

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

|  |   |
|--|---|
| <b>Company Name</b>                          | Five Prime Therapeutics Inc   |
| <b>Parent Company Name</b>                   | Five Prime Therapeutics Inc   |
| <b>Website</b>                               | http://www.fiveprime.com/   |
| <b>Country</b>                               | US  |
| <b>Number of Drugs in Active Development</b> | 7   |
| <b>Number of Inactive Drugs</b>              | 12  |
| <b>Number of Patents as Owner</b>            | 43  |
| <b>Number of Patents as Third Party</b>      | 1   |
| <b>Number of Deals</b>                       | 15  |
| <b>Key Indications</b>                       | Cancer,Endometrioid carcinoma,Chronic obstructive pulmonary disease,Osteoarthritis,Stomach tumor,Asthma,Non-small-cell lung cancer,Autoimmune disease,Cachexia,Fibrosis,Idiopathic pulmonary fibrosis,Musculoskeletal disease,Sarcopenia,Unidentified indication                                |
| <b>Key Target-based Actions</b>              | FGF2 receptor antagonist,CSF-1 antagonist,FGF1 receptor antagonist,Amphiregulin ligand modulator,Extracellular signal related kinase-1 stimulator,Extracellular signal related kinase-2 stimulator,IL antagonist,Insulin sensitizer,Interleukin 27 alpha ligand modulator,FGF1 receptor agonist |
| <b>Key Technologies</b>                      | Biological therapeutic,Parenteral formulation unspecified,Peptide,Protein recombinant,Antibody,Protein fusion,Monoclonal antibody humanized,Immunoglobulin-G,Antibody fragment,Infusion,Intravenous formulation,Small molecule therapeutic  |

## 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 immunology.

### 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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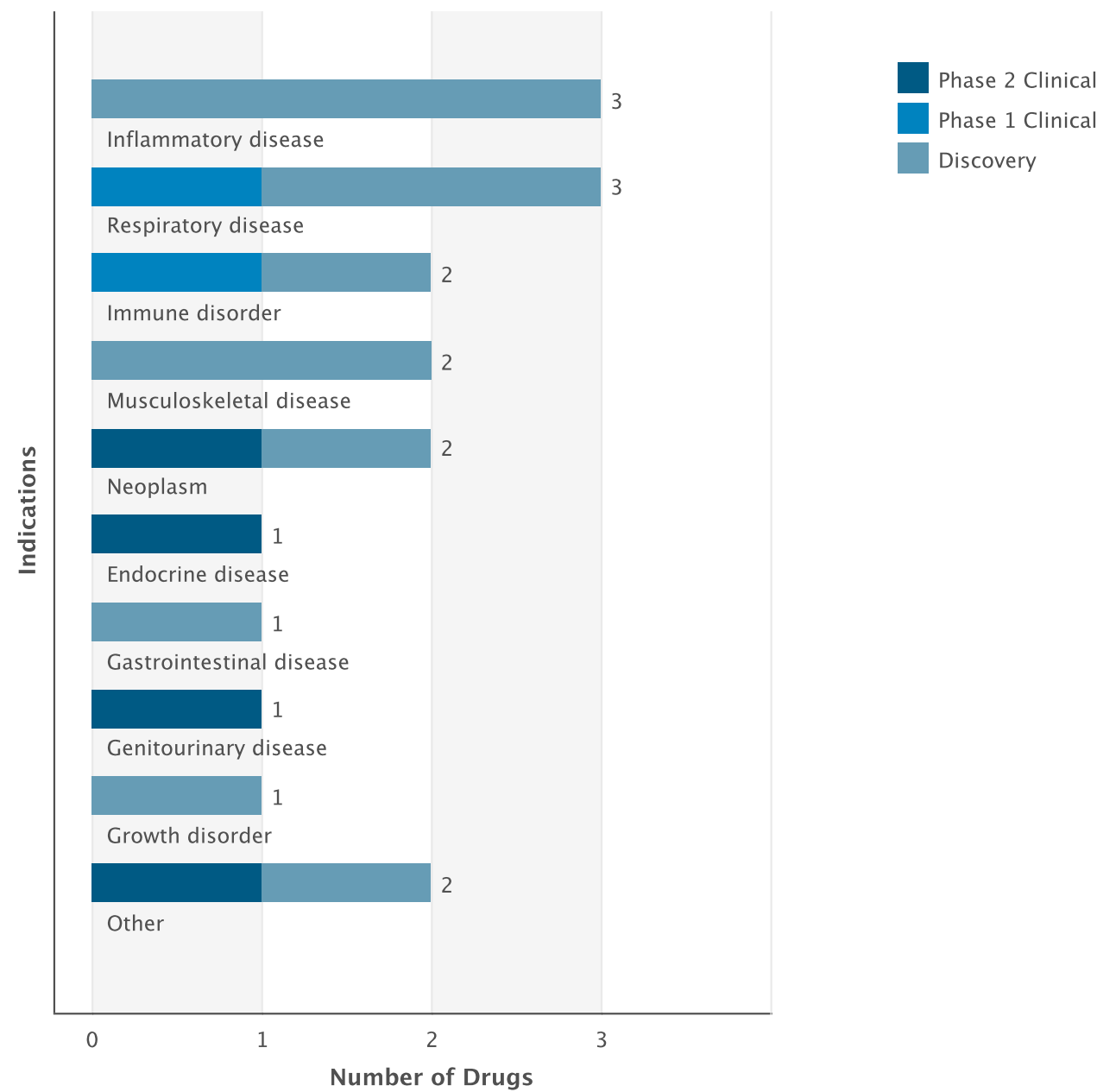


# PRODUCT PORTFOLIO SUMMARY

## DRUGS

### Drugs by Indication

Active Drugs by Indication Chart



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## Drugs by Indication Table

