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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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ABOUT CORTELLIS COMPANY DETAILED PIPELINE REPORT

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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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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	11
Number of Patents as Owner	57
Number of Patents as Third Party	1
Number of Deals	26
Key Indications	Cancer,Rheumatoid arthritis,Autoimmune disease,Systemic lupus erythematosus,Allergy,Asthma,Breast tumor,Chronic lymphocytic leukemia,Non-Hodgkin lymphoma,Solid tumor
Key Target-based Actions	B-lymphocyte antigen CD19 inhibitor,TNF antagonist,Immunoglobulin gamma Fc receptor IIB antagonist,TNF alpha ligand inhibitor,Immunoglobulin E antagonist,B-lymphocyte antigen CD20 modulator,Bone marrow stromal antigen 2 modulator,CD30 antagonist,CD40 ligand inhibitor,CD80 antagonist,CD86 antagonist,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 inhibitor,Thrombopoietin receptor agonist,VEGF ligand inhibitor
Key Technologies	Biological therapeutic,Parenteral formulation unspecified,Monoclonal antibody humanized,Protein recombinant,Small molecule therapeutic,Monoclonal antibody,Monoclonal antibody human,Peptide,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.

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. The3-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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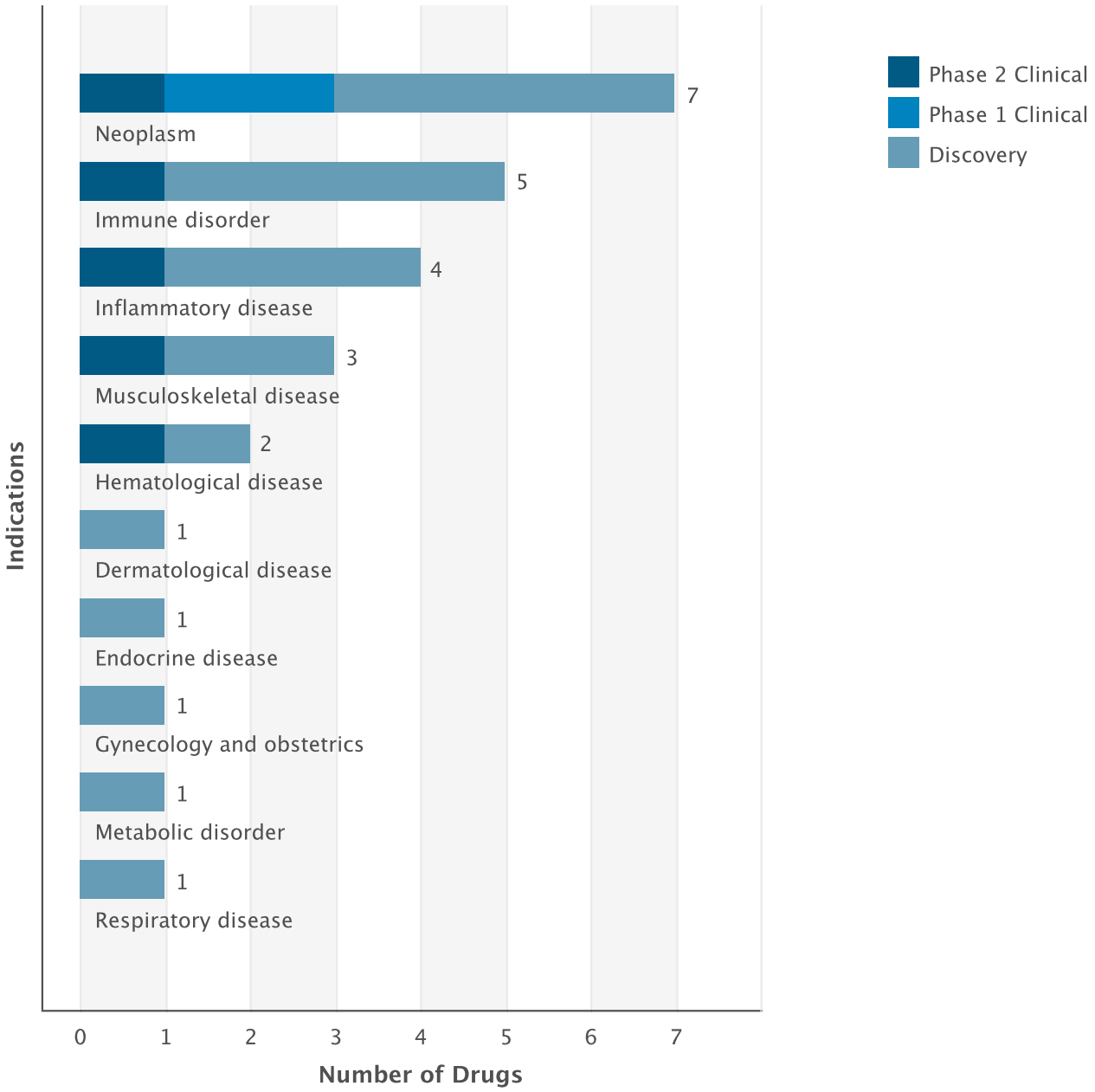
PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



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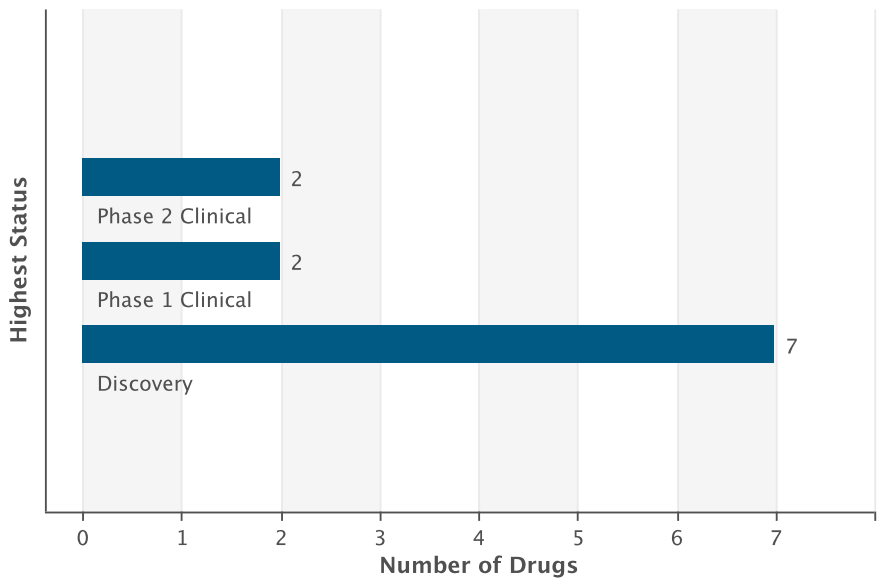
Drugs by Indication Table

Indication	Active	Inactive	Total
Neoplasm	7	7	14
Immune disorder	5	6	11
Hematological disease	2	4	6
Musculoskeletal disease	3	2	5
Inflammatory disease	4	1	5
Endocrine disease	1	2	3
Gynecology and obstetrics	1	1	2
Degeneration	0	1	1
Neurological disease	0	1	1
Genitourinary disease	0	1	1
Dermatological disease	1	0	1
Respiratory disease	1	0	1
Ocular disease	0	1	1
Metabolic disorder	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	2
Phase 1 Clinical	2
Discovery	7
Discontinued	3
No Development Reported	8

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 - 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	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

