

## Zafgen Inc

### COMPANY AND PIPELINE OVERVIEW REPORT

A comprehensive coverage of the company and a summary of the drug pipeline portfolio.

Publication Date: 04-Apr-2015

#### 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 COMPANY AND PIPELINE OVERVIEW 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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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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**PLEASE NOTE:** the financials section where present in the report includes: Share Information, Stock Performance chart (including the consensus recommendation), and Major Shareholders. Financial Performance presents graphical and tabular data on Worldwide Sales, Operating Income and Net Income over time, together with a Quarterly earnings update. Balance Sheet lists Assets, Liabilities and Stockholders Equity, and Forecasts includes: EPS Forecast and Other Forecasts. The data reported in all sections (except share information and major stock holders) are correct as of the publication date of the report (and not the download date). For share information and major stock holders the data is correct for the date shown with these sections

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# Zafgen Inc

## COMPANY OVERVIEW

Company Name	Zafgen Inc
Parent Company Name	Zafgen Inc
Website	<a href="http://www.zafgen.com/">http://www.zafgen.com/</a>
Country	US
Number of Drugs in Active Development	3
Number of Inactive Drugs	3
Number of Patents as Owner	33
Number of Patents as Third Party	0
Number of Deals	3
Key Indications	Obesity,Non-insulin dependent diabetes,Non-alcoholic steatohepatitis,Brain tumor,Non alcoholic fatty liver disease,Prader-Willi syndrome,Weight gain,Weight loss,Alzheimers disease,Angiogenesis disorder,Cardiovascular disease,Stroke
Key Target-based Actions	Methionine aminopeptidase-2 inhibitor,C-reactive protein inhibitor,Thioredoxin stimulator,Methionine aminopeptidase-2 modulator
Key Technologies	Small molecule therapeutic,Oral formulation,Subcutaneous formulation,Natural product,Crystalline form,Intravenous formulation,Formulation preservation,Oligonucleotide antisense

## COMPANY PROFILE

### SUMMARY

Zafgen, founded in 2005, is a private venture-backed biopharmaceutical company that develops obesity therapeutics based on vascular targeting in adipose tissue.

### COMPANY LOCATION

The company is based in Cambridge, MA.

### LICENSING AGREEMENTS

In January 2009, Argenta Discovery and Zafgen signed an agreement to research and discover therapeutics for the treatment of obesity.

In August 2008, Anthill and Zafgen entered into an agreement where Anthill was to use its ACOS high-speed synthesis and purification capabilities to assist Zafgen in lead compounds identification for its obesity programs.

### FINANCIAL

In January 2015, the company commenced an underwritten public offering of 2,840,909 shares of its common stock. The underwriters were to be granted a 30-day option to purchase up to an additional 426,136 shares of common stock. Later that month, Zafgen priced the offering of 3,942,200 common stock shares at a price of \$35 each, which includes the underwriters' option to purchase up to an additional 514,200 common stock shares at the public offering price. The offering was expected to close on or about January 28, 2015. Later that month, the offering was closed.

In December 2014, Zafgen was selected for addition to the NASDAQ Biotechnology Index.

In June 2014, Zafgen announced an IPO of 6,000,000 shares of its common stock priced at \$16 per share. At that time, underwriters were granted a 30-day option to purchase up to an additional 900,000 shares of common stock to cover any over-allotments. The shares were traded on the NASDAQ Global Market under the ticker symbol "ZFGN". Later that month, the offering was closed and at that time, the over-allotment option was fully exercised.

In April 2014, the company closed \$20 million term loan with Oxford Finance LLC and MidCap Financial.

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In December 2013, Zafgen raised \$45 million in a series E equity financing round.

In December 2012, Zafgen raised \$21 million in a series D equity financing.

In July 2011, Zafgen raised \$33 million in a series C financing.

## COMPANY FINANCIALS

### SHARE INFORMATION

<b>Close Price (USD)</b>	37.18
<b>Change (USD)</b>	-0.50 (-1.33%)
<b>Previous Close Price (USD)</b>	37.68
<b>Volume</b>	246,726
<b>52-Week High (USD)</b>	55.36
<b>52-Week Low (USD)</b>	16.01
<b>Date</b>	02-Apr-2015
<b>Exchange</b>	NASDAQ(COMPOSITE)
<b>Current Number of Shares Outstanding</b>	22,707,410
<b>Current Market Capitalization</b>	907,842,252
<b>EPS (Date Reported)</b>	-0.68438

