

# KaloBios Pharmaceuticals Inc

## **COMPANY AND PIPELINE OVERVIEW REPORT**

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

Publication Date: 15-Oct-2012

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

#### **COMPANY OVERVIEW**

Company Name	KaloBios Pharmaceuticals Inc
Parent Company Name	KaloBios Pharmaceuticals Inc
Website	http://kalobios.com/
Country	US
Number of Drugs in Active Development	3
Number of Inactive Drugs	1
Number of Patents as Owner	15
Number of Patents as Third Party	2
Number of Deals	14
Key Indications	Asthma, Cancer, Rheumatoid arthritis, Cystic fibrosis, Hematological neoplasm, Inflammatory disease, Pseudomonas infection, Unidentified indication, Pseudomonas aeruginosa infection, Acute myelogenous leukemia, Alzheimers disease, Cardiac failure, Chronic obstructive pulmonary disease, Osteopenia, Solid tumor
Key Target-based Actions	Epha3 tyrosine kinase receptor inhibitor,Immunoglobulin G1 modulator,Immunoglobulin kappa modulator,GM-CSF receptor antagonist,GM-CSF ligand inhibitor,VEGF receptor antagonist,ACE inhibitor,Acetylcholinesterase inhibitor,Beta amyloid antagonist,Complement C3 inhibitor,Complement Factor B inhibitor,DHFR inhibitor,EPHA3 gene inhibitor,EPHA3 gene modulator,Epha3 tyrosine kinase receptor modulator,Epha3 tyrosine kinase receptor stimulator,Folate antagonist,Immunoglobulin G agonist,NMDA receptor antagonist,PcrV protein
Key Technologies	Monoclonal antibody humanized, Biological therapeutic, Infusion, Intravenous formulation, Antibody, Drug combination, Monoclonal antibody, Antibody fragment, Antibody polyclonal, Chimeric antibody

#### **COMPANY PROFILE**

#### **SUMMARY**

KaloBios Pharmaceuticals is engaged in the development of patient-targeted, first-in-class monoclonal antibodies designed to significantly improve the lives of seriously ill patients with difficult-to-treat diseases. Such uses include de novo discovery of high-affinity human antibodies, as well as optimization of antibodies and other therapeutic proteins. KaloBios has the capability to discover, engineer and develop clinically relevant antibodies, protein therapeutics, and small molecules, but is also actively seeking genomics, biotechnology and pharmaceutical collaborators to use its technologies, and to partner and co-develop its drugs.

## **ACQUISITIONS AND SPIN-OFFS**

In January 2004, KaloBios merged with Celscia Therapeutics. The resulting company was named KaloBios.

#### **LICENSING AGREEMENTS**

In October 2008, BioWa licensed non-exclusive rights to its POLLITIGENT platform to KaloBios Pharmaceuticals for enhancing the antibody-dependent cellular cytotoxicity of select KaloBios therapeutic antibodies.

In April 2007, Novartis non-exclusively licensed KaloBios' Humaneering technology for the development of human antibodies. KaloBios had previously humanized three antibodies for Novartis, and would generate three more. In May 2006, KaloBios humanized an antibody against an undisclosed target for Novartis. The companies also extended their agreement. KaloBios received research and success fees and would receive milestones and royalties.

In June 2004, KaloBios licensed a murine monoclonal antibody for the potential treatment of Pseudomonas aeruginosa infection from the Medical College of Wisconsin and the University of California San Francisco.

#### **FINANCIAL**



In October 2012, the company was planning an IPO of its stock.

In September 2012, the company had completed a \$10 million long-term debt financing with MidCap Financial SBIC and also the company have the option to borrow an additional \$5 million by the end of the second quarter of 2013.

By September 2012, the company had raised gross proceeds of \$20.25 million from the closing of series E financing round.

In September 2008, KaloBios raised \$20 million from a series D financing round. In December 2008, the company raised a further \$12 million from the financing.

In July 2007, KaloBios completed a \$20 million series C financing round.

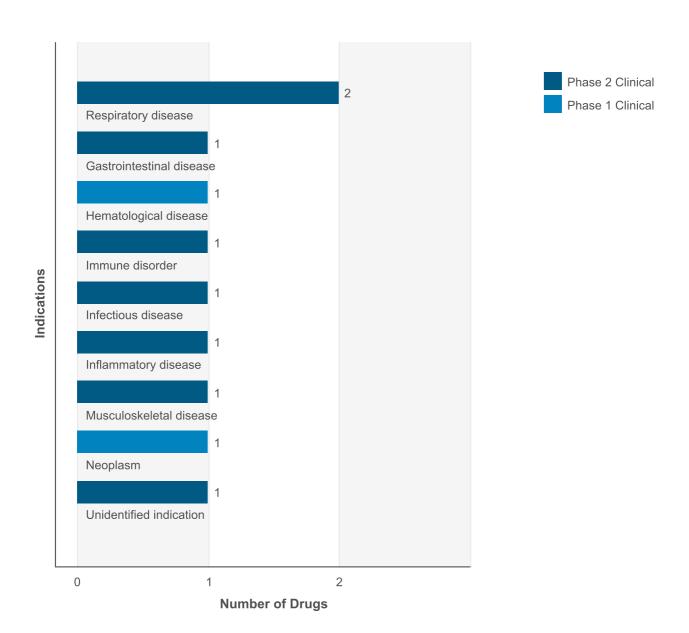
In March 2005, KaloBios completed a \$20 million series B financing. Proceeds from the financing would be used to build a clinical development team and to progress two lead antibodies into clinical evaluation.

