THOMSON REUTERS
CORTELLIS™

Puma Biotechnology Inc

CORTELLIS COMPANY DETAILED PIPELINE REPORT

A comprehensive coverage of the the company's drug pipeline portfolio including detailed product records.

Publication Date: 19-Jun-2013

THOMSON REUTERS
3 Times Square
New York, New York 10036
United States

Tel: +1 646 223 4000

thomsonreuters.com

Return to Table of Contents

THOMSON REUTERS

ABOUT CORTELLIS COMPANY DETAILED PIPELINE REPORT

Thomson Reuters provides the knowledge, tools, and expertise to help support drug discovery and development activities, IP portfolio optimization, identification of licensing and partnering opportunities, delivery of successful regulatory submissions, and the ability to keep current with the rapidly-changing pharmaceutical and chemical markets, supporting informed, early decisions.

This report was created by Thomson Reuters, using information from *Thomson Reuters Cortellis™ for Competitive Intelligence*; a comprehensive, proven intelligence solution that leverages the most accurate, complete, and widely respected drug pipeline information.From drug discovery and development activities to patent reports, the latest deals, and partnering opportunities, *Cortellis* can provide the confidence to make the most informed business decisions, faster. *Cortellis for Competitive Intelligence* provides accurateand validated information on pharmaceutical and biotechnology companies globally, their drug pipelines, deals, patents, and clinical trials, plus breaking industry news and conference coverage. All contained in one simple, highly intuitive research platform.

Cortellis Company Detailed Pipeline reports are the second in a series of that track pharmaceutical and biotechnology companies worldwide. All *Cortellis for Competitive Intelligence* content is subject to the most comprehensive editorial review process available, conducted by scientists, pharma professionals, regulatory experts, and generics specialists. Featuring timely drug pipeline information expertly uncovered and integrated from over 400 global meetings each year, you'll always be on top of the latest developments.

Chosen by leading life sciences companies, their executives and investors, *Cortellis for Competitive Intelligence* accelerates your deal-making and gives you timely insights on the development landscape.

Discover undiscovered opportunities in drug development and licensing faster with *Thomson Reuters Cortellis™ for Competitive Intelligence*

DISCLAIMER

The information contained in this report is based on sources believed to be correct but Thomson Reuters does not guarantee the accuracy, timeliness, or completeness of this information. Opinions, if any, are those held by the author of any individual report or article at the time of initial publication and do not necessarily reflect the views of Thomson Reuters.

Information in this report on companies is intended for reference use only, and does not constitute a recommendation to buy or sell any particular security or other investment and does not constitute an offer to buy from or sell to any particular investor. Any company or securities mentioned in this report may not be suitable for any particular investor, depending on that investor's financial position and needs.

Return to Table of Contents

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.

Return to Table of Contents

TABLE OF CONTENTS

Return to Table of Contents

Puma Biotechnology Inc

COMPANY OVERVIEW

Company Name	Puma Biotechnology Inc
Parent Company Name	Puma Biotechnology Inc
Website	http://www.pumabiotechnology.com/
Country	US
Number of Drugs in Active Development	2
Number of Inactive Drugs	0
Number of Patents as Owner	1
Number of Patents as Third Party	0
Number of Deals	1
Key Indications	Metastatic breast cancer,Non-small-cell lung cancer,Solid tumor
Key Target-based Actions	
Key Technologies	

COMPANY PROFILE

SUMMARY

Puma Biotechnology Inc is a biopharmaceutical company that acquires and develops cancer therapeutics.

ACQUISITIONS & SPIN-OFFS

In October 2011, in conjunction with a $55 million private placement, Puma completed a reverse merger with Innovative Acquisitions with Puma surviving as a wholly owned operating subsidiary of Innovative. Following this, Puma was merged into Innovative and Puma stockholders received shares of Innovative. Innovative was then renamed as Puma Biotechnology.

FINANCIAL

In May 2013, the New York Stock Exchange contacted Puma Biotechnology regarding the company's common stock trading.