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## STOCK PERFORMANCE



## MAJOR SHAREHOLDERS

Shareholder	Type	Country	Shares held	% of shares held	Change in holding	% changes in shares held	Date
Fidelity Select Biotechnology Portfolio	Mutual Fund	United States	2,613,501	9.73	342,801	0.15	28-Feb-2015
Fidelity Advisor Biotechnology Fund	Mutual Fund	United States	1,306,751	4.87	171,402	0.15	28-Feb-2015
iShares NASDAQ Biotechnology ETF	Mutual Fund	United States	325,602	1.21	60,054	0.23	28-Feb-2015
Vanguard Total Stock Market Index Fund	Mutual Fund	United States	185,477	0.69	18,730	0.11	28-Feb-2015
BlackRock Health Sciences Opportunities Portfolio	Mutual Fund	United States	176,500	0.66	176,500	1	28-Feb-2015
Prudential Jennison Health Sciences Fund	Mutual Fund	United States	153,985	0.57	0	0	28-Feb-2015
Loomis, Sayles & Company, L.P.	Investment Advisor/Hedge Fund	United States	141,234	0.53	141,234	1	28-Feb-2015
Loomis Sayles Small Cap Growth Fund	Mutual Fund	United States	141,234	0.53	141,234	1	28-Feb-2015

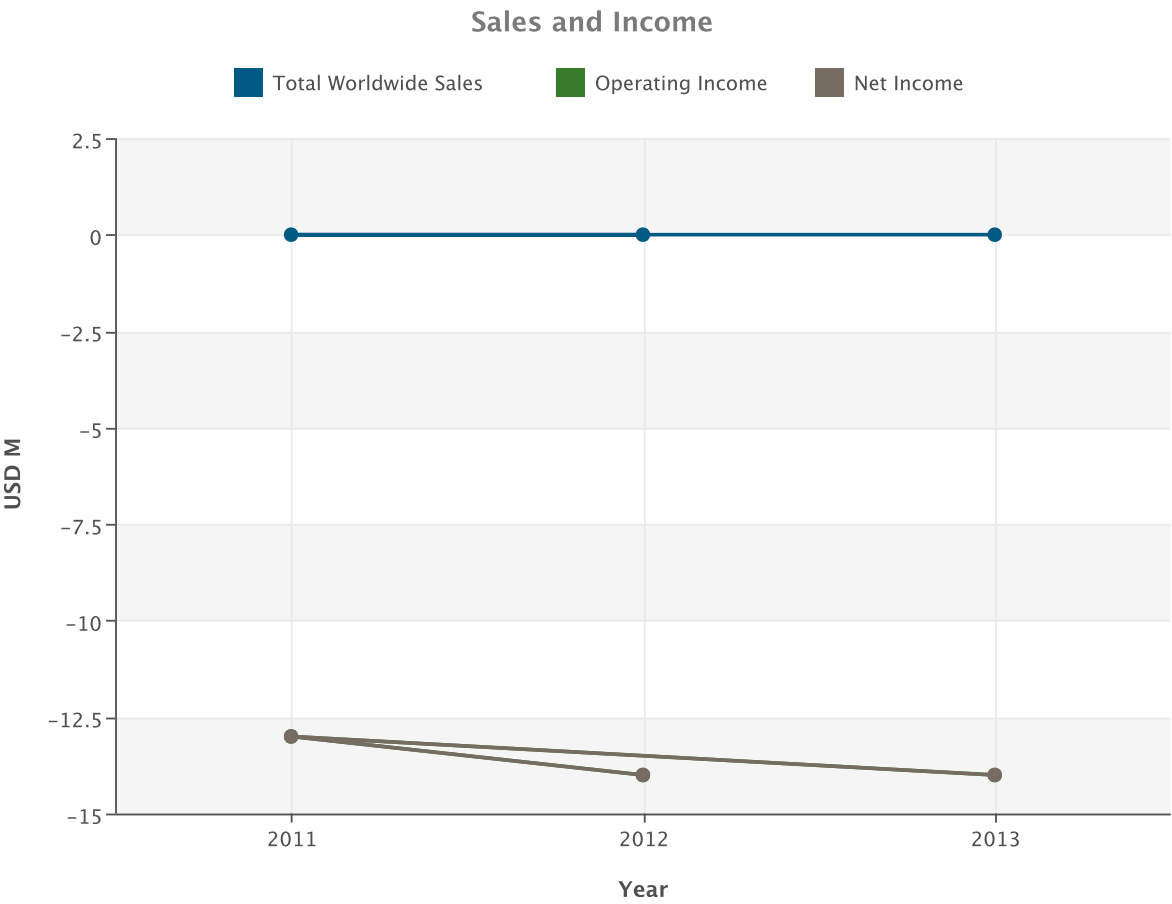
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iShares Russell 2000 ETF	Mutual Fund	United States	126,310	0.47	7,338	0.06	28-Feb-2015
Vanguard Extended Market Index Fund	Mutual Fund	United States	115,347	0.43	102,047	7.67	28-Feb-2015
Prudential Jennison Small Company Fund, Inc.	Mutual Fund	United States	102,589	0.38	102,589	1	28-Feb-2015
iShares Russell 2000 Growth ETF	Mutual Fund	United States	56,243	0.21	11,134	0.25	28-Feb-2015
Fidelity Spartan Extended Market Index Fund	Mutual Fund	United States	47,420	0.18	27,058	1.33	28-Feb-2015
AST Federated Aggressive Growth Portfolio	Mutual Fund	United States	47,320	0.18	47,320	1	28-Feb-2015
Forward Growth Fund	Mutual Fund	United States	35,000	0.13	0	0	31-Jan-2015
Russell U.S. Small Cap Equity Fund	Mutual Fund	United States	28,719	0.11	28,719	1	28-Feb-2015
Vanguard Health Care Index Fund	Mutual Fund	United States	24,449	0.09	12,554	1.06	28-Feb-2015
JPMorgan Small Cap Value Fund	Mutual Fund	United States	24,300	0.09	-2,400	-0.09	28-Feb-2015
iShares Micro-Cap ETF	Mutual Fund	United States	19,283	0.07	1,413	0.08	28-Feb-2015
Principal SmallCap Blend Fund	Mutual Fund	United States	18,760	0.07	-13,460	-0.42	28-Feb-2015