PATENTS *

Indication	As Owner	As Third Party	Total
Cardiovascular disease	10	0	10
Endocrine disease	11	0	11
Gastrointestinal disease	14	0	14
Genitourinary disease	3	0	3
Growth disorder	2	0	2
Hematological disease	13	0	13
Degeneration	2	0	2
Andrology	1	0	1
Immune disorder	38	0	38
Musculoskeletal disease	17	0	17
Neoplasm	44	0	44
Ocular disease	2	0	2
Genetic disorder	2	0	2
Metabolic disorder	11	0	11
Mouth disease	4	0	4
Neurological disease	19	0	19
Nutritional disorder	2	0	2

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Respiratory disease	5	0	5
Infectious disease	27	0	27
Injury	2	0	2
Inflammatory disease	28	0	28
Otorhinolaryngological disease	2	0	2
Gynecology and obstetrics	4	0	4
Dermatological disease	8	0	8

* 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

MOR-208

MOR-208 SNAPSHOT

Drug Name	MOR-208
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	MorphoSys AG;Xencor Inc
Inactive Companies	
Highest Status	Phase 2 Clinical
Active Indications	B-cell acute lymphoblastic leukemia;Chronic lymphocytic leukemia;Lymphoma;Non-Hodgkin lymphoma;Cancer;Prolymphocytic leukemia
Target-based Actions	B-lymphocyte antigen CD19 inhibitor
Other Actions	Anti-inflammatory;Anticancer monoclonal antibody
Technologies	Biological therapeutic;Intravenous formulation;Infusion;Monoclonal antibody humanized
Last Change Date	10-Dec-2013

MOR-208 DEVELOPMENT PROFILE

SUMMARY

MorphoSys, in collaboration with Xencor, is developing MOR-208 (MOR-00208; Maori-0028, XMP-5574), an iv formulation of an anti-CD19 humanized mAb, for the potential treatment of cancer,. In November 2012, data from a phase I/IIa trial for chronic lymphocytic leukemia (CLL) were published. In April 2013, a US phase II trial was initiated in patients with relapsed/refractory B-cell acute lymphoblastic leukemia (B-ALL). In May 2013, a phase II trial was initiated in patients with relapsed/refractory Non-Hodgkin's lymphoma (NHL) in the US and Europe. In December 2013, a phase II trial in patients with relapsed or refractory CLL/small lymphocytic lymphoma (SLL)/prolymphocytic leukemia (PLL) or untreated CLL/SLL/PLL in the US was initiated. At that time, the trial was estimated to complete in October 2017.

Xencor was developing previous lead XENP-5603. In September 2007, the company selected Maori-208 to advance into IND-enabling studies. Xenocor was also previously investigating the series for autoimmune diseases but no development has since been reported for this indication and development is presumed to have been discontinued.

MOR-208 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
MorphoSys AG	B-cell acute lymphoblastic leukemia	US	Phase 2 Clinical	26-Apr-2013

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Company	Indication	Country	Development Status	Date
MorphoSys AG	Chronic lymphocytic leukemia	US	Phase 2 Clinical	27-Jun-2010
MorphoSys AG	Lymphoma	US	Phase 2 Clinical	03-Dec-2013
MorphoSys AG	Non-Hodgkin lymphoma	Europe	Phase 2 Clinical	13-May-2013
MorphoSys AG	Non-Hodgkin lymphoma	US	Phase 2 Clinical	13-May-2013
MorphoSys AG	Prolymphocytic leukemia	US	Phase 2 Clinical	03-Dec-2013
Xencor Inc	Chronic lymphocytic leukemia	US	Phase 2 Clinical	27-Jun-2010
Xencor Inc	Cancer	US	Discovery	18-Apr-2007
Xencor Inc	Autoimmune disease	US	No Development Reported	03-Dec-2010

MOR-208 DRUG NAMES

Names	Type
MOR-208	Research Code
XmAb CD19	
XmAb-5574	Research Code
MOR-00208	Research Code
XENP-5574	Research Code
XENP-5603	Research Code
anti-CD19 humanized monoclonal antibody (cancer/autoimmune disease), Xencor	
anti-CD19 humanized mAb (cancer/autoimmune disease), Xencor	

MOR-208 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
Chronic lymphocytic leukemia											
0	0	0	0	1	1	0	2	0	0	1	3
Lymphoma											
0	0	0	0	1	1	0	1	0	0	1	2

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B-cell acute lymphoblastic leukemia											
0	0	0	0	1	1	0	0	0	0	1	1
Non-Hodgkin lymphoma											
0	0	0	0	1	1	0	0	0	0	1	1
Prolymphocytic leukemia											
0	0	0	0	1	1	0	0	0	0	1	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	3	3	0	2	0	0	3	5

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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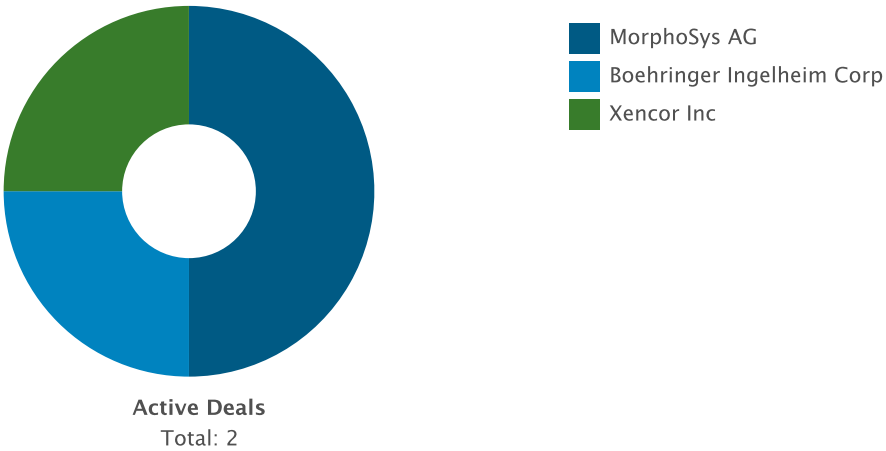
MOR-208 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
MorphoSys AG	0	0	2	0	2
Xencor Inc	1	0	0	0	1
Boehringer Ingelheim Corp	1	0	0	0	1

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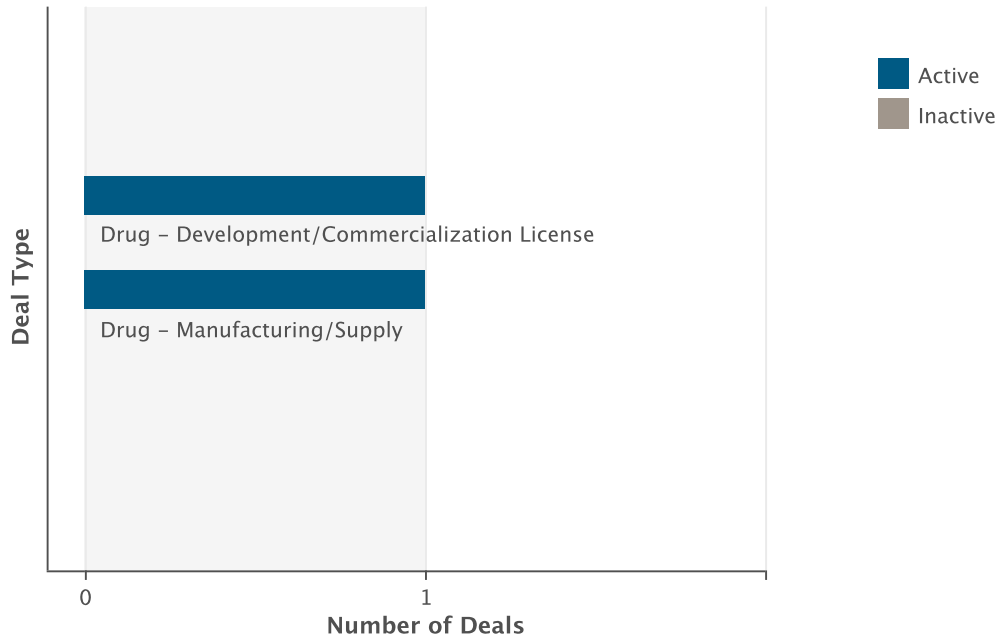
Deals by Type Chart



