

## Conatus Pharmaceuticals 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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#### THOMSON REUTERS

3 Times Square  
New York, New York 10036  
United States

Tel: +1 646 223 4000

[thomsonreuters.com](http://thomsonreuters.com)

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# ABOUT CORTELLIS COMPANY DETAILED PIPELINE REPORT

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## GLOSSARY

### Number of Drugs in Active Development

Number of drugs associated with the company or subsidiary that are currently in active development, i.e. the development status for the drug(s) is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

### Number of Inactive Drugs

Number of drugs associated with the company or subsidiary that are currently classified as inactive, i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.

### Number of Patents as Owner

Number of patents associated with the company where the company is listed as owner; i.e. the relationship type (or way the patent refers to the company) is: Patent Assignee/Owner, Patent owner (not assignee), Licensee for development and marketing, Licensee – marketing only (Distributor), Patent assignee of family member, Inferred assignee.

### Number of Patents as Third Party

Number of patents associated with the company where the company is listed as third party; i.e. the relationship type (or way the patent refers to the company) is: Patent assignee (not owner), Ex-Licensee for development and marketing, Ex-Licensee marketing only (Distributor), Customer of technology, Ex-Customer of technology, Patent opponent or infringer, Affiliate organization of inventor, Owner of underlying technology.

### Patents summary table

This table represents a summary of the core patent coverage for this company covering Therapeutic EP, US and WO patents since 1990 only.

### Number of Deals

A count of deals where the company or one of its subsidiaries is the primary company.

### Key Indications

Displays top ten key indications for the company and its subsidiaries based on frequency (indications occurring with high and identical frequency are always included, and this may result in more than ten Key Indications being listed). Includes both indications associated with patents where the company is patent owner and indications associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

### Key Target-based Actions

Displays top ten key target-based actions for the company and its subsidiaries based on frequency (actions occurring with high and identical frequency are always included, and this may result in more than ten Key Target-based Actions being listed). Includes both target-based actions associated with patents where the company patent owner and target-based actions associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended. A target-based action is one that is associated with a target.

### Key Technologies

Displays top ten key technologies for the company and its subsidiaries based on frequency (technologies occurring with high and identical frequency are always included, and this may result in more than ten Key Technologies being listed). Includes both key technologies associated with patents where the company relationship is patent owner and key technologies associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

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# Conatus Pharmaceuticals Inc

## COMPANY OVERVIEW

<b>Company Name</b>	Conatus Pharmaceuticals Inc
<b>Parent Company Name</b>	Conatus Pharmaceuticals Inc
<b>Website</b>	<a href="http://www.conatuspharma.com/">http://www.conatuspharma.com/</a>
<b>Country</b>	US
<b>Number of Drugs in Active Development</b>	1
<b>Number of Inactive Drugs</b>	11
<b>Number of Patents as Owner</b>	25
<b>Number of Patents as Third Party</b>	3
<b>Number of Deals</b>	11
<b>Key Indications</b>	Hepatitis C virus infection,Alcoholic hepatitis,Diabetes mellitus,Idiopathic pulmonary fibrosis,Islet cell transplant rejection,Liver failure,Non-alcoholic steatohepatitis,Hepatitis B virus infection,Liver disease
<b>Key Target-based Actions</b>	Caspase inhibitor,Interleukin-1 converting enzyme inhibitor,SMAC protein modulator,Matrix metalloprotease inhibitor
<b>Key Technologies</b>	Small molecule therapeutic,Oral formulation,Biological therapeutic,Intravenous formulation,Crystalline form

## COMPANY PROFILE

### SUMMARY

Conatus Pharmaceuticals Inc was formed in July 2005 by the former management of Idun Pharmaceuticals following that company's acquisition by Pfizer. Conatus's R&D is centered on inflammation and liver disease.

### FINANCIAL

In September 2013, Conatus reported that it was to be included in the Russell 2000, Russell 3000 and Russell Global indices on September 30, 2013.

In June 2013, the company filed a registration statement on form S-1 with the US SEC for an initial public offering (IPO) of its common stock. In July 2013, the company priced its IPO of 6 million common stock shares at \$11.00 each. Also, the underwriters were granted a 30-day overallotment option to purchase up to an additional 0.9 million common stock shares and the offering was expected to close on July 30, 2013. At that time, trading of shares on the NASDAQ Global Market under the ticker symbol 'CNAT' was scheduled to begin on July 25, 2013.

In February 2011, Conatus closed a \$20 million series B preferred stock private placement financing and converted promissory bridge notes into series B preferred stock. In April 2011, Conatus closed a second tranche of the series B private placement financing raising \$7.5 million. The total capital raised was \$32.5 million.

In January 2007, Conatus completed the first \$5.5 million of its \$27.5 million preferred stock private placement financing. The company was to use the proceeds to develop a clinical stage hepatitis C virus drug candidate it licensed from Roche Holding, and to identify additional licensing opportunities. In May 2007, Conatus raised the final \$22 million in its \$27.5 million series A private placement. The closing was associated with the achievement of a preclinical CTS-1027 milestone.

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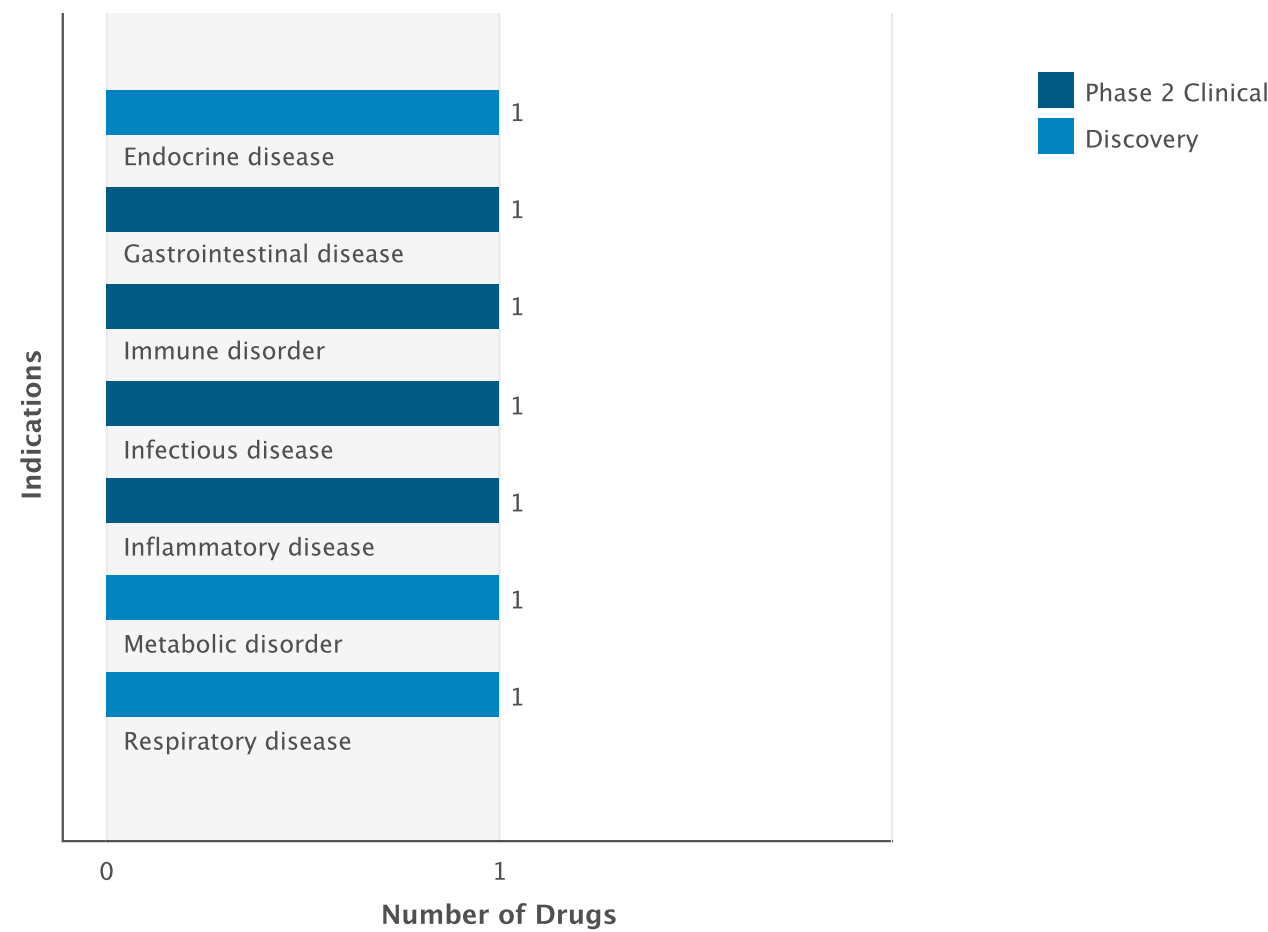


