Investigator Portal

The Translational Research Knowledge base

Jeff Clovis

Thomson Scientific

Jeff.Clovis@thomson.com

investigatorportal®
The Translational Research Knowledge Base

rch
sent and Future…

Within the vast realm of the Life Sciences or ñbiomedical researchò there is today extreme emphasis on integration of fundamental discovery and its application in clinical medicine ï *translational science-research-medicine*.

In the U.S. this is influenced tremendously by the impetus of the NIH Roadmap -- positioning biomedical research for the future.

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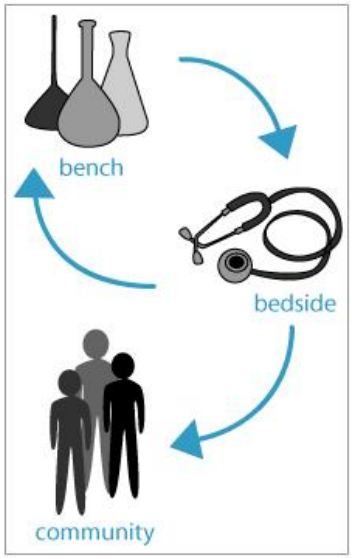
- This collaborative, interdisciplinary approach among traditional ñresearchersò and clinicians presents new requirements for supporting informational resources.
- What is needed is a diverse collection of integrated content delivered within a set of tools and features capable of driving fundamental discovery as well as supporting the decision-making process for clinicians and researchers alike.



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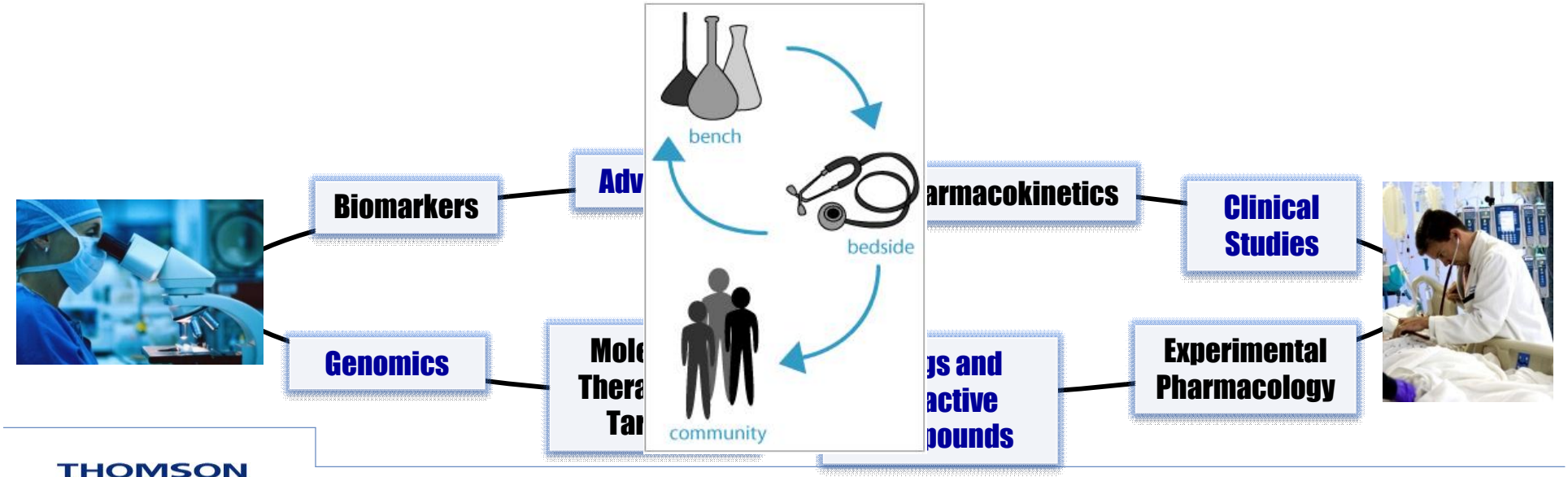
Therefore ï Thomson Scientific now presents a diverse collection of *integrated* knowledge-bases in order to serve the molecular biologists, immunologists, pharmacologists, etc. in the lab as well as the oncologists, cardiologists, neurologists, etc. in the clinic.



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These knowledge-bases draw from a wide range of sources, are supported by Thomson Scientific experts as well as an international contributor network, and are complemented by additional content such as disease briefings and bioinformatics resources.

- Published Research
- Conference and Symposia Presentations
- Bioinformatics Resources
- Intellectual Property
- Regulatory Information
- Clinical Guidelines
- Disease Briefings

- Biomarkers
- Adverse Events
- Pharmacokinetics
- Clinical Studies
- Genomics
- Molecular Therapeutic Targets
- Drugs and Bioactive Compounds
- Experimental Pharmacology

Prous Science *Investigator Portal* from *Thomson Scientific* is the resource to optimize workflow in the translational research environment.

It is the source of the vast majority of content we've just presented .

Designed to meet the challenges of interdisciplinary biomedical research.

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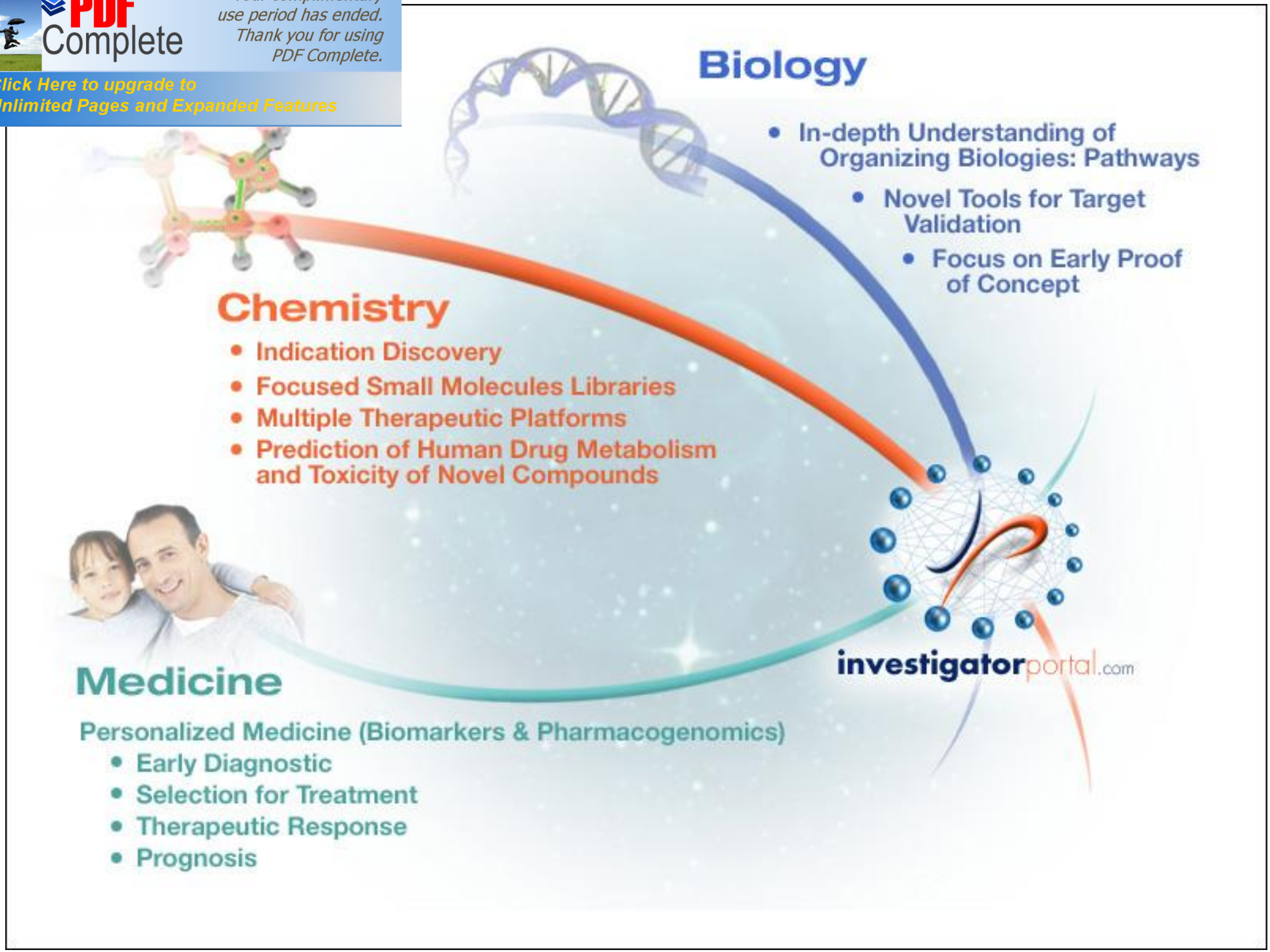

Sources of Information

- Patent Offices
- Journals
- Scientific Congresses
- Company Information
- Regulatory Agencies
- Contributor Network

11 Patent Offices around the world provide constant updates on product patent status

Over 1,500 journals screened regularly, covering disease and treatment information

Over 350 scientific congresses per year covered by medical reporters and writers including official sessions, symposia, poster and oral sessions

Press Releases
Annual/Quarterly Reports
Investor Conferences

FDA / EMEA/PMDA (Japan)

Over 500 direct collaborators around the world, dedicated to excellence in the delivery of scientific knowledge.

