bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	B-cell lymphoma	US	Discovery	31-Jul-2014

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bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc DRUG NAMES

Names	Type
XmAb-13677	Research Code
XmAb-13676	Research Code
bispecific antibody program (CD3 x CD20 target, B-cell malignancies), Xencor Inc	

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