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	2012	2011	2013		
Sales (USD M)	0	0	0		
Operating Income (USD M)	-13.791	-13.154	-13.78		
Net Income (USD M)	-13.88	-13.157	-14.027		

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## Quarterly earnings update

Period	Sales (USD M)	Operating Income (USD M)	Net Income (USD M)
2014 Q3	0	-14.361	-14.689
2014 Q2	0	-5.986	-6.443
2014 Q1	0	-4.521	-4.507
2013 Q4	0	-3.761	-3.899
2013 Q3	0	-3.524	-3.557
2013 Q2	0	-2.975	-3.19
2013 Q1	0	-3.52	-3.594
2012 Q4	0	-3.006	-3.086

## BALANCE SHEET

### Assets (USD M)

	2012	2013			
Cash & Short Term Investments	9.935	35.517			
Inventories - Total	0	0			
Current Assets - Total	10.324	37.358			
Property, Plant And Equipment - Net	0.032	0.037			
Other Assets - Total	0.63	0.743			
Total Assets	10.986	38.138			

### Liabilities (USD M)

	2012	2013			
Accounts Payable	1.231	2.015			
Short Term Debt & Current Portion Of Long Term Debt	0	0			
Current Liabilities - Total	2.93	2.915			
Long Term Debt	0	0			
Other Liabilities	0	0			
Total Liabilities	2.93	2.915			

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## Stockholders Equity (USD M)

	2012	2013			
Minority Interest	0	0			
Preferred Stock	62.785	103.797			
Common Stock	0.005	0.005			
Treasury Stock	0	0			
Total Liabilities & Shareholders' Equity	10.986	38.138			

## FORECASTS

### EPS Forecast

Year ending	Current Forecast	1 month ago	3 months ago
31-Dec-2015	-2.682	-2.36	-2.627
31-Dec-2016	-3.094	-2.34	-2.945
31-Dec-2017	-3.553	-2.44	-3.195

### Other Forecasts

Year ending	DPS	CPS	Pretax	Sales
31-Dec-2015			-63.03	0
31-Dec-2016			-74.97	0
31-Dec-2017			-77.6	7.4