- **Academia**
- **Research centers**
- **Scientific societies**
- **Clinical practice**
- **Thought leaders**
- **Regulatory agencies**
- **Healthcare industry experts**

Advisors

- Jeffrey Ross, Cyrus Strong Merrill Professor & Chairman, Albany Medical College, Albany, NY.
- Bruce Chabner / Petra Loesch, Director Mass General Hospital Cancer Center, Boston, MA.
- Gary Small, Professor Psychiatry & Biobehavioral Sciences/Director UCLA Center Aging
- Peter Libby, Professor & Director Cardiovascular Division, Brigham & Women's Hospital, Boston
- Richard Jove, Professor & Chair, Division of Molecular Medicine, City of Hope, Duarte, CA.
- Eduard Vieta, Prof. Of Psychiatry, Massachusetts General Hospital, Boston
- Trevor Hansel, Director, Clinical Studies Unit, NHLI, Imperial College, London
- Diederick Grobbee, Professor & Chairman, Julius Center, UMC Utrecht, Netherlands
- Satoru Iwase, Vice-Director, Department Palliative Medicine, University Hospital, Tokyo
- Hu Dayi, Director Cardiology Department, People's Hospital, Beijing
- Keith McGregor, Scientific Director, European Society of Cardiology (ESC)
- Matt Peterson, Director of Information, American Diabetes Association (ADA)
- J C Kaski, Head Cardiological Sciences, St. George's Hospital Medical School, London
- Salvador Peña, Head of Immunogenetics, Free University of Amsterdam
- Pere Gascón, Professor & Head of Clinical Oncology, Hospital Clinic, Barcelona

Investigator Portal ï The Translational Research Knowledge Base

- Vital translational research information solution
  - Faster access to structured and relevant information - Increased productivity
  - Stimulates hypothesis building - New research lines
  - Optimizes workflow - Translational research
- Fills unmet need
  - First in class unique information resource for translational researchers
  - Subscription based business model available by medical specialty
- Improvement on current information solutions
  - Subscription databases
  - Public resources
- Designed specifically for academia and government users
  - ✓ Simple and easy to use search engine, clear design
  - ✓ Organized by medical specialties
  - ✓ Analyzed, structured and indexed data

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Search Across Knowledge Areas: breast cancer

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Welcome: Philip Purnell

From Basic Science to Clinical Research

Therapeutic Targets & Pathways Molecular structures where dugs interact	36	131	**Genomics** Allelic variants for disease susceptibility and drug- response
Drugs & Biologics Therapeutic compounds and procedures	1196	26	**Biomarkers** Indicators of screening, diagnosis, prediction of efficacy & safety as well as monitoring response to treatments
Pharmacokinetics/Metabolism Kinetic profile of drugs	858	2605	**Clinical Studies** Interventional clinical studies in humans
Experimental Pharmacology Experimental data from drug-receptor and enzyme/target cell interactions	3048	263	**Adverse Events** Undesired effects induced by therapy

References

Intellectual Property Innovation discoveries and patents	578	15462	**Literature** Published references to current literature

Gateways

- Gateways to Products
- Gateways to Patents
- Gateways to Clinical Trials
- Gateways to Targets

Today's News

- Betaferon is only drug to delay disability in patients treated after first MS attack
- E.U. approves Vectibix for the treatment of metastatic colorectal cancer
- LifeCycle Pharma initiates phase II clinical trial of immunosuppressant LCP-Tacro
- OncoVista licenses OSI-7904L from OSI Pharmaceuticals

archive

Dynamic Monographs

Diseases

Internet | 100%

	7	9223	Literature Published references to current literature
Regulatory Regulatory recommendation for drug R&D	1	10	Guidelines Diagnostic, therapeutic and management guidelines

Congresses

49th Annual Meeting of the American Society for Therapeutic Radiology and Oncology (ASTRO) (October 28-November 01, Los Angeles, United States) 2007 CITATIONS [5]	National Cancer Research Institute Cancer Conference (September 30-October 03, Birmingham, United Kingdom) 2007 CITATIONS [61]
AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics (October 22-26, San Francisco, United States) 2007 CITATIONS [176]	14th European Cancer Conference (ECCO) (September 23-27, Barcelona, Spain) 2007 CITATIONS [476]
Chest 2007 (October 20-25, Chicago, United States) 2007 CITATIONS [15]	12th World Conference on Lung Cancer (September 02-06, Seoul, Korea, Republic of) 2007 CITATIONS [558]
66th Annual Meeting of the Japanese Cancer Association (October 03-05, Yokohama, Japan) 2007 CITATIONS [27]	13th International Congress of Immunology (August 21-25, Rio de Janeiro, Brazil) 2007 CITATIONS [125]

Congresses Found: 220 more

Pharmaceuticals

archive

Dynamic Monographs

Diseases

- Colorectal Cancer
- Chronic Obstructive Pulmonary Disease (Chronic Bronchitis and Emphysema)

more

Congresses

- Annual Meeting of the American Association of Pharmaceutical Scientists (AAPS) (November 11-15, San Diego, United States) 2007

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Search Across Knowledge Areas: breast cancer

Clear | Go

Welcome: Philip Purnell

Click here to see the list of therapeutic targets that have been implicated in this pathology

From Basic Science to Clinical Research

Therapeutic Targets & Pathways Molecular structures where dugs interact	36	131	Genomics Allelic varia drug- respo
Drugs & Biologics Therapeutic compounds and procedures	1196	26	Biomarkers Indicators of screening, diagnosis, prediction of efficacy & safety as well as monitoring response to treatments
Pharmacokinetics/Metabolism Kinetic profile of drugs	858	2605	Clinical Studies Interventional clinical studies in humans
Experimental Pharmacology Experimental data from drug-receptor and enzyme/target cell interactions	3048	263	Adverse Events Undesired effects induced by therapy

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- OncoVista licenses OSI-7904L from OSI Pharmaceuticals

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Dynamic Monographs

Diseases

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Therapeutic Targets and Pathways

Search

26 to 36 records retrieved from 36

1 2

Target Name	Type	Condition (Status)	Links
Mucin 1 (isoform 1)	Protein	Cancer (Validated) Cancer, breast (Validated) Cancer, breast metastatic (Validated) Cancer, colorectal (Candidate) Cancer, kidney (renal cell carcinoma) (Validated) Cancer, lung (Candidate) Cancer, lung (non-small cell) (Validated) Cancer, ovary (Candidate) Cancer, pancreas (Candidate) Cancer, prostate (Validated) Cancer, stomach (Candidate) Lymphoma (Candidate) Multiple myeloma (Validated)	Swiss-Prot: P15941
Phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase	Protein	Cancer (Validated)	Swiss-Prot: P60484 PDB: 1D5R
PLAU	Gene	Cancer (Validated) Cancer, breast (Validated) Cancer, head and neck (Validated) Cancer, ovary (Validated) Cancer, pancreas (Validated) Cancer, solid tumor (Validated) Female reproductive system cancer (Validated) Lesion, skin (Validated) Macular degeneration (Candidate) Ulcer, cutaneous chronic (Candidate)	GenBank: NM_002658 Entrez Gene: 5328
PTEN	Gene	Cancer (Validated)	GenBank: NM_000314 Entrez Gene: 5728
SERPINE1	Gene	Cancer (Candidate) Thrombosis (Validated) Thrombosis, arterial coronary (Candidate)	GenBank: M16006 Entrez Gene: 5054
Steryl-sulfatase	Protein	Acne (Candidate)	Swiss-Prot: P08842

Display Formats

- Full Record List
- All Related Information
- Products
- References
- Patents
- Genomics

Refine in Chart Format

Therapeutic Target & Pathways Charts available:

- Condition
- Mechanism of Action
- Type

		ioma (Validated) ma (Validated) rcoma (Candidate) glioma (Validated) andidate) andidate) coma (Validated)	
Endothelial nitric oxide synthase	Protein	Angina pectoris (Validated) Coronary artery disease (Candidate) Heart failure, congestive (Validated) Traumatic brain injury (Validated)	1, 1M9Q,
EPHA2	Gene	Cancer, solid tumor (Validated)	GenBank: NM_004431 Entrez Gene: 1969
Epidermal growth factor receptor (isoform a)	Protein	Astrocytoma (Validated) Astrocytoma, anaplastic (Validated) Cancer (Validated) Cancer, biliary (Validated) Cancer, bladder (Validated) Cancer, brain (Candidate) Cancer, breast metastatic (Validated) Cancer, cervix (Validated) Cancer, colon (Validated) Cancer, colorectal (Validated) Cancer, colorectal metastatic (Validated) Cancer, esophagus (Validated) Cancer, gastrointestinal (Validated) Cancer, germ cells (Candidate) Cancer, head and neck (Validated) Cancer, kidney (Candidate) Cancer, kidney (renal cell carcinoma) (Validated) Cancer, kidney metastatic (Validated) Cancer, larynx (Validated) Cancer, liver (Validated) Cancer, lung (non-small cell) (Validated) Cancer, lung (non-small cell) metastatic (Validated) Cancer, lung (small-cell) (Validated) Cancer, mouth (Validated) Cancer, ovary (Validated) Cancer, pancreas (Validated) Cancer, pancreas metastatic (Validated) Cancer, prostate (Validated) Cancer, rectum (Validated) Cancer, rhinopharyngeal (Candidate) Cancer, salivary glands (Validated) Cancer, skin (Validated) Cancer, solid tumor (Validated) Cancer, stomach (Validated) Cancer, thyroid (Validated) Carcinoma, adrenocortical (Validated) Carcinoma, squamous-cell (Validated) Digestive/gastrointestinal cancer (Validated) Glioblastoma (Validated) Glioblastoma multiforme (Validated) Glioma (Validated)	Swiss-Prot: P00533 PDB: 1IVO, 1M14, 1M17, 1MOX, 1NQL

See full record for EGFR

Full record for EGFR

1 to 1 records retrieved from 1

Epidermal growth factor receptor (isoform a)