Deals by Type Table

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

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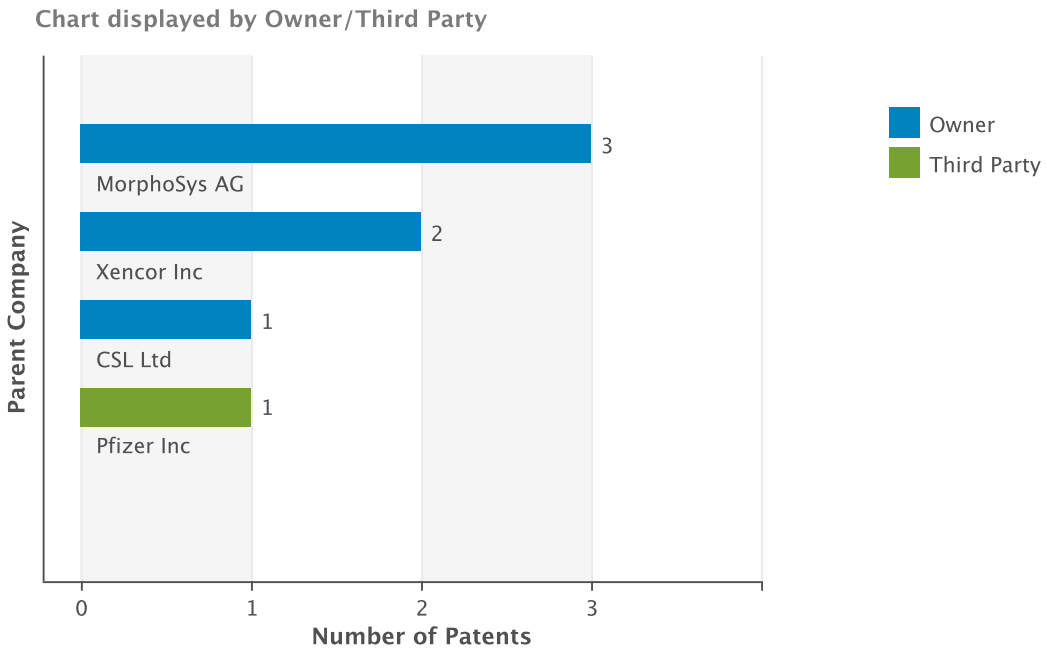
PATENTS

Patents by Parent Company Chart



Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
MorphoSys AG	3	0	3
Xencor Inc	2	0	2
CSL Ltd	1	0	1
Pfizer Inc	0	1	1

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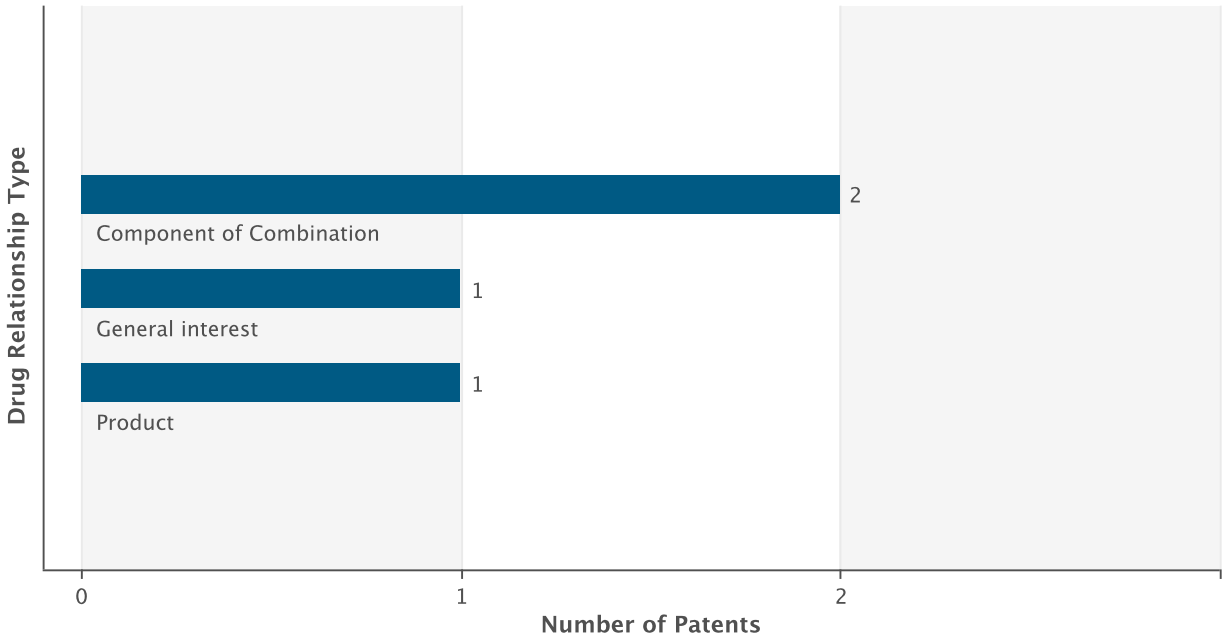
Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
Component of Combination	2
General interest	1
Product	1

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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
Target-based Actions	B-lymphocyte antigen CD19 inhibitor;Immunoglobulin gamma Fc receptor IIB antagonist
Other Actions	Immunomodulator;Anti-inflammatory
Technologies	Biological therapeutic;Parenteral formulation unspecified;Monoclonal antibody humanized
Last Change Date	02-Oct-2013

XmAb-5871 DEVELOPMENT PROFILE

SUMMARY

Xencor and licensee Amgen are developing XmAb-5871, a humanized monoclonal antibody 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 rheumatoid arthritis (RA). The company is also investigating the antibody for the potential treatment of lupus ,,,. In February 2013, phase Ib/IIa trial for RA was initiated.

The company is also investigating an anti-CD19 mAb, XmAb-5574, for the potential treatment of cancer and autoimmune diseases.

