

# Zafgen Inc

# **COMPANY AND PIPELINE OVERVIEW REPORT**

Coverage of the company and a summary of the drug pipeline portfolio.

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

#### **COMPANY OVERVIEW**

Company Name	Zafgen Inc
Parent Company Name	Zafgen Inc
Website	http://www.zafgen.com/
Country	US
Number of Drugs in Active Development	3
Number of Inactive Drugs	1
Number of Patents as Owner	29
Number of Patents as Third Party	0
Number of Deals	3
Key Indications	Obesity,Prader-Willi syndrome,Weight gain,Weight loss,Angiogenesis disorder,Cardiovascular disease,Metabolic disorder,Non-insulin dependent diabetes,Stroke,Alzheimers disease,Amnesia,Atherosclerosis,Bipolar disorder,Breast disease,Candida infection,Cardiac failure,Cerebrovascular disease,Chronic fatigue syndrome,Creutzfeldt Jakob disease,Dementia,Endocrine disease,Fibromyalgia,Frontotemporal dementia,Gallstones,Head injury,Heart disease,Hepatobiliary disease,Huntingtons chorea,Hypertension,Hypothyroidism,Lipid metabolism disorder,Liver disease,Liver tumor,Mood disorder,Musculoskeletal disease,Myocardial infarction,Osteoarthritis,Post traumatic stress disorder,Premenstrual syndrome,Prostate hyperplasia,Psychiatric
Key Target-based Actions	Methionine aminopeptidase-2 inhibitor, C-reactive protein inhibitor, Thioredoxin stimulator
Key Technologies	Oral formulation, Small molecule therapeutic, Natural product, Crystalline form, Subcutaneous formulation, Formulation preservation, Intravenous formulation, Oligonucleotide antisense

#### **COMPANY PROFILE**

#### **SUMMARY**

Zafgen, found 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 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.

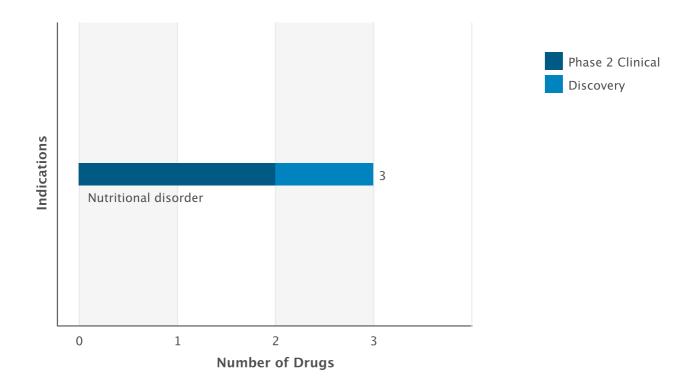
In July 2011, Zafgen raised \$33 million in a series C financing.



# PRODUCT PORTFOLIO SUMMARY DRUGS

# Drugs by Indication

Active Drugs by Indication Chart



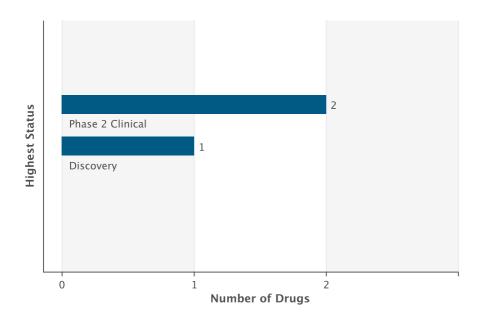
# Drugs by Indication Table

Indication	Active	Inactive	Total
Nutritional disorder	3	1	4
Metabolic disorder	0	1	1
Gastrointestinal disease	0	1	1
Endocrine disease	0	1	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	2
Discovery	1
No Development Reported	1

### **DEALS**

Deal Type	Prin	cipal	Par	tner	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	0	5



## Trials by Phase

Phase	Ongoing	All
Phase 2	0	2
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 1, 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	6	0	6
Endocrine disease	4	0	4
Gastrointestinal disease	4	0	4
Genitourinary disease	3	0	3
Growth disorder	1	0	1
Degeneration	1	0	1
Andrology	1	0	1
Psychiatric disorder	2	0	2
Musculoskeletal disease	3	0	3
Neoplasm	1	0	1
Genetic disorder	1	0	1
Metabolic disorder	5	0	5
Neurological disease	3	0	3
Nutritional disorder	23	0	23
Respiratory disease	1	0	1
Infectious disease	2	0	2
Injury	1	0	1



Inflammatory disease	1	0	1
Fatigue	1	0	1
Gynecology and obstetrics	1	0	1

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

#### PRODUCT PORTFOLIO DRUGS

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

# beloranib hemioxalate (obesity), Zafgen

Drug Name	beloranib hemioxalate (obesity), Zafgen
Key Synonyms	beloranib
Originator Company	Chong Kun Dang Pharmaceutical Corp
Active Companies	Zafgen Inc
Inactive Companies	Chong Kun Dang Pharmaceutical Corp
Highest Status	Phase 2 Clinical
Active Indications	Obesity
Target-based Actions	Methionine aminopeptidase-2 inhibitor
Other Actions	Lipid metabolism modulator, Angiogenesis inhibitor, Anticancer
Technologies	Intravenous formulation, Small molecule therapeutic
Last Change Date	16-Aug-2013

# beloranib (sc, obesity), Zafgen

Drug Name	beloranib (sc, obesity), Zafgen
Key Synonyms	beloranib
Originator Company	Chong Kun Dang Pharmaceutical Corp
Active Companies	Zafgen Inc
Inactive Companies	Chong Kun Dang Pharmaceutical Corp
Highest Status	Phase 2 Clinical
Active Indications	Obesity, Prader-Willi syndrome
Target-based Actions	Methionine aminopeptidase-2 inhibitor
Other Actions	Lipid metabolism modulator
Technologies	Subcutaneous formulation, Small molecule therapeutic
Last Change Date	16-Jan-2014

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# second generation therapeutics (oral, obesity), Zafgen

Drug Name	second generation therapeutics (oral, obesity), Zafgen
Key Synonyms	
Originator Company	Zafgen Inc
Active Companies	Zafgen Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Obesity
Target-based Actions	
Other Actions	Lipid metabolism modulator
Technologies	Oral formulation, Small molecule therapeutic
Last Change Date	31-Oct-2012



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