Type	Protein
Related Names	Avian erythroblastic leukemia viral (v-erb-b) oncogene homolog; EGFR variant 1; ERBB; ERBB1; Epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian), transcript variant 1; HER1
EC	2.7.10.1
Links	Swiss-Prot: P00533 PDB: 1IVO, 1M14, 1M17, 1MOX, 1NQL
Description/Function	The epidermal growth factor receptor (EGFR; erbB1) is the prototype of a family of tyrosine kinases, called ErbB, that participate in the control of differentiation, proliferation and cell survival. ErbB family is comprised of erbB1 (HER-1/EGFR), erbB2 (HER-2), erbB3 (HER-3) and erbB4 (HER-4), all of which play important roles in development but that are often found dysregulated and/or overexpressed in premalignant and malignant breast tumors. EGFR is activated upon ligand binding to its extracellular domain, leading to dimerization and autophosphorylation of the cytoplasmic domains, which subsequently serve as docking sites for signal transducers that activate diverse signaling pathways, such as Ras-Raf-MAPK, PI3K-Akt, PLC-gamma1, Src, STAT and others. The ligands of ErbB receptors belong to the EGF family of peptide growth factors, including EGF, TGF-alpha, amphiregulin and neuregulin subfamily. EGFR gene amplification, activating mutations, overexpression of EGFR ligands and loss of negative regulatory mechanisms are some of the mechanisms responsible for aberrant EGFR signaling in cancer.
Targetscape	Breast Cancer Targetscape Colorectal Cancer Targetscape Lung Cancer Targetscape Prostate Cancer Targetscape Melanoma Targetscape

Display Formats

- All Related Information
- Products
- References
- Patents
- Genomics

Refine in Chart Format

Therapeutic Target & Pathways Charts available:

- Condition
- Mechanism of Action
- Type

Therapeutic Targets and Pathways

Full record for EGFR

Search

1 to 1 records retrieved from 1

Links to external databased with records on EGFR

Epidermal growth factor receptor (isoform a)

Type	Protein
Related Names	Avian erythroblastic leukemia viral (v-erb-b) oncogene ERBB1; Epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian), transcript variant 1; HER1
EC	2.7.10.1
Links	Swiss-Prot: P00533 PDB: 1IVO, 1M14, 1M17, 1MOX, 1NQL
Description/Function	The epidermal growth factor receptor (EGFR; erbB1) is the prototype of a family of tyrosine kinases, called ErbB, that participate in the control of differentiation, proliferation and cell survival. ErbB family is comprised of erbB1 (HER-1/EGFR), erbB2 (HER-2), erbB3 (HER-3) and erbB4 (HER-4), all of which play important roles in development but that are often found dysregulated and/or overexpressed in premalignant and malignant breast tumors. EGFR is activated upon ligand binding to its extracellular domain, leading to dimerization and autophosphorylation of the cytoplasmic domains, which subsequently serve as docking sites for signal transducers that activate diverse signaling pathways, such as Ras-Raf-MAPK, PI3K-Akt, PLC-gamma1, Src, STAT and others. The ligands of ErbB receptors belong to the EGF family of peptide growth factors, including EGF, TGF-alpha, amphiregulin and neuregulin subfamily. EGFR gene amplification, activating mutations, overexpression of EGFR ligands and loss of negative regulatory mechanisms are some of the mechanisms responsible for aberrant EGFR signaling in cancer.
Targetscape	Breast Cancer Targetscape Colorectal Cancer Targetscape Lung Cancer Targetscape Prostate Cancer Targetscape Melanoma Targetscape

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Refine in Chart Format

Therapeutic Target & Pathways Charts available:

- Condition
- Mechanism of Action
- Type

Internet 100%

Search

1 to 1 re

Links available from the full record include direct link to the Swiss-Prot entry for this target

Epidermal growth factor receptor (isoform a)

Type	Protein
Related Names	Avian erythroblastic leukemia viral (v-erb-b) oncogene homolog; EGFR variant 1; ERBB; ERBB1; Epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian), transcript variant 1; HER1
EC	2.7.10.1
Links	Swiss-Prot: P00533
Description/Function	The epidermal growth factor re kinases, called ErbB, that partic survival. ErbB family is compris and erbB4 (HER-4), all of which dysregulated and/or overexpre activated upon ligand binding to autophosphorylation of the cyto for signal transducers that activ Akt, PLC-gamma1, Src, STAT a family of peptide growth factors subfamily. EGFR gene amplifica and loss of negative regulatory aberrant EGFR signaling in canc
Targetscape	Breast Cancer Targetscape Lung Cancer Targetscape Melanoma Targetscape

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UniProtKB/Swiss-Prot entry P00533

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Note: most headings are clickable, even if they don't appear as links. They link to the user manual or other documents.

Entry information	
Entry name	**EGFR_HUMAN**
Primary accession number	**P00533**
Secondary accession numbers	O00688 O00732 P06268 Q14225 Q92795 Q9BZS2 Q9GZX1 Q9H2C9 Q9H3C9 Q9UMD7 Q9UMD8 Q9UMG5
Integrated into Swiss-Prot on	July 21, 1986
Sequence was last modified on	November 1, 1997 (Sequence version 2)
Annotations were last modified on	December 4, 2007 (Entry version 124)
Name and origin of the protein	
Protein name	**Epidermal growth factor receptor [Precursor]**
Synonyms	**EC 2.7.10.1** **Receptor tyrosine-protein kinase ErbB-1**
Gene name	**Name: EGFR** Synonyms: ERBB1
From	Homo sapiens (Human) [TaxID: 9606]
Taxonomy	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini; Catarrhini; Hominidae; Homo.
Protein existence	1: Evidence at protein level;
References	
[1]	NUCLEOTIDE SEQUENCE [MRNA] (ISOFORM 1). DOI=10.1038/309418a0; PubMed=6328312 [NCBI, ExPASy, EBI, Israel, Japan] Ullrich A., Coussens L., Hayflick J.S., Dull T.J., Gray A., Tam A.W., Lee J., Yarden Y., Libermann T.A., Schlessinger J., Downward J., Mayes E.L.V., Whittle N., Waterfield M.D., Seeburg P.H.; "Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene in A431 epidermoid carcinoma cells."; Nature 309:418-425(1984).
[2]	NUCLEOTIDE SEQUENCE [MRNA] (ISOFORM 2).

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Therapeutic Targets and Pathways

Search

Links available from the full record include direct link to the Protein Data Bank entry for this target

growth factor receptor (isoform a)

Type	Protein
Related Names	Avian erythroblastic leukemia viral (v-erb-b) oncogene homolog; EGFR variant 1; ERBB; ERBB1; Epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian), transcript variant 1; HER1
EC	2.7.10.1
Links	P00533 PDB: 1IVO, 1M14, 1M17, 1M
Description/Function	The epidermal growth factor kinases, called ErbB, that pa survival. ErbB family is comp and erbB4 (HER-4), all of wh dysregulated and/or overexp activated upon ligand bindin autophosphorylation of the c for signal transducers that a Akt, PLC-gamma1, Src, STA family of peptide growth fact subfamily. EGFR gene amplit and loss of negative regulato aberrant EGFR signaling in c
Targetscape	Breast Cancer Targetscape Lung Cancer Targetscape Melanoma Targetscape

Display Formats

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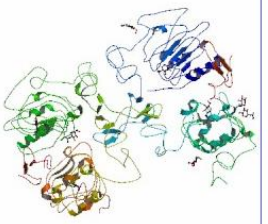
1ivo DOI 10.2210/pdb1ivo/pdb

Red - Derived Information

Title	Crystal Structure of the Complex of Human Epidermal Growth Factor and Receptor Extracellular Domains.
Authors	Ogiso, H., Ishitani, R., Nureki, O., Fukai, S., Yamanaka, M., Kim, J.H., Saito, K., Shirouzu, M., Yokoyama, S., RIKEN Structural Genomics/Proteomics Initiative (RSGI)
Primary Citation	Ogiso, H., Ishitani, R., Nureki, O., Fukai, S., Yamanaka, M., Kim, J.H., Saito, K., Inoue, M., Shirouzu, M., Yokoyama, S. (2002) Crystal Structure of the Complex of Human Epidermal Growth Factor and Receptor Extracellular Domains. *Cell (Cambridge,Mass.)* **110:** 775-787 [Abstract]
History	Deposition 2002-03-28 Release 2002-10-16
Experimental Method	Type X-RAY DIFFRACTION Data N/A
Parameters	Resolution[Å] 3.30; R-Value 0.258 (obs.); R-Free 0.326; Space Group P 3$_1$ 2 1
Unit Cell	Length [Å] a 220.16 b 220.16 c 113.12; Angles [°] alpha 90.00 beta 90.00 gamma 120.00

Images and Visualization

Biological Molecule



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Therapeutic Targets and Pathways

Search

Prous Science medical writers provide a short overview of each target's importance in pathological process

1 to 1 records retrieved from 1

Epidermal growth factor receptor (isofo	
Type	Protein
Related Names	Avian erythroblastic leukemia viral (v-erb-b) oncogene homolog; EGFR variant 1; ERBB; ERBB1; Epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian), transcript variant 1; HER1
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Targetscape	Breast Cancer Targetscape Colorectal Cancer Targetscape Lung Cancer Targetscape Prostate Cancer Targetscape Melanoma Targetscape