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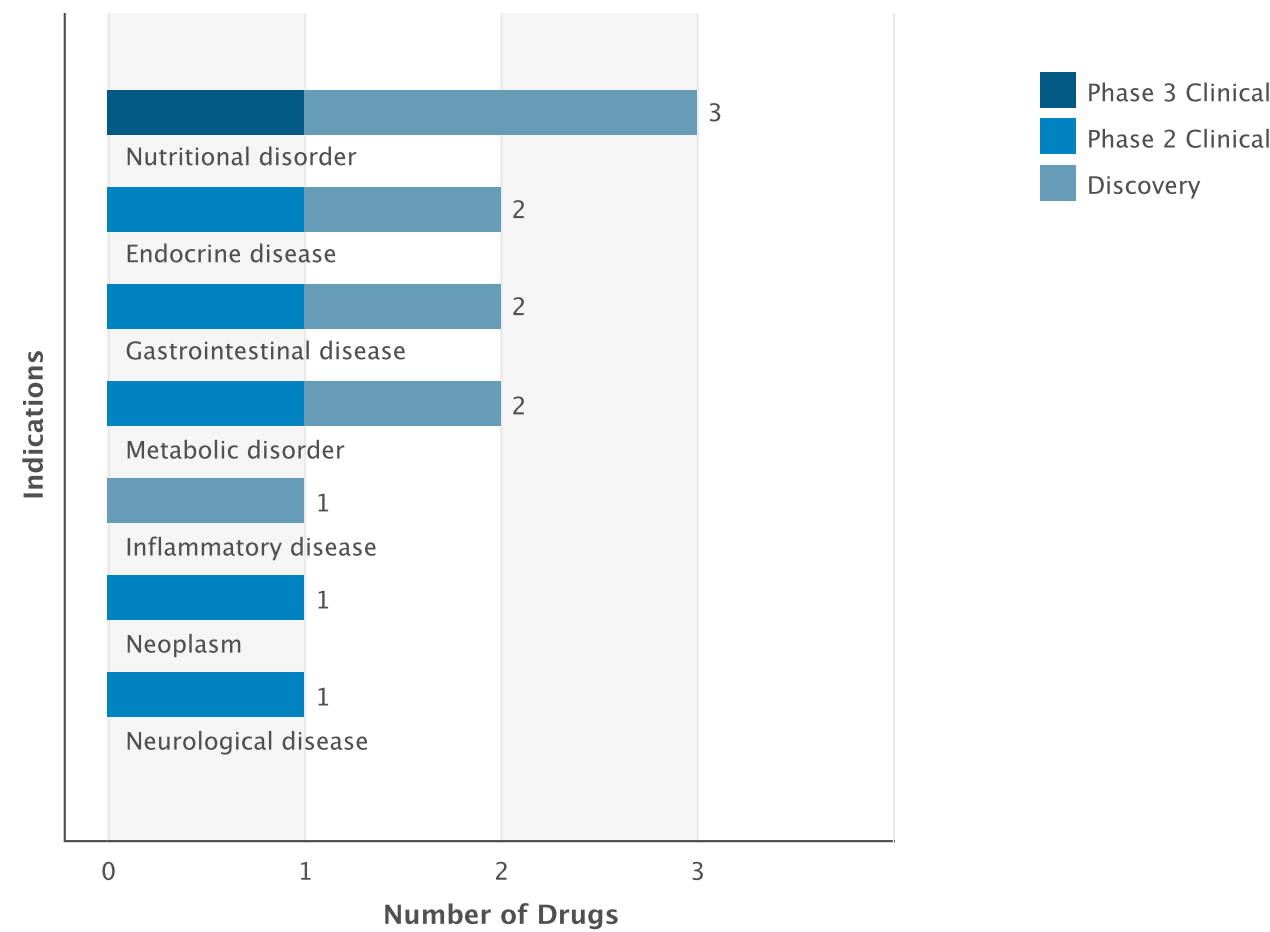


PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



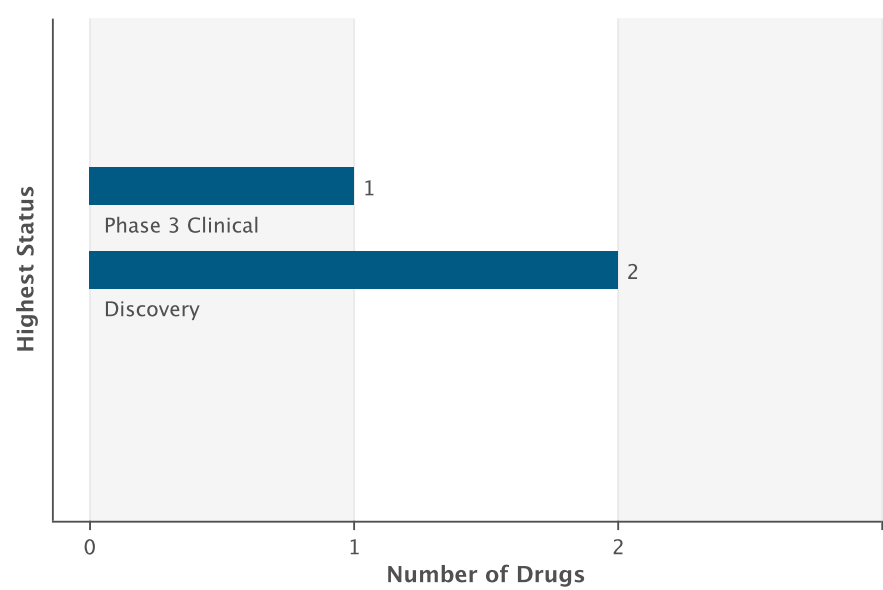
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Drugs by Indication Table

