



Clarivate în procesul de inovare

Adriana FILIP - Solutions Consultant
adriana.filip@clarivate.com

Ianuarie 2022

The lifecycle of innovation

COMMERCIALIZE

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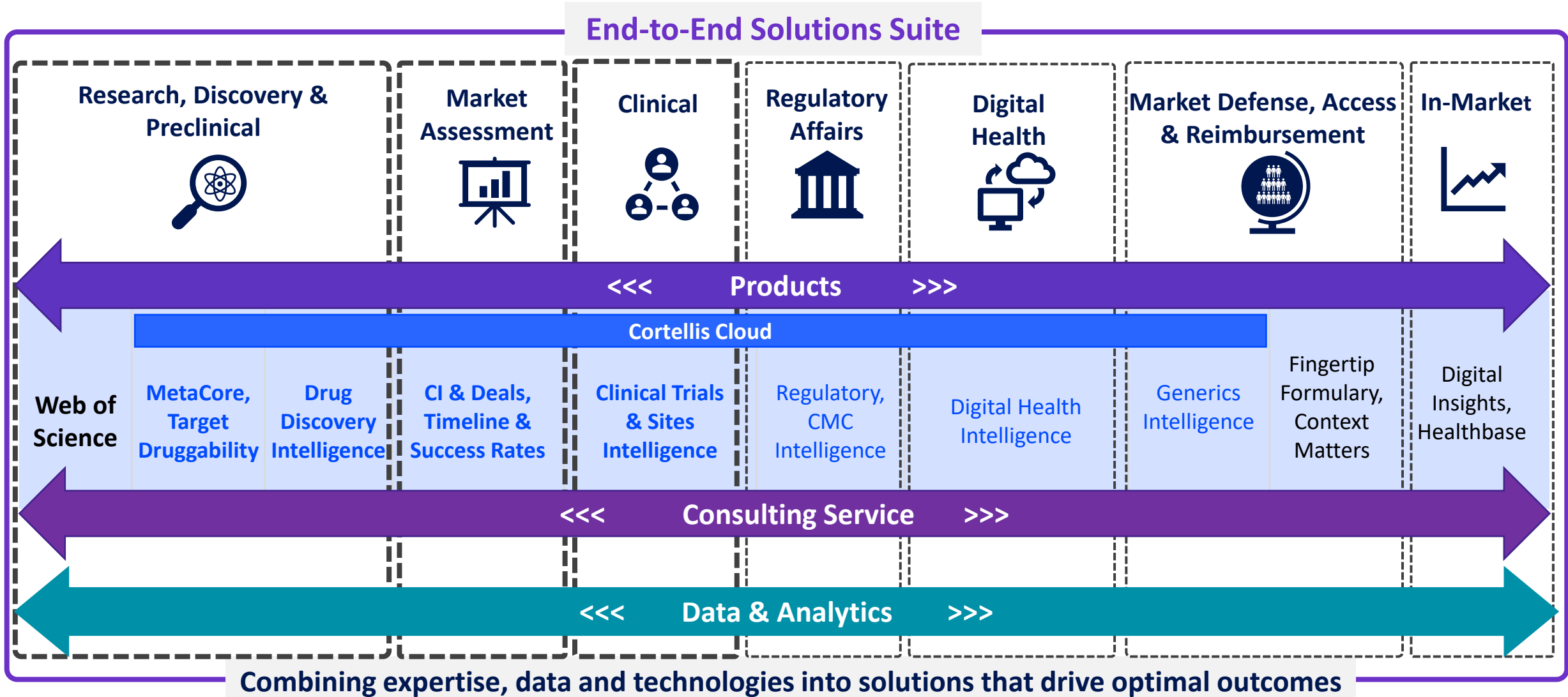
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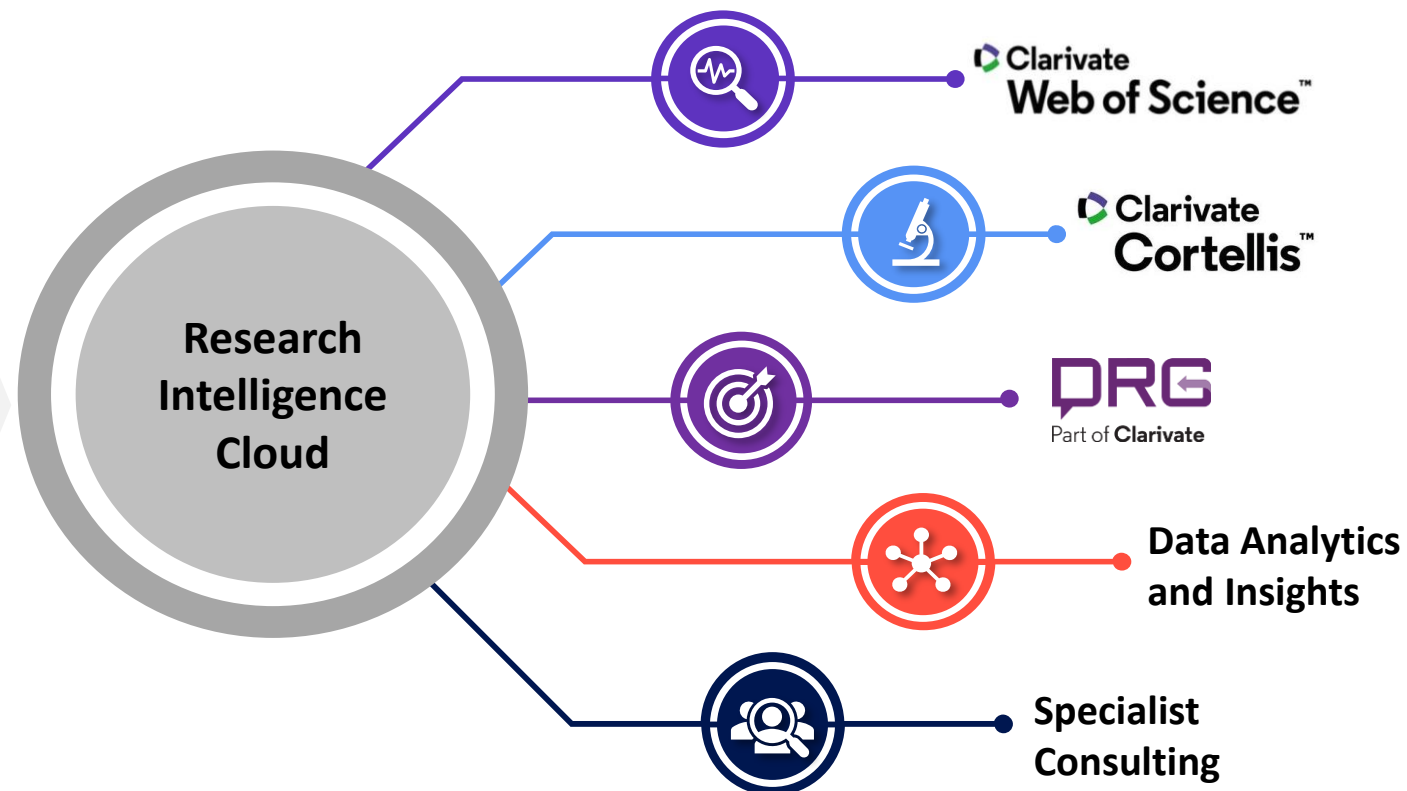
Data-driven insights spanning the entire innovation & product lifecycle



