

Intrexon Corp

COMPANY AND PIPELINE OVERVIEW REPORT

Coverage of the company and a summary of the drug pipeline portfolio.

Publication Date: 01-Feb-2014

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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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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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Intrexon Corp

COMPANY OVERVIEW

Company Name	Intrexon Corp
Parent Company Name	Intrexon Corp
Website	http://www.dna.com/
Country	US
Number of Drugs in Active Development	11
Number of Inactive Drugs	5
Number of Patents as Owner	20
Number of Patents as Third Party	1
Number of Deals	22
Key Indications	Cancer, Melioidosis, Autoimmune disease, Infectious disease, Melanoma, Alzheimers disease, Diabetes mellitus, Lung tumor, Respiratory disease, Solid tumor, Spinal muscular atrophy, Stage III
Key Target-based Actions	IL-12 agonist, Alpha 1 antitrypsin stimulator, DDC gene stimulator, SMN1 gene modulator, Ecdysone receptor modulator, ATP2A2 gene stimulator, Sarco endoplasmic calcium ATPase 2 modulator, Adiponectin receptor agonist, B-lymphocyte cell adhesion molecule stimulator, Beta defensin stimulator, Beta-galactosidase modulator, Bradykinin B2 receptor antagonist, C-type lectin domain protein 12A stimulator, CFTR stimulator, Casein modulator, Cyclooxygenase stimulator, Elongation factor 2 inhibitor, Erbb2 tyrosine kinase receptor inhibitor, Erythropoietin ligand, Glucagon-like peptide 1 agonist, Glucagon-like peptide 2 agonist, IL agonist, IL-10 agonist, IL-2 receptor alpha subunit stimulator, Interferon agonist, Interferon alpha ligand, Interferon beta ligand, Interferon gamma ligand modulator, Kallikrein inhibitor, Leptin agonist, Mesothelin stimulator, Myelin basic protein stimulator, Neural cell adhesion molecule stimulator, Plasma protease C1 inhibitor inhibitor, Plasminogen activator inhibitor 1 modulator, RANTES ligand, Signal transducer CD24 stimulator, TNF alpha ligand, TNF gene modulator, Trophoblast glycoprotein stimulator
Key Technologies	Biological therapeutic, Parenteral formulation unspecified, Monoclonal antibody human, Protein recombinant, Nanoparticle formulation, Gene transfer system viral, Cell therapy, Peptide, Antibody conjugated, Antibody polyclonal, Autologous stem cell therapy, Intratumoral formulation, Oral formulation, Subcutaneous formulation

COMPANY PROFILE

SUMMARY

Intrexon Corp (formerly Genomatix) is a privately-held life science company which researches and develops DNA control systems for the delivery, targeting, activation, regulation and location of biotherapeutics. The company changed its corporate name to Intrexon in August 2005.

COMPANY LOCATION

The company has its headquarters in Blacksburg, VA, with additional R&D operations in Valley Forge, PA.

In October 2011, Intrexon launched a cell engineering unit in San Diego, CA.

In February 2011, Intrexon launched its Agricultural Biotechnology Division in Research Triangle Park, North Carolina.

In April 2010, Intrexon relocated its Protein Production Division from San Francisco, CA to Foster City, CA.

ACQUISITIONS AND SPIN-OFFS

In December 2013, Intrexon entered into a definitive agreement to acquire Medistem, for approximately \$26 million.

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Medistem stockholders would receive \$0.27 in cash in exchange for each share of Medistem common stock and \$1.08 worth of Intrexon common stock, based on the 20-day volume-weighted average price of Intrexon's common stock immediately prior to closing. The acquisition was subject to Intrexon's satisfactory completion of its due diligence of Medistem and its technology, customary closing conditions and Medistem stockholder approval.

In October 2012, Intrexon entered into a definitive agreement to acquire an approximately 48% interest in Aqua Bounty Technologies by purchasing 48,631,444 shares for \$6 million in cash. Following the close of the transaction, Intrexon would be required to commence a tender offer for any and all of the other outstanding shares of Aqua Bounty. In January 2013, Intrexon chose not to extend the tender offer to acquire outstanding shares in Aqua Bounty.