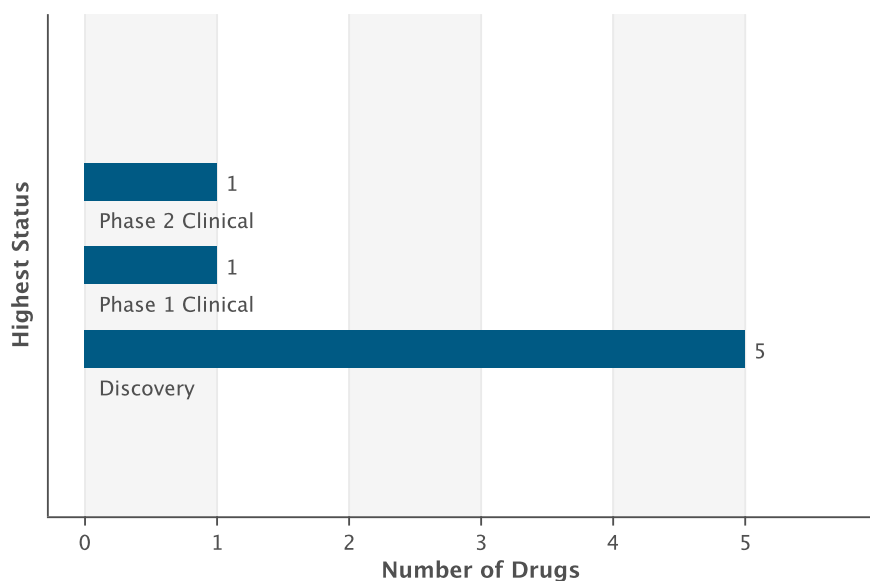
| Indication                | Active | Inactive | Total |
|---------------------------|--------|----------|-------|
| Neoplasm                  | 2      | 5        | 7     |
| Inflammatory disease      | 3      | 2        | 5     |
| Respiratory disease       | 3      | 1        | 4     |
| Gastrointestinal disease  | 1      | 3        | 4     |
| Endocrine disease         | 1      | 2        | 3     |
| Metabolic disorder        | 0      | 3        | 3     |
| Musculoskeletal disease   | 2      | 1        | 3     |
| Immune disorder           | 2      | 1        | 3     |
| Nutritional disorder      | 1      | 1        | 2     |
| Neurological disease      | 0      | 1        | 1     |
| Genitourinary disease     | 1      | 0        | 1     |
| Unidentified indication   | 1      | 0        | 1     |
| Cardiovascular disease    | 0      | 1        | 1     |
| Growth disorder           | 1      | 0        | 1     |
| Infectious disease        | 0      | 1        | 1     |
| Gynecology and obstetrics | 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 2 Clinical        | 1               |
| Phase 1 Clinical        | 1               |
| Discovery               | 5               |
| No Development Reported | 12              |

## DEALS

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

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## 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

## PATENTS \*

| Indication               | As Owner | As Third Party | Total |
|--------------------------|----------|----------------|-------|
| Cardiovascular disease   | 17       | 0              | 17    |
| Endocrine disease        | 20       | 0              | 20    |
| Gastrointestinal disease | 22       | 0              | 22    |
| Genitourinary disease    | 11       | 0              | 11    |
| Growth disorder          | 1        | 0              | 1     |
| Hematological disease    | 6        | 0              | 6     |
| Degeneration             | 4        | 0              | 4     |
| Andrology                | 5        | 0              | 5     |

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|                                |    |   |    |
|--------------------------------|----|---|----|
| Immune disorder                | 25 | 0 | 25 |
| Musculoskeletal disease        | 14 | 0 | 14 |
| Neoplasm                       | 30 | 1 | 31 |
| Ocular disease                 | 2  | 0 | 2  |
| Genetic disorder               | 5  | 0 | 5  |
| Metabolic disorder             | 12 | 0 | 12 |
| 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           | 22 | 0 | 22 |
| Otorhinolaryngological disease | 1  | 0 | 1  |
| Gynecology and obstetrics      | 12 | 0 | 12 |
| Dermatological disease         | 16 | 0 | 16 |
| 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

### FP-1039

#### FP-1039 SNAPSHOT

|                             |   |
|-----------------------------|---|
| <b>Drug Name</b>            | FP-1039   |
| <b>Key Synonyms</b>         |   |
| <b>Originator Company</b>   | Five Prime Therapeutics Inc   |
| <b>Active Companies</b>     | Human Genome Sciences Inc;Five Prime Therapeutics Inc   |
| <b>Inactive Companies</b>   |   |
| <b>Highest Status</b>       | Phase 2 Clinical  |
| <b>Active Indications</b>   | Non-small-cell lung cancer;Endometrioid carcinoma;Cancer  |
| <b>Target-based Actions</b> | FGF1 receptor antagonist  |
| <b>Other Actions</b>        | Angiogenesis inhibitor;Anticancer protein kinase inhibitor  |
| <b>Technologies</b>         | Biological therapeutic;Intravenous formulation;Infusion;Protein fusion;Antibody fragment;Immunoglobulin-G |
| <b>Last Change Date</b>     | 10-Jan-2014   |

#### FP-1039 DEVELOPMENT PROFILE

#### SUMMARY

FivePrime Therapeutics and licensee Human Genome Sciences (HGS), a subsidiary of GlaxoSmithKline, 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, ovarian and endometrial tumors,, .. In January 2011, a phase II endometrial cancer trial was initiated in the US. In July 2013, a phase Ib trial in non-small cell lung cancer (NSCLC) patients with abnormally high levels of FGFR1 was initiated. At that time, preliminary data were expected in the second half of 2014. In October 2009, the company was seeking to outlicense the codevelopment rights to the drug.