Display Formats

- All Related Information
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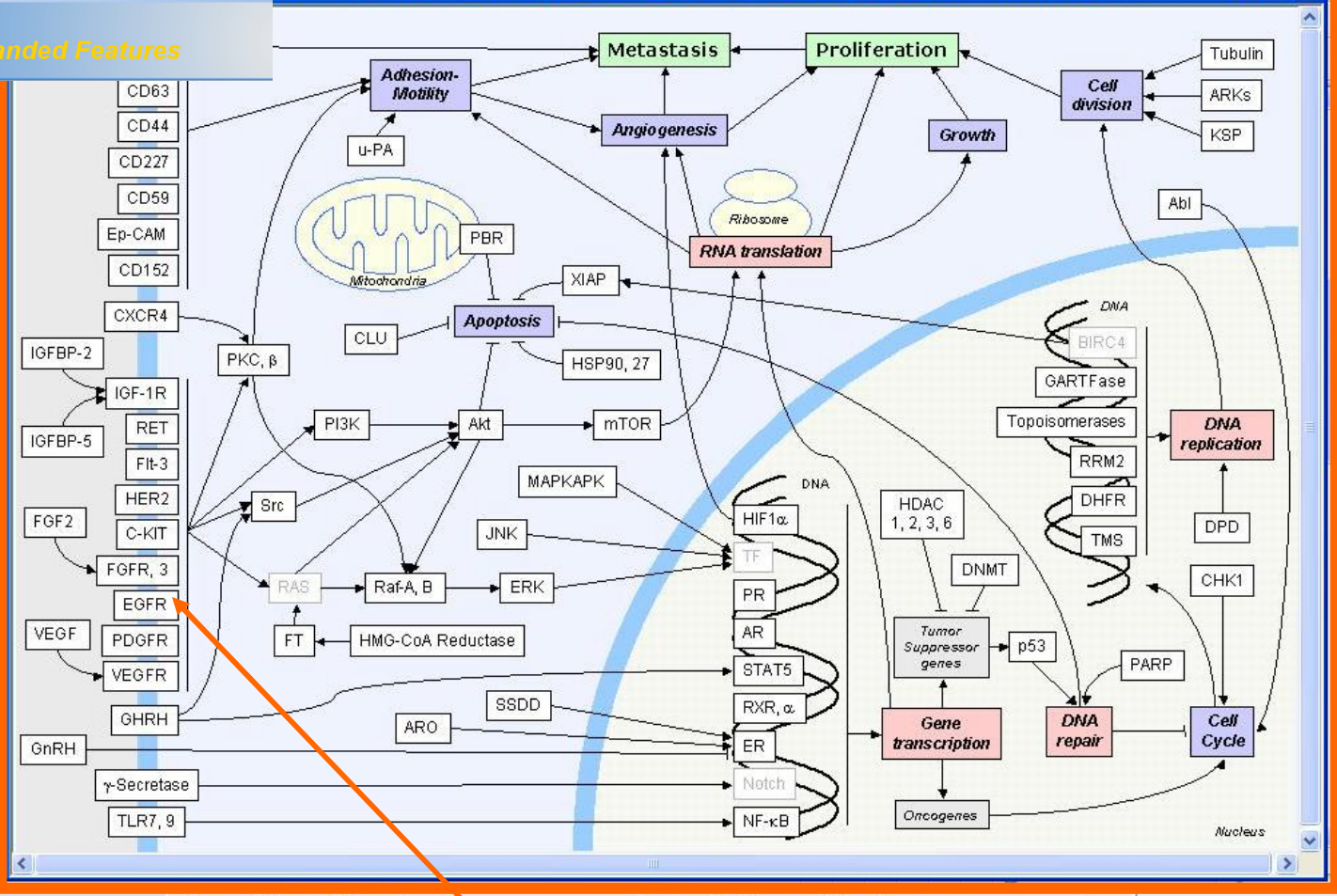
- Genomics

Refine in Chart Format

Therapeutic Target & Pathways Charts available:

- Condition
- Mechanism of Action
- Type

al.com/ivp/servlet/xmlxsl/TARGET_LANDSCAPES_PKG.getMainLandscape?p_l - Windows Internet Explorer



Therapeuti

1 to 1 records retrieved

Type
Related Names
EC
Links
Description/Functio

Targetscape

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etscape
Melanoma

See the molecular landscapes showing the involvement of key targets in different disease processes

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Therapeutic Targets and Pathways

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Type	Protein
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Targetscape	Breast Cancer Targetscape Colorectal Cancer Targetscape Lung Can… …etscape Melanoma Targetscape

Scroll down for further data on this therapeutic target

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oma (Validated)	Astrocytoma, anaplastic (Validated)	Cancer (Validated)
biliary (Validated)	Cancer, bladder (Validated)	Cancer, brain (Candidate)
Cancer, breast metastatic (Validated)	Cancer, cervix (Validated)	Cancer, colon (Validated)
Carcinoma, squamous-cell (Validated)	Digestive/gastrointestinal cancer (Validated)	Glioblastoma (Validated)
Glioblastoma multiforme (Validated)	Glioma (Validated)	Infection, coccidial (Validated)
Leukemia, acute myeloid (Validated)	Melanoma, metastatic (Validated)	Menetrier's disease (Validated)
Multiple myeloma (Validated)	Neuroblastoma (Validated)	Neurofibrosarcoma (Candidate)
	(Candidate)	Sarcoma (Candidate)

Multimedia animations illustrate in greater detailpathological processes and therapeutic pathways

Images & Pathways	EGFR/HER2 Signal Transduction Pathways	Radioimmunotherapy: The Use of Radiolabeled Antibodies in the Therapy of Cancer
	Resistance to Anti-HER2 Therapy	
Related Mechanisms	EGFR (HER1; erbB1) Inhibitors; Anti-EGFR	
Products Under Development and Launched	Cancer Infections	

Related Information

Drugs & Biologics	626	Literature	26	Patents	12	Genomics	1
Biomarkers	1	Therapeutic Targets & Pathways	1				

	oma (Validated)	Astrocytoma, anaplastic (Validated)	Cancer (Validated)
	biliary (Validated)	Cancer, bladder (Validated)	Cancer, brain (Candidate)
	Cancer, breast metastatic (Validated)	Cancer, cervix (Validated)	Cancer, colon (Validated)
	Carcinoma, squamous-cell (Validated)	Digestive/gastrointestinal cancer (Validated)	Glioblastoma (Validated)
	Glioblastoma multiforme (Validated)	Glioma (Validated)	Infection, coccidial (Validated)
	Leukemia, acute myeloid (Validated)	Melanoma, metastatic (Validated)	Menetrier's disease (Validated)
	Multiple myeloma (Validated)	Neuroblastoma (Validated)	Neurofibrosarcoma (Candidate)
	Oligodendroglioma (Validated)	Psoriasis (Candidate)	Sarcoma (Candidate)
	Synovial sarcoma (Validated)		
Images & Pathways	EGFR/HER2 Signal Transducti		of
	Resistance to Anti-HER2 Therapy		
Related Mechanisms	EGFR (HER1; erbB1) Inhibitors; Anti-EGFR		
Products Under Development and Launched	Cancer Infections		

See which other research groups are developing molecules using the same target

Related Information

Drugs & Biologics	626	Literature	26	Patents	12	Genomics	1
Biomarkers	1	Therapeutic Targets & Pathways	1				

cer

	Drug Name	Mechanism of Action	Organization	Phases
027	ior egf/r3	Inhibitors of Signal Transduction Pathways **Anti-EGFR**	Center of Molecular Immunology	Launched - 1995
230562	Cetuximab	Angiogenesis Inhibitors Inhibitors of Signal Transduction Pathways **Anti-EGFR**	Merck KGaA	Phase II
272554	Technetium nimotuzumab	**Anti-EGFR**	YM BioSciences	Phase I/II
304403	SAI-EGFR-ECD	**Anti-EGFR**	Center of Molecular Immunology YM BioSciences	Preclinical Preclinical
384901	HKI-357	Inhibitors of Signal Transduction Pathways **EGFR (HER1; erbB1) Inhibitors**	Wyeth Pharmaceuticals	Preclinical
396354	ARRY-334543	HER2 (erbB2) Inhibitors **EGFR (HER1; erbB1) Inhibitors**	Array BioPharma	Phase I
447851	CUDC-101	HER2 (erbB2) Inhibitors **EGFR (HER1; erbB1) Inhibitors** Histone Deacetylase (HDAC) Inhibitors	Curis	Preclinical

Infections

Infection, protozoal

Infection, coccidial

EN	Drug Name	Mechanism of Action	Organization	Phases
383388	RM-6427	**EGFR (HER1; erbB1) Inhibitors**	Romark	Preclinical

Start networking or keeping an eye on the competition!

Related Information

Drugs & Biologics 626 | Literature 26 | Patents 12 | Genomics 1

Biomarkers 1 | Therapeutic Targets & Pathways 1

Internet 100%

	Drug Name	Mechanism of Action	Organization	Phases
027	ior egf/r3	Inhibitors of Signal Transduction Pathways **Anti-EGFR**	Center of Molecular Immunology	Launched - 1995
230562	Cetuximab	Angiogenesis Inhibitors Inhibitors of Signal Transduction Pathways **Anti-EGFR**	Merck KGaA	Phase II
272554	Technetium nimotuzumab	**Anti-EGFR**	YM BioSciences	Phase I/II
304403	SAI-EGFR-ECD	**Anti-EGFR**	Center of Molecular Immunology YM BioSciences	Preclinical Preclinical
384901	HKI-357	Inhibitors of Signal Transduction Pathways **EGFR (HER1; erbB1) Inhibitors**	Wyeth Pharmaceuticals	Preclinical
396354	ARRY-334543	HER2 (erbB2) Inhibitors **EGFR (HER1; erbB1) Inhibitors**	Array BioPharma	Phase I
447851	CUDC-101	HER2 (erbB2) Inhibitors **EGFR (HER1; erbB1) Inhibitors** Histone Deacetylase (HDAC) Inhibitors	Curis	Prec

Infections
Infection, protozoal
Infection, coccidial

EN	Drug Name	Mechanism of Action	Organization	Phases
383388	RM-6427	**EGFR (HER1; erbB1) Inhibitors**	Romark	Preclinical

Search results are indexed and structured around 12 interlinked Knowledge Areas

Related Information

Drugs & Biologics 626	Literature 26	Patents 12	Genomics 1
Biomarkers 1	Therapeutic Targets & Pathways 1		

Internet 100%

	Drug Name	Mechanism of Action	Organization	Phases
027	ior egf/r3	Inhibitors of Signal Transduction Pathways **Anti-EGFR**	Center of Molecular Immunology	Launched - 1995
230562	Cetuximab	Angiogenesis Inhibitors Inhibitors of Signal Transduction Pathways **Anti-EGFR**	Merck KGaA	Phase II
272554	Technetium nimotuzumab	**Anti-EGFR**	YM BioSciences	Phase I/II
304403	SAI-EGFR-ECD	**Anti-EGFR**	Center of Molecular Immunology YM BioSciences	Preclinical Preclinical
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447851	CUDC-101	HER2 (erbB2) Inhibitors **EGFR (HER1; erbB1) Inhibitors** Histone Deacetylase (HDAC) Inhibitors	Curis	Preclinical