XmAb-5871 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Rheumatoid arthritis	US	Phase 2 Clinical	13-Feb-2013
Xencor Inc	Systemic lupus erythematosus	US	Discovery	31-Dec-2009

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XmAb-5871 DRUG NAMES

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

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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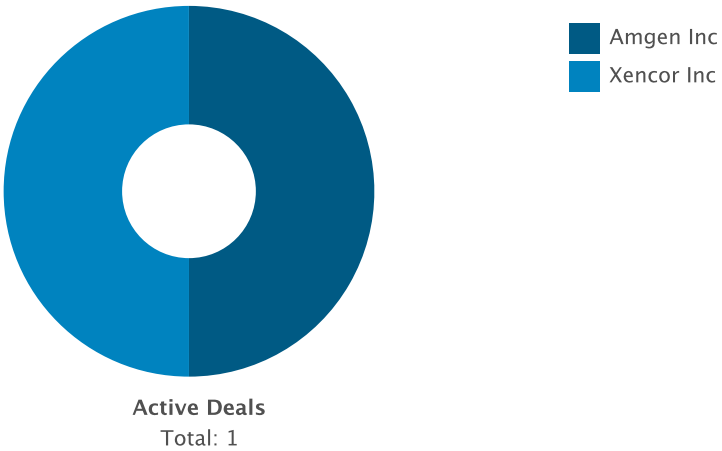
XmAb-5871 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

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

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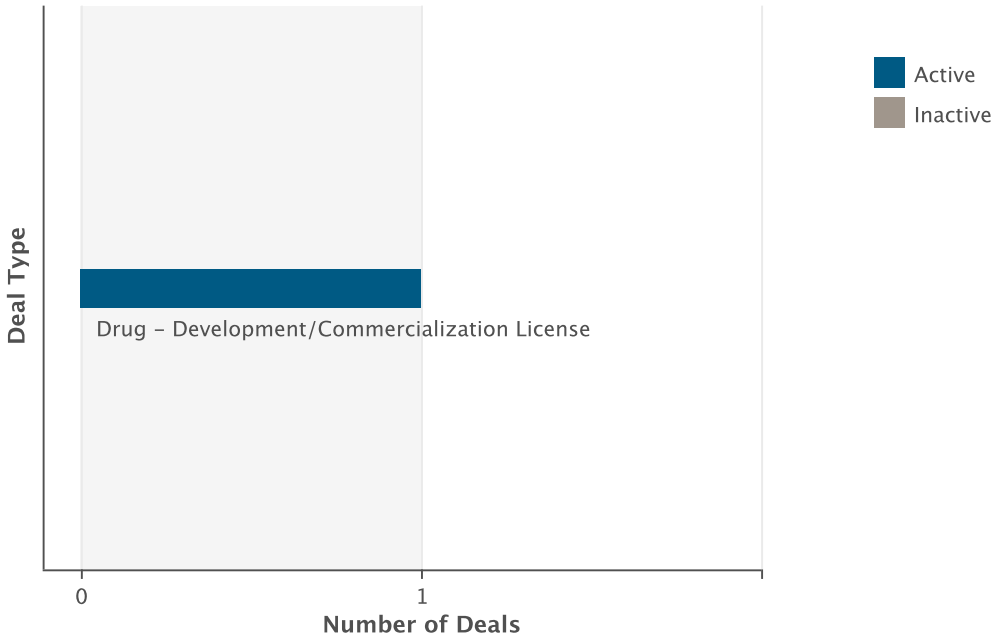
Deals by Type Chart



Deals by Type Table

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

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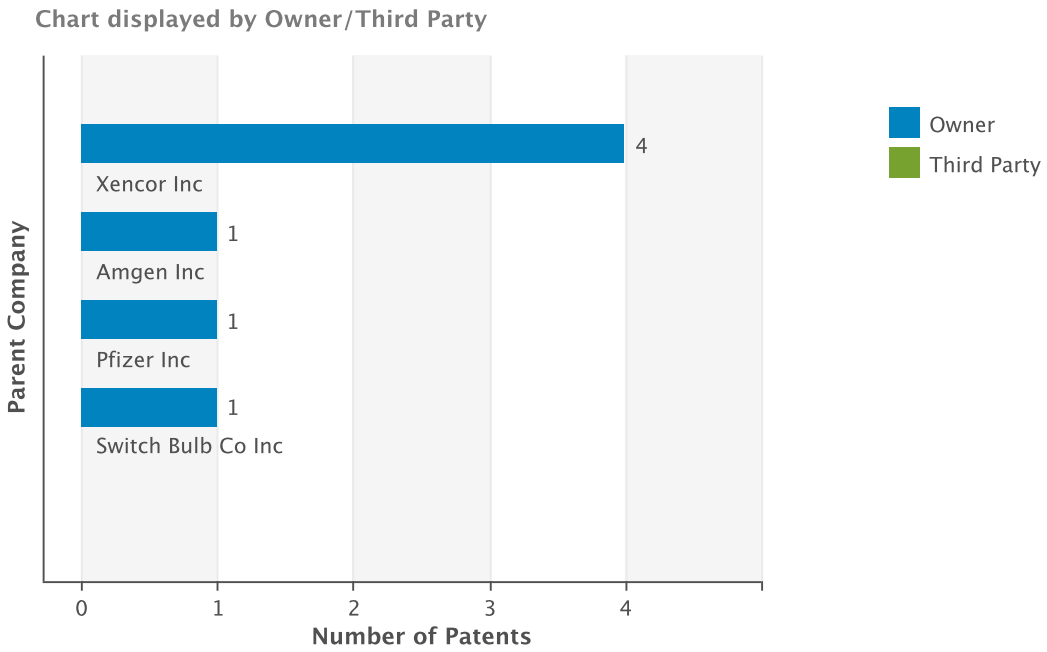
PATENTS

Patents by Parent Company Chart



Patents by Parent Company Table

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

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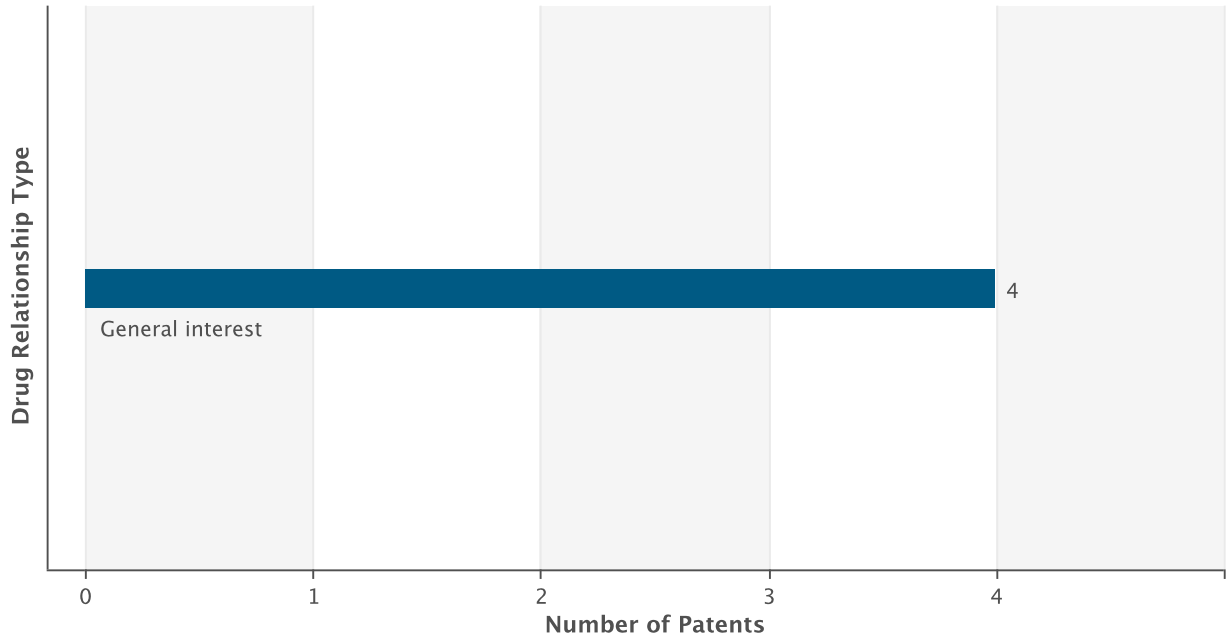
Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	4