#### FP-1039 DEVELOPMENT STATUS

##### CURRENT DEVELOPMENT STATUS

| Company                     | Indication             | Country | Development Status | Date        |
|-----------------------------|------------------------|---------|--------------------|-------------|
| Five Prime Therapeutics Inc | Endometrioid carcinoma | US      | Phase 2 Clinical   | 18-Jan-2011 |
| Human Genome Sciences Inc   | Endometrioid carcinoma | US      | Phase 2 Clinical   | 16-Mar-2011 |
| Five Prime Therapeutics Inc | Cancer                 | US      | Phase 1 Clinical   | 31-Jul-2008 |

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| Company                     | Indication                 | Country | Development Status | Date        |
|-----------------------------|----------------------------|---------|--------------------|-------------|
| Five Prime Therapeutics Inc | Non-small-cell lung cancer | US      | Phase 1 Clinical   | 16-Mar-2011 |
| Human Genome Sciences Inc   | Non-small-cell lung cancer | US      | Phase 1 Clinical   | 16-Mar-2011 |

## FP-1039 DRUG NAMES

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

## 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   | 2                | 3   | 0                 | 0   | 2        | 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   | 2                | 3   | 0                 | 0   | 2        | 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)

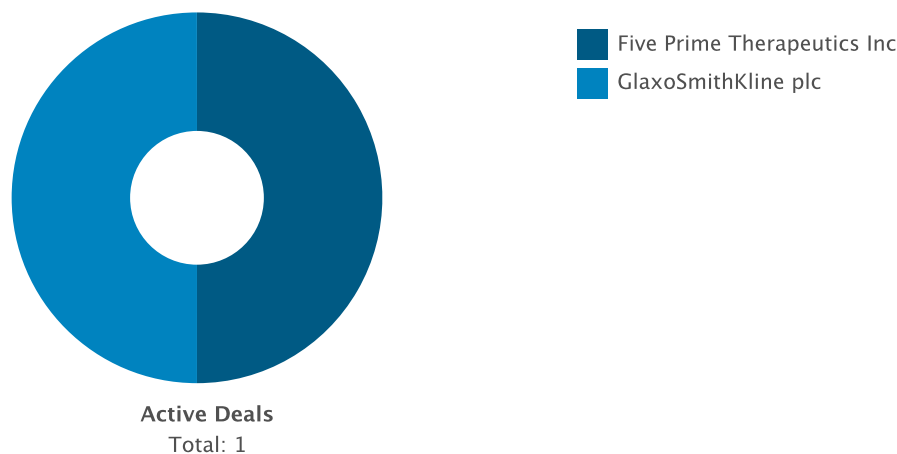
#### Phase 1 Clinical

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

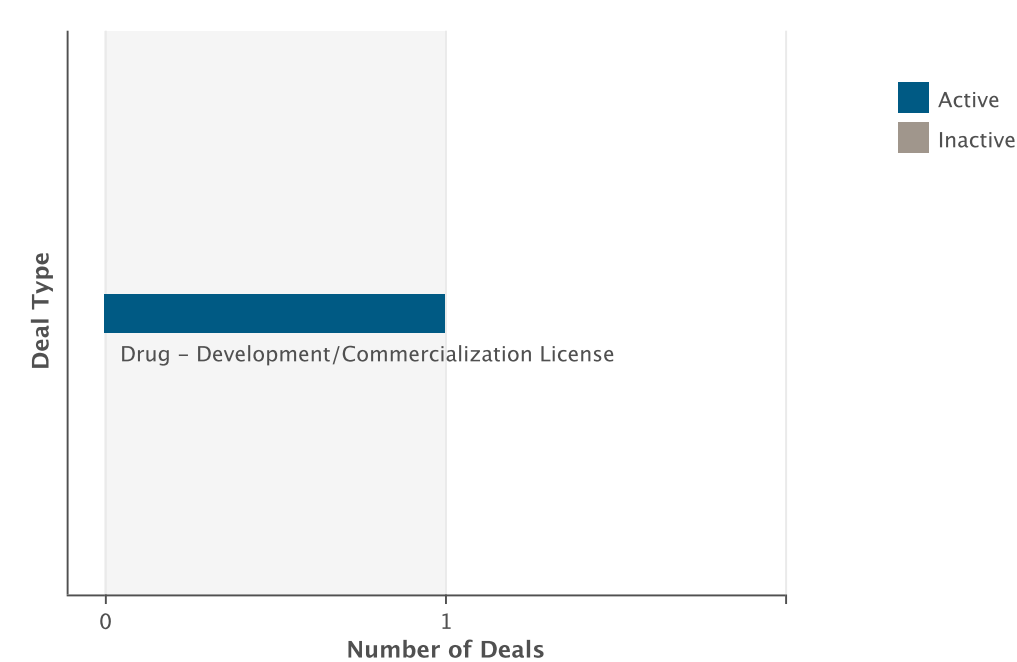


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Deals by Parent Company Table