In October 2011, Intrexon acquired Immunologix, a company focused on the production of fully human monoclonal antibodies.

In October 2011, Intrexon announced the acquisition of GT Life Sciences, and the purchase of assets comprising the LEAP cell-processing platform from CynTellect. Terms of the transactions were not disclosed.

In April 2011, the company acquired Neugenesis.

In February 2011, Intrexon acquired Agarigen a company which developed a mushroom-based expression platform for rapid, high-yield production of recombinant proteins.

In September 2009, Intrexon acquired certain assets and operations from Clinical Data's subsidiary Avalon Pharmaceutical, including a bioassay facility in Germantown, MD, for \$1.5 million in cash.

In December 2006, RheoGene and Intrexon agreed to merge. The combined company, Intrexon Corp, would be based in Blacksburg, VA, and the UPMC would have an ownership stake in the new company.

FINANCIAL

In July 2013, Intrexon filed a registration statement with the SEC for an IPO of its common stock. In August 2013, the company priced its IPO of 9,999,999 common stock shares at \$16 each. The underwriters were also granted a 30-day option to buy additional 1,499,999 common stock shares. At that time, trading of shares, under the symbol 'XON' on the New York Stock Exchange was expected to begin on August 8, 2013; later that month, the IPO was closed and a total of 11,499,998 common stock shares were issued, including the complete exercise of the underwriter's over-allotment option. By September 2013, the company raised a total net proceeds of approximately \$168.3 million by the closing of the offering including the complete exercise of the underwriter's over-allotment option.

In May 2013, the company raised \$150 million from a series F preferred investment round.

In May 2011, Intrexon raised \$100 million from a series E preferred financing round.

In May 2008, Intrexon raised \$25 million from a series C-2 financing. In June 2009, the company raised an additional \$10 million from the series C-2 financing round.

In May 2007, Intrexon raised \$25 million from a series C financing round.

