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Argos Therapeutics 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

Thomson Reuters provides the knowledge, tools, and expertise to help support drug discovery and development activities, IP portfolio optimization, identification of licensing and partnering opportunities, delivery of successful regulatory submissions, and the ability to keep current with the rapidly-changing pharmaceutical and chemical markets, supporting informed, early decisions.

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

COMPANY OVERVIEW

Company Name	Argos Therapeutics Inc
Parent Company Name	Argos Therapeutics Inc
Website	http://www.argostherapeutics.com/
Country	US
Number of Drugs in Active Development	4
Number of Inactive Drugs	5
Number of Patents as Owner	17
Number of Patents as Third Party	2
Number of Deals	16
Key Indications	Autoimmune disease,Transplant rejection,Systemic lupus erythematosus,HIV infection,Inflammatory disease,Renal cell carcinoma,Allergy,Insulin dependent diabetes,Myasthenia gravis,Asthma,Diabetes mellitus,Graves disease,Hashimotos disease,Multiple sclerosis,Pemphigus,Psoriasis
Key Target-based Actions	Interferon alpha ligand inhibitor,CD83 antagonist,CD40 ligand receptor antagonist,IL-12 antagonist,SL cytokine ligand inhibitor,CD80 antagonist,CD86 antagonist,HLA class II antigen inhibitor,IL-10 antagonist,IL-2 receptor alpha subunit inhibitor,IL-23 antagonist,IL-4 agonist,Proteasome inhibitor,TNF antagonist
Key Technologies	Biological therapeutic,Cell therapy,Injectable formulation,Intradermal formulation,Parenteral formulation unspecified,Immunoglobulin-G,Infusion,Intravenous formulation,Monoclonal antibody humanized,Small molecule therapeutic,Subcutaneous formulation,T-lymphocyte

COMPANY PROFILE

SUMMARY

Argos Therapeutics (formerly Merix Bioscience Inc) is a venture-backed, start-up immunotherapy company dedicated to the treatment of metastatic cancers and chronic infectious diseases resistant to current therapies. In October 2004, the company changed its name from Merix Bioscience Inc to Argos Therapeutics Inc.

COMPANY LOCATION

In October 2001, Merix established a wholly owned subsidiary, Merix Germany GmbH, in Erlangen, Germany, to conduct dendritic cell research focusing on Merix's RNA platform. This subsidiary was renamed Argos Therapeutics GmbH, when the parent company changed its name in October 2004.

LICENSING AGREEMENTS

Argos Therapeutics and Therakos, a subsidiary of Johnson & Johnson, have entered an agreement to research and develop regulatory T cell technology-based treatments. The technology was previously developed by Argos.

In April 2006, Argos licensed exclusive rights to use the soluble protein, CD83, for autoimmune disorders and transplant rejection, from Beckman Coulter. Beckman Coulter licensed rights to the protein from the Dana-Farber Cancer Institute, and retained rights to diagnostic use of CD83.

In June 2004, Merix and Kirin Brewery Co Ltd signed an agreement for the development of therapies using dendritic cells, initially for the treatment of cancer and HIV. The companies would jointly conduct research and development and share profits worldwide. Merix would commercialize in the US and Canada and Kirin in Asia. Opportunities in Europe and the rest of the world were to be decided jointly. Kirin made an equity investment in Merix and appointed a member to Merix's board. Each company was to contribute $45-65 million during the first three years of the collaboration..

In March 2004, Geron Corp and Merix entered into second agreement, in which Geron acquired exclusive rights to use Merix's platform technology in therapeutic cancer vaccines using telomerase as an antigen. Geron and Merix also

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gained coexclusive rights to use the Merix technology in cancer vaccines using antigens other than telomerase, while Merix retained exclusive rights to use it with total tumor RNA and other uncharacterized antigens. The companies also agreed to a cross licensing arrangement with respect to a new technology in the same field. Geron issued 5 million shares of its common stock to Merix in connection with the deal. The companies entered the first agreement in August 2000, to assess the clinical and commercial potential of hTERT RNA as an antigen for cancer immunotherapy using Merix's delivery system. Geron provided expertise and proprietary rights in the field of telomerase. Under the terms of the collaboration, Geron would sponsor preclinical studies at Duke University to confirm the safety and efficacy of hTERT RNA-modified dendritic cells to mediate immune responses against tumors. Studies would be performed in parallel with Merix. Geron and Merix would jointly determine the clinical development plan for the combined technology platform.

EARLY R&D

In June 2009, the company reported results from studies investigating the progression of HIV infection. The HIV viral protein R (Vpr) was believed to be required for the establishment of HIV infection. Some known C terminal VPr mutations did not reduce the block of IL-12 production by the virus, but an amino acid substitution, R90K, completely reversed this suppression.

In October 2008, data were published showing that the company's RNA-electroporated dendritic cells generated high-avidity cytotoxic T cells in vitro. Later that month, further results published showed that the company's dentritic cells could improve dendritic cells-based immunotherapy.

IP NEWS

In November 2001, the USPTO issued Merix a core patent, which had previously been licensed on an exclusive worldwide basis from Duke University, and which provides the company with substantially more options for treating cancer and infectious diseases. Using defined RNA antigens Merix could target certain cancers and infectious diseases, such as hepatitis C, with autologous dendritic cell vaccines.

R&D GRANTS

In October 2006, the NIH awarded Argos Therapeutics a 5-year, $21 million contract to develop novel HIV immunotherapy candidates. The goal of the contract was to determine the immunogenicity of Argos' HIV immunotherapy candidate and then develop more potent next-generation product candidates. Optimized therapies would then be tested in a multicenter, randomized, placebo-controlled clinical trial. Argos teamed up with several leading institutions which would participate in the development program. The award would cover all of the costs associated with the development of the next-generation HIV immunotherapies, plus portions of costs related to Argos' existing HIV candidate development. Argos would retain commercial rights to any candidates that were developed.

FINANCIAL

In March 2014, the company was added to the Russell 2000 and Russell 3000 indices.

In February 2014, the company planned to issue 5,625,000 shares priced at $8 per share through an IPO. Underwriters would be granted 30-day option to purchase 843,750 additional shares. At that time, Argos shares were traded under the ticker symbol 'ARGS' on the NASDAQ Global Market. Later that month, Forbion Capital Partners reported that the IPO had closed.

In August 2013, the company raised $42.5 million in a series E financing. At that time, Pharmstandard International SA, a subsidiary of Pharmstandard OJSC had purchased 9,214,233 preferred shares and 1,417,571 warrants for US $12 million, in a total consideration of US $30 million in the series E financing round. At that time, the company planned for three tranches including the conditional last tranche of US $6 million, following phase III positive data in AGS-003. In November 2013, the company increased the size of the series E financing of $17.5 million for a total consideration of $60 million.

In April 2012, the company raised $25 million in a series D financing.

In July 2011, the company filed a registration statement with the SEC for an IPO of shares.

In April 2008, Argos raised $35.2 million from series C financing. In November 2008, the company raised $35.2 million from the second tranche of series C financing round.

In April 2007, Argos raised $5 million in a 3-year debt financing.

In September 2001, Merix completed a $39.5 million round of private financing. This second included previous and new domestic and international institutions. The funds would be used to advance clinical trials of a cancer vaccine and to expand the Merix platform for immunostimulation.

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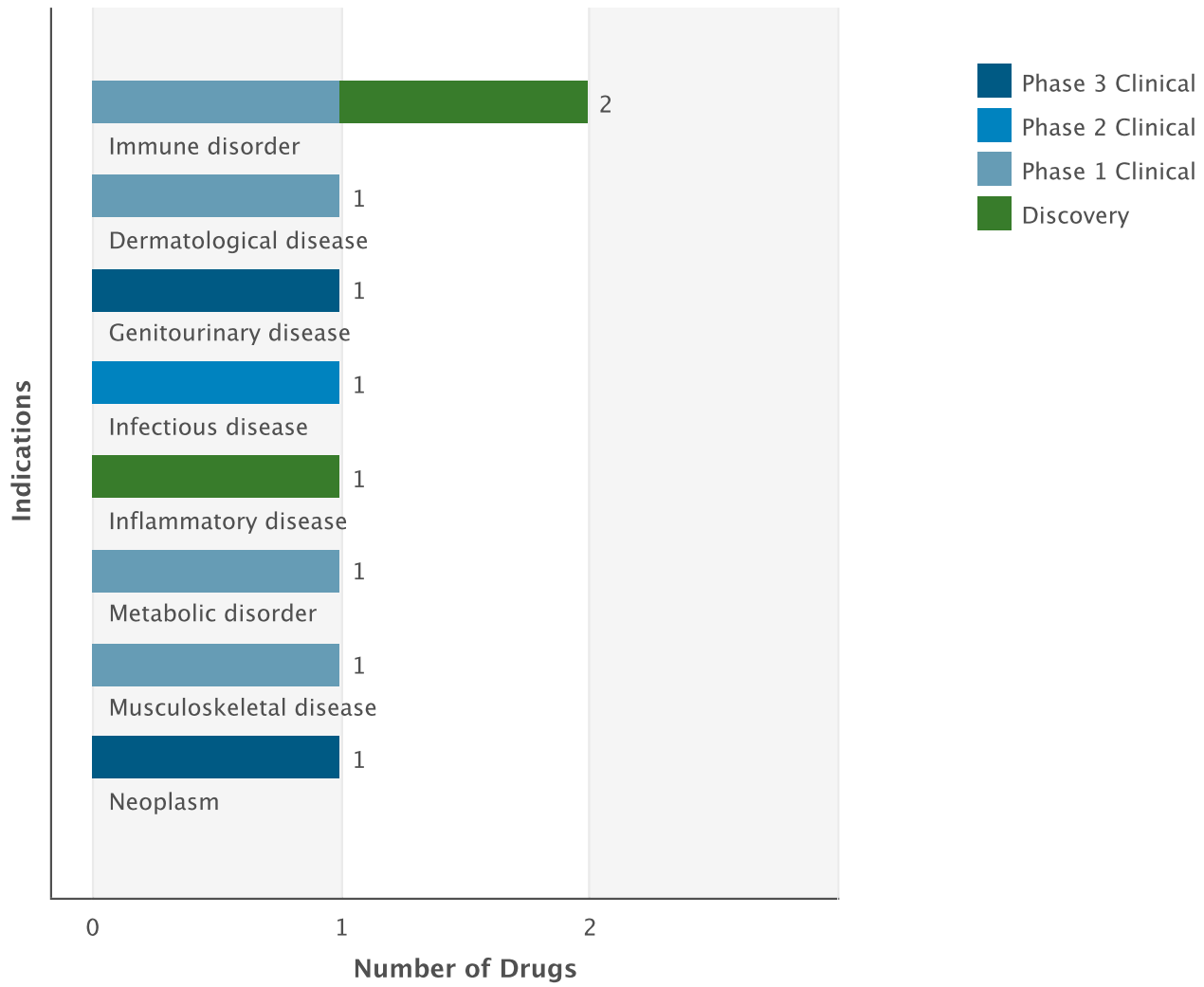
PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



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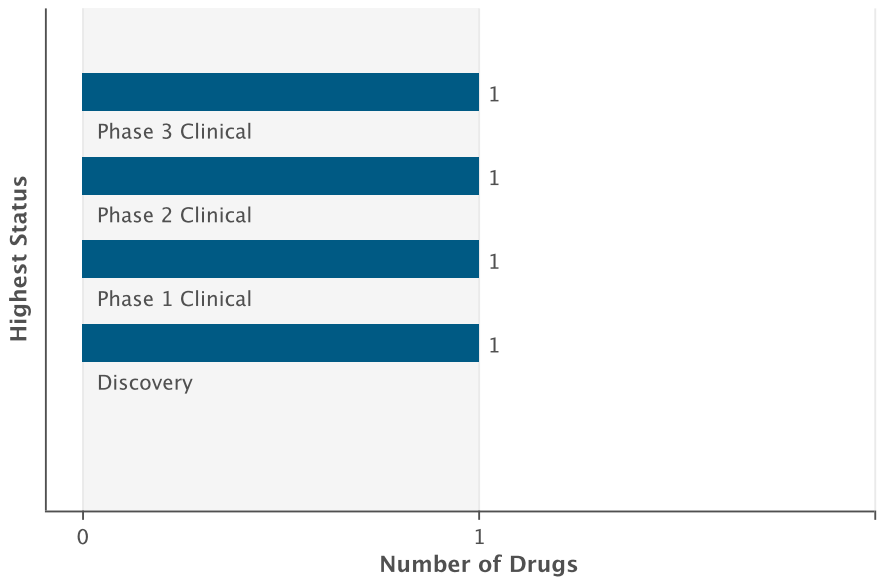
Drugs by Indication Table

Indication	Active	Inactive	Total
Neoplasm	1	3	4
Immune disorder	2	1	3
Metabolic disorder	1	1	2
Gastrointestinal disease	0	2	2
Dermatological disease	1	1	2
Genitourinary disease	1	1	2
Infectious disease	1	0	1
Endocrine disease	0	1	1
Hematological disease	0	1	1
Andrology	0	1	1
Inflammatory disease	1	0	1
Musculoskeletal 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 3 Clinical	1
Phase 2 Clinical	1
Phase 1 Clinical	1
Discovery	1
Discontinued	2
No Development Reported	3

DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Technology - Other Proprietary	0	0	0	0	1
Patent - Exclusive Rights	0	0	1	0	1
Patent - Non-Exclusive Rights	0	0	1	0	1
Drug - Funding	2	0	0	0	2
Drug - Early Research/Development	3	0	0	0	3
Drug - Development/Commercialization License	5	0	1	0	6
Drug - Manufacturing/Supply	1	0	0	0	1
Drug - Development Services	0	0	1	0	1

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CLINICAL TRIALS

Trials by Condition Studied

Condition Studied	Ongoing	All
Neoplasm	1	7
Infectious disease	1	4
Genitourinary disease	1	4
Metabolic disorder	0	1
Immune disorder	0	1
Dermatological disease	0	1
Gastrointestinal disease	0	1
Hematological disease	0	1
Musculoskeletal disease	0	1

Trials by Phase

Phase	Ongoing	All
Phase 3	1	1
Phase 2	0	4
Phase 1	1	6
Phase not specified	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

PATENTS *

Indication	As Owner	As Third Party	Total
Cardiovascular disease	2	0	2
Endocrine disease	5	1	6
Gastrointestinal disease	9	1	10
Immune disorder	11	1	12

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Musculoskeletal disease	4	0	4
Neoplasm	12	1	13
Metabolic disorder	5	1	6
Neurological disease	5	1	6
Prophylaxis	2	0	2
Respiratory disease	2	1	3
Infectious disease	11	0	11
Inflammatory disease	8	1	9
Dermatological disease	4	1	5

* 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

AGS-003

AGS-003 SNAPSHOT

Drug Name	AGS-003
Key Synonyms	
Originator Company	Argos Therapeutics Inc
Active Companies	Medinet Co Ltd;Argos Therapeutics Inc
Inactive Companies	Kirin Pharma Co Ltd;Kyowa Hakko Kirin Co Ltd;Kirin Brewery Co Ltd
Highest Status	Phase 3 Clinical
Active Indications	Renal cell carcinoma
Target-based Actions	
Other Actions	Anticancer;Therapeutic vaccine;Genetically engineered autologous cell vaccine
Technologies	Cell therapy;Biological therapeutic;Intradermal formulation
Last Change Date	30-Jun-2014

AGS-003 DEVELOPMENT PROFILE

SUMMARY

Argos Therapeutics (formerly Merix) and licensee Medinet are developing AGS-003, an RNA-loaded autologous dendritic cell (DC) vaccine, in which the DCs are loaded with purified amplified total tumor mRNA, based on Argos' Arcelis technology, for the potential intradermal treatment of renal cell carcinoma (RCC) ,. By June 2012, a phase III study had been started in Europe and North America ; in November 2012, the phase III trial was initiated in the US ; in September 2013, the trial was initiated in Israel, Spain and Czech Republic ; in March 2014, enrollment was expected to be completed in the second half of 2014 and overall survival analysis data were expected in the first half of 2016. In January 2014, Medinet had plans to have the agent approved in Japan . In May 2014, a phase II trial in non-clear cell metastatic RCC, two investigator-initiated, phase II trials in early stage RCC and a phase II trial in solid tumors were expected in the second half of 2014. In March 2014, the company was seeking to outlicense the drug.

Argos was previously developing the agent for melanoma. By March 2004, a phase I trial was underway ; a further phase I trial began in April 2005. However, no development has been reported for some time.

Kyowa Hakko Kirin (formerly Kirin Pharma, formerly Kirin Brewery) was previously investigating the vaccine to develop it for the Asian market,. However, by January 2010, Kyowa Hakko Kirin had discontinued the drug, giving the reason "portfolio management" .

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AGS-003 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Argos Therapeutics Inc	Renal cell carcinoma	Europe	Phase 3 Clinical	07-Jun-2012
Argos Therapeutics Inc	Renal cell carcinoma	Israel	Phase 3 Clinical	24-Sep-2013
Argos Therapeutics Inc	Renal cell carcinoma	North America	Phase 3 Clinical	07-Jun-2012
Argos Therapeutics Inc	Renal cell carcinoma	US	Phase 3 Clinical	19-Nov-2012
Medinet Co Ltd	Renal cell carcinoma	Japan	Discovery	27-Dec-2013
Kyowa Hakko Kirin Co Ltd	Renal cell carcinoma	Asia	Discontinued	29-Jan-2010
Argos Therapeutics Inc	Melanoma	Germany	No Development Reported	03-Aug-2006
Kirin Brewery Co Ltd	Melanoma	Asia	No Development Reported	03-Aug-2006

AGS-003 DRUG NAMES

Names	Type
tumor antigen transfected dendritic cells (melanoma/renal tumor), Argos Therapeutics/Kirin	
cancer vaccine (tumor RNA), Merix	
melanoma/renal tumor vaccine (tumor RNA), Argos Therapeutics/Kirin	
RNA-loaded dendritic cell vaccine (melanoma/renal tumor), Argos Therapeutics/Kyowa Hakko Kirin	
RNA-loaded dendritic cell vaccine (cancer), Merix	
AGS-003	Research Code
RNA-loaded dendritic cell vaccine (intradermal, renal cell carcinoma), Argos Therapeutics/Medinet	
dendritic cell vaccine (Arcelis, melanoma/renal tumor), Argos Therapeutics/Kirin	
RNA-loaded dendritic cell vaccine (melanoma/renal tumor), Argos Therapeutics/Kirin	
tumor antigen transfected dendritic cells (cancer), Merix	
MB-002	Research Code

AGS-003 CLINICAL TRIALS

Trials by Phase and Condition Studied

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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
Renal cell carcinoma											
0	0	1	1	0	1	0	2	0	0	1	4
Renal tumor											
0	0	0	0	0	0	0	0	1	1	1	1
Metastatic renal cancer											
0	0	0	0	0	1	0	0	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	1	1	0	2	0	2	1	1	2	6

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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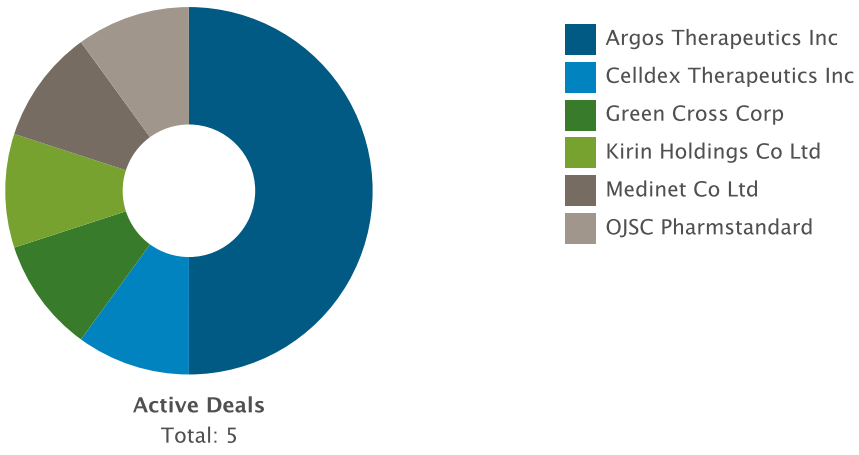
AGS-003 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Argos Therapeutics Inc	4	0	1	0	5
Kirin Holdings Co Ltd	0	0	1	0	1
OJSC Pharmstandard	0	0	1	0	1
Celldex Therapeutics Inc	1	0	0	0	1
Medinet Co Ltd	0	0	1	0	1
Green Cross Corp	0	0	1	0	1

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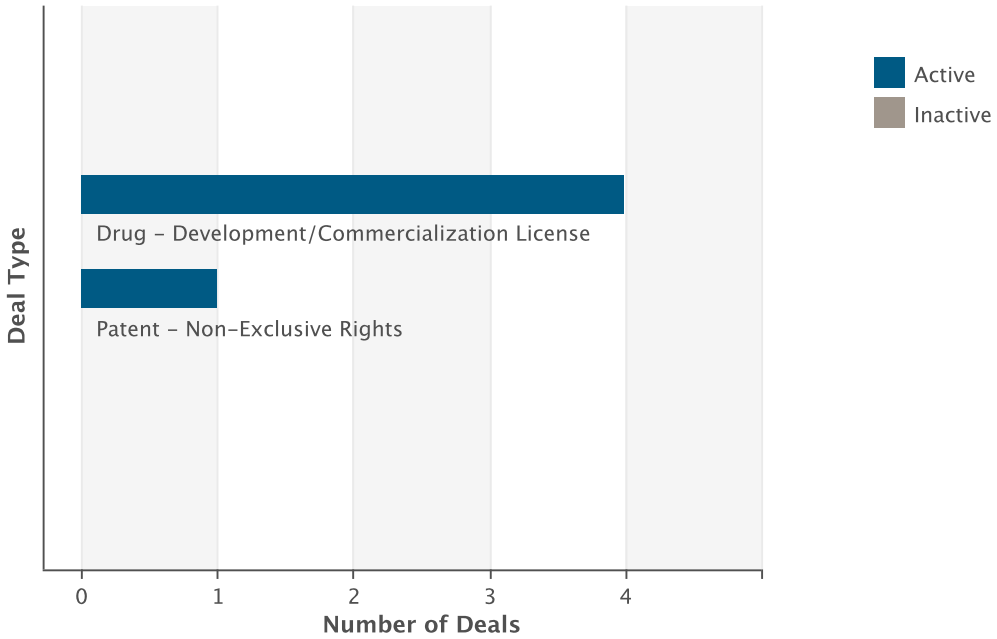
Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Development/Commercialization License	4	0	4
Patent - Non-Exclusive Rights	1	0	1

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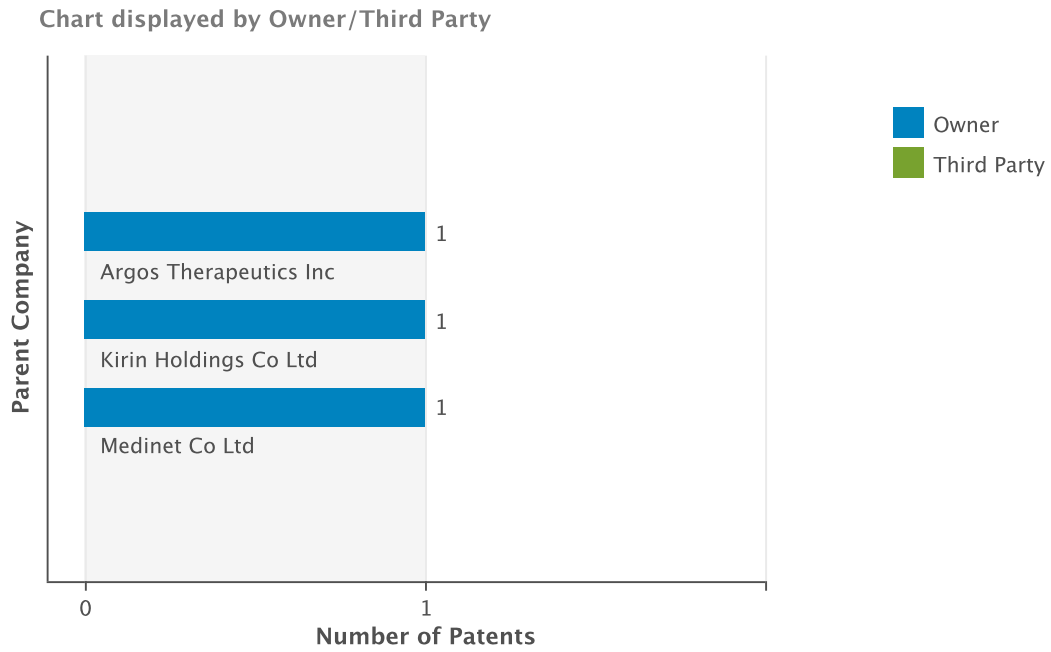
PATENTS

Patents by Parent Company Chart



Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Medinet Co Ltd	1	0	1
Kirin Holdings Co Ltd	1	0	1
Argos Therapeutics Inc	1	0	1

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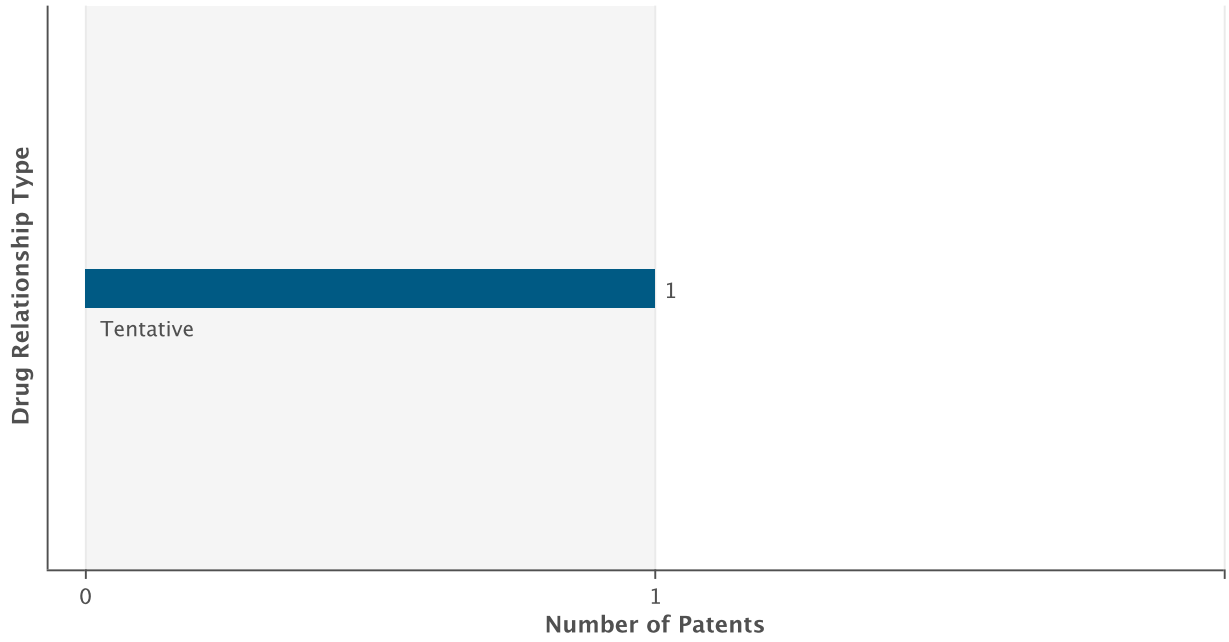
Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
Tentative	1

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AGS-004

AGS-004 SNAPSHOT

Drug Name	AGS-004
Key Synonyms	
Originator Company	Argos Therapeutics Inc
Active Companies	Argos Therapeutics Inc
Inactive Companies	Kyowa Hakko Kirin Co Ltd
Highest Status	Phase 2 Clinical
Active Indications	HIV infection
Target-based Actions	
Other Actions	Antiviral;Genetically engineered autologous cell vaccine;Therapeutic vaccine
Technologies	Cell therapy;Biological therapeutic;Intradermal formulation
Last Change Date	22-Jul-2014

AGS-004 DEVELOPMENT PROFILE

SUMMARY

Argos Therapeutics (formerly Merix) is developing AGS-004, an autologous dendritic cell vaccine loaded with RNA encoding the HIV antigens gag, vpr, rev and nef (GVRN), developed using Argos' Arcelis technology, for the potential intradermal treatment of HIV infection. In September 2006, a Canadian phase I/II trial was initiated in HIV-positive patients. In May 2008, Argos initiated the phase IIa portion of the trial ; in October 2009, positive phase IIa results were presented ; in April 2012, further results were published. In November 2010, a phase IIb study began. In May 2014, another phase II study of AGS-004 aimed at eliminating the need for antiretroviral therapy in pediatric patients was planned to be initiated in the second half of 2014. In March 2014, the company was seeking to outlicense the drug.

Kyowa Hakko Kirin (formerly Kirin Pharma) was previously jointly developing AGS-004,. However, by January 2010, Kyowa Hakko Kirin had discontinued the drug, giving the reason "portfolio management" .

AGS-004 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Argos Therapeutics Inc	HIV infection	Canada	Phase 2 Clinical	30-Sep-2006
Argos Therapeutics Inc	HIV infection	North America	Phase 2 Clinical	12-May-2008
Kyowa Hakko Kirin Co Ltd	HIV infection	Canada	Discontinued	29-Jan-2010
Kyowa Hakko Kirin Co Ltd	HIV infection	US	Discontinued	29-Jan-2010

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AGS-004 DRUG NAMES

Names	Type
HIV vaccine (RNA-loaded, Arcelis), Argos Therapeutics	
tumor antigen transfected dendritic cells (HIV, Arcelis), Argos Therapeutics	
RNA-loaded dendritic cell vaccine (HIV, Arcelis), Merix	
tumor antigen transfected dendritic cells (HIV, Arcelis), Merix	
HIV vaccine (RNA-loaded, Arcelis), Argos/Kyowa Hakko Kirin	
RNA-loaded dendritic cell vaccine (HIV, Arcelis), Argos Therapeutics	
AGS-004	Research Code
HIV vaccine (RNA-loaded, Arcelis), Merix	
viral replication-inhibiting vaccine (HIV, Arcelis), Argos/Kirin	

AGS-004 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
HIV infection											
0	0	0	0	0	1	1	2	0	0	1	3
HIV-1 infection											
0	0	0	0	0	1	0	0	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	1	2	0	0	1	4

Phase Definitions

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

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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

AGS-004 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

Active Deals
Total: 2

Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Argos Therapeutics Inc	2	0	0	0	2
Kirin Holdings Co Ltd	0	0	1	0	1
US Government	0	0	1	0	1

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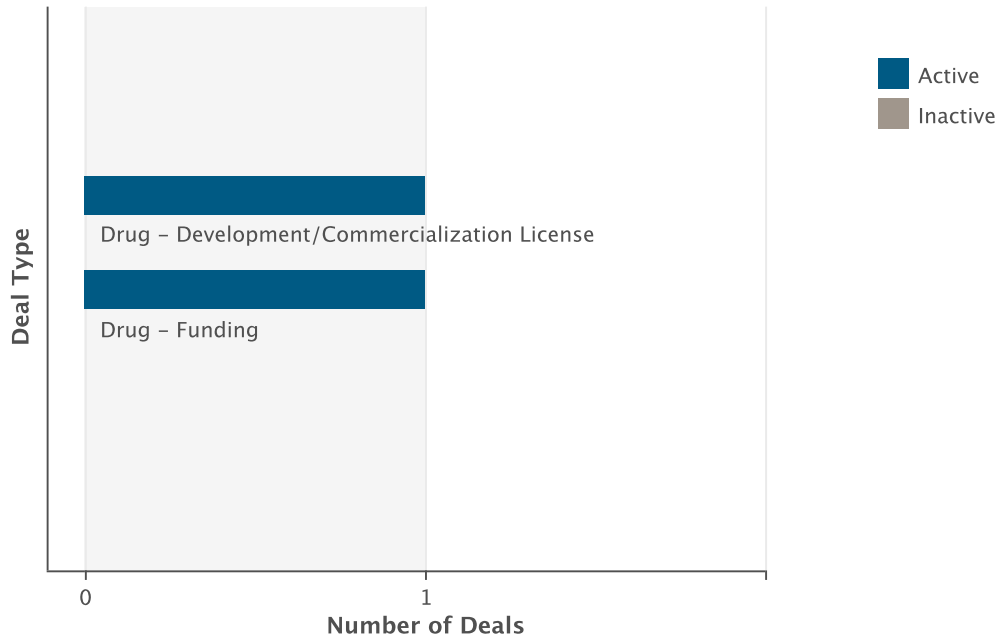
Deals by Type Chart



Deals by Type Table

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

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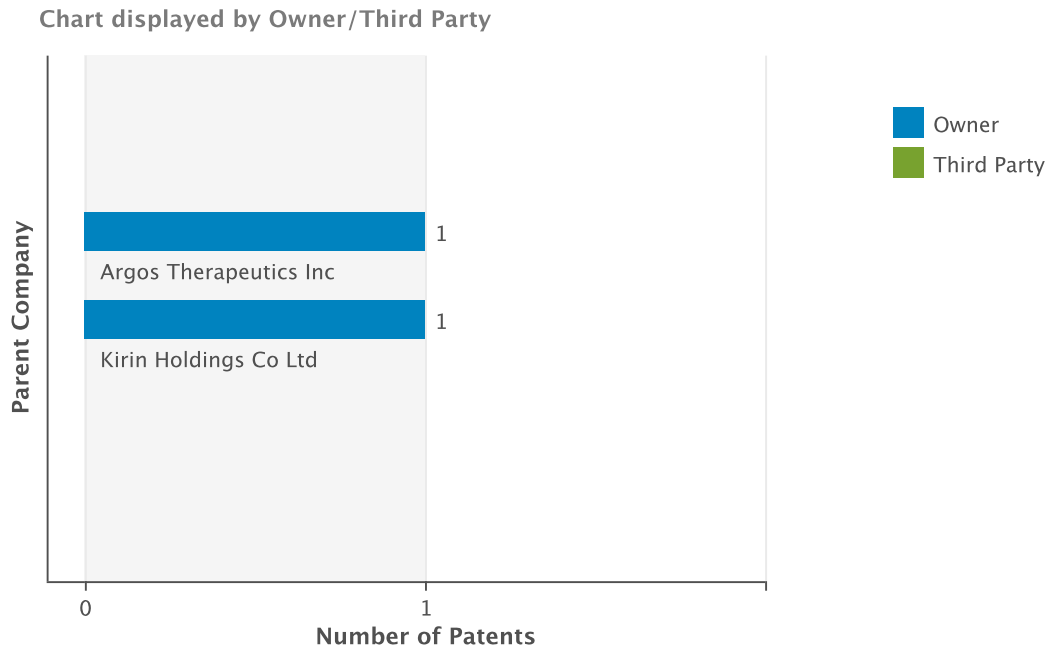
PATENTS

Patents by Parent Company Chart



Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Argos Therapeutics Inc	1	0	1
Kirin Holdings Co Ltd	1	0	1

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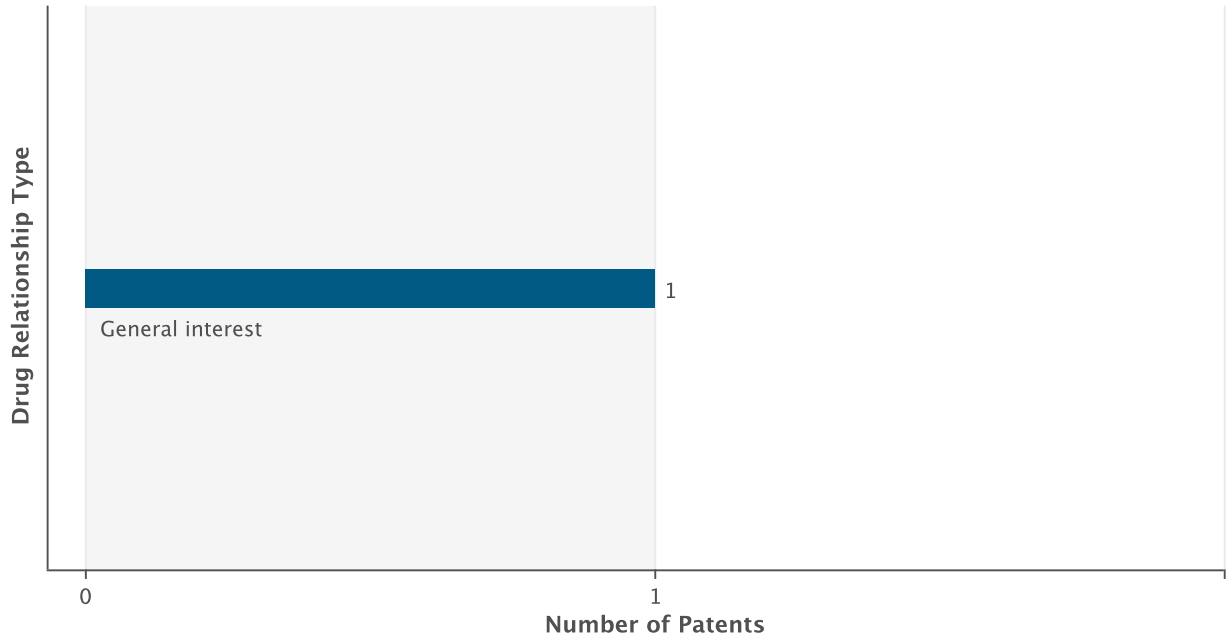
Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	1

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AGS-009

AGS-009 SNAPSHOT

Drug Name	AGS-009
Key Synonyms	
Originator Company	Argos Therapeutics Inc
Active Companies	Argos Therapeutics Inc
Inactive Companies	Novo Nordisk A/S
Highest Status	Phase 1 Clinical
Active Indications	Systemic lupus erythematosus
Target-based Actions	Interferon alpha ligand inhibitor
Other Actions	Immunosuppressant
Technologies	Monoclonal antibody humanized;Immunoglobulin-G;Subcutaneous formulation;Intravenous formulation;Infusion;Biological therapeutic
Last Change Date	09-Apr-2014

AGS-009 DEVELOPMENT PROFILE

SUMMARY

Argos Therapeutics is developing AGS-009 (previously NNC-0152-0000-0001; NN-8360), a humanized IgG4 mAb that neutralizes IFN-alpha, for the potential iv or sc treatment of systemic lupus erythematosus (SLE). In July 2009, a phase I SLE trial began ; however, in June 2010, the trial was suspended for a transfer of sponsorship from the previous licensee, Novo Nordisk, to Argos. In December 2010, Argos reactivated the phase Ia trial and initiated dosing of patients. In December 2011, the trial completed ; in June 2012, data were reported. In March 2014, the company was seeking to outlicense the drug.

The mAb was previously being developed in collaboration with Novo Nordisk ; however, by June 2010, Novo Nordisk was no longer involved in its development .

AGS-009 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Argos Therapeutics Inc	Systemic lupus erythematosus	US	Phase 1 Clinical	10-Jun-2010
Argos Therapeutics Inc	Systemic lupus erythematosus	Sweden	Discontinued	10-Jun-2010
Novo Nordisk A/S	Systemic lupus erythematosus	Sweden	Discontinued	10-Jun-2010
Novo Nordisk A/S	Systemic lupus erythematosus	US	Discontinued	10-Jun-2010

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AGS-009 DRUG NAMES

Names	Type
IFN-alpha neutralizing antibody (lupus), Argos Therapeutics	
AGS-009	Research Code
NN-8360	Research Code
anti-lupus antibody (IFN-alpha neutralizing), Argos Therapeutics	
NNC-0152-0000-0001	Research Code
lupus antibody (IFN-alpha neutralizing), Argos Therapeutics	
IFN-alpha humanized mAbs (SLE), Argos/Novo Nordisk	

AGS-009 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
Systemic lupus erythematosus											
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	0	0	1	0	0	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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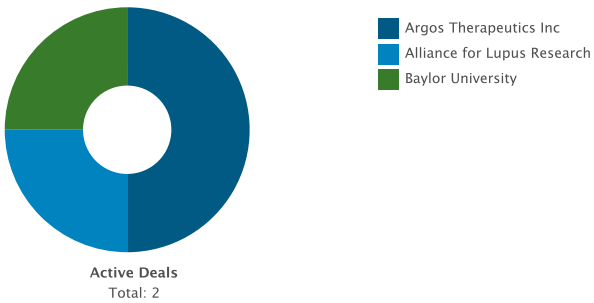
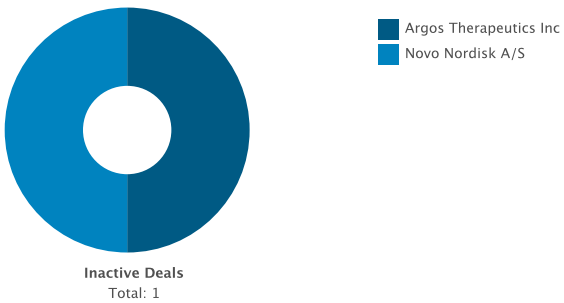
AGS-009 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart





Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Argos Therapeutics Inc	1	1	1	0	3
Alliance for Lupus Research	0	0	1	0	1
Novo Nordisk A/S	0	0	0	1	1
Baylor University	1	0	0	0	1

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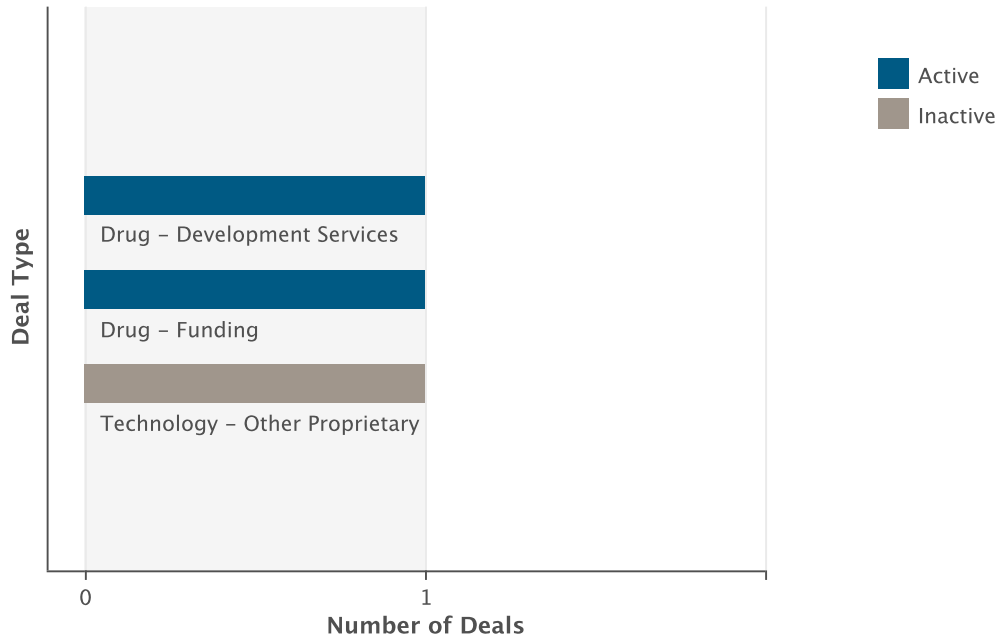
Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Technology - Other Proprietary	0	1	1
Drug - Funding	1	0	1
Drug - Development Services	1	0	1

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AGS-010

AGS-010 SNAPSHOT

Drug Name	AGS-010
Key Synonyms	
Originator Company	Dana-Farber Cancer Institute Inc
Active Companies	Argos Therapeutics Inc
Inactive Companies	Beckman Coulter Inc;Dana-Farber Cancer Institute Inc
Highest Status	Discovery
Active Indications	Inflammatory disease;Transplant rejection;Autoimmune disease
Target-based Actions	CD83 agonist
Other Actions	Anti-inflammatory;Immunosuppressant
Technologies	Glycoprotein;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	16-Aug-2013

AGS-010 DEVELOPMENT PROFILE

SUMMARY

Argos Therapeutics, under license from Beckman Coulter (which licensed the technology from the Dana-Farber Cancer Institute), is investigating soluble CD83 (sCD83), AGS-010, for the potential treatment of transplant rejection, inflammatory disease and autoimmune disease,. In May 2007, the glycoprotein was in preclinical studies ; in January 2013, the drug was listed as being in preclinical development. In September 2009, the company was seeking to outlicense the therapy.

AGS-010 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Argos Therapeutics Inc	Autoimmune disease	US	Discovery	26-Apr-2006
Argos Therapeutics Inc	Inflammatory disease	US	Discovery	25-Jan-2013
Argos Therapeutics Inc	Transplant rejection	US	Discovery	26-Apr-2006
Beckman Coulter Inc	Autoimmune disease	US	Discontinued	26-Apr-2006
Beckman Coulter Inc	Transplant rejection	US	Discontinued	26-Apr-2006
Dana-Farber Cancer Institute Inc	Autoimmune disease	US	Discontinued	26-Apr-2006
Dana-Farber Cancer Institute Inc	Transplant rejection	US	Discontinued	26-Apr-2006

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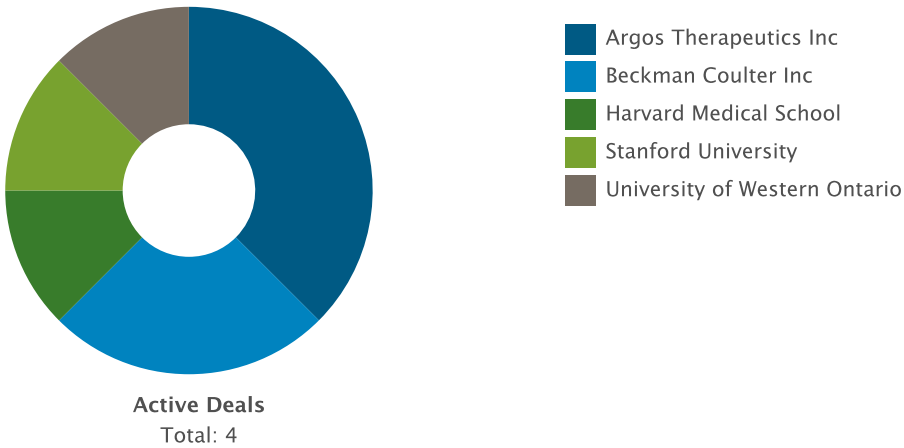
AGS-010 DRUG NAMES

Names	Type
soluble CD83 (transplant rejection/autoimmune disease), Argos Therapeutics	
AGS-010	Research Code

AGS-010 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Argos Therapeutics Inc	2	0	1	0	3
Beckman Coulter Inc	1	0	1	0	2
Stanford University	0	0	1	0	1
Harvard Medical School	1	0	0	0	1
University of Western Ontario	0	0	1	0	1