# PRODUCT PORTFOLIO SUMMARY

## DRUGS

### Drugs by Indication

Active Drugs by Indication Chart



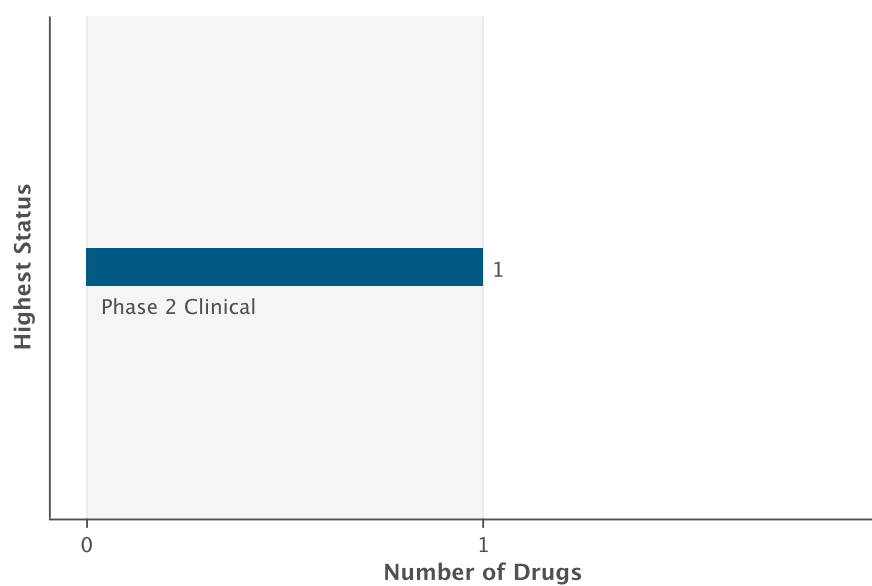
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## Drugs by Indication Table

Indication	Active	Inactive	Total
Neoplasm	0	4	4
Cardiovascular disease	0	4	4
Inflammatory disease	1	2	3
Gastrointestinal disease	1	1	2
Infectious disease	1	1	2
Neurological disease	0	2	2
Surgical procedure	0	1	1
Injury	0	1	1
Metabolic disorder	1	0	1
Immune disorder	1	0	1
Endocrine disease	1	0	1
Respiratory 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 2 Clinical	1
Discontinued	3
No Development Reported	4

## DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Technology - Other Proprietary	1	0	2	0	3
Drug - Funding	1	0	0	0	1
Drug - Early Research/Development	3	0	1	0	5
Drug - Development/Commercialization License	0	0	1	0	2

## CLINICAL TRIALS

### Trials by Condition Studied

Condition Studied	Ongoing	All
Gastrointestinal disease	3	14
Inflammatory disease	1	11
Infectious disease	0	8
Surgical procedure	0	1
Genitourinary disease	1	1
Immune disorder	0	1
Endocrine disease	1	1
Cardiovascular disease	0	1
Metabolic disorder	1	1
Neoplasm	0	1

### Trials by Phase

Phase	Ongoing	All
Phase 2	2	10
Phase 1	2	6

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## 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	15	0	15
Endocrine disease	1	0	1
Gastrointestinal disease	6	0	6
Genitourinary disease	1	0	1
Hematological disease	3	1	4
Degeneration	2	0	2
Immune disorder	25	1	26
Musculoskeletal disease	8	0	8
Neoplasm	14	1	15
Ocular disease	1	0	1
Neurological disease	15	0	15
Respiratory disease	2	1	3
Infectious disease	7	0	7
Injury	4	0	4
Inflammatory disease	20	0	20
Dermatological disease	1	0	1

\* This table represents a summary of the core patent coverage for this company covering Therapeutic EP, US and WO patents since 1990 only.

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## PRODUCT PORTFOLIO DRUG PIPELINE DETAIL

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

### emricasan (oral, islet transplant rejection/liver disease), Conatus

#### emricasan (oral, islet transplant rejection/liver disease), Conatus SNAPSHOT

<b>Drug Name</b>	emricasan (oral, islet transplant rejection/liver disease), Conatus
<b>Key Synonyms</b>	emricasan
<b>Originator Company</b>	Idun Pharmaceuticals Inc
<b>Active Companies</b>	Conatus Pharmaceuticals Inc
<b>Inactive Companies</b>	Pfizer Inc;Idun Pharmaceuticals Inc
<b>Highest Status</b>	Phase 2 Clinical
<b>Active Indications</b>	Alcoholic hepatitis;Hepatitis C virus infection;Liver failure;Islet cell transplant rejection;Non-alcoholic steatohepatitis;Idiopathic pulmonary fibrosis;Diabetes mellitus
<b>Target-based Actions</b>	Caspase inhibitor
<b>Other Actions</b>	Fibrosuppressant;Apoptosis inhibitor;Anti-inflammatory;Cardioprotectant;Antiviral
<b>Technologies</b>	Oral formulation;Small molecule therapeutic
<b>Last Change Date</b>	04-Dec-2013

#### emricasan (oral, islet transplant rejection/liver disease), Conatus DEVELOPMENT PROFILE

##### SUMMARY

Conatus Pharmaceuticals (following its acquisition of Idun Pharmaceuticals) is developing an oral formulation of emricasan (PF-3491390, IDN-6556), the lead from a program of small-molecule antifibrotic caspase inhibitors, for the potential prevention of islet transplant rejection in diabetes patients, and for fibrotic liver diseases including acute alcoholic and infectious hepatitis, acute liver failure and non-alcoholic steatohepatitis (NASH). The company is also investigating the drug for the potential treatment of idiopathic pulmonary fibrosis and diabetes ,,,.

In June 2012, a phase I/II trial in islet transplant recipients began. In March 2012, the drug was listed as in phase II trials for HCV infection, acute liver failure and NASH; the company was also conducting preclinical development for diabetes and idiopathic pulmonary fibrosis at that time. In July 2013, a phase II trial was initiated in alcoholic hepatitis. In September 2013, patient recruitment began in phase IIb trial. By June 2013, the company planned to initiate a phase II/III trial in patients who had developed liver fibrosis post-orthotopic liver transplant due to HCV infection in the second half of 2013 . By July 2012, the company was seeking to outlicense the drug.

Pfizer was previously investigating the drug for the potential treatment of acute alcoholic and infectious hepatitis,. By October 2003, phase II trials had been initiated in hepatitis C virus (HCV)-infected patients ; these were ongoing in July 2007. Conatus acquired Idun in July 2010. Idun was previously investigating the drug for the potential treatment of cardiac failure and inflammation. Pfizer acquired Idun in April 2005.

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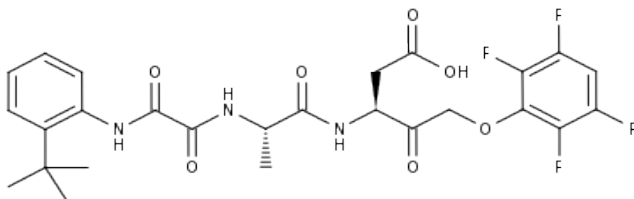
Conatus was previously developing an intravenous formulation of this drug, to improve liver function following liver transplantation.

## emricasan (oral, islet transplant rejection/liver disease), Conatus DEVELOPMENT STATUS

### CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Conatus Pharmaceuticals Inc	Alcoholic hepatitis	US	Phase 2 Clinical	30-Jun-2013
Conatus Pharmaceuticals Inc	Hepatitis C virus infection	US	Phase 2 Clinical	21-Mar-2012
Conatus Pharmaceuticals Inc	Islet cell transplant rejection	Canada	Phase 2 Clinical	30-Jun-2012
Conatus Pharmaceuticals Inc	Liver failure	US	Phase 2 Clinical	21-Mar-2012
Conatus Pharmaceuticals Inc	Non-alcoholic steatohepatitis	US	Phase 2 Clinical	21-Mar-2012
Conatus Pharmaceuticals Inc	Diabetes mellitus	US	Discovery	21-Mar-2012
Conatus Pharmaceuticals Inc	Idiopathic pulmonary fibrosis	US	Discovery	21-Mar-2012
Idun Pharmaceuticals Inc	Cardiac failure	US	Discontinued	26-Oct-2005
Idun Pharmaceuticals Inc	Hepatitis	US	Discontinued	26-Oct-2005
Idun Pharmaceuticals Inc	Inflammatory disease	US	Discontinued	26-Oct-2005
Idun Pharmaceuticals Inc	Liver disease	US	Discontinued	26-Oct-2005
Pfizer Inc	Hepatitis	US	Discontinued	28-Feb-2008

## emricasan (oral, islet transplant rejection/liver disease), Conatus CHEMICAL STRUCTURES

CAS Registry Number:	Confidence Level:
254750-02-2	1
	
Name	Type
emricasan	INN; USAN
IDN-6556	Research Code

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Name	Type
PF-03491390	Research Code
PF-3491390	Research Code

### emricasan (oral, islet transplant rejection/liver disease), Conatus DRUG NAMES

Names	Type
PF-03491390	Research Code
PF-3491390 (oral), Pfizer	
IDN-1394	Research Code
IDN-6556	Research Code
antifibrotic agent (liver disease), Pfizer	
PF-3491390	Research Code
emricasan (oral), Pfizer	
emricasan	INN, USAN
caspase inhibitors, IDUN	
IDN-6556 (oral), Pfizer	
emricasan (oral, islet transplant rejection/liver disease), Conatus	

### emricasan (oral, islet transplant rejection/liver disease), Conatus 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
Hepatitis C virus infection											
0	0	0	0	0	3	0	0	0	0	0	3
Hepatitis											
0	0	0	0	0	1	0	1	0	0	0	2
Liver disease											
0	0	0	0	0	1	0	1	0	0	0	2

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Alcoholic hepatitis											
0	0	0	0	1	1	0	0	0	0	1	1
Insulin dependent diabetes											
0	0	0	0	0	0	1	1	0	0	1	1
Chronic liver failure											
0	0	0	0	1	1	0	0	0	0	1	1
Renal failure											
0	0	0	0	0	0	1	1	0	0	1	1
Cholestasis											
0	0	0	0	0	1	0	0	0	0	0	1
Primary biliary cirrhosis											
0	0	0	0	0	1	0	0	0	0	0	1
Liver transplantation											
0	0	0	0	0	1	0	0	0	0	0	1
Hepatitis B virus infection											
0	0	0	0	0	1	0	0	0	0	0	1
Primary sclerosing cholangitis											
0	0	0	0	0	1	0	0	0	0	0	1
Cardiac failure											
0	0	0	0	0	0	0	1	0	0	0	1
Hepatocellular carcinoma											
0	0	0	0	0	1	0	0	0	0	0	1
Non-alcoholic steatohepatitis											
0	0	0	0	0	1	0	0	0	0	0	1
Inflammatory disease											
0	0	0	0	0	0	0	1	0	0	0	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	2	7	2	4	0	0	4	11