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

Deals by Type Chart



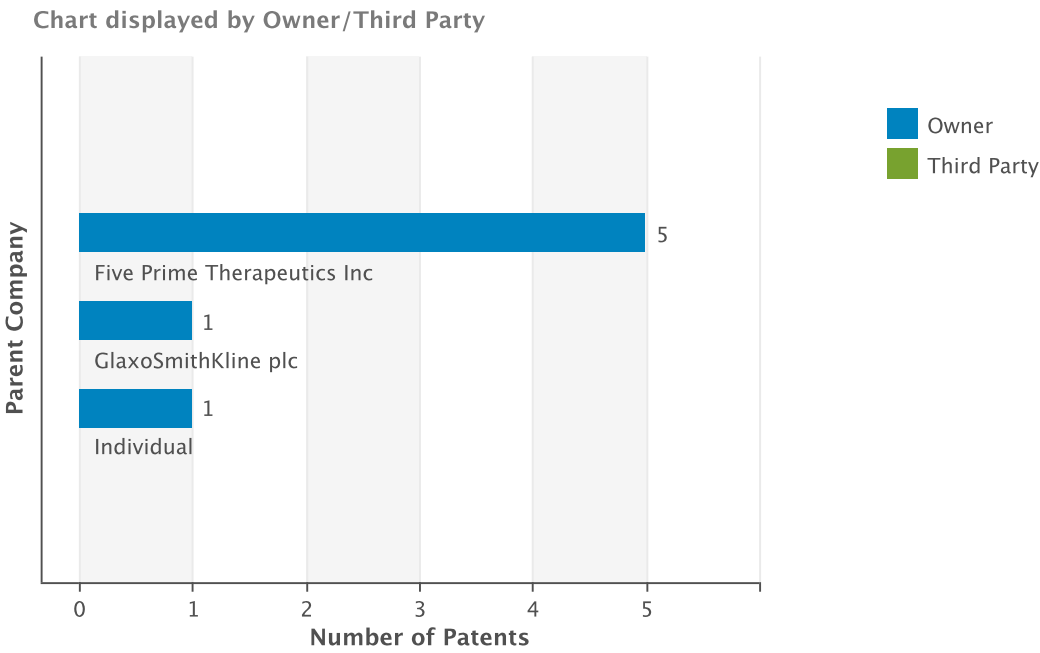
Deals by Type Table

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

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PATENTS

Patents by Parent Company Chart



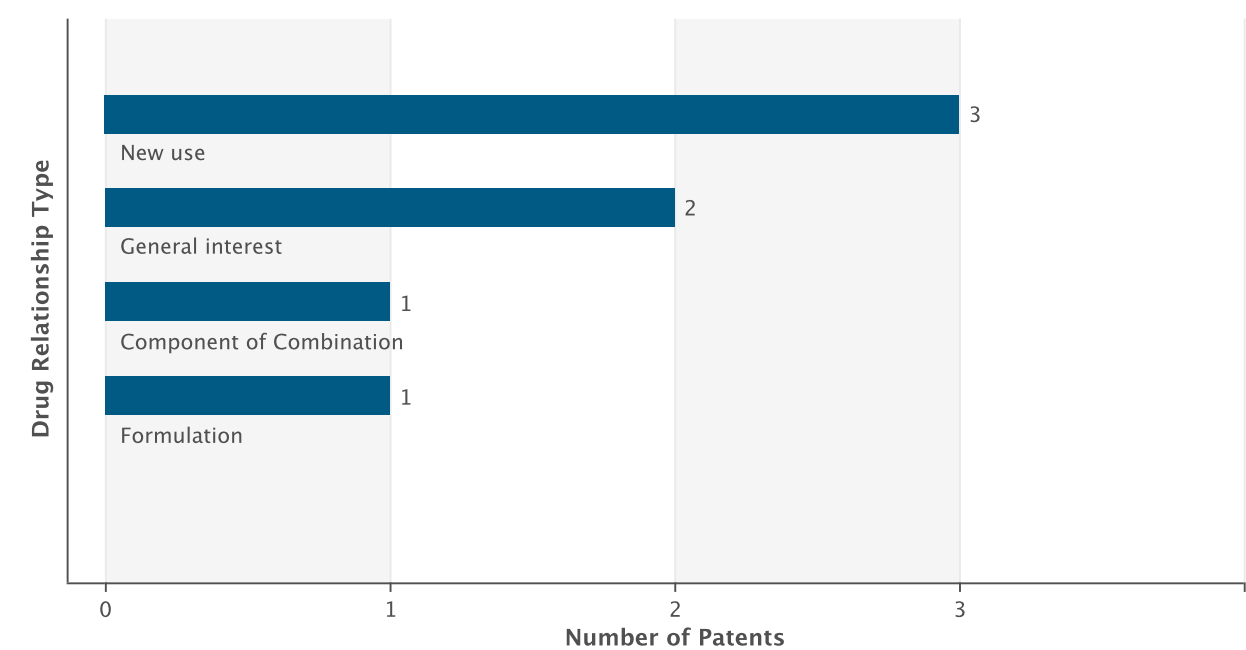
Patents by Parent Company Table

| Company Name                | As Owner | As Third Party | Total |
|-----------------------------|----------|----------------|-------|
| 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     |

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## 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   | Fibrosis;Autoimmune disease   |
| Target-based Actions | CSF-1 antagonist  |
| Other Actions        | Anti-inflammatory   |
| Technologies         | Biological therapeutic;Parenteral formulation unspecified;Monoclonal antibody humanized |
| Last Change Date     | 13-Nov-2013   |

### 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 treatment of autoimmune diseases and fibrosis, including rheumatoid arthritis, lupus nephritis and multiple sclerosis . . A phase I trial began in the Netherlands in October 2013.

### 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 | Autoimmune disease | US          | Discovery          | 31-Jan-2009 |
| Five Prime Therapeutics Inc | Fibrosis           | US          | Discovery          | 27-Feb-2013 |