In October 2012, Puma increased and priced the previously announced public offering of 6.5 million shares to 7.5 million shares of common stock at $16 each, to raise $120 million. At that time, the company also granted the underwriters a 30-day option to purchase up to 1.125 million additional common stock shares; later that month, the underwriters elected to exercise in full their option to buy additional common stock shares at the public offering price, less the underwriting discount. The additional purchase, which increased the total offering size to $138 million, was expected to close concurrently with the closing for the initial purchase on October 24, 2012; later that month, the company raised net proceeds of approximately $129.1 million from the closing of the underwritten public offering of 8.62 million shares.

In April 2012, Puma was approved for quoting its common stock on the OTC Bulletin Board and the OTC Market Group's OTC Link under the symbol 'PBYI'. The common stock would begin trading on April 18, 2012. In October 2012, the company began trading its shares on the New York Stock Exchange.

In October 2011, Puma raised gross proceeds of $55 million from a private placement of 14.7 million shares priced at $3.75 per share; in November 2011, Puma completed the second tranche of its $60 million private financing. The company raised gross proceeds of $5 million from the private placement of 1.3 million shares of its common stock priced at $3.75 per share.

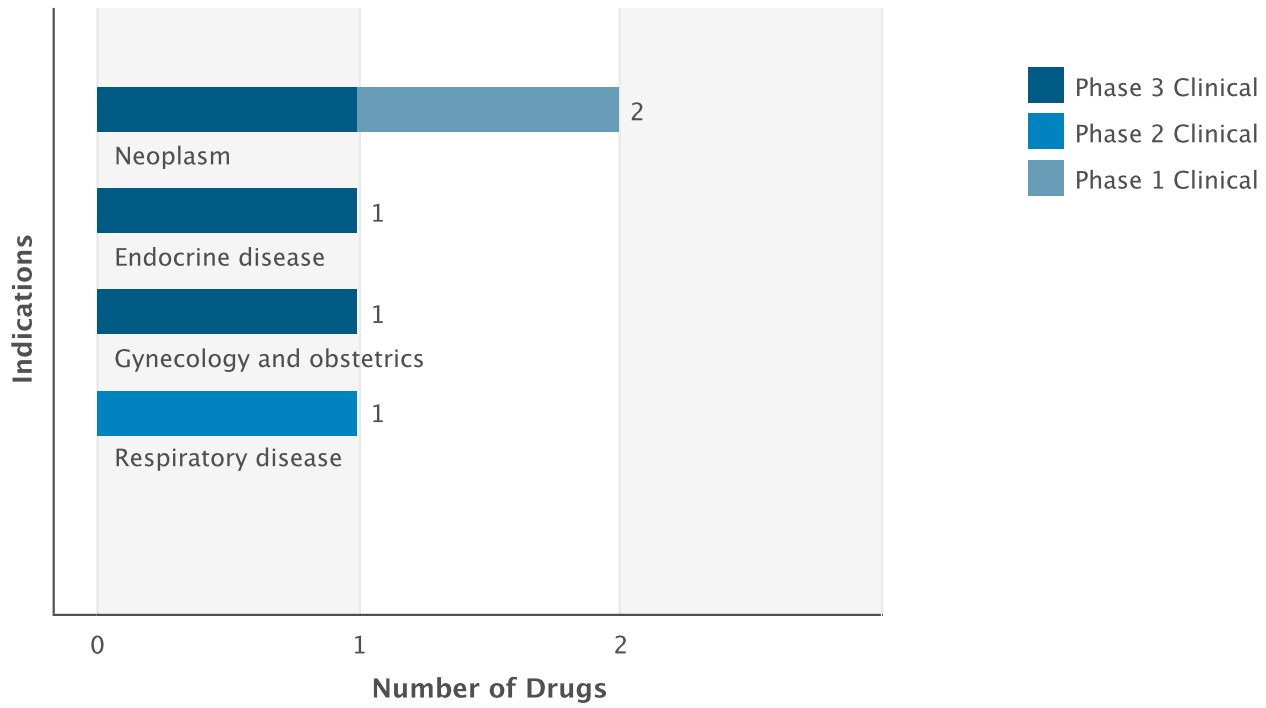
Return to Table of Contents

PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



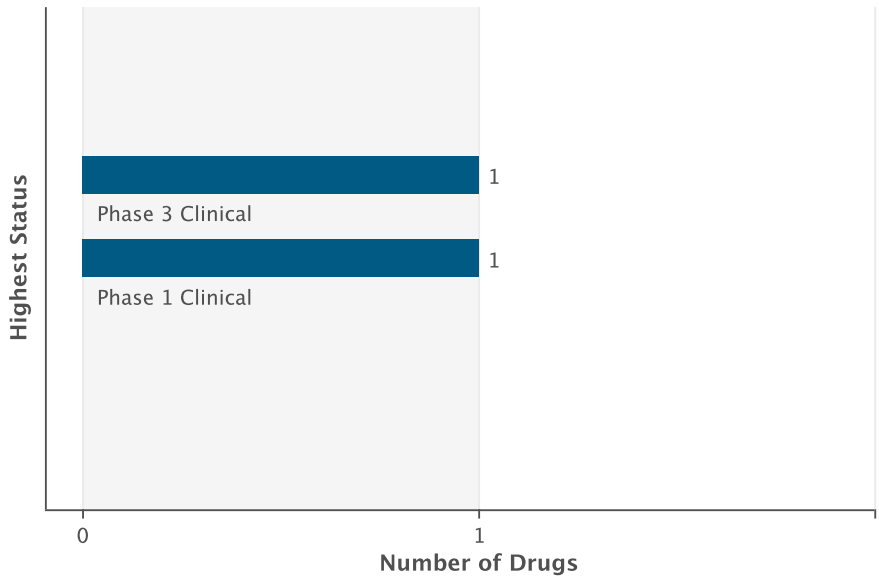
Drugs by Indication Table

Indication	Active	Inactive	Total
Neoplasm	2	0	2
Respiratory disease	1	0	1
Endocrine disease	1	0	1
Gynecology and obstetrics	1	0	1

Return to Table of Contents

Drugs by Highest Status

Active Drugs by Highest Status Chart



Drugs by Highest Status Table

Development Status	Number of Drugs
Phase 3 Clinical	1
Phase 1 Clinical	1

DEALS

Deal Type	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Drug - Development/Commercialization License	0	0	1	0	1

CLINICAL TRIALS

Trials by Condition Studied

Condition Studied	Ongoing	All
Neoplasm	11	20
Gynecology and obstetrics	10	14
Endocrine disease	10	14
Respiratory disease	1	3

Return to Table of Contents

Trials by Phase

Phase	Ongoing	All
Phase 3	2	2
Phase 2	7	7
Phase 1	2	21

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
Endocrine disease	1	0	1
Neoplasm	1	0	1
Gynecology and obstetrics	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.

Return to Table of Contents

PRODUCT PORTFOLIO DRUG PIPELINE DETAIL

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

neratinib

neratinib SNAPSHOT

Drug Name	neratinib
Key Synonyms	neratinib
Originator Company	Wyeth
Active Companies	Puma Biotechnology Inc
Inactive Companies	Wyeth;Pfizer Inc;Wyeth Research
Highest Status	Phase 3 Clinical
Active Indications	Metastatic breast cancer;Non-small-cell lung cancer
Target-based Actions	Erbb2 tyrosine kinase receptor inhibitor;Erbb4 tyrosine kinase receptor inhibitor;Epidermal growth factor antagonist;mTOR inhibitor
Other Actions	Anticancer protein kinase inhibitor
Technologies	Oral formulation;Tablet formulation;Small molecule therapeutic
Last Change Date	10-Jun-2013

neratinib DEVELOPMENT PROFILE

SUMMARY

Puma Biotechnology, under license from Pfizer (previously Wyeth), is developing neratinib (PB-272; HKI-272), an irreversible Erbb1, ErbB2 and ErbB4 tyrosine kinase inhibitor, for the potential oral treatment of HER2-positive, NSCLC and locally advanced or metastatic breast cancer in patients who have received prior trastuzumab-based therapy , ,. In July 2009, worldwide phase III breast cancer trials were initiated by Wyeth ; in October 2011, following its acquisition of development and commercialization rights, Puma intended to stop enrollment of patients and terminate the ongoing Pfizer-sponsored trials. In March 2013, a phase III trial in HER2 positive metastatic breast cancer patients was initiated. In April 2013, a phase II trial in patients with NSCLC was ongoing. In November 2012, the company expected to initiate a phase III trial in breast cancer in 2013.