SUBSIDIARY COMPANIES

Names
RheoGene Inc
Neugenesis Corp
Immunologix
Agarigen Inc

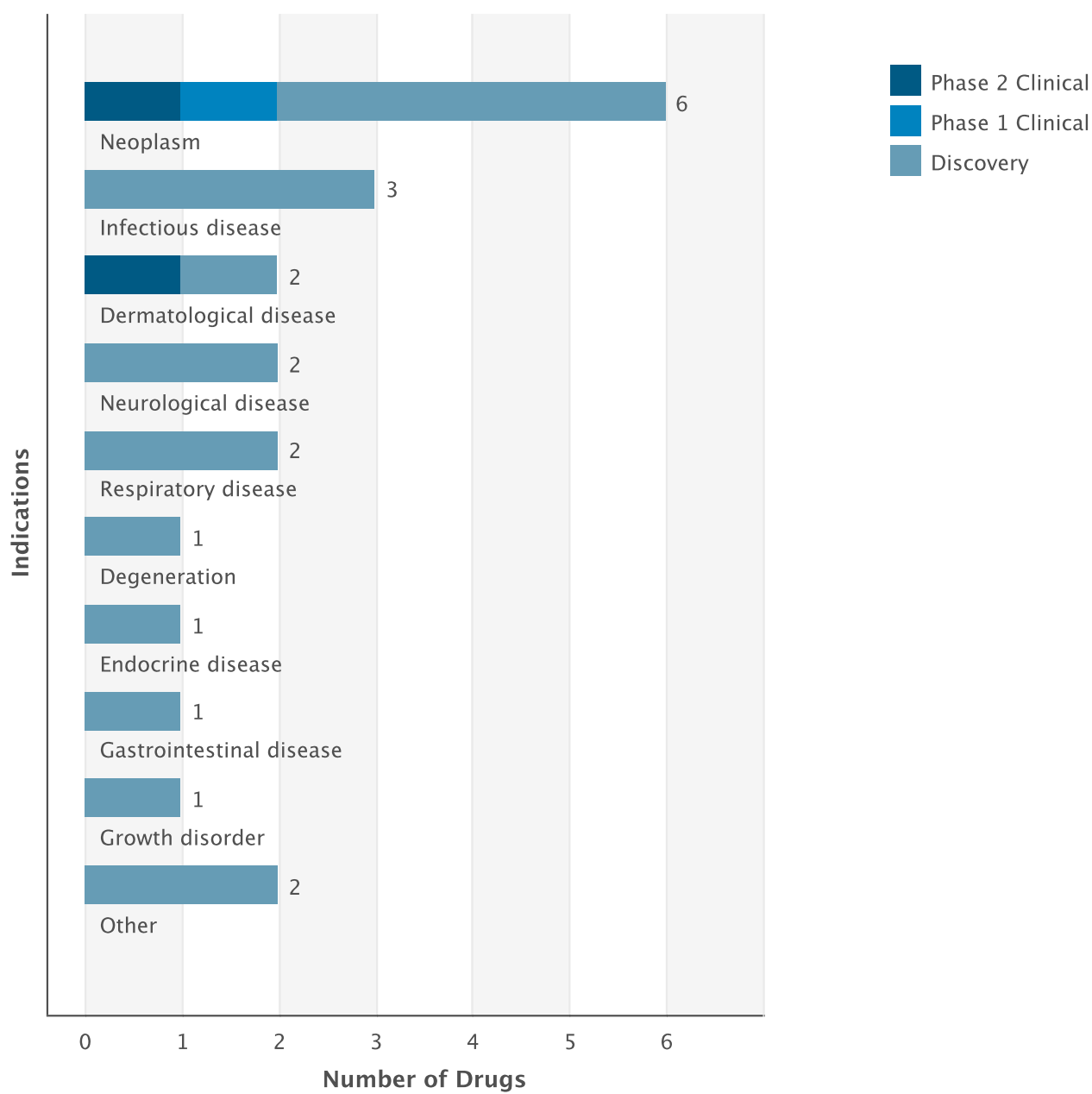
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PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



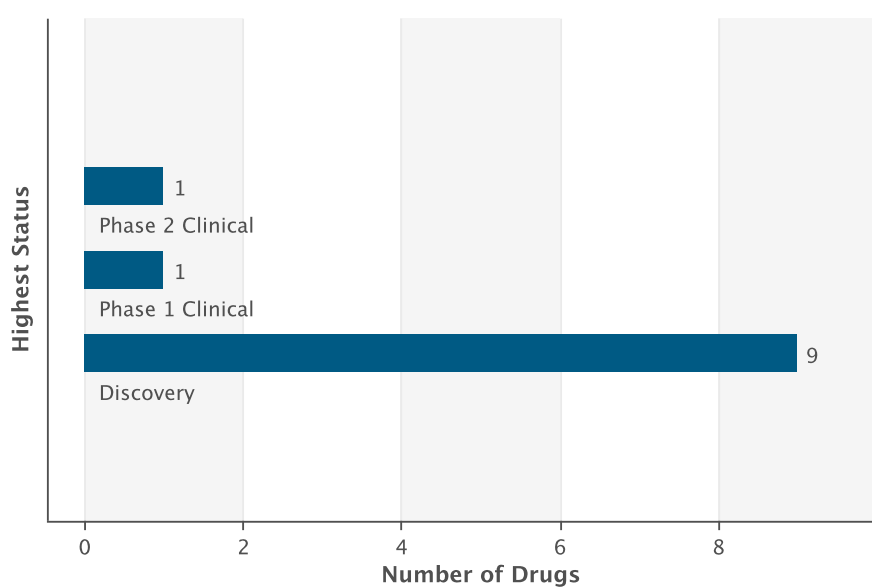
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Drugs by Indication Table

Indication	Active	Inactive	Total
Infectious disease	3	4	7
Neoplasm	6	0	6
Respiratory disease	2	3	5
Neurological disease	2	1	3
Dermatological disease	2	0	2
Degeneration	1	0	1
Immune disorder	1	0	1
Growth disorder	1	0	1
Gastrointestinal disease	1	0	1
Endocrine disease	1	0	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	1
Phase 1 Clinical	1
Discovery	9
No Development Reported	5

DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Technology - Other Proprietary	13	0	0	0	13
Drug - Funding	2	0	0	0	2
Drug - Early Research/Development	2	0	0	0	2
Drug - Development/Commercialization License	1	0	0	0	1
Drug - Commercialization License	1	0	0	0	1
Drug - Development Services	1	0	0	0	1
Technology - Delivery/Formulation	0	0	2	0	2

CLINICAL TRIALS

Trials by Condition Studied

Condition Studied	Ongoing	All
Neoplasm	0	1

Trials by Phase

Phase	Ongoing	All
Phase 1	0	1

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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PATENTS *

Indication	As Owner	As Third Party	Total
Cardiovascular disease	7	0	7
Endocrine disease	1	0	1
Gastrointestinal disease	1	0	1
Genitourinary disease	2	0	2
Hematological disease	2	0	2
Degeneration	1	0	1
Immune disorder	6	0	6
Musculoskeletal disease	2	0	2
Neoplasm	14	0	14
Ocular disease	1	0	1
Genetic disorder	3	0	3
Metabolic disorder	4	0	4
Neurological disease	4	0	4
Respiratory disease	4	0	4
Infectious disease	5	0	5
Injury	1	0	1
Toxicity and intoxication	1	0	1
Unidentified indication	3	0	3
Inflammatory disease	4	0	4
Dermatological disease	4	0	4
Surgical procedure	1	0	1

* 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 DRUGS

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

Ad-RTS-IL-12

Drug Name	Ad-RTS-IL-12
Key Synonyms	
Originator Company	ZIOPHARM Oncology Inc
Active Companies	ZIOPHARM Oncology Inc, Intrexon Corp
Inactive Companies	
Highest Status	Phase 2 Clinical
Active Indications	Stage IV melanoma, Stage III melanoma, Glioblastoma, Metastatic breast cancer
Target-based Actions	IL-12 agonist
Other Actions	Immunostimulant, Anticancer, Adenovirus based gene therapy
Technologies	Intratumoral formulation, Oral formulation, Virus recombinant, Biological therapeutic
Last Change Date	08-Jan-2014

SGX-94

Drug Name	SGX-94
Key Synonyms	
Originator Company	University of British Columbia
Active Companies	SciClone Pharmaceuticals Inc, Soligenix Inc, Intrexon Corp
Inactive Companies	University of British Columbia
Highest Status	Phase 2 Clinical
Active Indications	Radiation sickness, Oral mucositis, Melioidosis
Target-based Actions	Sequestosome 1 inhibitor
Other Actions	Anti-inflammatory, Antibacterial
Technologies	Systemic formulation unspecified, Biological therapeutic, Peptide
Last Change Date	06-Dec-2013

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DC-RTS-IL-12

Drug Name	DC-RTS-IL-12
Key Synonyms	
Originator Company	Intrexon Corp
Active Companies	ZIOPHARM Oncology Inc, Intrexon Corp
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Solid tumor
Target-based Actions	IL-12 agonist
Other Actions	Immunostimulant, Anticancer, Genetically engineered autologous cell therapy
Technologies	Intratumoral formulation, Cell therapy, Oral formulation, Biological therapeutic
Last Change Date	18-Nov-2013

interferon-alpha plasmid transgene therapy (melanoma), ZIOPHARM/Intrexon

Drug Name	interferon-alpha plasmid transgene therapy (melanoma), ZIOPHARM/Intrexon
Key Synonyms	
Originator Company	ZIOPHARM Oncology Inc
Active Companies	Intrexon Corp, ZIOPHARM Oncology Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Melanoma
Target-based Actions	IFNA gene modulator
Other Actions	Plasmid based gene therapy, Anticancer, Immunostimulant
Technologies	DNA technology, Intramuscular formulation, Biological therapeutic
Last Change Date	19-Mar-2013

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fully human monoclonal antibodies (cancer/infection/autoimmune disease), Intrexon