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## FPA-008 DRUG NAMES

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

## 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)

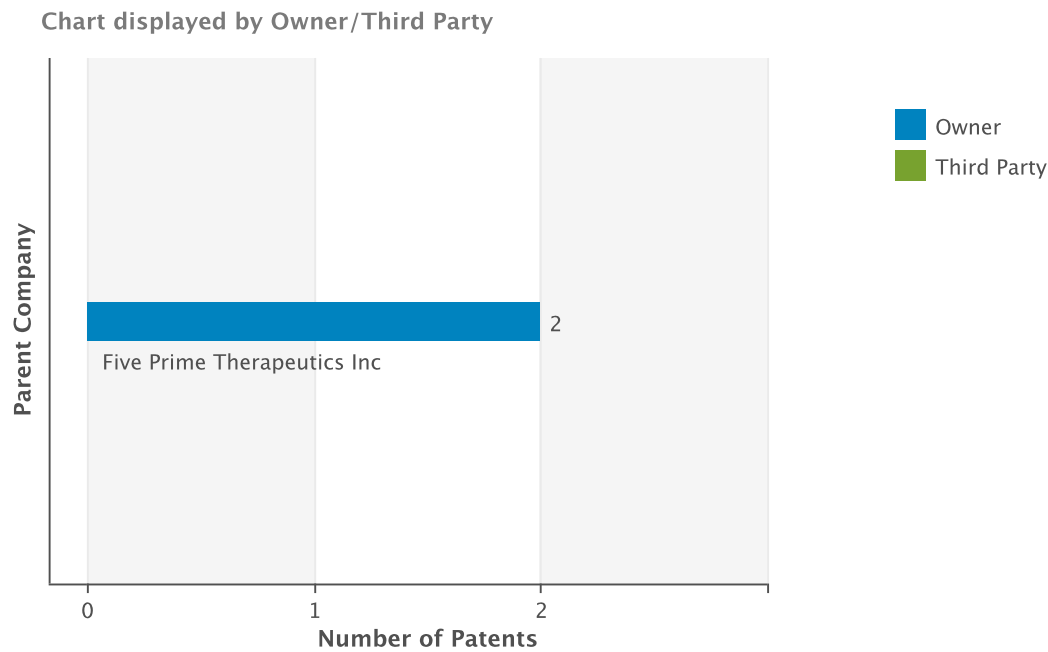
#### Phase 1 Clinical

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

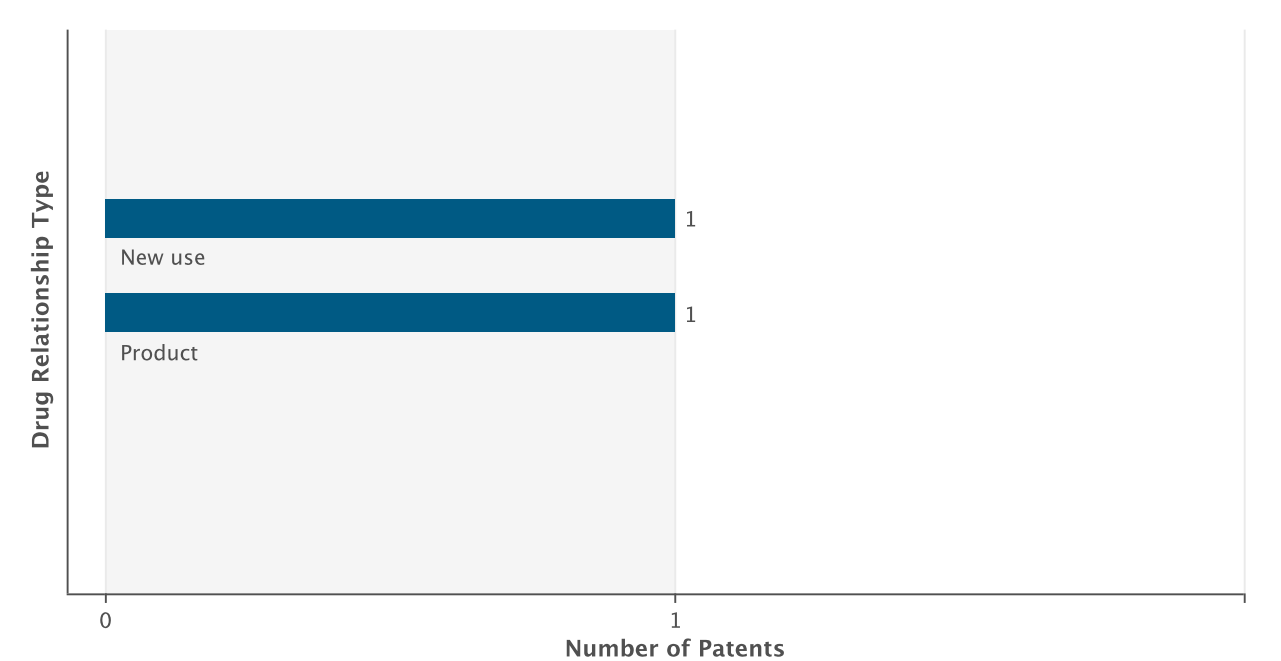


Patents by Parent Company Table

| Company Name                | As Owner | As Third Party | Total |
|-----------------------------|----------|----------------|-------|
| Five Prime Therapeutics Inc | 2        | 0              | 2     |

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

| Drug Relationship | Total |
|-------------------|-------|
| Product           | 1     |
| New use           | 1     |

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

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

|                             |   |
|-----------------------------|---|
| <b>Drug Name</b>            | therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech |
| <b>Key Synonyms</b>         |   |
| <b>Originator Company</b>   | Five Prime Therapeutics Inc   |
| <b>Active Companies</b>     | Five Prime Therapeutics Inc;Janssen Biotech Inc   |
| <b>Inactive Companies</b>   |   |
| <b>Highest Status</b>       | Discovery   |
| <b>Active Indications</b>   | Osteoarthritis;Idiopathic pulmonary fibrosis  |
| <b>Target-based Actions</b> |   |
| <b>Other Actions</b>        | Anti-inflammatory;Respiratory system agent;Fibrosuppressant                                 |
| <b>Technologies</b>         | Biological therapeutic;Parenteral formulation unspecified;Peptide                           |
| <b>Last Change Date</b>     | 28-Feb-2013   |

### 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 was appeared to be ongoing.

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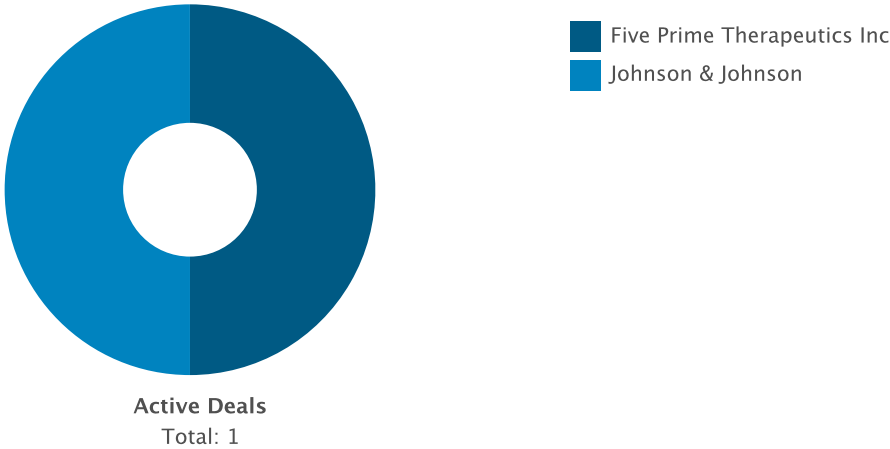
therapeutic peptide program (osteoarthritis/pulmonary fibrosis), FivePrime/ Janssen Biotech DRUG NAMES