### 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)

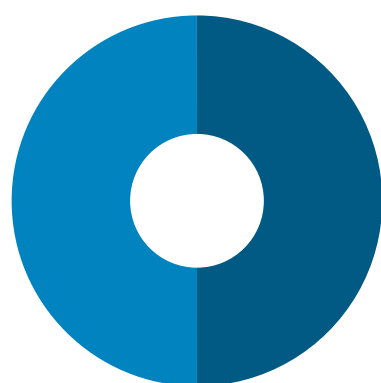
#### Phase 1 Clinical

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

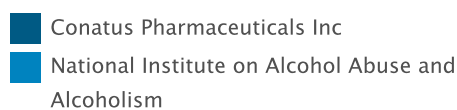
## emricasan (oral, islet transplant rejection/liver disease), Conatus DEALS AND PATENTS

### DEALS

#### Deals by Parent Company Chart



Active Deals  
Total: 1

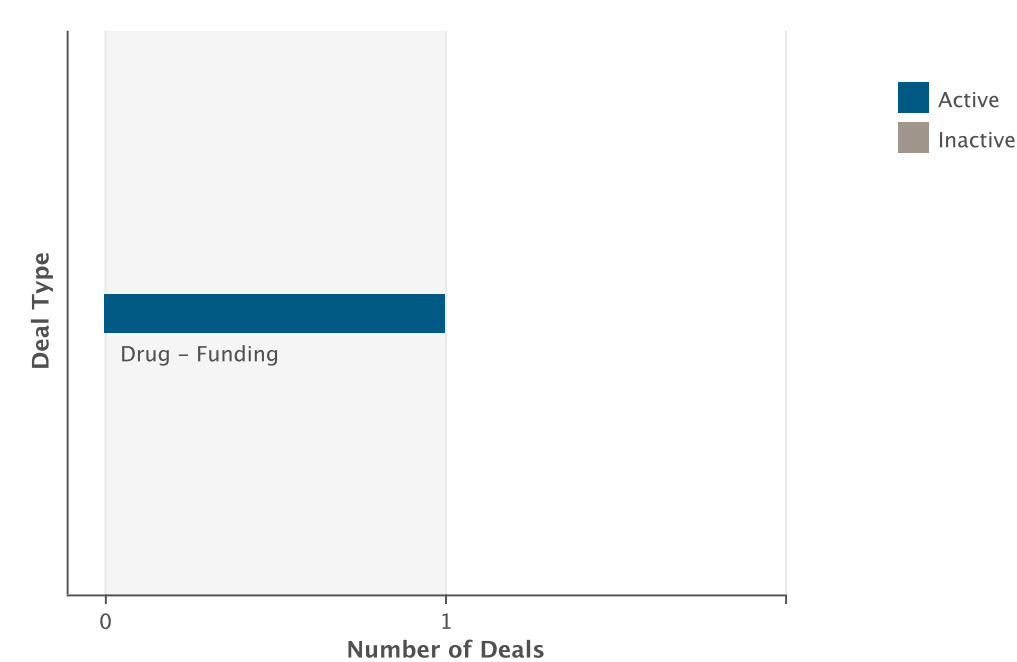


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Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
National Institute on Alcohol Abuse and Alcoholism	0	0	1	0	1
Conatus Pharmaceuticals Inc	1	0	0	0	1

Deals by Type Chart



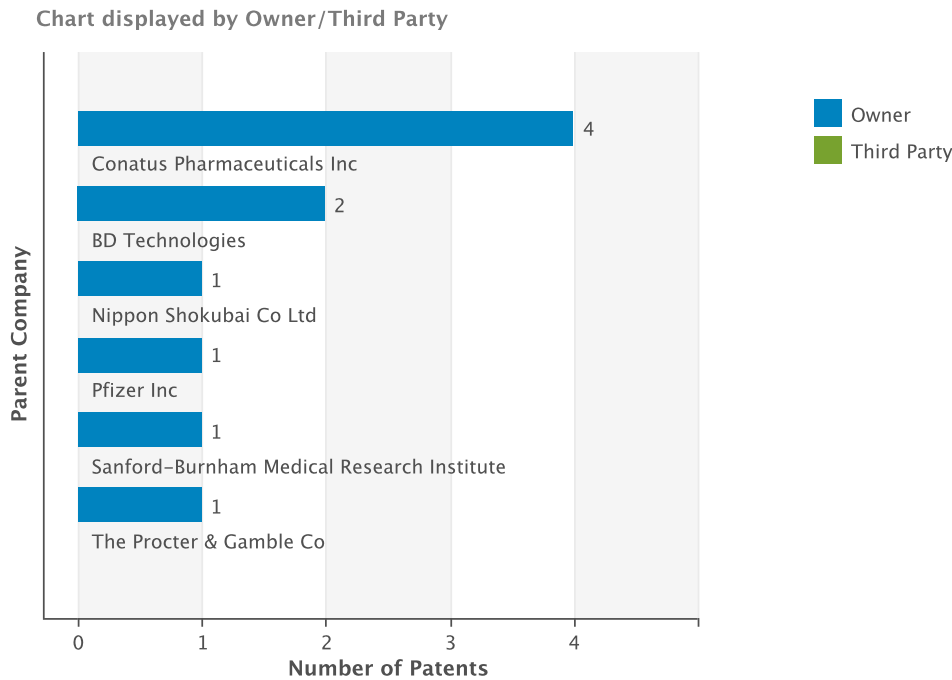
Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Funding	1	0	1

