

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

#### **COMPANY OVERVIEW**

Company Name	Achaogen Inc
Parent Company Name	Achaogen Inc
Website	http://www.achaogen.com/
Country	US
Number of Drugs in Active Development	3
Number of Inactive Drugs	3
Number of Patents as Owner	40
Number of Patents as Third Party	1
Number of Deals	9
Key Indications	Gram negative bacterium infection,Bacterial infection,Pseudomonas aeruginosa infection,Escherichia coli infection,Multidrug resistant infection,Bacterial urinary tract infection,Pyelonephritis,MRSA infection,Staphylococcus aureus infection,Actinobacteria infection,Clostridium difficile infection,Enterococcus faecium infection,Francisiellaceae infection,Haemophilus influenzae infection,Mycobacterium tuberculosis infection,Salmonella typhi infection,Streptococcus pneumoniae infection
Key Target-based Actions	LpxC inhibitor,SOS gene inhibitor,Caspase modulator,Penicillin binding protein inhibitor
Key Technologies	Small molecule therapeutic,Antibiotic,Oral formulation,Systemic formulation unspecified,Infusion,Intravenous formulation,Drug combination,Crystalline form,Drug screening,Formulation preservation,Luminescence,Peptide,Peptidomimetic,Polynucleotide sequence

#### **COMPANY PROFILE**

#### **SUMMARY**

Achaogen Inc is a biotechnology company, established by August 2004, focused on the development of small molecule compounds to combat multi-drug resistance in bacteria. It takes products to the early clinical development stage at which point it seeks worldwide external resources for late-stage clinical work. The company is pursuing several unique strategies to combat these pathogens, including the development of drugs (achaogens) against the induced mutation process that is upregulated in bacteria during antibiotic exposure and that leads to the introduction of mutations that may confer antibiotic resistance.

#### **COMPANY LOCATION**

Achaogen Inc is headquartered in San Francisco, CA where it has a state-of-the-art research facility.

## LICENSING AGREEMENTS

In January 2008, ChemDiv entered into an agreement with Achaogen to discover and develop antibacterial compounds. Financial terms were not disclosed.

In June 2007, Albany Molecular Research (AMRI) agreed to screen its natural product libraries against Achaogen's therapeutic targets for antibiotic resistance. AMRI would also provide other discovery and follow-up services, and will receive upfront fees, milestones and royalties.

In August 2004, Achaogen entered into a small-molecule research and discovery collaboration with NeoGenesis Pharmaceuticals Inc. NeoGenesis would use its drug discovery technologies, including its ALIS (Automated Ligand Identification System) platform, NeoMorph compound libraries and lead optimization technologies to discover drug candidates against selected targets.

#### **EARLY R&D**

By April 2010, the company was investigating 'neoglycosides', next generation aminoglycosides, which have



demonstrated broad-spectrum activity against multi-drug resistant gram-negative bacterial infections.

#### **FINANCIAL**

In January 2014, Achaogen filed a registration statement with the US SEC for a proposed initial public offering of its common stock shares.

In April 2010, the company raised \$56 million from the closing of a series C financing round.

In October 2006, Achaogen was awarded a 4-year, \$24.7 million contract from the Defense Threat Reduction Agency for the development of therapies for anthrax and other biothreat agents.

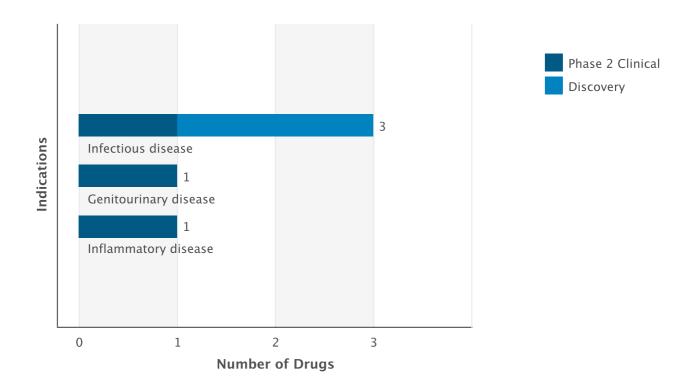
Earlier in October 2006, Achaogen raised over \$26 million from a series B financing round.