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

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

DEALS

Deals by Parent Company Chart

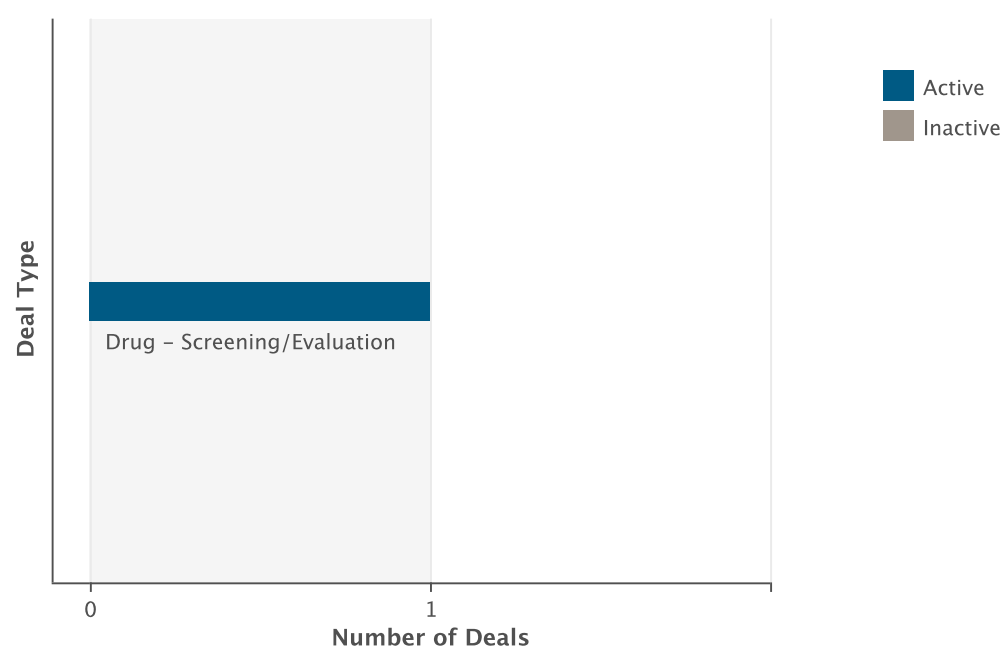


Deals by Parent Company Table

| 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;Anticancer monoclonal antibody                      |
| Technologies         | Biological therapeutic;Parenteral formulation unspecified;Monoclonal antibody humanized |
| Last Change Date     | 18-Sep-2013   |

### FPA-144 DEVELOPMENT PROFILE

#### SUMMARY

FivePrime Therapeutics is investigating FPA-144, a humanized monoclonal antibody that targets against FGFR2b, for the potential treatment of gastric cancer. In June 2012, the antibody was listed as being in preclinical development and at that time, the company expected filing an IND in the second half of 2013 ; in September 2013, the company planned to initiate a phase I trial in the second half 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          |
|--|---------------|
| FPA-144  | Research Code |
| humanized monoclonal antibody (gastric cancer),<br>FivePrime |               |
| FPA-005  | Research Code |

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

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

|                             |  |
|-----------------------------|--|
| <b>Drug Name</b>            | secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime |
| <b>Key Synonyms</b>         |  |
| <b>Originator Company</b>   | Five Prime Therapeutics Inc  |
| <b>Active Companies</b>     | GlaxoSmithKline plc;Five Prime Therapeutics Inc                                      |
| <b>Inactive Companies</b>   |  |
| <b>Highest Status</b>       | Discovery  |
| <b>Active Indications</b>   | Sarcopenia;Musculoskeletal disease;Cachexia  |
| <b>Target-based Actions</b> |  |
| <b>Other Actions</b>        | Musculoskeletal system modulator;Unspecified drug target                             |
| <b>Technologies</b>         | Biological therapeutic;Parenteral formulation unspecified;Protein recombinant        |
| <b>Last Change Date</b>     | 28-Feb-2013  |

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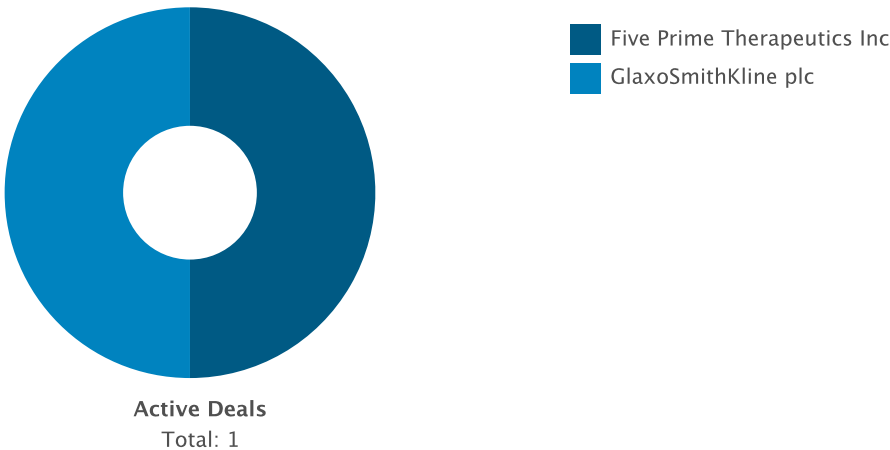
**secreted/transmembrane receptor proteins (musculoskeletal disorders), GSK/ FivePrime DRUG NAMES**