Previously, neratinib was also being developed for the potential treatment of non-small cell lung cancer (NSCLC). In November 2005, phase II trials were initiated in the US and Europe for the indication ; however, in March 2008, the drug was listed on Wyeth's pipeline as being in phase II trials for breast cancer only.

neratinib DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date

Return to Table of Contents

Company	Indication	Country	Development Status	Date
Puma Biotechnology Inc	Metastatic breast cancer	US	Phase 3 Clinical	20-Mar-2013
Puma Biotechnology Inc	Non-small-cell lung cancer	US	Phase 2 Clinical	01-Apr-2013
Pfizer Inc	Breast tumor	Africa	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Australia and New Zealand	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Canada	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Central America	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	China	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Europe	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Japan	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Middle East	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	Russian Federation	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	South America	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	South East Asia	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	South Korea	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	UK	Discontinued	05-Oct-2011
Pfizer Inc	Breast tumor	US	Discontinued	05-Oct-2011
Wyeth	Non-small-cell lung cancer	Europe	No Development Reported	04-Mar-2008
Wyeth	Non-small-cell lung cancer	US	No Development Reported	04-Mar-2008

neratinib CHEMICAL STRUCTURES

CAS Registry Number:	Confidence Level:
698387-09-6	1

Return to Table of Contents

Name	Type
neratinib	INN; USAN
HKI-272	Research Code
PF-5208767	Research Code

neratinib DRUG NAMES

Names	Type
neratinib	INN, USAN
PB-272	Research Code
PF-5208767	Research Code
HKI-272	Research Code

neratinib 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
Metastatic breast cancer											
0	0	1	1	7	8	2	3	0	0	10	12
Breast tumor											
0	0	1	1	1	1	1	4	0	0	3	6
Solid tumor											
0	0	0	0	1	1	1	5	0	0	2	6
Non-small-cell lung cancer											
0	0	0	0	1	2	0	3	0	0	1	5
Advanced solid tumor											
0	0	0	0	1	1	0	3	0	0	1	4
Cancer											
0	0	0	0	0	0	0	2	0	0	0	2

Return to Table of Contents

Central nervous system disease											
0	0	0	0	0	1	0	0	0	0	0	1

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	2	2	9	11	3	23	0	0	14	36

Phase Definitions

Phase 3 Clinical
Includes Phase 3, Phase 3b, Phase 3a, Phase 2/3 (where enrolment count is 300 or over)

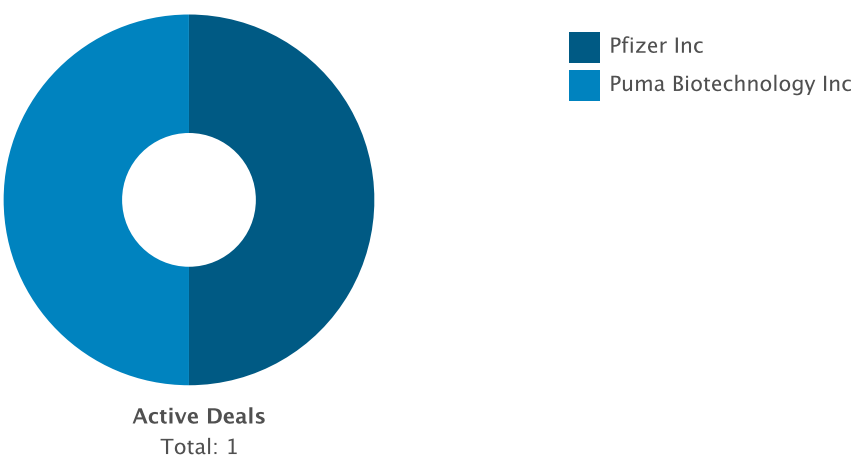
Phase 2 Clinical
Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