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# PRODUCT PORTFOLIO SUMMARY DRUGS

## Drugs by Indication

Active Drugs by Indication Chart



## Drugs by Indication Table

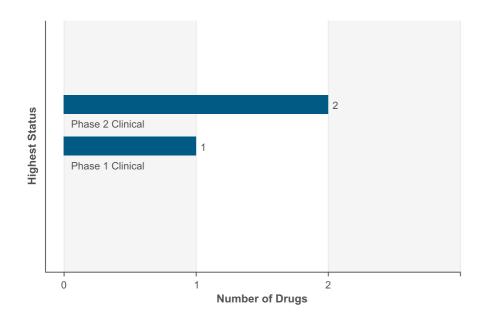
Indication	Active	Inactive	Total
Musculoskeletal disease	1	1	2
Respiratory disease	2	0	2
Inflammatory disease	1	1	2



Immune disorder	1	1	2
Hematological disease	1	1	2
Degeneration	0	1	1
Neoplasm	1	0	1
Dermatological disease	0	1	1
Infectious disease	1	0	1
Neurological disease	0	1	1
Gastrointestinal disease	1	0	1
Unidentified indication	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	2
Phase 1 Clinical	1
No Development Reported	1



#### **DEALS**

Deal Type	Prin	cipal	Pai	tner	Total
	Active	Inactive	Active	Inactive	
Technology - Other Proprietary	2	0	1	0	3
Drug - Funding	4	0	0	0	4
Drug - Early Research/Development	0	0	3	0	3
Drug - Development/Commercialization License	1	0	3	0	4

## **CLINICAL TRIALS**

## Trials by Condition Studied

Condition Studied	Ongoing	All
Inflammatory disease	1	5
Respiratory disease	2	5
Immune disorder	1	5
Musculoskeletal disease	0	3
Hematological disease	1	2
Gastrointestinal disease	1	2
Neoplasm	1	1
Infectious disease	0	1
Dermatological disease	0	1

## Trials by Phase

Phase	Ongoing	All
Phase 2	2	4
Phase 1	1	6

## **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
Immune disorder	3	1	4
Neoplasm	6	0	6
Genetic disorder	1	0	1
Metabolic disorder	2	0	2
Neurological disease	4	0	4
Prophylaxis	1	0	1
Degeneration	2	0	2
Andrology	1	0	1
Cardiovascular disease	3	1	4
Endocrine disease	2	0	2
Genitourinary disease	1	0	1
Dermatological disease	3	0	3
Gastrointestinal disease	3	0	3
Growth disorder	1	0	1
Hematological disease	4	0	4
Musculoskeletal disease	3	0	3
Respiratory disease	3	1	4
Infectious disease	4	0	4
Injury	1	0	1
Inflammatory disease	2	1	3
Gynecology and obstetrics	1	0	1

 $<sup>^{\</sup>star}$  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

## **KB-003**

Drug Name	KB-003
Key Synonyms	
Originator Company	Ludwig Institute for Cancer Research
Active Companies	KaloBios Pharmaceuticals Inc
Inactive Companies	Ludwig Institute for Cancer Research
Highest Status	Phase 2 Clinical
Active Indications	Asthma, Inflammatory disease, Rheumatoid arthritis, Unidentified indication
Target-based Actions	GM-CSF ligand inhibitor, Immunoglobulin G1 modulator, Immunoglobulin kappa modulator
Other Actions	Anti-inflammatory
Technologies	Monoclonal antibody human, Biological therapeutic, Parenteral formulation unspecified
Last Change Date	12-Sep-2012

## **KB-001**

Drug Name	KB-001
Key Synonyms	
Originator Company	University of California San Francisco
Active Companies	Sanofi Pasteur, KaloBios Pharmaceuticals Inc
Inactive Companies	University of California San Francisco
Highest Status	Phase 2 Clinical
Active Indications	Cystic fibrosis, Pseudomonas infection
Target-based Actions	PcrV protein type III inhibitor
Other Actions	Antibacterial
Technologies	Monoclonal antibody humanized, PEGylated formulation, Intravenous formulation, Biological therapeutic
Last Change Date	26-Jun-2012



## **KB-004**

Drug Name	KB-004
Key Synonyms	
Originator Company	KaloBios Pharmaceuticals Inc
Active Companies	KaloBios Pharmaceuticals Inc
Inactive Companies	
Highest Status	Phase 1 Clinical
Active Indications	Cancer, Hematological neoplasm
Target-based Actions	Epha3 tyrosine kinase receptor inhibitor, Immunoglobulin G1 modulator, Immunoglobulin kappa modulator
Other Actions	Anticancer monoclonal antibody, Anticancer protein kinase inhibitor
Technologies	Monoclonal antibody humanized, Intravenous formulation, Infusion, Biological therapeutic
Last Change Date	11-Oct-2011



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