Infections

Infection, protozoal

Infection, coccidial

EN	Drug Name	Mechanism of Action	Organization	Phases
383388	RM-6427	**EGFR (HER1; erbB1) Inhibitors**	Romark	Preclinical

Click here for a list of molecules acting on EGFR as a target

Related Information

Drugs & Biologics 626 | Literature 26 | Patents 12 | Genomics 1

Biomarkers 1 | Therapeutic Targets & Pathways 1

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We have now jumped to the Drugs & Biologics Knowledge Area for the results related to EGFR as a target

Drugs & Biologics

Search

Products related to Target "EGFR (erbB1)"

1 to 25 records retrieved from 626

1 2 3 4 5 6 7 8 9 10 Next> Last>>

	IPortal ID	Code Name	Generic Name	Brand Name	Indication	Mechanism of Action Group	Organization	Highest Phase
*	122175 FULL RECORD	PTI-G4660 SIPI-9764-I	Genistein	Bonistein	Cancer, kidney metastatic Fibrosis, cystic Osteopenia Cancer, prostate Cancer, bladder Endometrial hyperplasia Melanoma, metastatic	Apoptosis Inducers; CFTR Channel Activators; Tyrosine Kinase Inhibitors; EGFR (HER1; erbB1) Inhibitors; Angiogenesis Inhibitors; DNA Topoisomerase II Inhibitors; Inhibitors of Signal Transduction Pathways	SurModics Astellas Pharma Universita degli Studi di Messina National Cancer Institute (US) Bausch & Lomb National Institutes of Health	Phase II
*	131055 FULL RECORD	LNS-5662	Quercetin		Pain	EGFR (HER1; erbB1) Inhibitors; Protein Tyrosine Phosphatase PTP-1B Inhibitors; Aldose Reductase Inhibitors; Cytokine Production Inhibitors; Xanthine Oxidase Inhibitors;	University of Shizuoka Limerick NeuroSciences	Phase I

Display Formats

- Full Record List
- Structure Activity
- All Related Information
- References

Refine in Chart Format

Compounds by:

- Development Status
- Therapeutic Impact (by Therapeutic Group)
- Organizational Benchmark
- Patents by Mechanism Scope
  - Molecular Mechanisms
  - Cellular Mechanisms
- Product Launches by Year
- Products and Targets (by Target)
- Conditions
- Under Active Development
- Agency (FDA, EMEA, etc)

Drugs & Biologics

Search

Products related to Target "EGFR (erbB1)"

1 to 25 records retrieved from 626

1 2 3 4 5 6 7 8 9 10 Next> Last>>

	IPortal ID	Code Name	Generic Name	Brand Name	Indication	Mechanism of Action Group	Organization	Highest Phase
*	122175 FULL RECORD	PTI-G4660 SIPI-9764-I	Genistein	Bonistein	Cancer, kidney metastatic Fibrosis, cystic Osteopenia Cancer, prostate Cancer, bladder ...metrial ...plasia ...oma, ...tatic	Apoptosis Inducers; CFTR Channel Activators; Tyrosine Kinase Inhibitors; EGFR (HER1; erbB1) Inhibitors; Angiogenesis Inhibitors; DNA Topoisomerase II Inhibitors; Inhibitors of Signal Transduction Pathways	SurModics Astellas Pharma Universita degli Studi di Messina National Cancer Institute (US) Bausch & Lomb National Institutes of Health	Phase II
*	131055 FULL RECORD	LNS-5662	Quercetin		Pain	EGFR (HER1; erbB1) Inhibitors; Protein Tyrosine Phosphatase PTP-1B Inhibitors; Aldose Reductase Inhibitors; Cytokine Production Inhibitors; Xanthine Oxidase Inhibitors;	University of Shizuoka Limerick NeuroSciences	Phase I

Refine search by regulatory agency

Display Formats

- Full Record List
- Structure Activity
- All Related Information
- References

Refine in Chart Format

Compounds by:

- Development Status
- Therapeutic Impact (by Therapeutic Group)
- Organizational Benchmark
- Patents by Mechanism Scope
  - Molecular Mechanisms
  - Cellular Mechanisms
- Product Launches by Year
- Products and Targets (by Target)
- Conditions
- Under Active Development
- Agency (FDA, EMEA, etc)

javascript:%20v_submit_url='redirect_pkg.CalculateXMLCharts?p_sessionId=19920&p_ka=16&p_dimensiones=2&p_chartNam

Internet 100%

Agency (FDA, EMEA, etc)

Display Options

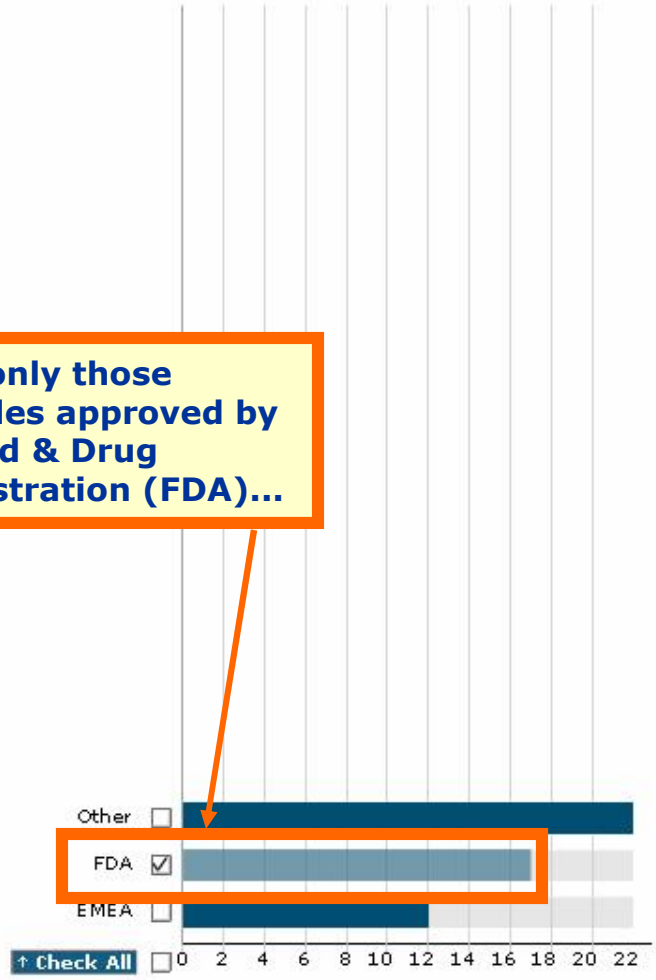
Horizontal Display | Vertical Display | Pie Chart Display

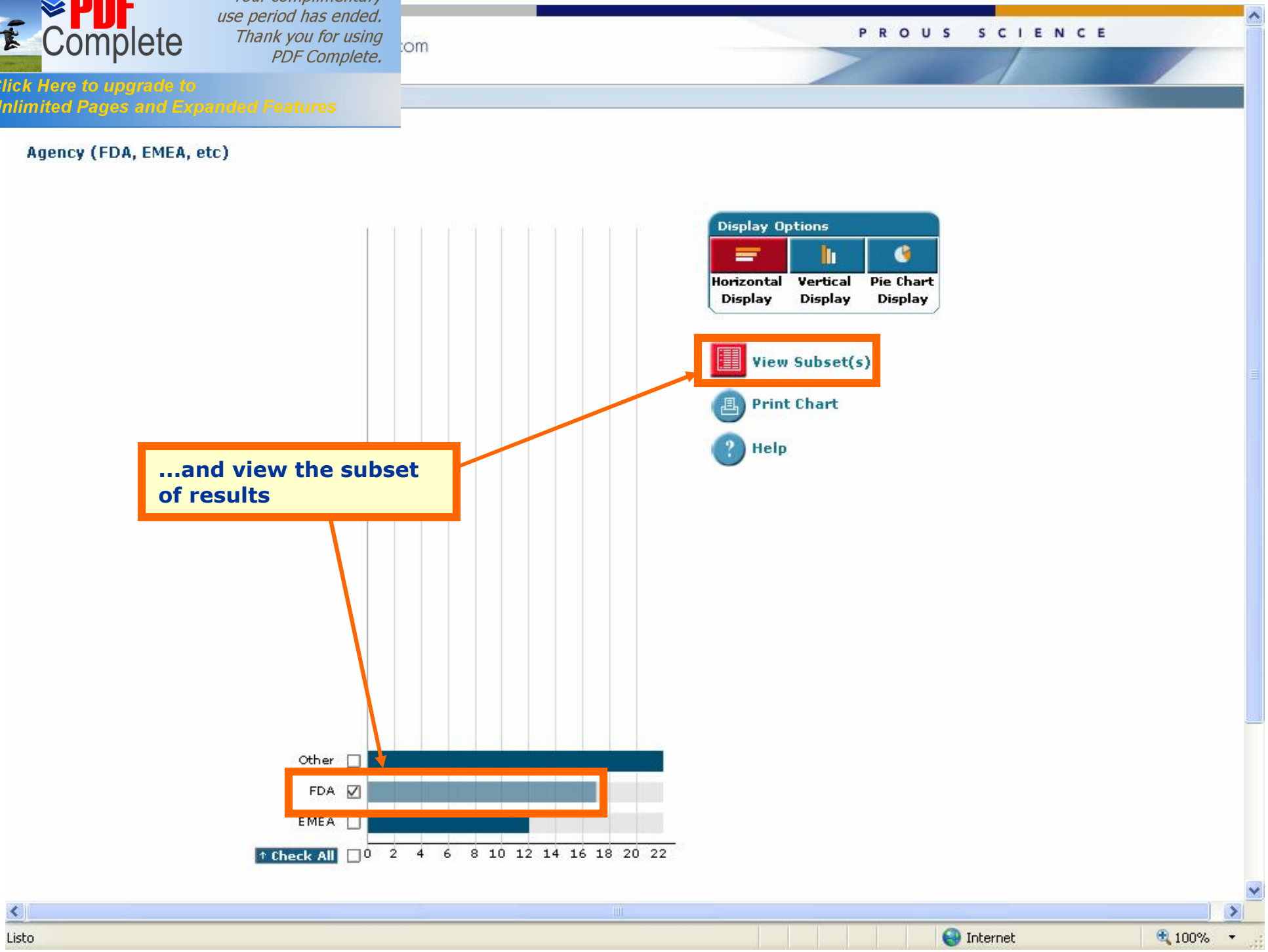
View Subset(s)