Indication	Active	Inactive	Total
Nutritional disorder	3	3	6
Gastrointestinal disease	2	1	3
Metabolic disorder	2	1	3
Endocrine disease	2	1	3
Inflammatory disease	1	0	1
Neoplasm	1	0	1
Neurological disease	1	0	1

Drugs by Highest Status

Active Drugs by Highest Status Chart



Drugs by Highest Status Table

Development Status	Number of Drugs
Phase 3 Clinical	1
Discovery	2
No Development Reported	3

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## DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Drug - Early Research/Development	0	0	1	0	1
Drug - Development/Commercialization License	0	0	1	0	1
Technology - Target Validation	0	0	1	0	1

## CLINICAL TRIALS

### Trials by Condition Studied

Condition Studied	Ongoing	All
Nutritional disorder	2	8
Metabolic disorder	1	1
Endocrine disease	1	1
Gastrointestinal disease	1	1

### Trials by Phase

Phase	Ongoing	All
Phase 3	1	1
Phase 2	1	4
Phase 1	0	3

### 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	7	0	7
Endocrine disease	4	0	4
Gastrointestinal disease	5	0	5
Genitourinary disease	4	0	4

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Growth disorder	1	0	1
Hematological disease	1	0	1
Degeneration	3	0	3
Andrology	1	0	1
Immune disorder	1	0	1
Psychiatric disorder	2	0	2
Musculoskeletal disease	4	0	4
Neoplasm	2	0	2
Ocular disease	1	0	1
Genetic disorder	1	0	1
Metabolic disorder	6	0	6
Mouth disease	1	0	1
Neurological disease	4	0	4
Nutritional disorder	25	0	25
Respiratory disease	1	0	1
Infectious disease	2	0	2
Injury	2	0	2
Inflammatory disease	3	0	3
Fatigue	1	0	1
Gynecology and obstetrics	1	0	1
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 DRUGS

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

### beloranib (sc, obesity/Prader-Willi syndrome/craniopharyngioma ), Zafgen

<b>Drug Name</b>	beloranib (sc, obesity/Prader-Willi syndrome/craniopharyngioma ), Zafgen
<b>Key Synonyms</b>	beloranib
<b>Originator Company</b>	Chong Kun Dang Pharmaceutical Corp
<b>Active Companies</b>	Zafgen Inc
<b>Inactive Companies</b>	Chong Kun Dang Pharmaceutical Corp
<b>Highest Status</b>	Phase 3 Clinical
<b>Active Indications</b>	Obesity, Brain tumor, Prader-Willi syndrome, Non-insulin dependent diabetes
<b>Target-based Actions</b>	Methionine aminopeptidase-2 inhibitor
<b>Other Actions</b>	Anticancer, Hypoglycemic agent, Lipid metabolism modulator
<b>Technologies</b>	Subcutaneous formulation, Small molecule therapeutic
<b>Last Change Date</b>	23-Mar-2015

### ZGN-839

<b>Drug Name</b>	ZGN-839
<b>Key Synonyms</b>	
<b>Originator Company</b>	Zafgen Inc
<b>Active Companies</b>	Zafgen Inc
<b>Inactive Companies</b>	
<b>Highest Status</b>	Discovery
<b>Active Indications</b>	Non-insulin dependent diabetes, Non alcoholic fatty liver disease, Non-alcoholic steatohepatitis, Obesity
<b>Target-based Actions</b>	Methionine aminopeptidase-2 inhibitor
<b>Other Actions</b>	Anti-inflammatory, Hypoglycemic agent
<b>Technologies</b>	Oral formulation, Small molecule therapeutic
<b>Last Change Date</b>	20-Mar-2015

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second generation beloranib (obesity), Zafgen

Drug Name	second generation beloranib (obesity), Zafgen
Key Synonyms	beloranib
Originator Company	Zafgen Inc
Active Companies	Zafgen Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Obesity
Target-based Actions	Methionine aminopeptidase-2 inhibitor
Other Actions	
Technologies	Subcutaneous formulation, Small molecule therapeutic
Last Change Date	23-Mar-2015

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