## PRODUCT PORTFOLIO SUMMARY

## **DRUGS**

## **Drugs by Indication**

Active Drugs by Indication Chart



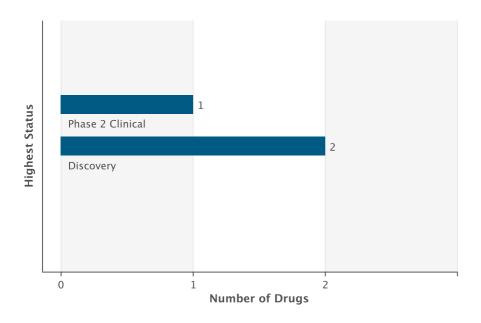
## Drugs by Indication Table

Indication	Active	Inactive	Total
Infectious disease	3	3	6
Inflammatory disease	1	0	1
Genitourinary 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 2 Clinical	1
Discovery	2
No Development Reported	3

## **DEALS**

Deal Type	Prin	cipal	Par	tner	Total
	Active	Inactive	Active	Inactive	
Drug - Discovery/Design	0	0	3	0	3
Drug - Funding	3	0	1	0	4
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



## Trials by Condition Studied

Condition Studied	Ongoing	All
Infectious disease	1	5
Respiratory disease	1	2
Inflammatory disease	0	1
Genitourinary disease	0	1

## Trials by Phase

Phase	Ongoing	All
Phase 3	1	3
Phase 2	0	1
Phase 1	0	7
Phase not specified	0	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

## **PATENTS** \*

Indication	As Owner	As Third Party	Total
Gastrointestinal disease	5	0	5
Genitourinary disease	1	0	1
Neoplasm	2	1	3
Respiratory disease	9	0	9
Infectious disease	35	1	36
Toxicity and intoxication	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.

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#### PRODUCT PORTFOLIO DRUGS

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

## plazomicin

Drug Name	plazomicin
Key Synonyms	plazomicin sulfate, plazomicin
Originator Company	Ibis Therapeutics
Active Companies	Achaogen Inc
Inactive Companies	Ibis Therapeutics
Highest Status	Phase 2 Clinical
Active Indications	Bacterial urinary tract infection, Pyelonephritis
Target-based Actions	
Other Actions	Aminoglycoside antibiotic, Antibacterial multidrug resistance inhibitor
Technologies	Intravenous formulation, Antibiotic, Infusion, Small molecule therapeutic
Last Change Date	27-Sep-2013

# expanded-spectrum neoglycosides (Gram-negative bacterial infection), Achaogen

Drug Name	expanded-spectrum neoglycosides (Gram-negative bacterial infection), Achaogen
Key Synonyms	
Originator Company	Achaogen Inc
Active Companies	Achaogen Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Gram negative bacterium infection
Target-based Actions	
Other Actions	RNA modulator, Aminoglycoside antibiotic, Antibacterial multidrug resistance inhibitor
Technologies	Antibiotic, Small molecule therapeutic
Last Change Date	10-Apr-2012

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# LpxC membrane biosynthesis inhibitors (multidrug-resistant bacterial infection), Achaogen

Drug Name	LpxC membrane biosynthesis inhibitors (multidrug-resistant bacterial infection), Achaogen
Key Synonyms	
Originator Company	Achaogen Inc
Active Companies	Achaogen Inc
Inactive Companies	
Highest Status	Discovery
Active Indications	Gram negative bacterium infection, Multidrug resistant infection
Target-based Actions	LpxC inhibitor
Other Actions	Antibacterial multidrug resistance inhibitor
Technologies	Systemic formulation unspecified, Antibiotic, Small molecule therapeutic
Last Change Date	18-Nov-2013



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