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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	Biological therapeutic;Parenteral formulation unspecified;Monoclonal antibody
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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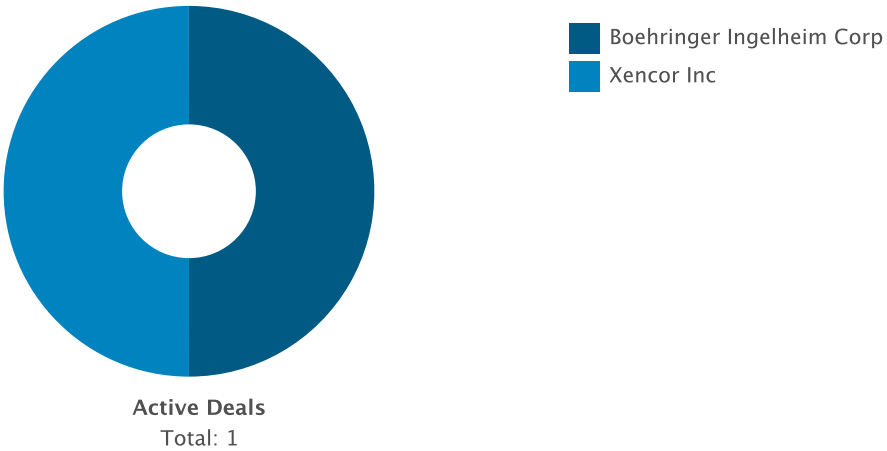
DEALS

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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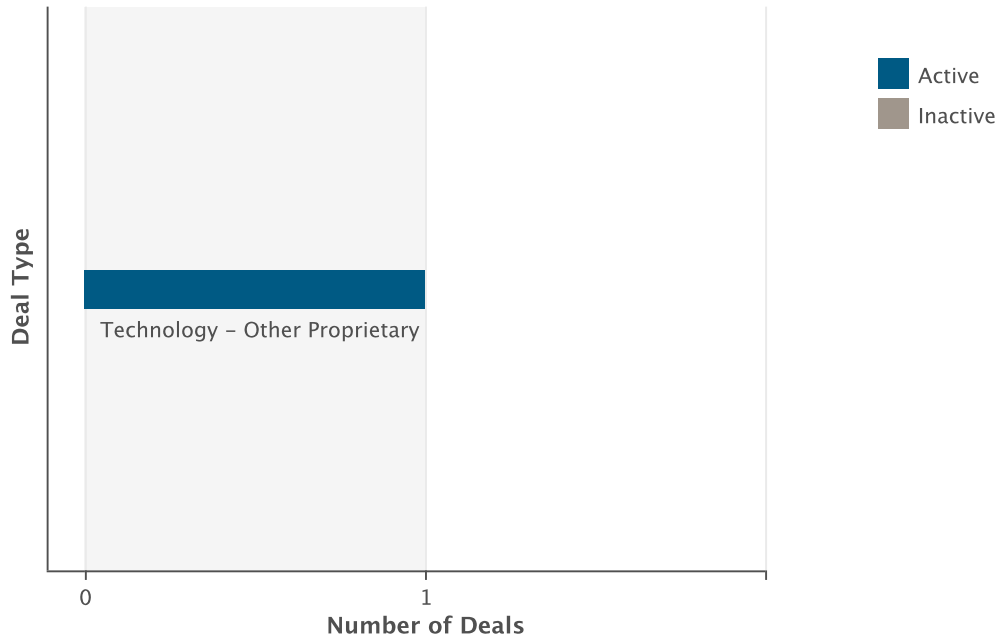
Deals by Type Chart



Deals by Type Table

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

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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	Biological therapeutic;Parenteral formulation unspecified;Monoclonal antibody
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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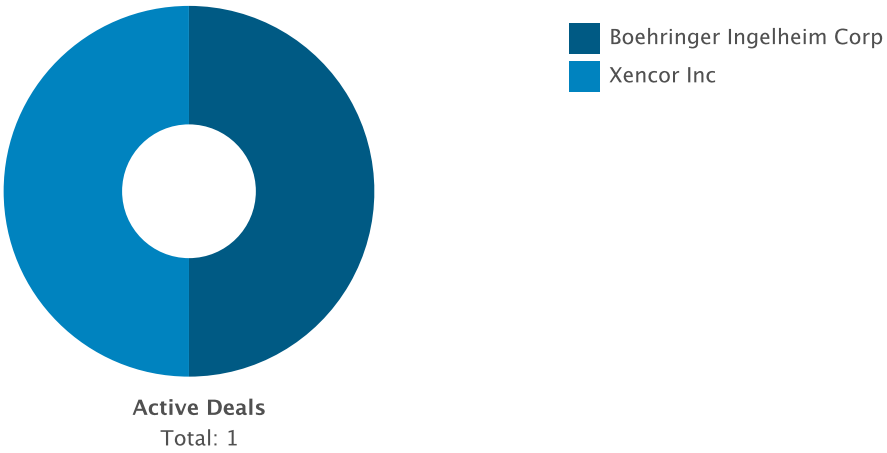
DEALS

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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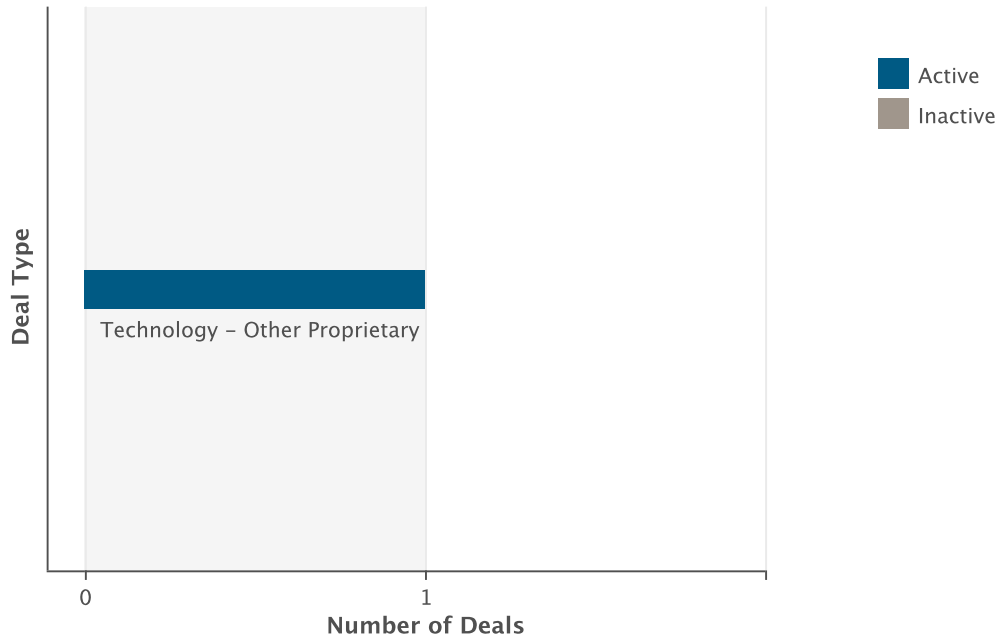
Deals by Type Chart



Deals by Type Table

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

Return to Table of Contents

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	Biological therapeutic;Parenteral formulation unspecified;Protein recombinant;Chimeric monoclonal antibody
Last Change Date	28-Sep-2012

cetuximab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-EGFR (Xtend-cetuximab), a biosuperior version of cetuximab (Erbitux), 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