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- **1.7B** cited scholarly references
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- **34K** academic journals
- **450K** clinical trials
- **32B** unique patient claims and HER record
- **3M** pharmacology records
- **1.9K** US hospitals' medical device purchase volume data
- **200** global disease and market forecasts
- **245K** regulatory reference documents
- **100%** of US population in enrollment data by coverage type
- **3K** patient segments covered in epidemiology studies
- **80K** pipeline programs
- **80** medical device market overviews
- **270K** variant disease associations
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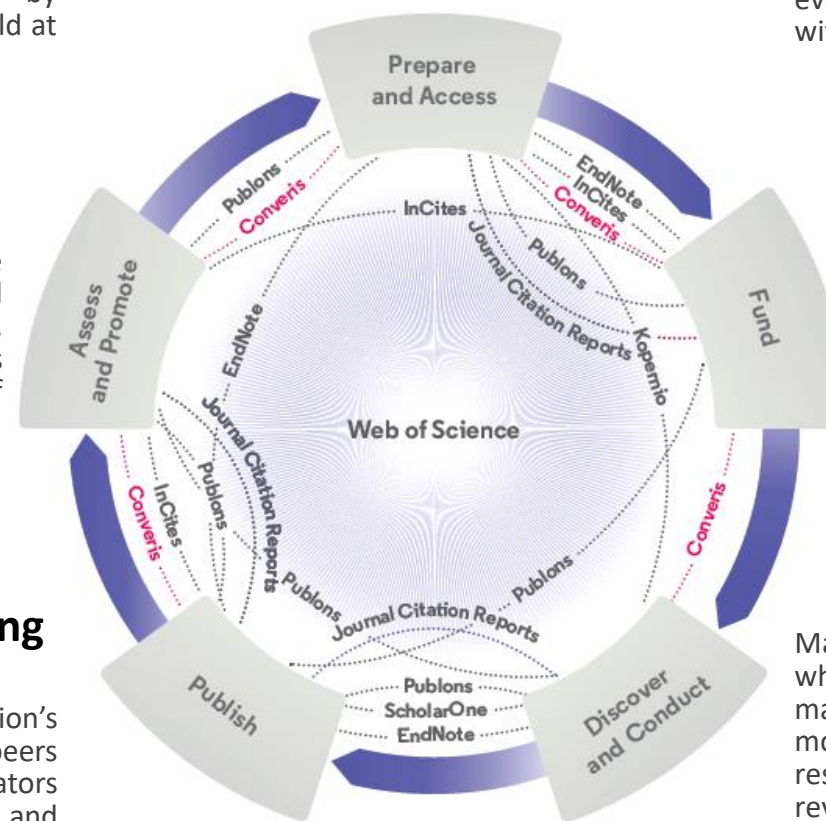
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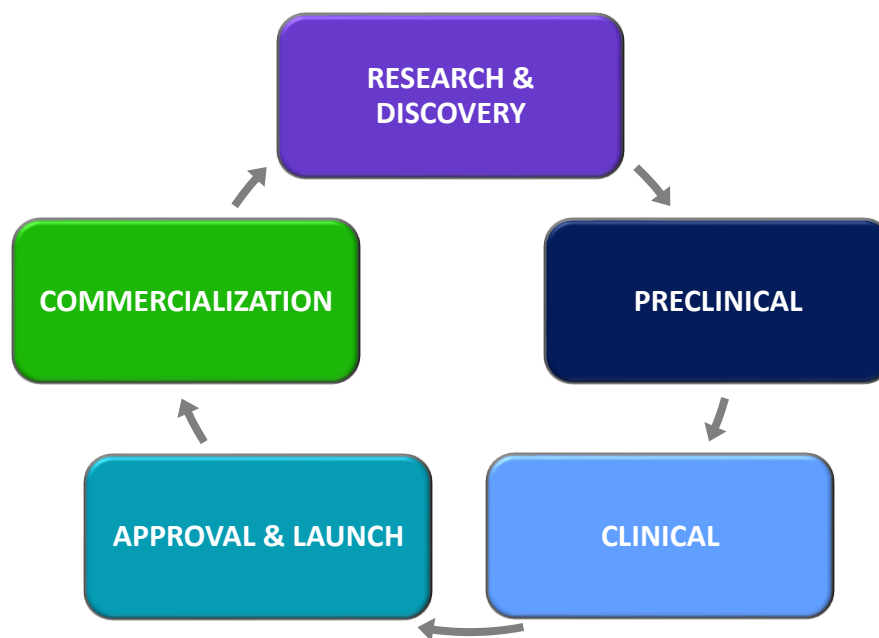
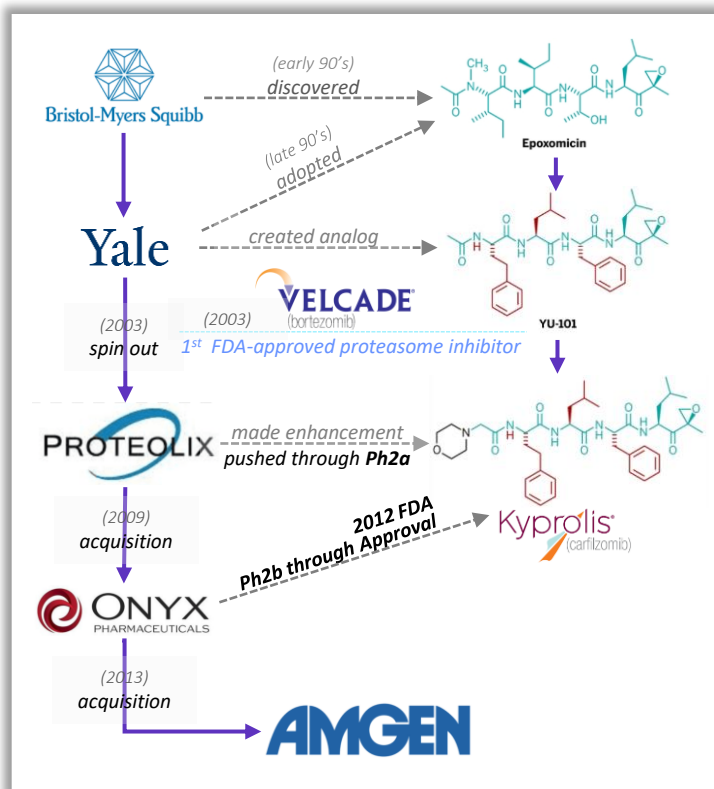
The screenshot displays the Cortellis Drug Discovery Intelligence dashboard. At the top, the Cortellis logo is on the left, and navigation options like 'