

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

COMPANY OVERVIEW

Company Name	Five Prime Therapeutics Inc
Parent Company Name	Five Prime Therapeutics Inc
Website	http://www.fiveprime.com/
Country	US
Number of Drugs in Active Development	6
Number of Inactive Drugs	14
Number of Patents as Owner	44
Number of Patents as Third Party	1
Number of Deals	18
Key Indications	Cancer,Rheumatoid arthritis,Chronic obstructive pulmonary disease,Osteoarthritis,Stomach tumor,Asthma,Non-small-cell lung cancer,Autoimmune disease,Cachexia,Fibrosis,Idiopathic pulmonary fibrosis,Mesothelioma,Musculoskeletal disease,Sarcopenia
Key Target-based Actions	CSF-1 antagonist,FGF2 receptor antagonist,FGF1 receptor antagonist,Amphiregulin ligand modulator,Extracellular signal related kinase-1 stimulator,Extracellular signal related kinase-2 stimulator,IL antagonist,Interleukin 27 alpha ligand modulator,FGF1 receptor agonist,Albumin agonist,CSF-1 agonist,FGF-2 ligand inhibitor,FGF-2 ligand
Key Technologies	Biological therapeutic,Parenteral formulation unspecified,Peptide,Protein recombinant,Antibody,Protein fusion,Monoclonal antibody humanized,Small molecule therapeutic,Immunoglobulin-G,Antibody fragment

COMPANY PROFILE

SUMMARY

Five Prime Therapeutics Inc was set up in 2002 by the founder of Chiron Corp to speed the discovery and development of first in-class protein and antibody drugs. The company has integrated multiple technologies into a discovery engine that enables systematic, high-throughput screening of whole sets of secreted proteins and receptors to address unmet medical needs in the areas of oncology and immunogy.

COMPANY LOCATION

In October 2010, the company relocated to a new drug discovery facility in South San Francisco, CA.

In December 2005, Five Prime relocated from South San Francisco, CA, to Mission Bay, San Francisco, CA.

LICENSING AGREEMENTS

In May 2008, Five Prime entered into a collaborative research program with Pfizer to discover and develop novel antibody targets and therapeutic proteins in the fields of diabetes and cancer. The collaboration would use FivePrime's rapid protein discovery platform, which screens FivePrime's target libraries using cell-based assays and in vivo, high-throughput screening techniques. FivePrime would receive an upfront payment, equity investment and research funding for three years, while Pfizer was granted exclusive worldwide development and commercialization rights to any emerging compounds in return for future milestone and royalty payments.

In January 2007, Five Prime Therapeutics signed a worldwide collaborative research and license agreement with Centocor which would focus on novel therapeutics for osteoarthritis and pulmonary fibrosis. FivePrime would screen its comprehensive protein library against cell-based assays directed to osteoarthritis and fibrosis and Centocor would have exclusive rights to the proteins and targets identified. In February 2010, Five Prime received a milestone payment from Centocor for the selection of a therapeutic for the potential treatment of immunology-related indications.

In April 2006, Five Prime entered a \$75 million, 2-year research deal with Boehringer Ingelheim to discover rheumatoid arthritis drugs. FivePrime would receive an upfront fee, research support, milestones and royalties, while Boehringer

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gained exclusive global rights to develop and commercialize any products and targets discovered. The basis of the deal was FivePrime's protein screening library of all human secreted proteins and their receptors.

In February 2006, Biosite granted Five Prime access to its Omniconal antibodies for use in therapeutic research programs. In return, Biosite would be able to use FivePrime's functional disease targets for the development of diagnostics.

By April 2004, Five Prime had established a strategic technology collaboration with Dnaform Inc, granting FivePrime the rights to use Dnaform's high-throughput cloning technologies for the creation of full length human cDNA libraries.

EARLY R&D

In May 2008, researchers from the company published a paper describing the discovery of interleukin-34 (IL-34) and the identification of its receptor. IL-34 was found to be highly specific in increasing the viability of primary monocyte while having no activity against other cell types.

By April 2006, the company was researching FPT-025, a cytokine that expands monocytes and participates in early differentiation of dendritic cells. At that time, the agent's potential in oncology, inflammation and infectious disease was being looked at.

By April 2004, the company was in hit validation for immune regulation and type 2 diabetes, in high-throughput screening for lymphogenesis, and in target validation in oncology. Novel splice variants of genes implicated in immune modulation had been discovered, and FivePrime had identified novel functions for known genes in the regulation of mature T, B and monocytic cells. Its metabolic disorder studies were focussed on three areas: protein insulin mimetics, protein insulin sensitizers, and protein-based insulin resistance, and the company had identified protein factors that enhance glucose uptake and was validating these for activity in secondary in vitro assays and mouse obesity-driven diabetes models. In lymphogenesis, FivePrime was screening for factors that accelerate and enhance the reconstitution of lymphoid cells for the treatment of immunocompromised cancer patients after bone marrow transplant. In addition the company was pursuing both antibodies to these factors, and proteins that are natural inhibitors of lymphogenesis for treatment of autoimmune and chronic inflammatory diseases. Within its oncology program, the company was developing therapeutic antibodies targeting key members of growth factors and their receptors; FivePrime has used its Whole Set of secreted proteins and receptors to build a microarray (Pharmanome) that contains hundreds of probes for secreted factors, receptors and other druggable targets, and was validating several targets before testing in xenograft models.

FINANCIAL

In February 2014, Five Prime priced a public offering of 3 million common stock shares at \$12.50 per share to raise \$37.5 million in gross proceeds. The underwriters were granted a 30-day option to purchase up to 450,000 additional shares. At that time, the offering was expected to close on February 12, 2014; later that month, the company raised gross proceeds of \$43,125,000 from the offering of 3,450,000 shares; later that month, the offering was closed.

In September 2013, Five Prime priced its initial public offering of 4,800,000 shares of its common stock at \$13.00 each, for an aggregate offering of \$62.4 million. In addition, the company granted a 30-day option to the underwriters to purchase up to 720,000 additional shares of common stock to cover over-allotments. At that time, the offering was expected to close on September 23, 2013, and the company also announced that its common stock were to trade on NASDAQ under the symbol 'FPRX', from September 18, 2013. Later in September 2013, the company raised gross proceeds of \$62.4 million from the closed offering; later in the same month, the underwriters fully exercised their over-allotment option to purchase 720,000 additional common stock shares at \$13.00 per share, resulting in a total of 5.52 million shares sold for \$71.8 million in gross proceeds.

In February 2005, Five Prime completed a \$45 million private equity financing.

In September 2003, Five Prime raised \$12 million in a second private financing round.

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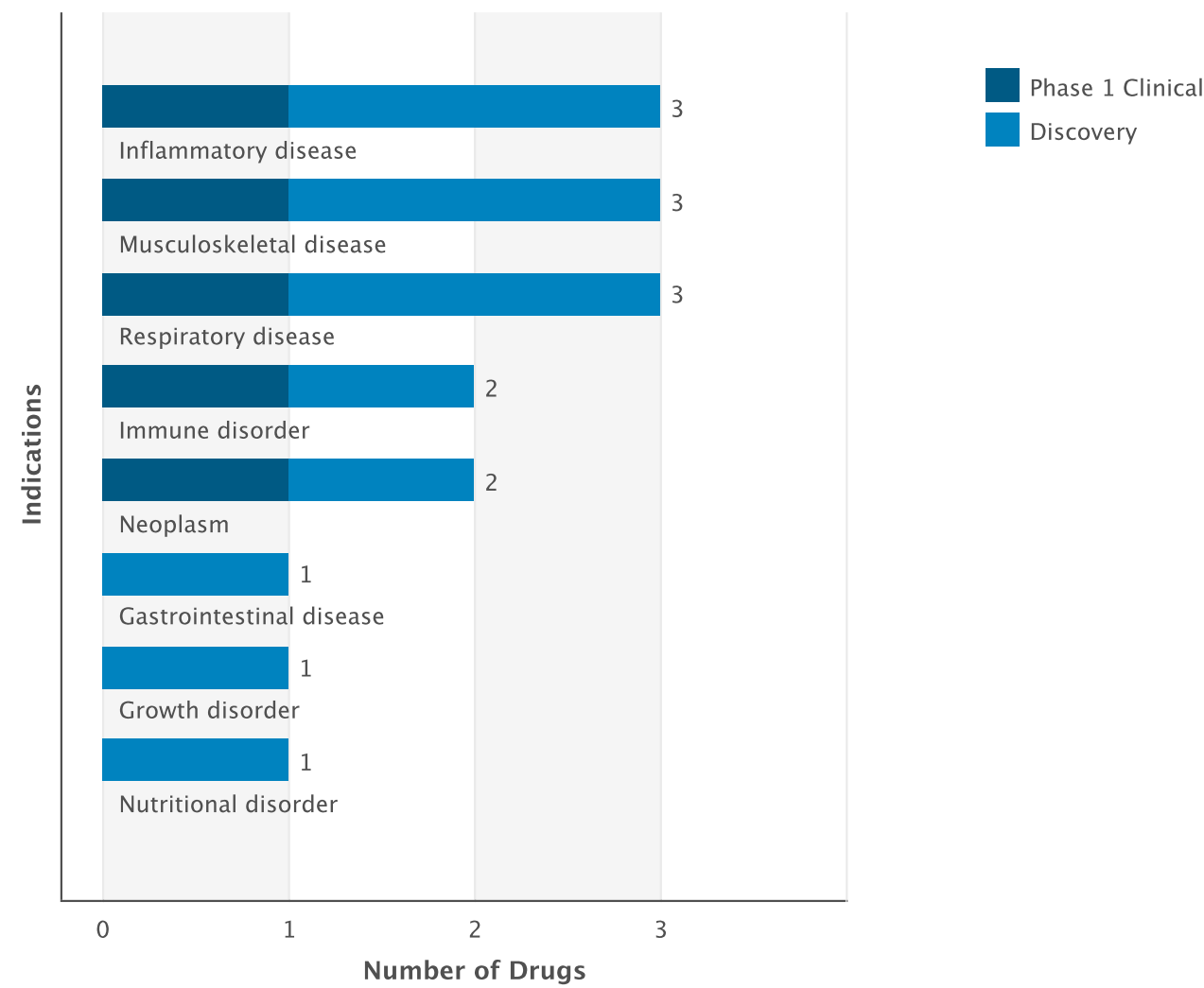


PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



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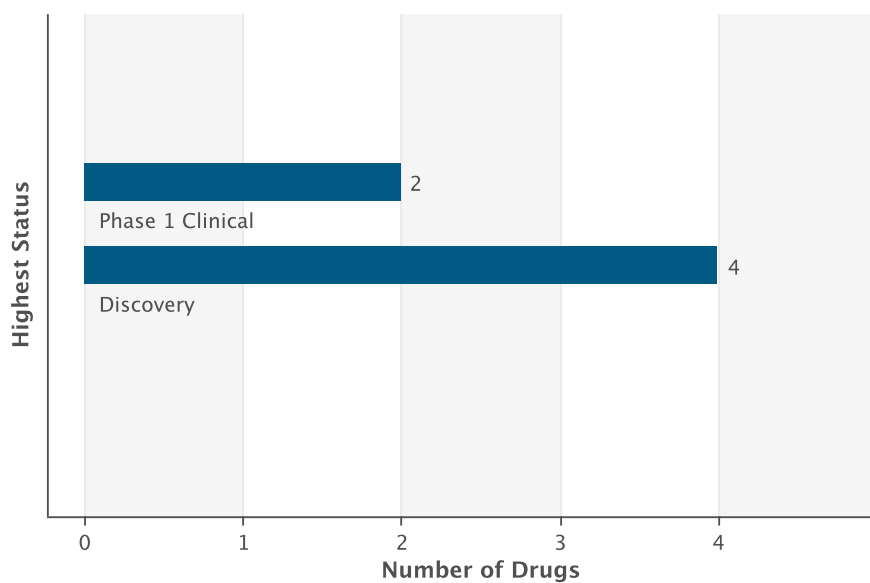
Drugs by Indication Table

Indication	Active	Inactive	Total
Neoplasm	2	6	8
Inflammatory disease	3	2	5
Respiratory disease	3	1	4
Gastrointestinal disease	1	3	4
Musculoskeletal disease	3	1	4
Endocrine disease	0	3	3
Metabolic disorder	0	3	3
Immune disorder	2	1	3
Nutritional disorder	1	1	2
Neurological disease	0	1	1
Cardiovascular disease	0	1	1
Infectious disease	0	1	1
Genitourinary disease	0	1	1
Gynecology and obstetrics	0	1	1
Unidentified indication	0	1	1
Growth disorder	1	0	1

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Drugs by Highest Status

Active Drugs by Highest Status Chart



Drugs by Highest Status Table

Development Status	Number of Drugs
Phase 1 Clinical	2
Discovery	4
Discontinued	1
No Development Reported	13

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DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Drug - Development/Commercialization License	4	0	2	0	6
Patent - Exclusive Rights	0	0	1	0	1
Drug - Screening/Evaluation	1	0	0	0	2
Drug - Early Research/Development	0	0	1	0	1
Drug - Discovery/Design	2	0	1	0	3
Drug - Funding	1	0	0	0	1
Technology - Other Proprietary	0	0	4	0	4

CLINICAL TRIALS

Trials by Condition Studied

Condition Studied	Ongoing	All
Neoplasm	0	3
Gynecology and obstetrics	0	2
Genitourinary disease	0	2
Endocrine disease	0	2
Inflammatory disease	1	1
Immune disorder	1	1
Musculoskeletal disease	1	1

Trials by Phase

Phase	Ongoing	All
Phase 2	0	2
Phase 1	1	2

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	17	0	17
Endocrine disease	20	0	20
Gastrointestinal disease	23	0	23
Genitourinary disease	11	0	11
Growth disorder	1	0	1
Hematological disease	7	0	7
Degeneration	4	0	4
Andrology	5	0	5
Immune disorder	26	0	26
Musculoskeletal disease	15	0	15
Neoplasm	31	1	32
Ocular disease	2	0	2
Genetic disorder	5	0	5
Metabolic disorder	13	0	13
Neurological disease	17	0	17
Nutritional disorder	3	1	4
Respiratory disease	13	0	13
Infectious disease	11	0	11
Injury	1	0	1
Inflammatory disease	23	0	23
Otorhinolaryngological disease	1	0	1
Gynecology and obstetrics	12	0	12
Dermatological disease	17	0	17
Surgical procedure	4	0	4

* 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

FPA-008

FPA-008 SNAPSHOT

Drug Name	FPA-008
Key Synonyms	
Originator Company	Five Prime Therapeutics Inc
Active Companies	Five Prime Therapeutics Inc
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Rheumatoid arthritis;Fibrosis;Autoimmune disease
Target-based Actions	CSF-1 antagonist
Other Actions	Anti-inflammatory
Technologies	Monoclonal antibody humanized;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	15-May-2014

FPA-008 DEVELOPMENT PROFILE

SUMMARY

FivePrime Therapeutics is developing FPA-008, a humanized monoclonal antibody targeted to colony stimulating factor 1 receptor (CSF1R), for the potential injectable treatment of autoimmune diseases and fibrosis, including rheumatoid arthritis, lupus nephritis and multiple sclerosis . FivePrime is also investigating FPA-008 for the potential treatment of fibrosis. In October 2013, a phase I trial began in the Netherlands . In March 2014, the company was seeking to outlicense the drug at a phase IIa/IIb ready point.

FPA-008 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Five Prime Therapeutics Inc	Autoimmune disease	Netherlands	Phase 1 Clinical	10-Oct-2013
Five Prime Therapeutics Inc	Rheumatoid arthritis	Netherlands	Phase 1 Clinical	10-Oct-2013
Five Prime Therapeutics Inc	Fibrosis	US	Discovery	27-Feb-2013

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FPA-008 DRUG NAMES

Names	Type
anti-CSF1R hmAb (autoimmune disease), FivePrime Therapeutics	
anti-colony stimulating factor 1 receptor humanized monoclonal antibody (autoimmune disease), FivePrime Therapeutics	
FPA-008	Research Code

FPA-008 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	0	1	1	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	0	0	1	1	0	0	1	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)

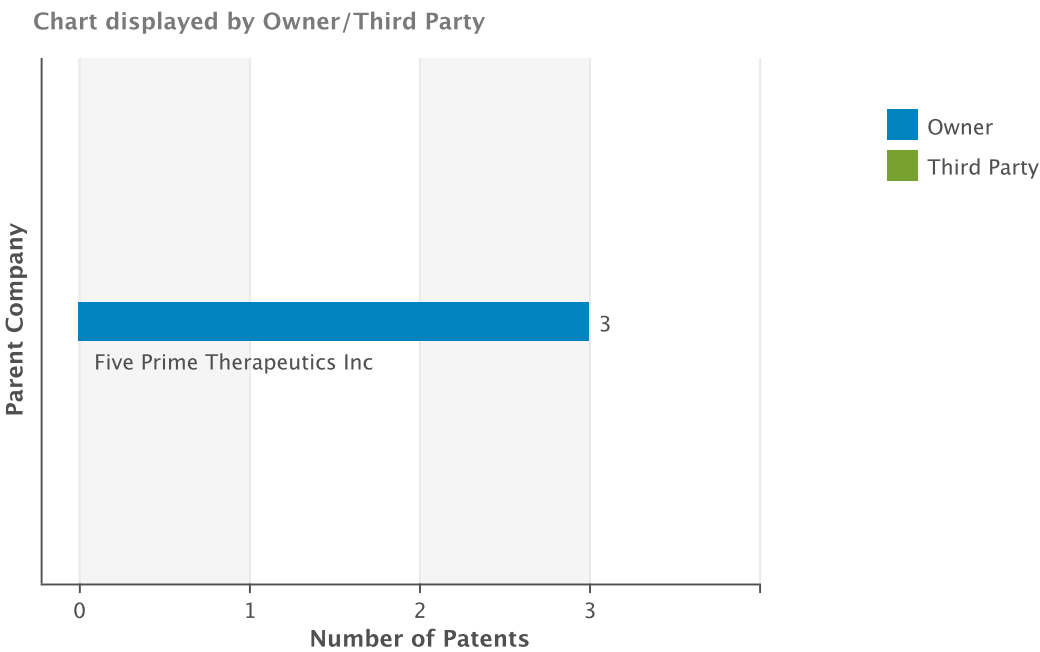
Phase 1 Clinical

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

Patents by Parent Company Chart

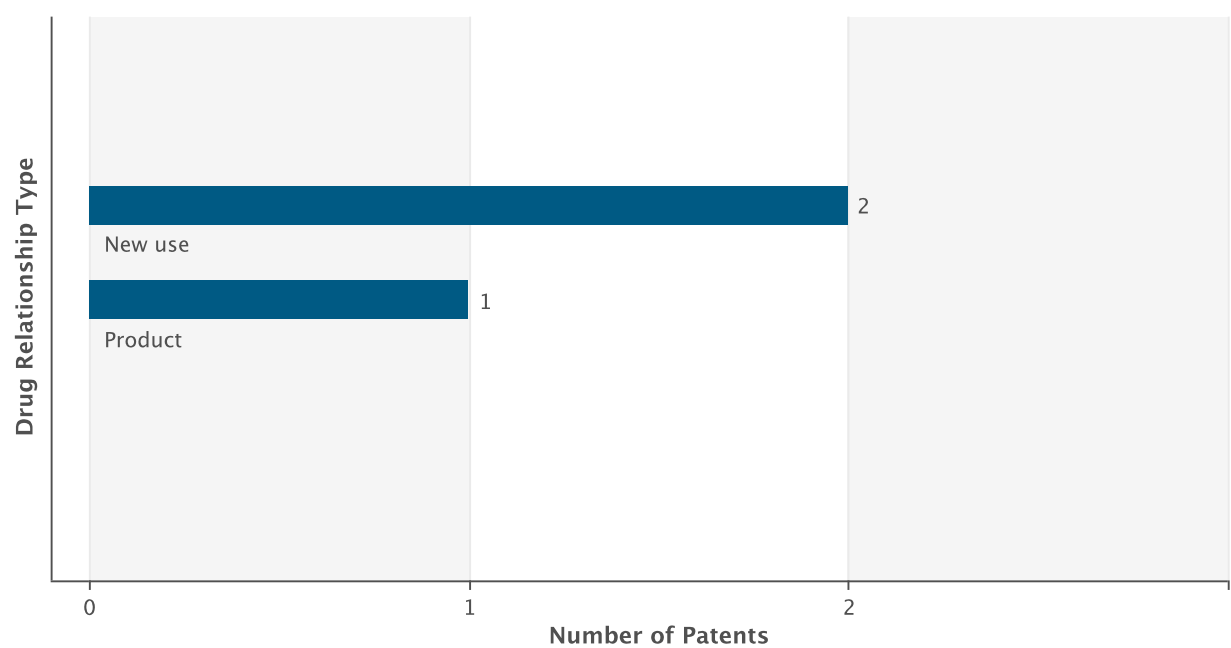


Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Five Prime Therapeutics Inc	3	0	3

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
New use	2
Product	1

FP-1039

FP-1039 SNAPSHOT

Drug Name	FP-1039
Key Synonyms	
Originator Company	Five Prime Therapeutics Inc
Active Companies	Human Genome Sciences Inc;Five Prime Therapeutics Inc
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Mesothelioma;Non-small-cell lung cancer;Cancer
Target-based Actions	FGF1 receptor antagonist
Other Actions	Angiogenesis inhibitor;Synergist;Anticancer protein kinase inhibitor
Technologies	Antibody fragment;Immunoglobulin-G;Intravenous formulation;Infusion;Biological therapeutic;Protein fusion
Last Change Date	28-Apr-2014

FP-1039 DEVELOPMENT PROFILE

SUMMARY

FivePrime Therapeutics and licensee GlaxoSmithKline (GSK, formerly Human Genome Sciences (HGS)), are developing FP-1039 (HGS-1036, GSK-3052230; 3052230), a soluble fusion protein comprising the extracellular domain of FGFR-1C linked to the Fc domain of IgG1 as a FGFR-1C antagonist that binds to several ligands that are key drivers of tumor growth, for the potential iv treatment of cancer such as breast, lung and ovarian tumors,, ,. In July 2013, a phase Ib trial in non-small cell lung cancer (NSCLC) patients with abnormally high levels of FGFR1 was initiated ; by March 2014, patients with mesothelioma were also being enrolled in this trial ; later that month, preliminary data from the dose-escalation part were expected by the end of 2014. In October 2009, the company was seeking to outlicense the codevelopment rights to the drug.

In January 2011, a phase II endometrial cancer trial was due to begin in the US, however the trial was withdrawn before enrollment began.

FP-1039 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Five Prime Therapeutics Inc	Cancer	US	Phase 1 Clinical	31-Jul-2008
Five Prime Therapeutics Inc	Mesothelioma	US	Phase 1 Clinical	17-Mar-2014
Five Prime Therapeutics Inc	Non-small-cell lung cancer	US	Phase 1 Clinical	16-Mar-2011

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Company	Indication	Country	Development Status	Date
Human Genome Sciences Inc	Mesothelioma	US	Phase 1 Clinical	17-Mar-2014
Human Genome Sciences Inc	Non-small-cell lung cancer	US	Phase 1 Clinical	16-Mar-2011
Five Prime Therapeutics Inc	Endometrioid carcinoma	US	Discontinued	31-Mar-2012
Human Genome Sciences Inc	Endometrioid carcinoma	US	Discontinued	31-Mar-2012

FP-1039 DRUG NAMES

Names	Type
GSK-3052230	Research Code
FGFR-1c antagonist (protein fusion/iv, cancer), FivePrime Therapeutics/ Human Genome Sciences	
FP-1039	Research Code
HGS-1036	Research Code
FPT-039	Research Code
FGFR-1c antagonist (protein fusion/iv, cancer), FivePrime Therapeutics	
3052330	Research Code
modified growth factor receptor (cancer), FivePrime Therapeutics	

FP-1039 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
Advanced solid tumor											
0	0	0	0	0	0	1	3	0	0	1	3
Endometrioid carcinoma											
0	0	0	0	0	2	0	0	0	0	0	2
Metastatic non small cell lung cancer											
0	0	0	0	0	0	1	1	0	0	1	1

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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	3	0	0	1	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)

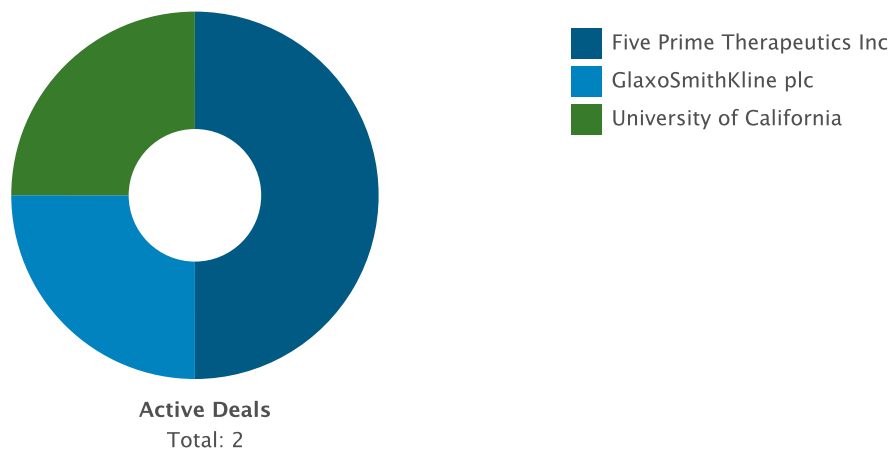
Phase 1 Clinical

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

FP-1039 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



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Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Five Prime Therapeutics Inc	1	0	1	0	2
University of California	1	0	0	0	1
GlaxoSmithKline plc	0	0	1	0	1

Deals by Type Chart



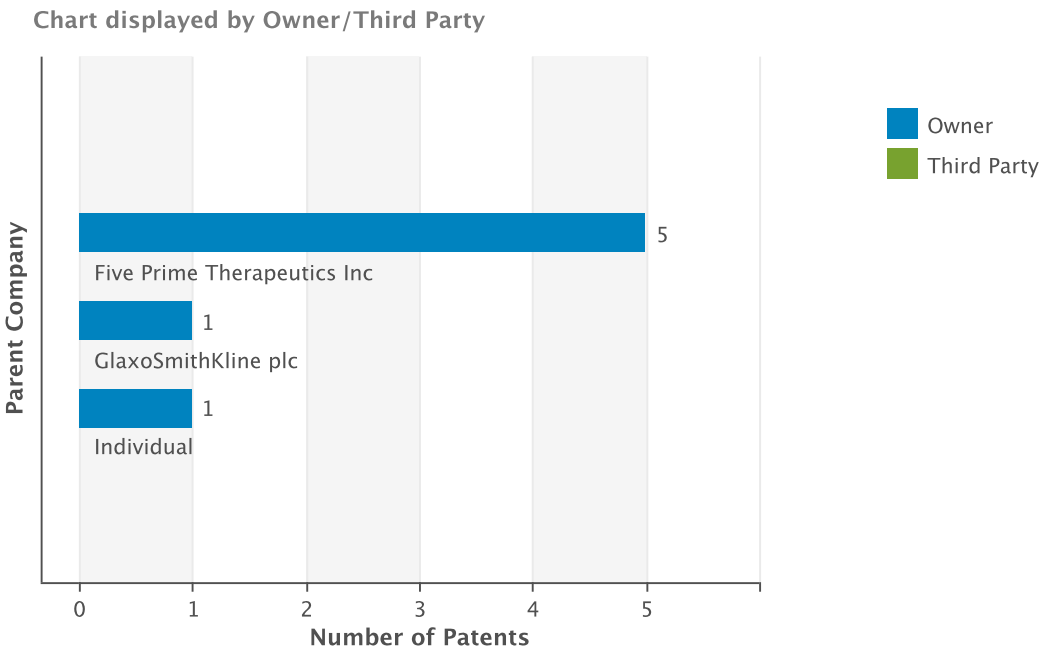
Deals by Type Table

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

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Patents by Parent Company Chart

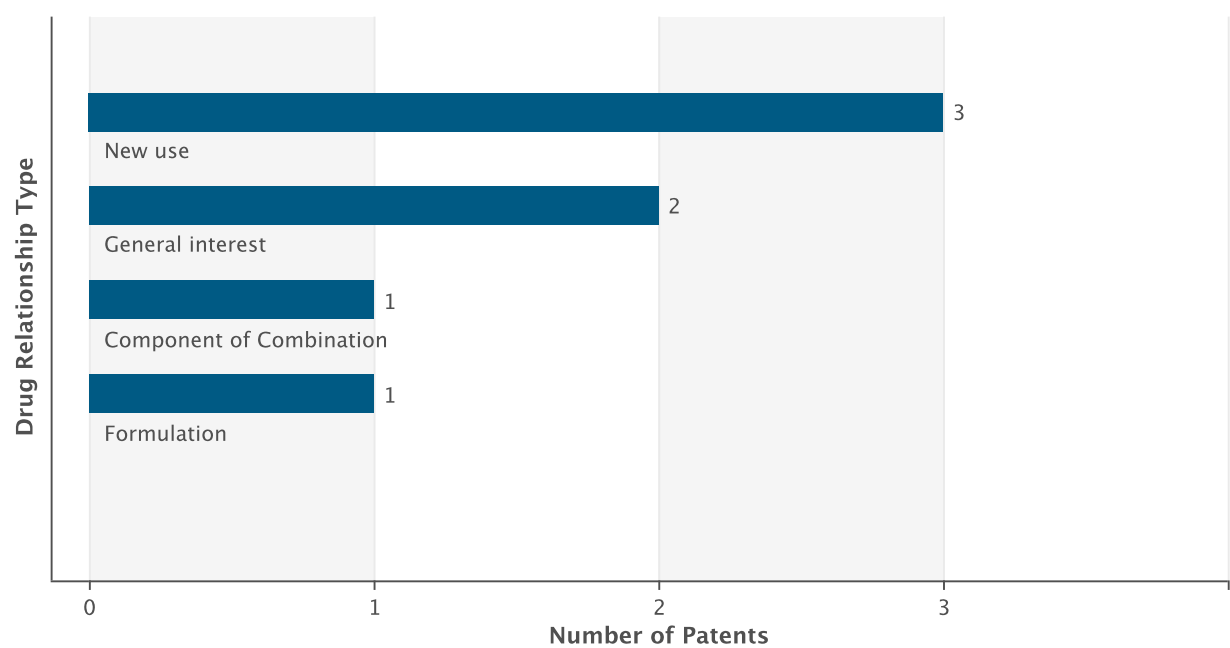


Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Five Prime Therapeutics Inc	5	0	5
Individual	1	0	1
GlaxoSmithKline plc	1	0	1

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
New use	3
General interest	2
Formulation	1
Component of Combination	1

therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech

therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech SNAPSHOT

Drug Name	therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech
Key Synonyms	
Originator Company	Five Prime Therapeutics Inc
Active Companies	Five Prime Therapeutics Inc;Janssen Biotech Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Osteoarthritis;Idiopathic pulmonary fibrosis
Target-based Actions	
Other Actions	Anti-inflammatory;Respiratory system agent;Fibrosuppressant
Technologies	Biological therapeutic;Parenteral formulation unspecified;Peptide
Last Change Date	28-Apr-2014

therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech DEVELOPMENT PROFILE

SUMMARY

FivePrime Therapeutics and Janssen Biotech (previously known as Centocor Ortho Biotech) are investigating therapeutic peptide program for the potential treatment of osteoarthritis and idiopathic pulmonary fibrosis,. In January 2009, the program was listed as being in lead optimization ; in February 2013, development appeared to be ongoing ; in April 2014, this was still the case.

therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Five Prime Therapeutics Inc	Idiopathic pulmonary fibrosis	US	Discovery	31-Dec-2006
Five Prime Therapeutics Inc	Osteoarthritis	US	Discovery	31-Dec-2006
Janssen Biotech Inc	Idiopathic pulmonary fibrosis	US	Discovery	31-Dec-2006
Janssen Biotech Inc	Osteoarthritis	US	Discovery	31-Dec-2006

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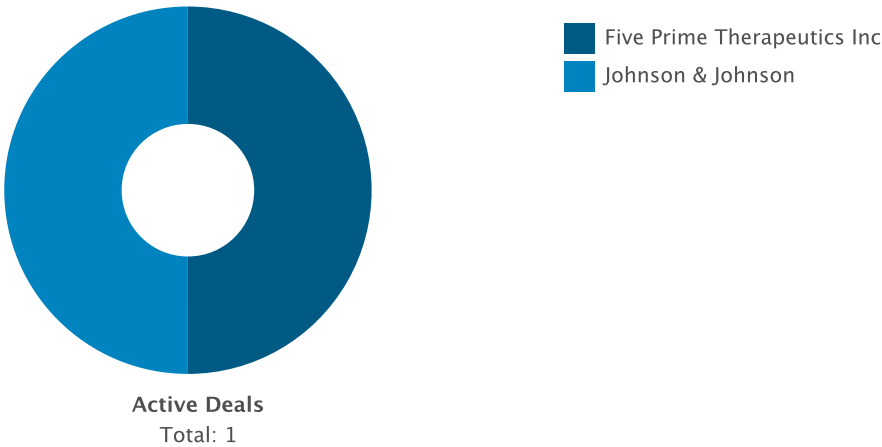
therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech DRUG NAMES

Names	Type
therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech	
therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime Therapeutics/Centocor Ortho Biotech	

therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

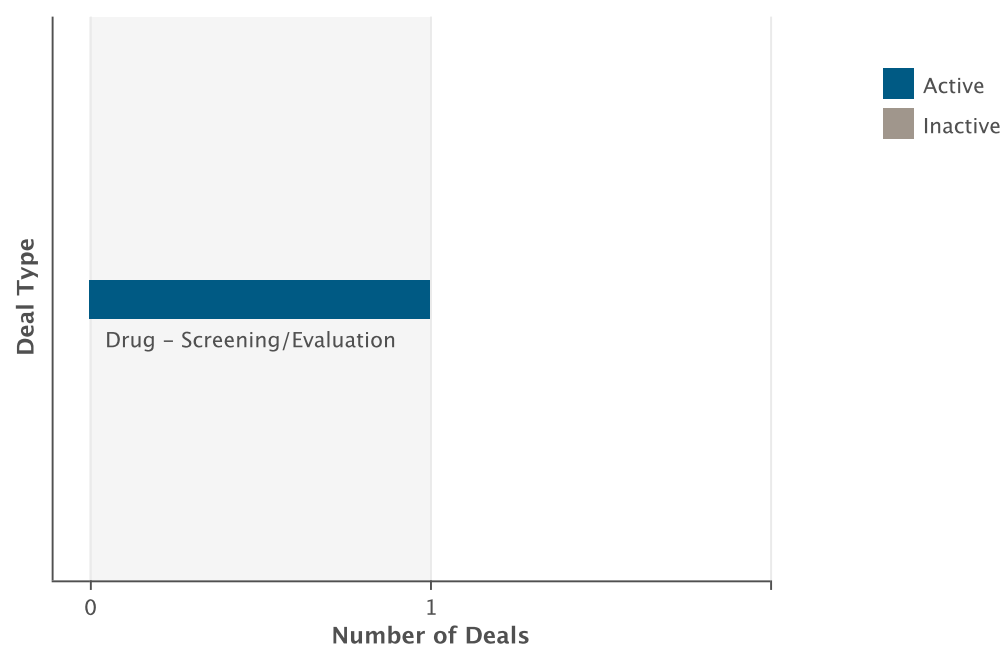


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Five Prime Therapeutics Inc	1	0	0	0	1
Johnson & Johnson	0	0	1	0	1

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Deals by Type Chart



Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Screening/Evaluation	1	0	1

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FPA-144

FPA-144 SNAPSHOT

Drug Name	FPA-144
Key Synonyms	
Originator Company	Five Prime Therapeutics Inc
Active Companies	Five Prime Therapeutics Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Stomach tumor
Target-based Actions	FGF2 receptor antagonist
Other Actions	Anticancer protein kinase inhibitor;Synergist;Anticancer monoclonal antibody
Technologies	Monoclonal antibody humanized;Injectable formulation;Biological therapeutic;Parenteral formulation unspecified
Last Change Date	30-Apr-2014

FPA-144 DEVELOPMENT PROFILE

SUMMARY

FivePrime Therapeutics is investigating FPA-144, a humanized monoclonal antibody that targets against FGFR2b, for the potential injectable treatment of gastric cancer,. In April, 2014, preclinical data were presented. In March 2014, a phase I trial was expected to begin by the end of 2014. In February 2013, the company was planning on seeking to outlicense the antibody after the completion of phase I development.

The company was previously investigating FPA-005, an antibody targeting a growth factor pathway, for the potential treatment of cancer. By May 2008, lead optimization was underway. However, in October 2009, the drug was no longer listed on the company's development pipeline.

FPA-144 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Five Prime Therapeutics Inc	Stomach tumor	US	Discovery	21-Jun-2012

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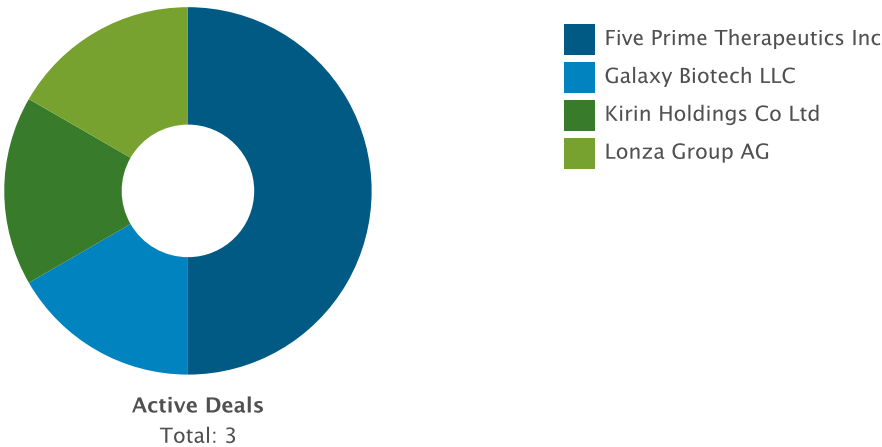
FPA-144 DRUG NAMES

Names	Type
humanized monoclonal antibody (gastric cancer), FivePrime	
FPA-144	Research Code
FPA-005	Research Code

FPA-144 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

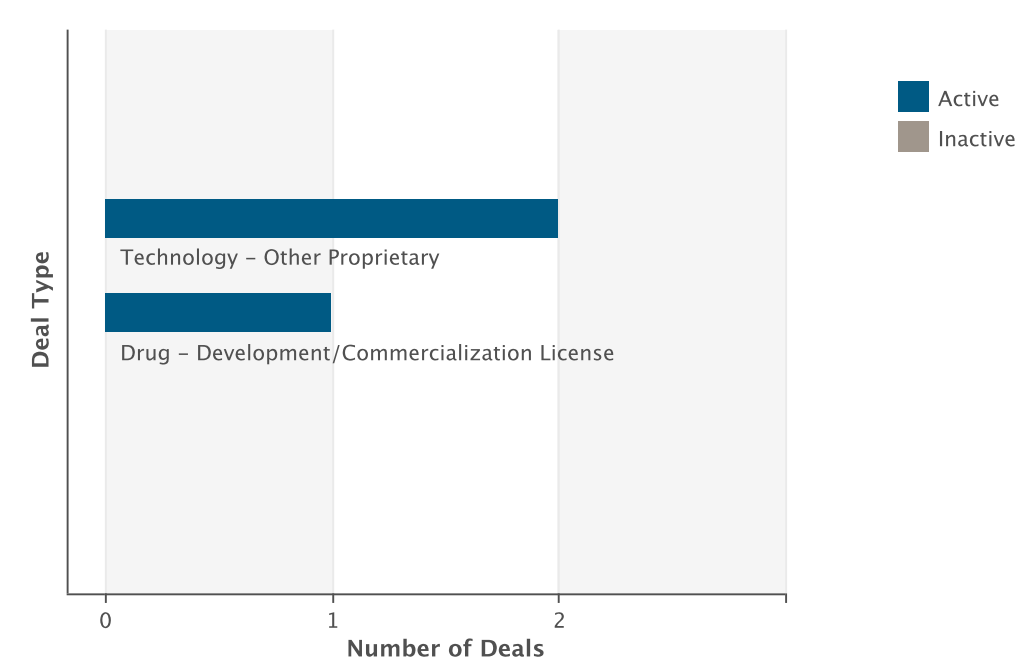


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Five Prime Therapeutics Inc	0	0	3	0	3
Galaxy Biotech LLC	1	0	0	0	1
Lonza Group AG	1	0	0	0	1
Kirin Holdings Co Ltd	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	2	0	2
Drug - Development/Commercialization License	1	0	1

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secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime

secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime SNAPSHOT

Drug Name	secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime
Key Synonyms	
Originator Company	Five Prime Therapeutics Inc
Active Companies	GlaxoSmithKline plc;Five Prime Therapeutics Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Sarcopenia;Musculoskeletal disease;Cachexia
Target-based Actions	
Other Actions	Musculoskeletal system modulator;Unspecified drug target
Technologies	Biological therapeutic;Parenteral formulation unspecified;Protein recombinant
Last Change Date	28-Apr-2014

secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime DEVELOPMENT PROFILE

SUMMARY

GlaxoSmithKline and FivePrime are investigating secreted proteins and transmembrane receptor proteins for the potential treatment of sarcopenia, cachexia and other musculoskeletal disorders such as muscular atrophy,. In February 2013, the collaboration between the companies remained active and development was presumed to be ongoing ; in April 2014, this was still the case. In May 2010, FivePrime was seeking to outlicense partnering rights for the program.

secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Five Prime Therapeutics Inc	Cachexia	US	Discovery	03-Aug-2010
Five Prime Therapeutics Inc	Musculoskeletal disease	US	Discovery	31-May-2010
Five Prime Therapeutics Inc	Sarcopenia	US	Discovery	03-Aug-2010
GlaxoSmithKline plc	Cachexia	UK	Discovery	03-Aug-2010
GlaxoSmithKline plc	Musculoskeletal disease	UK	Discovery	03-Aug-2010
GlaxoSmithKline plc	Sarcopenia	UK	Discovery	03-Aug-2010

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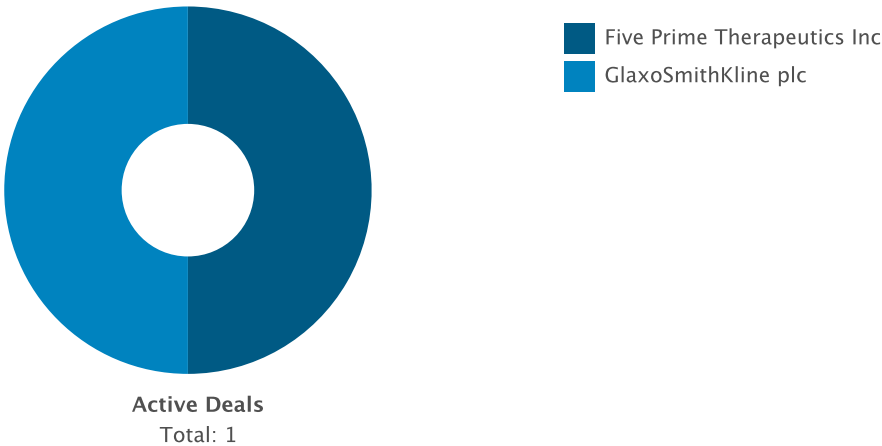
secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime DRUG NAMES