Return to Table of Contents

cetuximab biosuperior, Xencor DRUG NAMES

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

Return to Table of Contents

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	Biological therapeutic;Parenteral formulation unspecified;Monoclonal antibody human
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
biosuperior anti-TNF human mAb (autoimmune disease), Xencor	
biosuperior anti-TNF human monoclonal antibody (autoimmune disease), Xencor	
adalimumab biosuperior, Xencor	
Xtend-TNF	

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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	Biological therapeutic;Parenteral formulation unspecified;Protein recombinant;Monoclonal antibody human
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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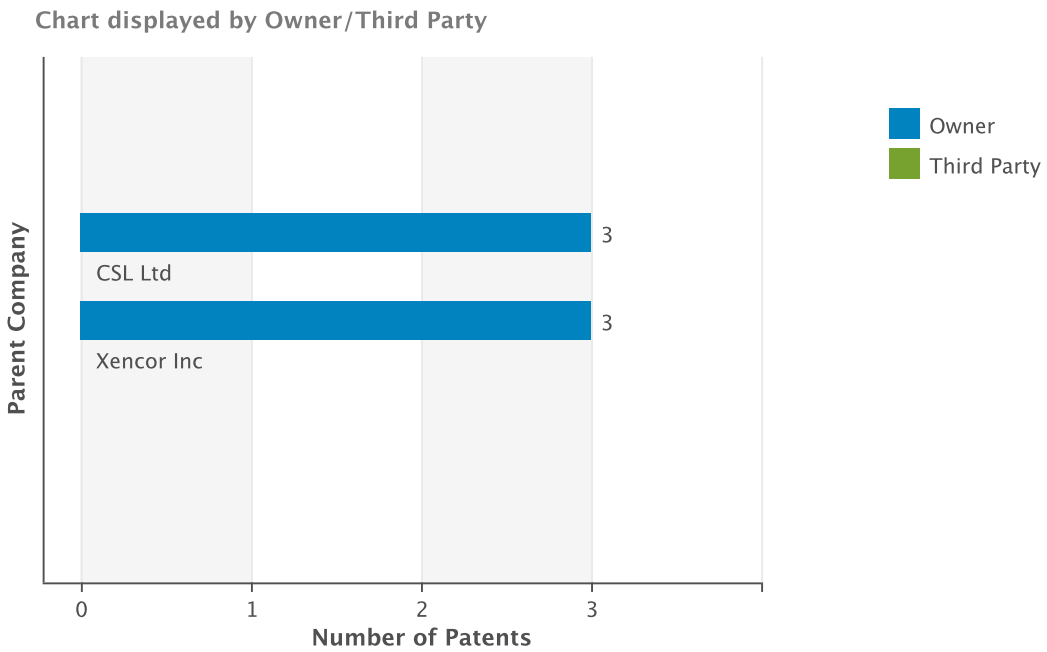
bevacizumab biosuperior, Xencor DRUG NAMES

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

bevacizumab biosuperior, Xencor DEALS AND PATENTS

PATENTS

Patents by Parent Company Chart



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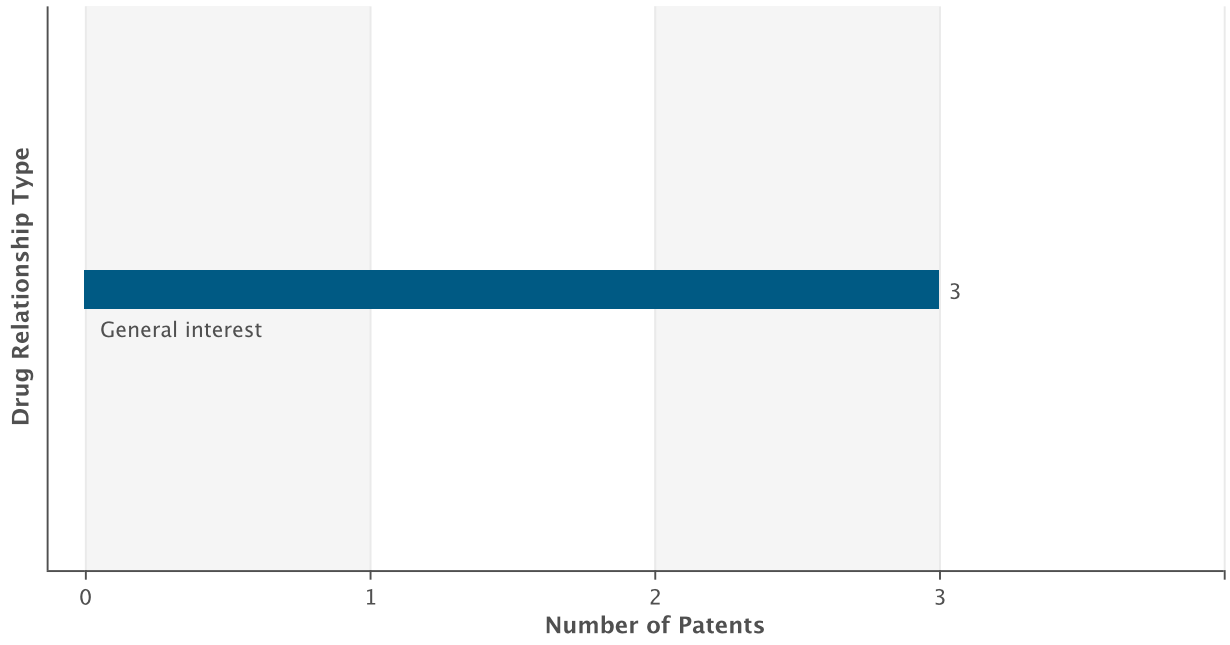
Patents by Parent Company Table

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

Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	3

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trastuzumab biosuperior, Xencor

trastuzumab biosuperior, Xencor SNAPSHOT

Drug Name	trastuzumab biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	Genentech Inc
Highest Status	Discovery
Active Indications	Breast tumor
Target-based Actions	Erbb2 tyrosine kinase receptor modulator
Other Actions	Anticancer monoclonal antibody
Technologies	Biological therapeutic;Protein recombinant;Monoclonal antibody humanized
Last Change Date	29-Sep-2012

trastuzumab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-trastuzumab, a biobetter version of the anti-HER2 humanized mAb trastuzumab (Herceptin) using its Xtend technology to enhance the mAb's half-life, presumably for the potential treatment of breast cancer.