| 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**

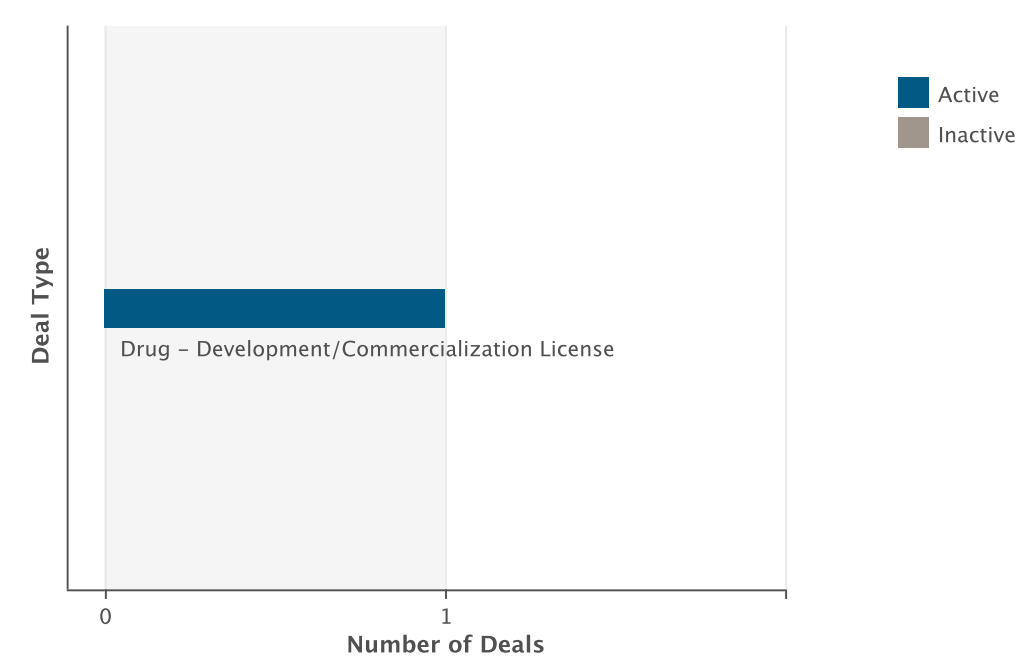


**Deals by Parent Company Table**

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

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Deals by Type Chart



Deals by Type Table

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

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## FPA-126

### FPA-126 SNAPSHOT

|                             |  |
|-----------------------------|--|
| <b>Drug Name</b>            | FPA-126  |
| <b>Key Synonyms</b>         |  |
| <b>Originator Company</b>   | Five Prime Therapeutics Inc  |
| <b>Active Companies</b>     | GlaxoSmithKline plc;Five Prime Therapeutics Inc  |
| <b>Inactive Companies</b>   |  |
| <b>Highest Status</b>       | Discovery  |
| <b>Active Indications</b>   | Asthma;Chronic obstructive pulmonary disease   |
| <b>Target-based Actions</b> | Interleukin 27 alpha ligand modulator  |
| <b>Other Actions</b>        | Respiratory system agent;Anti-inflammatory   |
| <b>Technologies</b>         | Antibody;Biological therapeutic;Parenteral formulation unspecified;Protein recombinant |
| <b>Last Change Date</b>     | 28-Feb-2013  |

### 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.

### 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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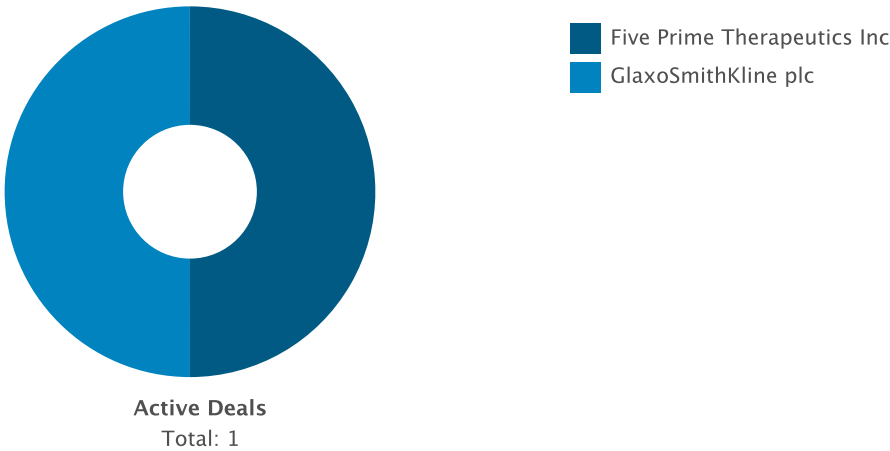
FPA-126 DRUG NAMES

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

FPA-126 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

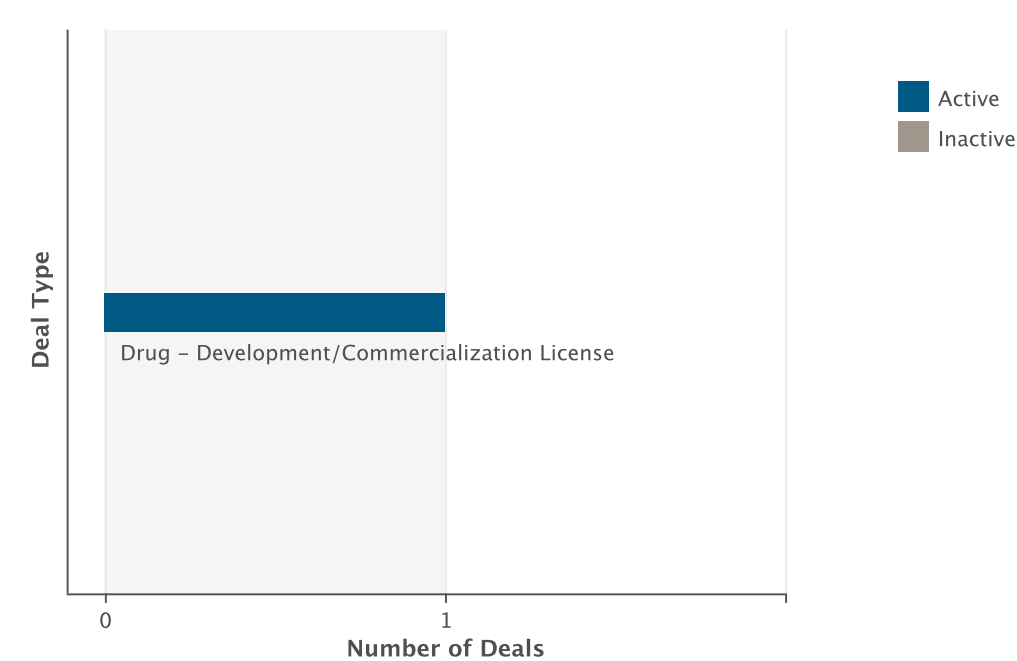


Deals by Parent Company Table

| 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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## therapeutic antibody program, Dyax/FivePrime Therapeutics