Names	Type
secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime	

secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

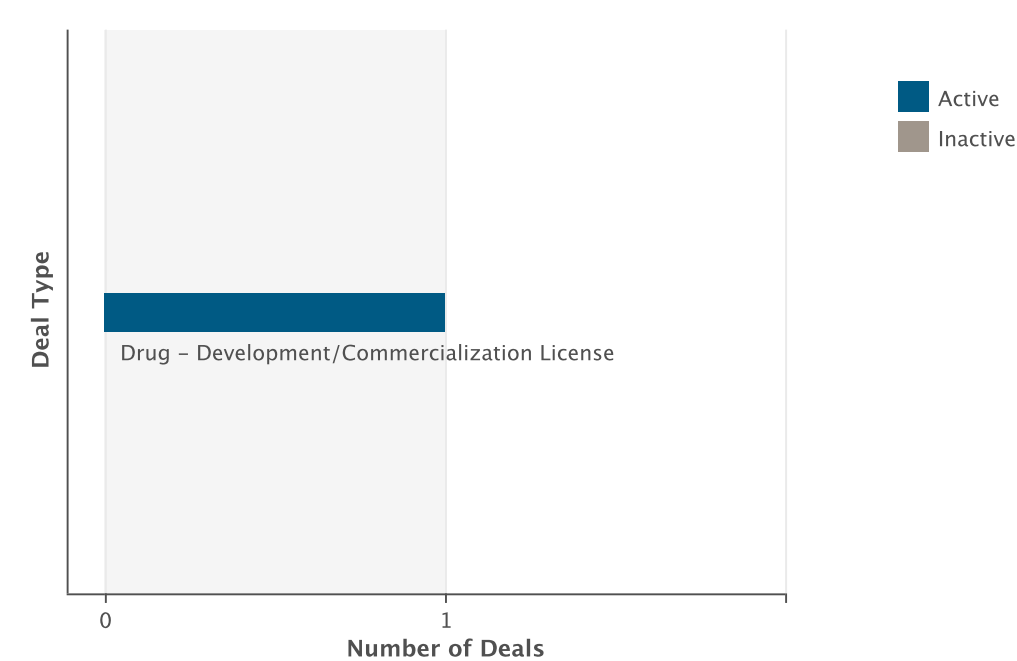


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Five Prime Therapeutics Inc	1	0	0	0	1
GlaxoSmithKline plc	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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FPA-126

FPA-126 SNAPSHOT

Drug Name	FPA-126
Key Synonyms	
Originator Company	Five Prime Therapeutics Inc
Active Companies	GlaxoSmithKline plc;Five Prime Therapeutics Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Asthma;Chronic obstructive pulmonary disease
Target-based Actions	Interleukin 27 alpha ligand modulator
Other Actions	Respiratory system agent;Anti-inflammatory
Technologies	Antibody;Biological therapeutic;Parenteral formulation unspecified;Protein recombinant
Last Change Date	09-Apr-2014

FPA-126 DEVELOPMENT PROFILE

SUMMARY

GlaxoSmithKline and FivePrime are investigating an antibody targeting cytokine IL-27, FPA-126, from the series of human secreted proteins and transmembrane receptor proteins, for the potential treatment of chronic obstructive pulmonary disease and refractory asthma including steroid resistant asthma. By April 2012, preclinical development in asthma was underway. In February 2013, an IND was expected for asthma in 2014 or 2015. In March 2014, the company was seeking to outlicense the drug.

FPA-126 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Five Prime Therapeutics Inc	Asthma	US	Discovery	17-Apr-2012
Five Prime Therapeutics Inc	Chronic obstructive pulmonary disease	US	Discovery	17-Apr-2012
GlaxoSmithKline plc	Asthma	US	Discovery	17-Apr-2012
GlaxoSmithKline plc	Chronic obstructive pulmonary disease	US	Discovery	17-Apr-2012

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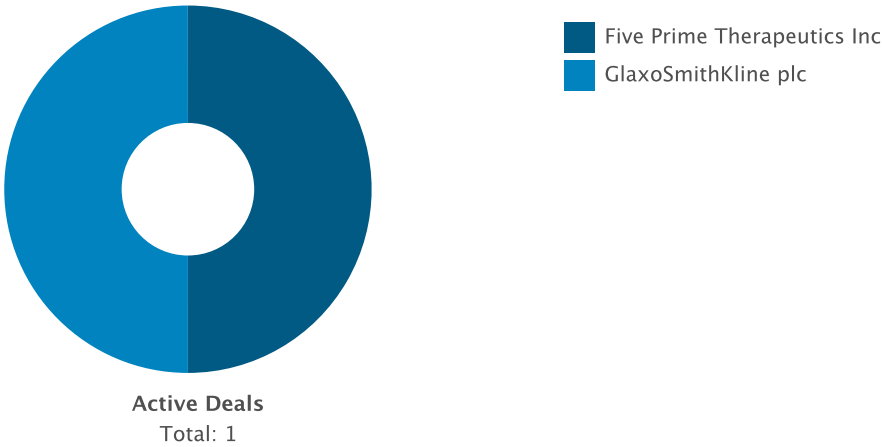
FPA-126 DRUG NAMES

Names	Type
IL-27 targeting antibody (asthma/COPD), FivePrime/GlaxoSmithKline	
FPA-126	Research Code
human secreted/transmembrane receptor proteins (asthma/ chronic obstructive pulmonary disease), GSK/ FivePrime	

FPA-126 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

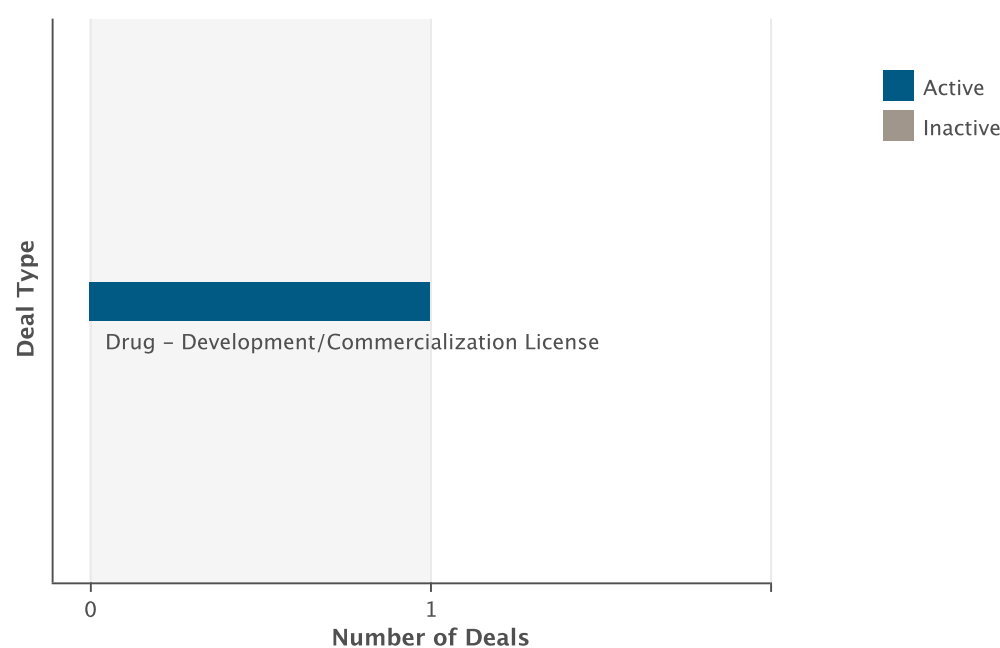


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Five Prime Therapeutics Inc	1	0	0	0	1
GlaxoSmithKline plc	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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