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

neratinib DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

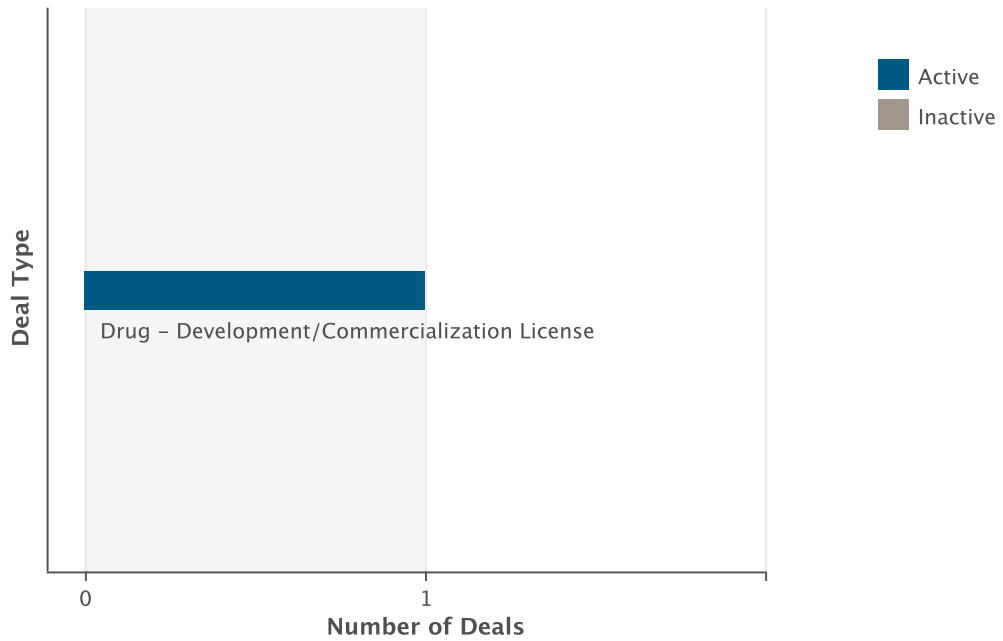


Return to Table of Contents

Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Pfizer Inc	1	0	0	0	1
Puma Biotechnology Inc	0	0	1	0	1

Deals by Type Chart



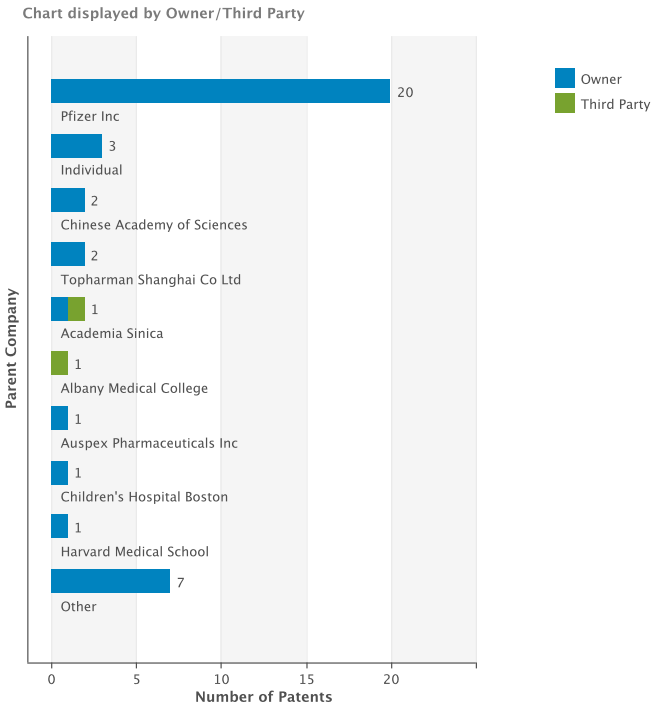
Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Development/Commercialization License	1	0	1