In December 2004, Xencor and Genentech formed a collaboration to use Xencor's Xmab technology to develop an anti-HER2 product. However, no development has been reported by Genentech since this time.

trastuzumab biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Breast tumor	US	Discovery	01-Dec-2004
Genentech Inc	Breast tumor	US	No Development Reported	01-Jun-2006

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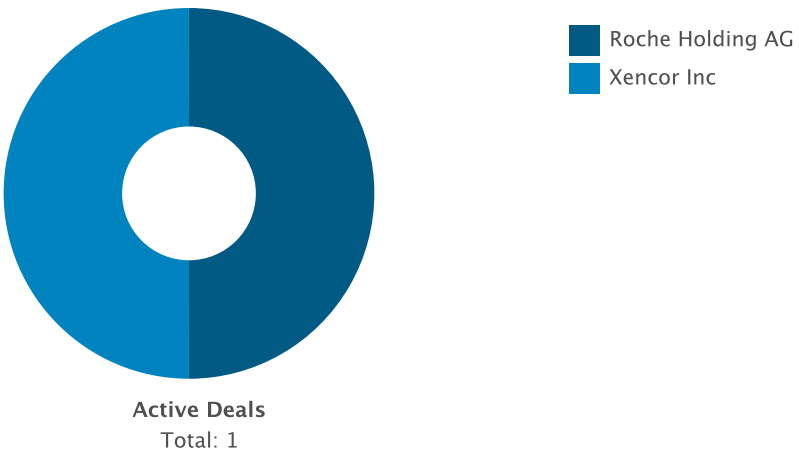
trastuzumab biosuperior, Xencor DRUG NAMES

Names	Type
trastuzumab biosuperior, Xencor	
Xtend-trastuzumab	
trastuzumab biobetter, Xencor	

trastuzumab 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	1	0	0	0	1
Roche Holding AG	0	0	1	0	1

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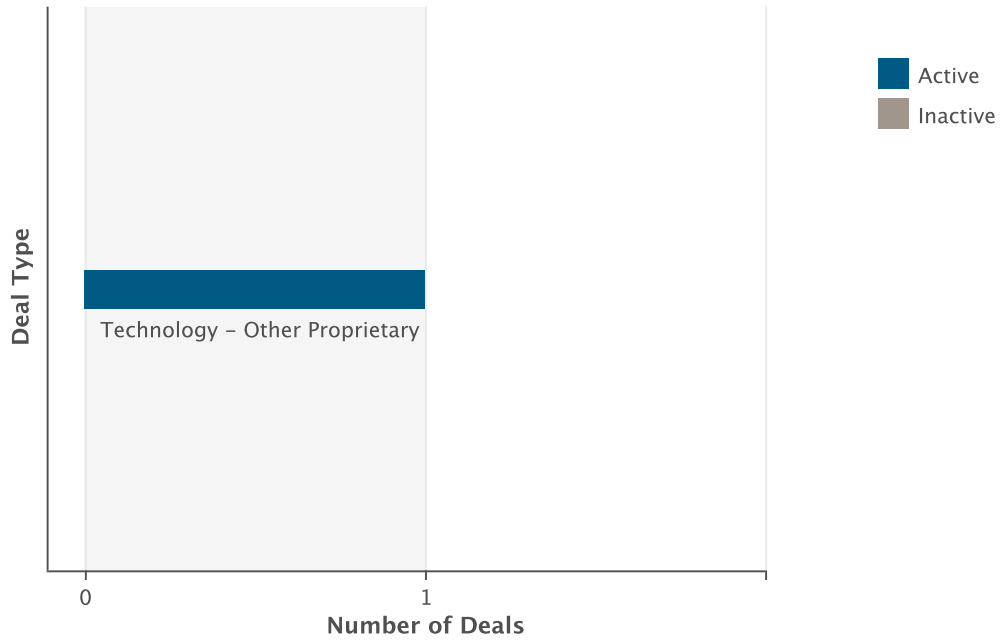
Deals by Type Chart



Deals by Type Table

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

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abatacept biosuperior, Xencor

abatacept biosuperior, Xencor SNAPSHOT

Drug Name	abatacept biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Rheumatoid arthritis
Target-based Actions	CD80 antagonist;CD86 antagonist;Cytotoxic T-lymphocyte protein-4 stimulator
Other Actions	Anti-inflammatory;IL-2 release inhibitor;Immunosuppressant
Technologies	Biological therapeutic;Protein recombinant;Protein conjugated;Immunoglobulin-G
Last Change Date	28-Sep-2012

abatacept biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-CTLA4 (XENP-9523, CTLA4-Ig, XPro-9523), a biosuperior version of abatacept (Orencia), an immunosuppressant that consists of CTLA4 fused to the Fc domain of IgG which binds specifically and with higher affinity to CD80 and CD86, developed using Xtend technology, for the potential treatment of rheumatoid arthritis. In November 2011, preclinical data were presented . In June 2012, the biosuperior was listed as being in preclinical development.

abatacept biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Rheumatoid arthritis	US	Discovery	07-Nov-2011

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abatacept biosuperior, Xencor DRUG NAMES

Names	Type
CTLA4-Ig	
XENP-9523	Research Code
abatacept biobetter, Xencor	
abatacept biosuperior, Xencor	
XPro-9523	Research Code
Xtend-CTLA4	

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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	Discovery
Active Indications	Allergy;Asthma
Target-based Actions	Immunoglobulin gamma Fc receptor IIB modulator;Immunoglobulin E antagonist
Other Actions	Anti-inflammatory
Technologies	Biological therapeutic;Parenteral formulation unspecified;Protein recombinant;Monoclonal antibody humanized
Last Change Date	24-Sep-2013

omalizumab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating 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 November 2010, the program was in preclinical development ; in September 2013, this was still the case. 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	Discovery	09-Nov-2010
Xencor Inc	Asthma	US	Discovery	09-Nov-2010

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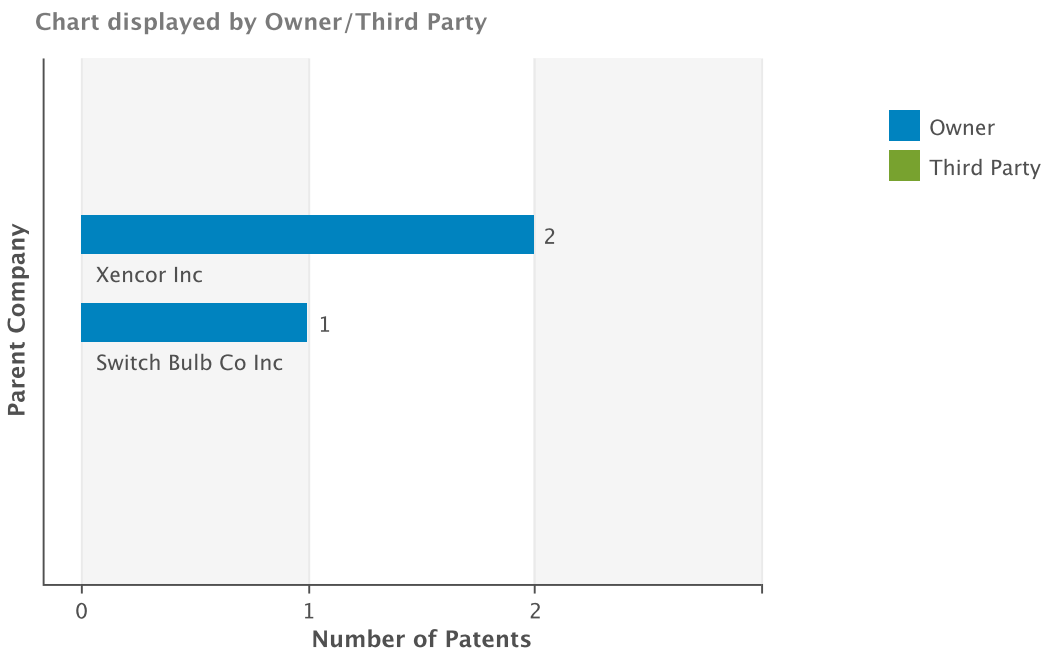
omalizumab biosuperior, Xencor DRUG NAMES

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

omalizumab 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	2	0	2
Switch Bulb Co Inc	1	0	1