Print Chart

Help

Select only those molecules approved by the Food & Drug Administration (FDA)…





Drugs & Biologics

Search

1 to 17 records retrieved from 17

1

	IPortal ID	Code Name	Generic Name	Brand Name	Indication	Mechanism of Action Group	Organization	Highest Phase
*	301036 FULL RECORD	016 572016 GW-2016 GW-572016 GW-572016F	Lapatinib ditosylate	Tykerb Tyverb	Cancer, breast metastatic Cancer, head and neck Lymphoma, non-Hodgkin's Cancer, stomach Cancer, prostate Cancer, colorectal Cancer, gallbladder Cancer, hepatobiliary Glioblastoma multiforme Cancer, breast Cancer, peritoneum Cancer, solid tumor Esophageal carcinoma Cancer, intraductal Cancer, brain Cancer, ovary Cancer, pancreas metastatic Cancer, cervix	EGFR (HER1; erbB1) Inhibitors; HER2 (erbB2) Inhibitors; Inhibitors of Signal Transduction Pathways	GlaxoSmithKline Brown University National Cancer Institute (US)	Launched-2007
*	276195 FULL RECORD	ABX-EGF E7.6.3	Panitumumab	Vectibix	Cancer, head and neck Carcinoma, squamous-cell Cancer, colorectal metastatic Cancer, lung (non-small cell)	Anti-EGFR; Inhibitors of Signal Transduction Pathways	Amgen	Launched-2006
*	250837 FULL RECORD	CP-358774 NSC-718781 OSI-774 R-1415 Ro-50-8231	Erlotinib hydrochloride	Tarceva	Cancer, head and neck Cancer, breast metastatic Cancer, kidney (renal cell carcinoma)	EGFR (HER1; erbB1) Inhibitors; Inhibitors of Signal	University of California, Davis Schwarz Pharma	Launched-2004

Display Formats

- Full Record List
- Structure Activity
- All Related Information
- References

Refine in Chart Format

Compounds by:

- Development Status
- Therapeutic Impact (by Therapeutic Group)
- Organizational Benchmark
- Patents by Mechanism Scope
  - Molecular Mechanisms
  - Cellular Mechanisms
- Product Launches by Year
- Products and Targets (by Target)
- Conditions
- Under Active Development
- Agency (FDA, EMEA, etc)

Drugs & Biologics

Search

View the full record for this drug

1 to 17 records retrieved from 17

1

	IPortal ID	Code Name	Generic Name	Brand Name	Indication	Mechanism of Action Group	Organization	Highest Phase
*	301036 FULL RECORD	016 572016 GW-2016 GW-572016 GW-572016F	Lapatinib ditosylate	Tykerb Tyverb	Cancer, breast metastatic Cancer, head and neck Lymphoma, non-Hodgkin's Cancer, stomach Cancer, prostate Cancer, colorectal Cancer, gallbladder Cancer, hepatobiliary Glioblastoma multiforme Cancer, breast Cancer, peritoneum Cancer, solid tumor Esophageal carcinoma Cancer, intraductal Cancer, brain Cancer, ovary Cancer, pancreas metastatic Cancer, cervix	EGFR (HER1; erbB1) Inhibitors; HER2 (erbB2) Inhibitors; Inhibitors of Signal Transduction Pathways	GlaxoSmithKline Brown University National Cancer Institute (US)	Launched-2007
*	276195 FULL RECORD	ABX-EGF E7.6.3	Panitumumab	Vectibix	Cancer, head and neck Carcinoma, squamous-cell Cancer, colorectal metastatic Cancer, lung (non-small cell)	Anti-EGFR; Inhibitors of Signal Transduction Pathways	Amgen	Launched-2006
*	250837 FULL RECORD	CP-358774 NSC-718781 OSI-774 R-1415 Ro-50-8231	Erlotinib hydrochloride	Tarceva	Cancer, head and neck Cancer, breast metastatic Cancer, kidney (renal cell carcinoma)	EGFR (HER1; erbB1) Inhibitors; Inhibitors of Signal	University of California, Davis Schwarz Pharma	Launched-2004

Display Formats

- Full Record List
- Structure Activity
- All Related Information
- References

Refine in Chart Format

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- Development Status
- Therapeutic Impact (by Therapeutic Group)
- Organizational Benchmark
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  - Molecular Mechanisms
  - Cellular Mechanisms
- Product Launches by Year
- Products and Targets (by Target)
- Conditions
- Under Active Development
- Agency (FDA, EMEA, etc)

Full record for lapatinib

Drugs & Biologics

Search

1 to 1 records retrieved from 1

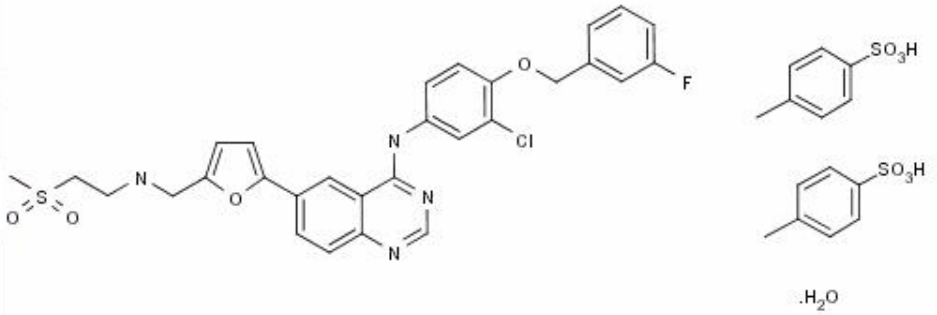
Lapatinib ditosylate

1 of 1

IPortal ID	301036
CAS Registry No.	388082-78-8 231277-92-2 (free base, anhydrous) 388082-77-7 (anhydrous)
Highest Phase	Launched-2007
Molecular Formula	C43H44ClFN4O11S3

Under Active Development

Structure



Chemical Name / Description

N-[3-Chloro-4-(3-fluorobenzyloxy)phenyl]-6-[5-[2-(methylsulfonyl)ethylaminomethyl]furan-2-yl]quinazolin-4-amine bis(4-methylbenzenesulfonate) hydrate

Code Name	Generic Name	Brand Name
016 572016 GW-2016 GW-572016 GW-572016F	Lapatinib ditosylate	Tykerb Tyverb

Indication	Cellular / Molecular Mechanism
Cancer, breast metastatic Cancer, head and neck Lymphoma, non-Hodgkin's Cancer, stomach Cancer, prostate Cancer, colorectal Cancer, gallbladder Cancer, hepatobiliary Glioblastoma multiforme	EGFR (HER1; erbB1) Inhibitors HER2 (erbB2) Inhibitors Inhibitors of Signal Transduction Pathways

Product Description	Organization
rphostins	GlaxoSmithKline Brown University National Cancer Institute (US)

Lapatinib, an ErB-1 and ErB-2 dual kinase inhibitor, was launched in the U.S. in 2007 for the treatment of advanced or metastatic HER2 (ErbB2) positive breast cancer in women who have received prior therapy, including Herceptin(R) (trastuzumab), in combination with Xeloda(R) (capecitabine). The compound was approved in 2007 in Switzerland and Australia for this indication and regulatory applications have been filed in Japan and Canada. Phase III trials are under way to evaluate the use of lapatinib as first-line treatment of breast cancer and head and neck cancer and for use in combination with paclitaxel in patients with ErbB2 amplified advanced gastric cancer. The compound is also being evaluated for several oncologic indications in the treatment of brain, gallbladder, prostate, ovary, endometrium, cervical and hepatobiliary cancers in collaboration with the National Cancer Institute (NCI). Lapatinib in combination with everolimus is also in early clinical studies for the treatment of lymphoma and non-Hodgkin's lymphoma (NHL). A phase I/II combination trial is evaluating lapatinib for the treatment of advanced or metastatic colorectal cancer. The National Cancer Institute (NCI) is developing the compound in phase II trials for the treatment of peritoneal cancer, ovarian and ductal carcinoma in situ of the breast (DCIS), while Brown University is conducting combination trials with gemcitabine for the treatment of pancreas metastatic cancer.
Lapatinib was granted fast-track status by the FDA in 2005 for the treatment of refractory advanced or metastatic breast cancer patients who have documented ErbB-2 overexpression and who have failed previous therapy.