### therapeutic antibody program, Dyax/FivePrime Therapeutics SNAPSHOT

|                      |  |
|----------------------|--|
| Drug Name            | therapeutic antibody program, Dyax/FivePrime Therapeutics          |
| Key Synonyms         |  |
| Originator Company   | Five Prime Therapeutics Inc  |
| Active Companies     | Five Prime Therapeutics Inc;Dyax Corp                              |
| Inactive Companies   |  |
| Highest Status       | Discovery  |
| Active Indications   | Unidentified indication  |
| Target-based Actions |  |
| Other Actions        | Unspecified drug target  |
| Technologies         | Antibody;Biological therapeutic;Parenteral formulation unspecified |
| Last Change Date     | 07-Nov-2012  |

### therapeutic antibody program, Dyax/FivePrime Therapeutics DEVELOPMENT PROFILE

#### SUMMARY

FivePrime Therapeutics and Dyax are investigating a therapeutic antibody program for the potential treatment of an unidentified indication. In April 2011, development was ongoing ; in September 2012, the program was listed as being active.

### therapeutic antibody program, Dyax/FivePrime Therapeutics DEVELOPMENT STATUS

#### CURRENT DEVELOPMENT STATUS

| Company                     | Indication              | Country | Development Status | Date        |
|-----------------------------|-------------------------|---------|--------------------|-------------|
| Dyax Corp                   | Unidentified indication | US      | Discovery          | 26-Apr-2011 |
| Five Prime Therapeutics Inc | Unidentified indication | US      | Discovery          | 26-Apr-2011 |

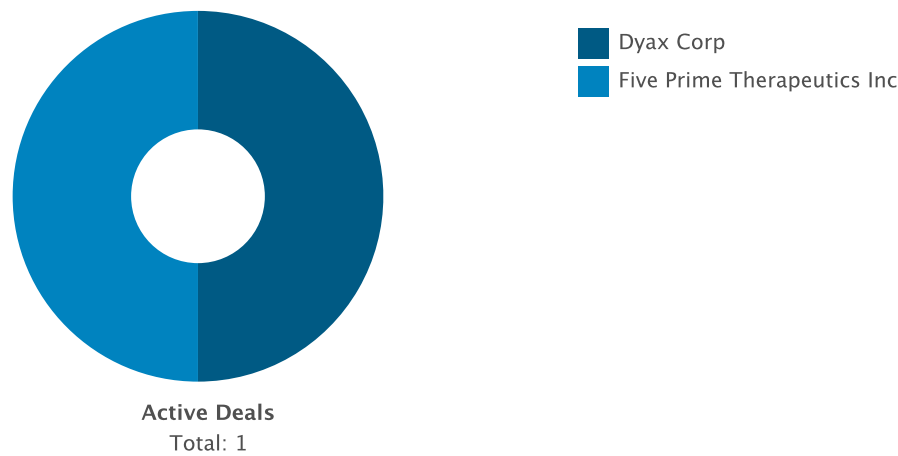
### therapeutic antibody program, Dyax/FivePrime Therapeutics DRUG NAMES

| Names   | Type |
|---|------|
| therapeutic antibody program, Dyax/FivePrime Therapeutics |      |

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DEALS

Deals by Parent Company Chart

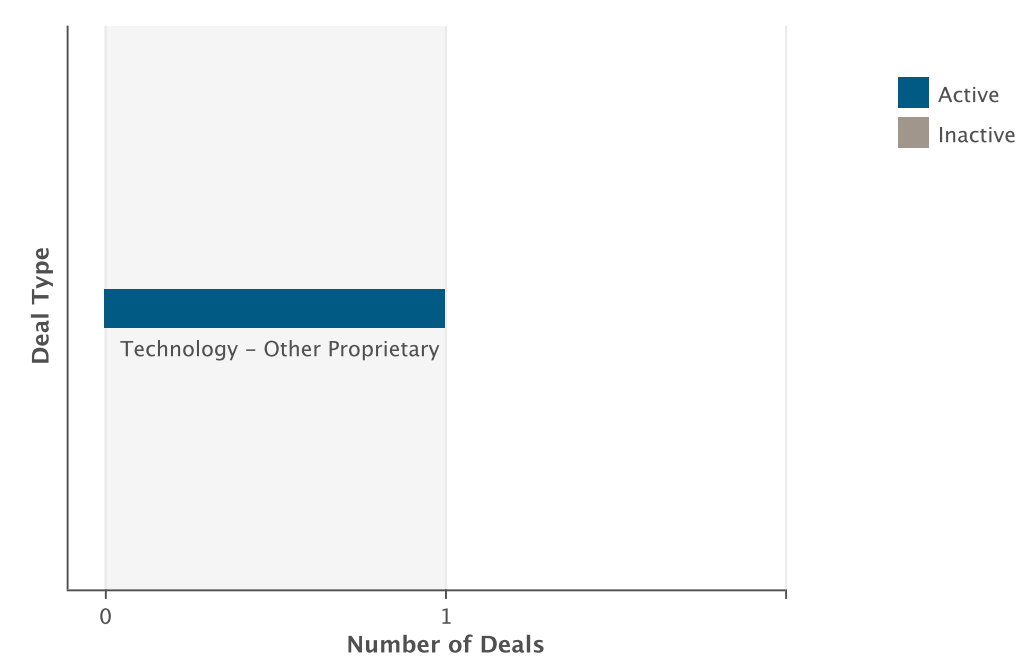


Deals by Parent Company Table

| Company Name                | Principal |          | Partner |          | Total |
|-----------------------------|-----------|----------|---------|----------|-------|
|                             | Active    | Inactive | Active  | Inactive |       |
| Five Prime Therapeutics Inc | 0         | 0        | 1       | 0        | 1     |
| Dyax Corp                   | 1         | 0        | 0       | 0        | 1     |

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Deals by Type Chart



Deals by Type Table

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

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