Drug Name	fully human monoclonal antibodies (cancer/infection/autoimmune disease), Intrexon
Key Synonyms	
Originator Company	Immunologix
Active Companies	Intrexon Corp
Inactive Companies	Immunologix
Highest Status	Discovery
Active Indications	Cancer, Infectious disease, Autoimmune disease
Target-based Actions	
Other Actions	Anticancer monoclonal antibody, Immunomodulator, Antimicrobial
Technologies	Monoclonal antibody human, Biological therapeutic, Parenteral formulation unspecified
Last Change Date	15-Jun-2012

rHuA1AT (sc Enhanze, A1AT deficiency), Intrexon

Drug Name	rHuA1AT (sc Enhanze, A1AT deficiency), Intrexon
Key Synonyms	
Originator Company	Intrexon Corp
Active Companies	Intrexon Corp
Inactive Companies	
Highest Status	Discovery
Active Indications	Respiratory disease, Diabetes mellitus
Target-based Actions	Alpha 1 antitrypsin stimulator
Other Actions	Hypoglycemic agent
Technologies	Subcutaneous formulation, Biological therapeutic, Protein recombinant
Last Change Date	28-Mar-2012

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antibody drug conjugates (cancer), Intrexon

Drug Name	antibody drug conjugates (cancer), Intrexon
Key Synonyms	
Originator Company	Intrexon Corp
Active Companies	Intrexon Corp
Inactive Companies	
Highest Status	Discovery
Active Indications	Cancer
Target-based Actions	
Other Actions	Anticancer
Technologies	Antibody conjugated, Biological therapeutic
Last Change Date	28-Mar-2012

SMN1-based gene replacement stem cell therapy (spinal muscular atrophy), Intrexon

Drug Name	SMN1-based gene replacement stem cell therapy (spinal muscular atrophy), Intrexon
Key Synonyms	
Originator Company	Intrexon Corp
Active Companies	Intrexon Corp
Inactive Companies	
Highest Status	Discovery
Active Indications	Spinal muscular atrophy
Target-based Actions	SMN1 gene modulator
Other Actions	Stem cell modulator
Technologies	Parenteral formulation unspecified, Autologous stem cell therapy
Last Change Date	30-Oct-2013

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transgene enabled cell-based therapeutics (Mesenchymal Lineage Cells/ RheoSwitch, lung cancer), ZIOPHARM Oncology/ Mesoblast/ Intrexon

Drug Name	transgene enabled cell-based therapeutics (Mesenchymal Lineage Cells/ RheoSwitch, lung cancer), ZIOPHARM Oncology/ Mesoblast/ Intrexon
Key Synonyms	
Originator Company	ZIOPHARM Oncology Inc
Active Companies	Mesoblast Ltd, ZIOPHARM Oncology Inc, Intrexon Corp
Inactive Companies	
Highest Status	Discovery
Active Indications	Lung tumor
Target-based Actions	
Other Actions	Gene therapy, Anticancer
Technologies	Biological therapeutic, Mesenchymal stem cell therapy
Last Change Date	02-Nov-2013

fully human mAbs (Alzheimers disease), Intrexon

Drug Name	fully human mAbs (Alzheimers disease), Intrexon
Key Synonyms	
Originator Company	Immunologix
Active Companies	Intrexon Corp
Inactive Companies	Immunologix
Highest Status	Discovery
Active Indications	Alzheimers disease
Target-based Actions	
Other Actions	Neuroprotectant
Technologies	Monoclonal antibody human, Biological therapeutic, Parenteral formulation unspecified
Last Change Date	12-Jun-2012

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SGX-101

Drug Name	SGX-101
Key Synonyms	
Originator Company	Soligenix Inc
Active Companies	Soligenix Inc, Intrexon Corp
Inactive Companies	
Highest Status	Discovery
Active Indications	Melioidosis
Target-based Actions	
Other Actions	Unspecified drug target, Antibacterial
Technologies	Monoclonal antibody human, Biological therapeutic, Parenteral formulation unspecified
Last Change Date	18-Oct-2013

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