Return to Table of Contents

PATENTS

Patents by Parent Company Chart



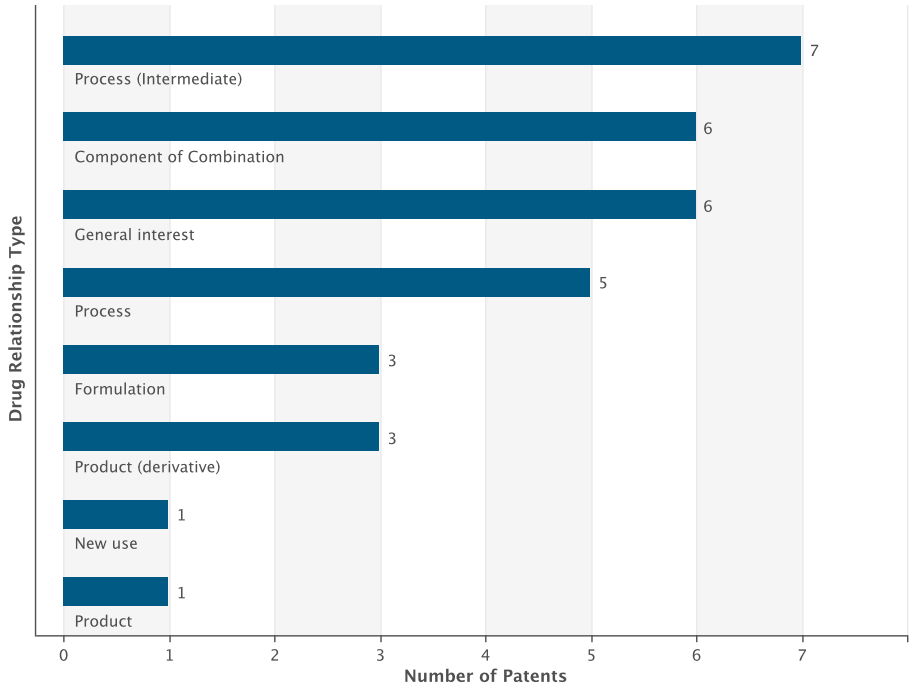
Return to Table of Contents

Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Pfizer Inc	20	0	20
Individual	3	0	3
Chinese Academy of Sciences	2	0	2
Topharman Shanghai Co Ltd	2	0	2
Trinity College Dublin	1	0	1
Harvard Medical School	1	0	1
National Taiwan University	1	0	1
Kolon Industries Inc	1	0	1
Academia Sinica	1	1	1
National Chung Hsing University	0	1	1
Auspex Pharmaceuticals Inc	1	0	1
Taichung Veterans General Hospital	1	0	1
Wellstat Management Company LLC	1	0	1
MedoLution Ltd	1	0	1
Children's Hospital Boston	1	0	1
Albany Medical College	0	1	1
Massachusetts General Hospital	1	0	1
Puma Biotechnology Inc	1	0	1
University of California	0	1	1

Return to Table of Contents

Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
Process (Intermediate)	7
General interest	6
Component of Combination	6
Process	5
Formulation	3
Product (derivative)	3
Product	1
New use	1

Return to Table of Contents

PB-357

PB-357 SNAPSHOT

Drug Name	PB-357
Key Synonyms	
Originator Company	Pfizer Inc
Active Companies	Puma Biotechnology Inc
Inactive Companies	Pfizer Inc
Highest Status	Phase 1 Clinical
Active Indications	Solid tumor
Target-based Actions	Epidermal growth factor antagonist;Erbb2 tyrosine kinase receptor inhibitor;Erbb3 tyrosine kinase receptor inhibitor
Other Actions	Anticancer protein kinase inhibitor
Technologies	Oral formulation;Small molecule therapeutic
Last Change Date	10-Jun-2013

PB-357 DEVELOPMENT PROFILE

SUMMARY

Puma Biotechnology is developing PB-357, an irreversible Erbb1, ErbB2 and ErbB4 tyrosine kinase inhibitor which is a structurally similar backup compound to neratinib, for the potential oral treatment of solid tumors. By December 2011, originator Pfizer had completed single-dose phase I trials; at that time, the company planned to consider options for further development in 2012. In May 2013, licensee Puma planned to evaluate PB-357 for further development in 2013.

PB-357 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Puma Biotechnology Inc	Solid tumor	US	Phase 1 Clinical	02-Dec-2011
Pfizer Inc	Solid tumor	US	Discontinued	02-Dec-2011

PB-357 DRUG NAMES

Names	Type
PB-357	Research Code

Return to Table of Contents

This report was created by Thomson Reuters, using information from *Thomson Reuters Cortellis™ for Competitive Intelligence*; a comprehensive, proven intelligence solution that leverages the most accurate, complete, and widely respected drug pipeline information.

For more information about *Cortellis for Competitive Intelligence*, visit:
http://cortellis.thomsonreuters.com/cortellis_for_you/?cid=thomsonone.

For subscription information, e-mail scientific.lifesciences@thomsonreuters.com.

Return to Table of Contents