Development Status Summary DETAILS MILESTONES REGULATORY INFORMATION

Phase	Organization	Indication
Launched - 2007	GlaxoSmithKline	Cancer, breast metastatic
Phase III	GlaxoSmithKline	Cancer, breast
Phase III	GlaxoSmithKline	Cancer, head and neck
Phase III	GlaxoSmithKline	Cancer, stomach
Phase II	National Cancer Institute (US)	Cancer, brain
Phase II	GlaxoSmithKline	
Phase II	National Cancer Institute (US)	er
Phase II	National Cancer Institute (US)	neck
Phase II	National Cancer Institute (US)	ary
Phase II	National Cancer Institute (US)	
Phase II	Brown University	metastatic
Phase II	National Cancer Institute (US)	Cancer, peritoneum
Phase II	GlaxoSmithKline	Cancer, prostate
Phase II	GlaxoSmithKline	Cancer, solid tumor
Phase II	GlaxoSmithKline	Esophageal carcinoma
Phase II	National Cancer Institute (US)	Glioblastoma multiforme
Phase I/II	GlaxoSmithKline	Cancer, colorectal
Phase I/II	National Cancer Institute (US)	Cancer, intraductal
Phase I	National Cancer Institute (US)	Cancer, breast
Phase I	National Cancer Institute (US)	Cancer, solid tumor
Phase I	National Cancer Institute (US)	Lymphoma, non-Hodgkin's

Search results are indexed and structured around 12 interlinked Knowledge Area

Related Information

Literature	331	Intellectual Property	25	Experimental Pharmacology	141	Pharmacokinetics / Metabolism	149
Clinical Studies	137	Therapeutic Targets & Pathways	3	Adverse Events	209	Biomarkers	25

oduct Description	Organization
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Development Status Summary DETAILS MILESTONES REGULATORY INFORMATION

Phase	Organization	Indication
Launched - 2007	GlaxoSmithKline	Cancer, breast metastatic
Phase III	GlaxoSmithKline	Cancer, breast
Phase III	GlaxoSmithKline	Cancer, head and neck
Phase III	GlaxoSmithKline	Cancer, stomach
Phase II	National Cancer Institute (US)	Cancer, brain
Phase II	GlaxoSmithKline	Cancer, cervix
Phase II	National Cancer Institute (US)	Cancer, gallbladder
Phase II	National Cancer Institute (US)	Cancer, head and neck
Phase II	National Cancer Institute (US)	Cancer, hepatobiliary
Phase II	National Cancer Institute (US)	Cancer, ovary
Phase II	Brown University	ncreas metastatic
Phase II	National Cancer Institute (US)	itoneum
Phase II	GlaxoSmithKline	state
Phase II	GlaxoSmithKline	d tumor
Phase II	GlaxoSmithKline	l carcinoma
Phase II	National Cancer Institute (US)	Glioblastoma multiforme
Phase I/II	GlaxoSmithKline	Cancer, colorectal
Phase I/II	National Cancer Institute (US)	Cancer, intraductal
Phase I	National Cancer Institute (US)	Cancer, breast
Phase I	National Cancer Institute (US)	Cancer, solid tumor
Phase I	National Cancer Institute (US)	Lymphoma, non-Hodgkin's

Click here to see the list of clinical studies related to this molecule

Related Information

Literature	331	Intellectual Property	25	Experimental Pharmacology	141	Pharmacokinetics / Metabolism	149
Clinical Studies	137	Therapeutic Targets & Pathways	3	Adverse Events	209	Biomarkers	25

The list of clinical studies related to this molecule

Clinical Studies

Search

Clinical Studies related to Lapatinib ditosylate (EN 301036)

1 to 25 records retrieved from 57 1 2 3

Journal/Congresses (57) | Other Sources (80)

Study	Design	Pop.No.	Drug Name	Conclusions / Objectives	Ref.
[illegible]	Open	[illegible]	Lapatinib ditosylate	[illegible] ineffective in patients with prostate cancer	[illegible]
Chemotherapy in biliary cancer	Comparative Pooled/meta-analysis Randomized	2810	Paclitaxel Gemcitabine Irinotecan hydrochloride Lanreotide acetate Docetaxel Erlotinib hydrochloride Lapatinib ditosylate Exatecan	Gemcitabine in combination with platinum was associated with high response and tumor control rates in patients with gallbladder carcinoma or cholangiocarcinoma	Ref. 2
Lapatinib in stomach cancer	Open	47	Lapatinib ditosylate	A phase II study suggested that lapatinib was well tolerated but induced only moderate antitumor activity in patients with gastric cancer	Ref. 3
Lapatinib plus topotecan in cancer	Dose-finding Multicenter Open	24	Topotecan hydrochloride Lapatinib ditosylate	The combination of lapatinib and topotecan was well tolerated in a phase I study; the maximum tolerated doses in patients with advanced solid tumors were 1250 mg/day and 4 mg/m2/week, respectively	Ref. 4
Lapatinib, gemcitabine and oxaliplatin in pancreas cancer	Open	15	Gemcitabine Oxaliplatin Lapatinib	The combination of lapatinib and full-dose gemcitabine was feasible in patients with pancreaticobiliary	Ref. 5

Display Formats

- Full Record List
- All Related Information
- References

Refine in Chart Format

Clinical Charts available:

- Clinical Study Design
- Clinical Study Population
- Clinical Study Condition
- Clinical Study Products

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oduct Description	Organization
rphostins	GlaxoSmithKline Brown University National Cancer Institute (US)

Lapatinib, an ErB-1 and ErB-2 dual kinase inhibitor, was launched in the U.S. in 2007 for the treatment of advanced or metastatic HER2 (ErbB2) positive breast cancer in women who have received prior therapy, including Herceptin(R) (trastuzumab), in combination with Xeloda(R) (capecitabine). The compound was approved in 2007 in Switzerland and Australia for this indication and regulatory applications have been filed in Japan and Canada. Phase III trials are under way to evaluate the use of lapatinib as first-line treatment of breast cancer and head and neck cancer and for use in combination with paclitaxel in patients with ErbB2 amplified advanced gastric cancer. The compound is also being evaluated for several oncologic indications in the treatment of brain, gallbladder, prostate, ovary, endometrium, cervical and hepatobiliary cancers in collaboration with the National Cancer Institute (NCI). Lapatinib in combination with everolimus is also in early clinical studies for the treatment of lymphoma and non-Hodgkin's lymphoma (NHL). A phase I/II combination trial is evaluating lapatinib for the treatment of advanced or metastatic colorectal cancer. The National Cancer Institute (NCI) is developing the compound in phase II trials for the treatment of peritoneal cancer, ovarian and ductal carcinoma in situ of the breast (DCIS), while Brown University is conducting combination trials with gemcitabine for the treatment of pancreas metastatic cancer.
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Development Status Summary DETAILS MILESTONES REGULATORY INFORMATION

Phase	Organization	Indication
Launched - 2007	GlaxoSmithKline	Cancer, breast metastatic
Phase III	GlaxoSmithKline	Cancer, breast
Phase III	GlaxoSmithKline	Cancer, head and neck
Phase III	GlaxoSmithKline	Cancer, stomach
Phase II	National Cancer Institute (US)	Cancer, brain
Phase II	GlaxoSmithKline	Cancer, cervix
Phase II	National Cancer Institute (US)	Cancer, gallbladder
Phase II	National Cancer Institute (US)	Cancer, head and neck
Phase II	National Cancer Institute (US)	Cancer, hepatobiliary
Phase II	National Cancer Institute (US)	Cancer, ovary
Phase II	Brown University	ncreas metastatic
Phase II	National Cancer Institute (US)	itoneum
Phase II	GlaxoSmithKline	state
Phase II	GlaxoSmithKline	d tumor
Phase II	GlaxoSmithKline	l carcinoma
Phase II	National Cancer Institute (US)	Glioblastoma multiforme
Phase I/II	GlaxoSmithKline	Cancer, colorectal
Phase I/II	National Cancer Institute (US)	Cancer, intraductal
Phase I	National Cancer Institute (US)	Cancer, breast
Phase I	National Cancer Institute (US)	Cancer, solid tumor
Phase I	National Cancer Institute (US)	Lymphoma, non-Hodgkin's

Click here to look at the adverse event profile of this drug

Related Information

Literature	331	Intellectual Property	25	Experimental Pharmacology	141	Pharmacokinetics / Metabolism	149
Clinical Studies	137	Therapeutic Targets & Pathways	3	Adverse Events	209	Biomarkers	25

Details of adverse events reported for this drug in clinical studies

Adverse Events

Search

1 to 25 values retrieved from 209

1 2 3 4 5 6 7 8 9

	Drug Name	Mechanism of Action	Event	Population	Condition	Ref
☐	Calcium folinate ALL AE 0.2 g/m2 i.v. o.d. x 2/2wks Fluorouracil ALL AE 0.4 g/m2 i.v. o.d. x 2/2wks Fluorouracil ALL AE 0.32 g/m2 i.v. o.d. x 2/2wks Lapatinib ditosylate ALL AE 1.25 g p.o. o.d. Oxaliplatin ALL AE $68 \cdot 10^{-3}$ g/m2 i.v. 1x/2 wks	DNA Alkylating Drugs Antimitotic Drugs; Pyrimidine Antagonists Antimitotic Drugs; Pyrimidine Antagonists EGFR (HER1; erbB1) Inhibitors; HER2 (erbB2) Inhibitors; Inhibitors of Signal Transduction Pathways	Diarrhea (grade 1)	Humans; Adult	Cancer	Ref. 1
☐	Calcium folinate ALL AE 0.2 g/m2 i.v. o.d. x 2/2wks Fluorouracil ALL AE 0.4 g/m2 i.v. o.d. x 2/2wks Fluorouracil ALL AE 0.32 g/m2 i.v. o.d. x 2/2wks Lapatinib ditosylate ALL AE 1.25 g p.o. o.d. Oxaliplatin ALL AE $68 \cdot 10^{-3}$ g/m2 i.v. 1x/2 wks	DNA Alkylating Drugs Antimitotic Drugs; Pyrimidine Antagonists Antimitotic Drugs; Pyrimidine Antagonists EGFR (HER1; erbB1) Inhibitors; HER2 (erbB2) Inhibitors; Inhibitors of Signal Transduction	Diarrhea (grade 2)	Humans; Adult	Cancer	Ref. 1

Display Formats

- Full Record List
- All Related Information
- References

Refine in Chart Format

adverse events charts

- Product
- Population
- Adverse event
- Report type
- Mechanism

oduct Description	Organization
rphostins	GlaxoSmithKline Brown University National Cancer Institute (US)

Lapatinib, an ErB-1 and ErB-2 dual kinase inhibitor, was launched in the U.S. in 2007 for the treatment of advanced or metastatic HER2 (ErbB2) positive breast cancer in women who have received prior therapy, including Herceptin(R) (trastuzumab), in combination with Xeloda(R) (capecitabine). The compound was approved in 2007 in Switzerland and Australia for this indication and regulatory applications have been filed in Japan and Canada. Phase III trials are under way to evaluate the use of lapatinib as first-line treatment of breast cancer and head and neck cancer and for use in combination with paclitaxel in patients with ErbB2 amplified advanced gastric cancer. The compound is also being evaluated for several oncologic indications in the treatment of brain, gallbladder, prostate, ovary, endometrium, cervical and hepatobiliary cancers in collaboration with the National Cancer Institute (NCI). Lapatinib in combination with everolimus is also in early clinical studies for the treatment of lymphoma and non-Hodgkin's lymphoma (NHL). A phase I/II combination trial is evaluating lapatinib for the treatment of advanced or metastatic colorectal cancer. The National Cancer Institute (NCI) is developing the compound in phase II trials for the treatment of peritoneal cancer, ovarian and ductal carcinoma in situ of the breast (DCIS), while Brown University is conducting combination trials with gemcitabine for the treatment of pancreas metastatic cancer.
Lapatinib was granted fast-track status by the FDA in 2005 for the treatment of refractory advanced or metastatic breast cancer patients who have documented ErbB-2 overexpression and who have failed previous therapy.

Development Status Summary DETAILS MILESTONES REGULATORY INFORMATION

Phase	Organization	Indication
Launched - 2007	GlaxoSmithKline	Cancer, breast metastatic
Phase III	GlaxoSmithKline	Cancer, breast
Phase III	GlaxoSmithKline	Cancer, head and neck
Phase III	GlaxoSmithKline	Cancer, stomach
Phase II	National Cancer Institute (US)	Cancer, brain
Phase II	GlaxoSmithKline	Cancer, cervix
Phase II	National Cancer Institute (US)	Cancer, gallbladder
Phase II	National Cancer Institute (US)	Cancer, head and neck
Phase II	National Cancer Institute (US)	Cancer, hepatobiliary
Phase II	National Cancer Institute (US)	Cancer, ovary
Phase II	Brown University	ncreas metastatic
Phase II	National Cancer Institute (US)	itoneum
Phase II	GlaxoSmithKline	state
Phase II	GlaxoSmithKline	d tumor
Phase II	GlaxoSmithKline	l carcinoma
Phase II	National Cancer Institute (US)	Glioblastoma multiforme
Phase I/II	GlaxoSmithKline	Cancer, colorectal
Phase I/II	National Cancer Institute (US)	Cancer, intraductal
Phase I	National Cancer Institute (US)	Cancer, breast
Phase I	National Cancer Institute (US)	Cancer, solid tumor
Phase I	National Cancer Institute (US)	Lymphoma, non-Hodgkin's

Click here to see the biomarkers associated with this molecule

Related Information

Literature	331	Intellectual Property	25	Experimental Pharmacology	141	Pharmacokinetics / Metabolism	149
Clinical Studies	137	Therapeutic Targets & Pathways	3	Adverse Events	209	Biomarkers	25

Search

We are now in the recently launched Biomarkers Knowledge Area

1 to 25 records retrieved from 26

Biomarker Name	Indication	Role	Technique (Substrate)	Validity
Bcl-2	Cancer, prostate	Prognosis	IHC (Tissue Protein)	Potential
beta-Catenin	Cancer, colorectal	Prognosis	IHC (Tissue Protein)	Potential
		Differential Diagnosis	PCR + DirectSeq (DNA)	Potential
		Prognosis	IHC (Tissue Protein)	Potential
		Differential Diagnosis	IHC (Tissue Protein)	Potential
CEA	Cancer	Prognosis - Disease Monitoring	IA (Serum)	Established
		Prognosis - Disease Monitoring	EIA ( )	Established
	Cancer, colorectal	Staging	IA (Serum)	Established
Chromogranin A	Cancer, lung	Diagnosis	IA (Plasma)	Potential
		Prognosis	IHC (Tissue Protein)	Potential
		Prognosis	IA (Plasma)	Potential
	Neuroendocrine cancer	Prognosis	RT-PCR (mRNA)	Under Investigation
		Diagnosis	IA (Plasma)	Potential
		Monitoring Treatment Efficacy	IA (Plasma)	Potential
DPD	Cancer, colorectal	Selection for Therapy	RT-PCR (mRNA)	Under Investigation
		Selection for Therapy	RT-PCR (mRNA)	Potential
	Neutropenia	Predicting Treatment Toxicity	PCR (DNA)	Potential
FHIT	Cancer, lung	Prognosis	IHC (Tissue Protein)	Potential
		Prognosis	PCR/LOH (DNA)	Potential
		Prognosis	RT-PCR (mRNA)	Under Investigation
		Prognosis	Methylation PCR (DNA)	Potential
Fibrin/FDP	Coronary artery disease	Risk Factor - Cardiovascular		Under Investigation
HE4	Cancer, ovary	Diagnosis	IHC (Tissue Protein)	Potential
HER2	Cancer, breast	Selection for Therapy	IHC (Tissue Protein)	Established
		Selection for Therapy	FISH (DNA)	Established

Display Formats

- Full Record List
- All Related Information

Refine in Chart Format

Biomarkers charts available by:

- Diseases
- Role
- Validity
- Type
- Biological Process
- Technique
- Substrate
- Status
- Organization

Search

1 to 25 records retrieved from 26

1 2

Biomarker Name	Indication	Role	Technique (Substrate)	Validity
Bcl-2	Cancer, prostate	Prognosis	IHC (Tissue Protein)	Potential
beta-Catenin	Cancer, colorectal	Prognosis	IHC (Tissue Protein)	Potential
		Differential Diagnosis	PCR + DirectSeq (DNA)	Potential
		Prognosis	IHC (Tissue Protein)	Potential
		Differential Diagnosis	IHC (Tissue Protein)	Potential
CEA	Cancer	Prognosis - Disease Monitoring	IA (Serum)	Established
		Prognosis - Disease Monitoring	EIA ( )	Established
	Cancer, colorectal	Staging	IA (Serum)	Established
Chromogranin A	Cancer, lung	Diagnosis	IA (Plasma)	Potential
		Prognosis	IHC (Tiss	
		Prognosis	IA (Plasn	
	Neuroendocrine cancer	Prognosis	RT-PCR (	
		Diagnosis	IA (Plasn	
		Monitoring Treatment Efficacy	IA (Plasn	
DPD	Cancer, colorectal	Selection for Therapy	RT-PCR (mRNA)	Under Investigation
		Selection for Therapy	RT-PCR (mRNA)	Potential
	Neutropenia	Predicting Treatment Toxicity	PCR (DNA)	Potential
FHIT	Cancer, lung	Prognosis	IHC (Tissue Protein)	Potential
		Prognosis	PCR/LOH (DNA)	Potential
		Prognosis	RT-PCR (mRNA)	Under Investigation
		Prognosis	Methylation PCR (DNA)	Potential
Fibrin/FDP	Coronary artery disease	Risk Factor - Cardiovascular		Under Investigation
HE4	Cancer, ovary	Diagnosis	IHC (Tissue Protein)	Potential
HER2	Cancer, breast	Selection for Therapy	IHC (Tissue Protein)	Established
		Selection for Therapy	FISH (DNA)	Established

Click to access the full record for a given biomarker

Display Formats

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- All Related Information

Refine in Chart Format

Biomarkers charts available by:

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- Technique
- Substrate
- Status
- Organization

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Full record for HER2 as a biomarker

Biomarkers

Search

1 to 1 records retrieved from 1

HER2	
Synonym	EGFR2; ERBB2 ; Epidermal growth factor receptor 2; ErbB-2; HER2/Neu; NEU; Receptor protein-tyrosine kinase erbB-2; v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2
Type	Proteomic; Genomic
Biological Process	Angiogenesis; Oncogenesis; Invasion; Tumor Cell Proliferation
Description	The human epidermal growth factor receptor 2 (HER2) is a transmembrane protein with an intracellular tyrosine kinase activity and an extracellular receptor domain. Most of the studies have linked either HER2 gene amplification or Her2 protein overexpression with adverse prognosis in either node-negative or node-positive disease. Another use of this marker in clinical practice is focused on the prediction of response to the anti-HER2 targeted therapy with trastuzumab, and with the small molecule anti-HER1/HER2 tyrosine kinase inhibitor lapatinib. HER2 assessment is most often used as a biomarker for therapy selection. Although HER2 testing is a standard of breast cancer management, it may also be useful to evaluate or manage prostate, colorectal or ovarian cancer.
Organization	Abbott Applied Biosystems Bayer Dako Genomic Health Invitrogen Oncor Roche Diagnostics Ventana Medical Vysis
Modifier	Product Modifier: Trastuzumab (Treatment) Lapatinib ditosylate (Treatment) Mechanism Modifier: HER2 (erbB2) Inhibitors (Treatment) Anti-HER2/neu/ErbB2 (Treatment)
Indications	Diseases

) Inhibitors (Treatment)
u/ErbB2 (Treatment)

Cancer, breast

Population	Role	Validity	Technique (Substrate)	Authority
	Selection for Therapy	Potential	SISH (DNA)	
	Selection for Therapy	Established	IHC (Tissue Protein)	FDA European Group on Tumour Markers (EGTM) ASCO
	Monitoring Treatment Efficacy	Potential	CISH (DNA)	
Metastatic	Prognosis - Disease Monitoring	Established	EIA (Tissue Protein)	FDA
Metastatic	Selection for Therapy	Potential	IHC (Tissue Protein)	
Metastatic	Selection for Therapy	Potential	RT-PCR (DNA)	
Metastatic	Selection for Therapy	Potential	eTAG (Protein)	
Stage II - Lymph Node Positive	Selection for Therapy	Established	FISH (DNA)	FDA European Group on Tumour Markers (EGTM) ASCO
Stage II - Lymph Node Positive	Selection for Therapy	Potential	RT-PCR (mRNA)	
Stage II - Lymph Node Positive	Monitoring Treatment Efficacy	Established	FISH (DNA)	FDA ASCO
Stage II - Lymph Node Positive	Prognosis	Established	FISH (DNA)	FDA European Group on Tumour Markers (EGTM) ASCO
Primary - Lymph Node Negative	Prognosis - Risk Stratification	Established	FISH (DNA)	FDA ASCO

Digestive/gastrointestinal cancer

Cancer, colorectal

Population	Role	Validity	Technique (Substrate)	Authority
Primary	Selection for Therapy	Potential	FISH (DNA)	

Investigator Portal

The Translational Research Knowledge base

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