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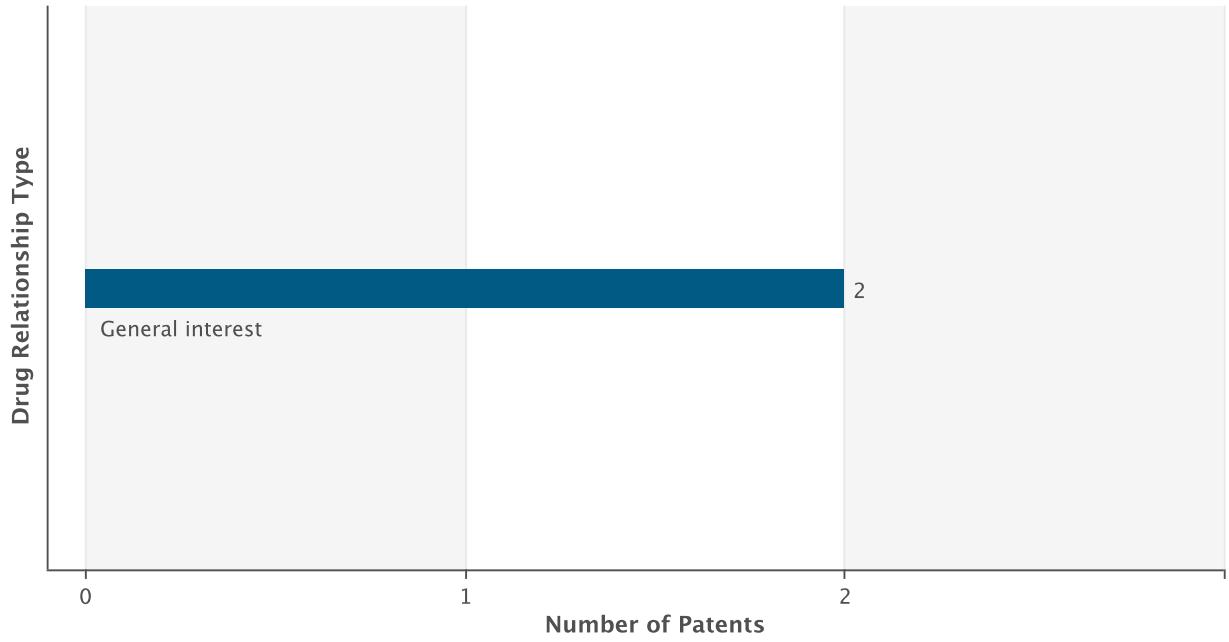
Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	2

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rituximab biosuperior, Xencor

rituximab biosuperior, Xencor SNAPSHOT

Drug Name	rituximab biosuperior, Xencor
Key Synonyms	
Originator Company	Xencor Inc
Active Companies	Xencor Inc
Inactive Companies	Genentech Inc
Highest Status	Discovery
Active Indications	Rheumatoid arthritis;Non-Hodgkin lymphoma
Target-based Actions	B-lymphocyte antigen CD20 modulator
Other Actions	Anti-inflammatory;Anticancer monoclonal antibody
Technologies	Chimeric monoclonal antibody;Biological therapeutic;Protein recombinant
Last Change Date	29-Sep-2012

rituximab biosuperior, Xencor DEVELOPMENT PROFILE

SUMMARY

Xencor is investigating Xtend-rituximab, a biobetter version of the anti-CD20 chimeric mAb rituximab (Rituxan, Mabthera) using its Xtend technology to enhance the mAb's half-life, presumably for the potential treatment of rheumatoid arthritis and non-Hodgkin's lymphoma (NHL).

In December 2004, Xencor and Genentech formed a collaboration to use Xencor's Xmab technology to develop an anti-CD20 product. However, no development has been reported by Genentech since this time.

rituximab biosuperior, Xencor DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Xencor Inc	Non-Hodgkin lymphoma	US	Discovery	01-Dec-2004
Xencor Inc	Rheumatoid arthritis	US	Discovery	01-Dec-2004
Genentech Inc	Non-Hodgkin lymphoma	US	No Development Reported	01-Jun-2006
Genentech Inc	Rheumatoid arthritis	US	No Development Reported	01-Jun-2006

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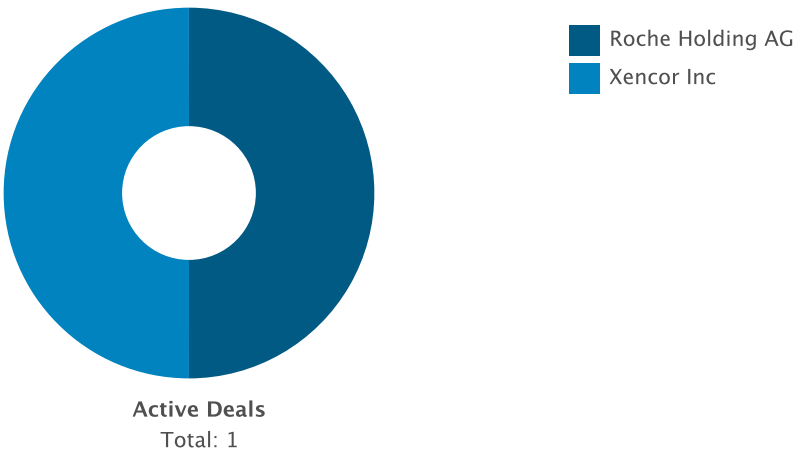
rituximab biosuperior, Xencor DRUG NAMES

Names	Type
rituximab biosuperior, Xencor	
rituximab biobetter, Xencor	

rituximab 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	
Roche Holding AG	0	0	1	0	1
Xencor Inc	1	0	0	0	1

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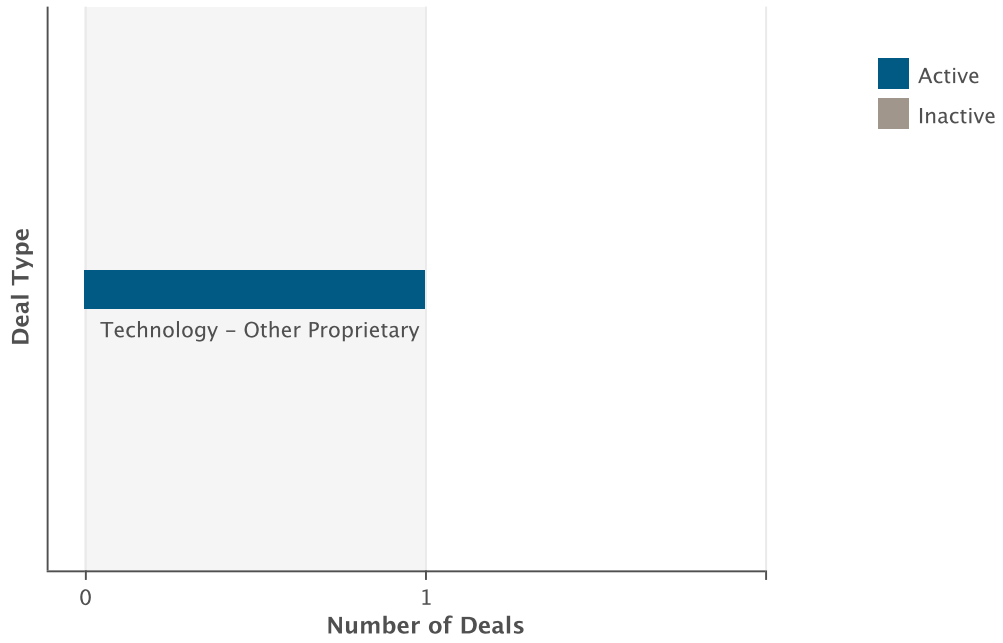
Deals by Type Chart



Deals by Type Table

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

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