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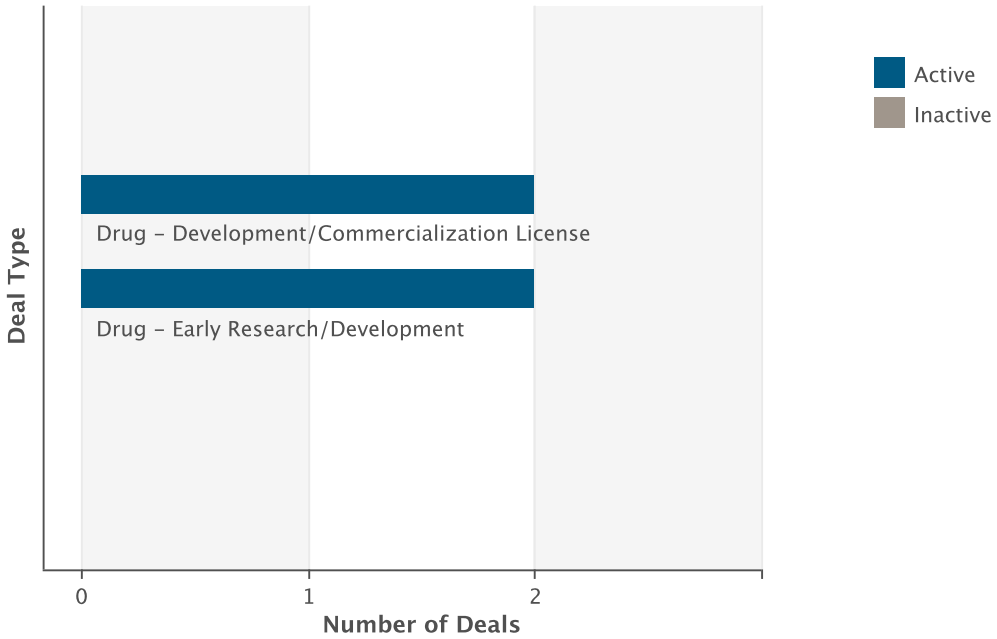
Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Early Research/Development	2	0	2
Drug - Development/Commercialization License	2	0	2

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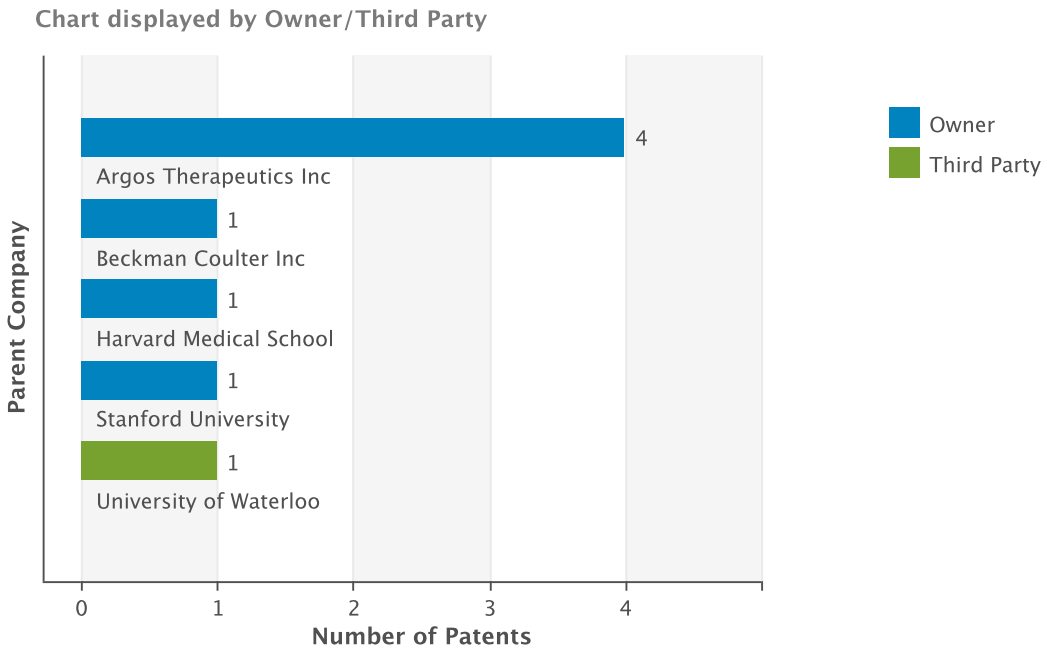
PATENTS

Patents by Parent Company Chart



Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Argos Therapeutics Inc	4	0	4
Beckman Coulter Inc	1	0	1
Stanford University	1	0	1
University of Waterloo	0	1	1
Harvard Medical School	1	0	1

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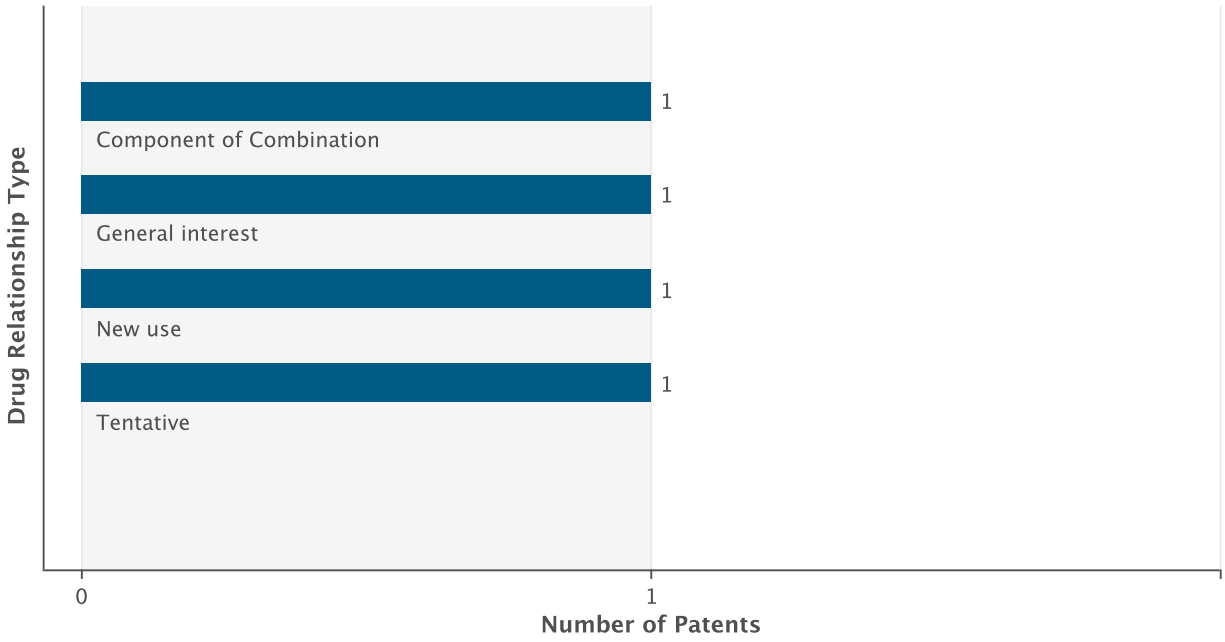
Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
Component of Combination	1
General interest	1
New use	1
Tentative	1

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