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PATENTS

Patents by Parent Company Chart



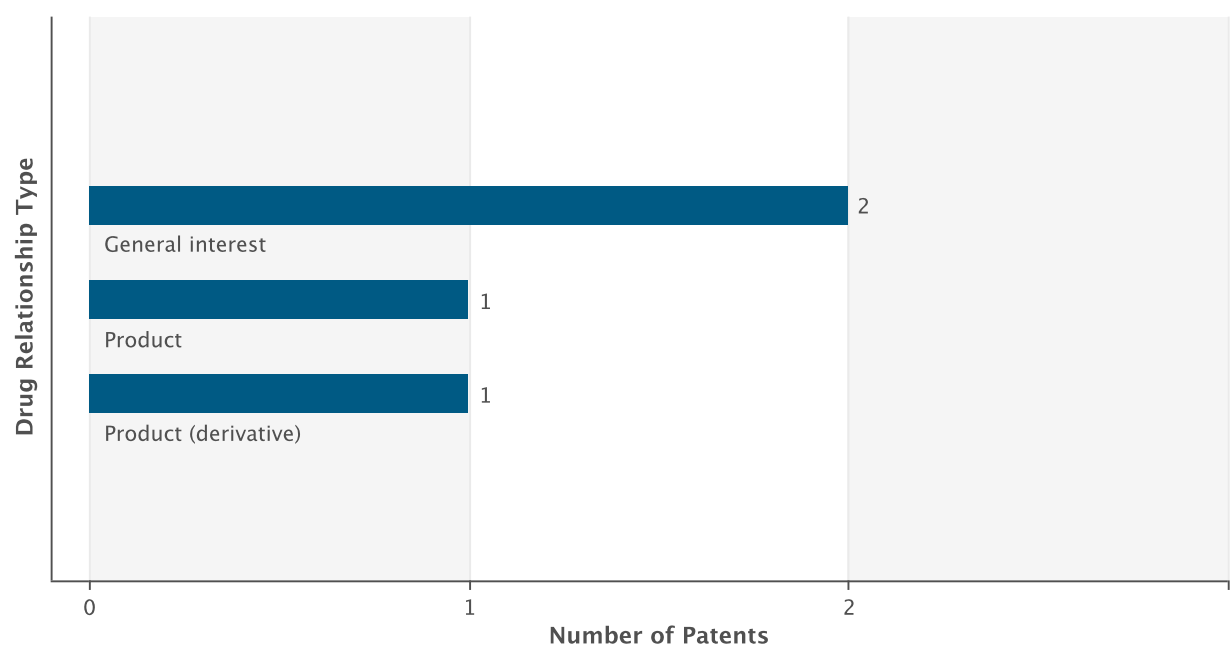
Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Conatus Pharmaceuticals Inc	4	0	4
BD Technologies	2	0	2
The Procter & Gamble Co	1	0	1
Pfizer Inc	1	0	1
Sanford-Burnham Medical Research Institute	1	0	1
Nippon Shokubai 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	2
Product	1
Product (derivative)	1

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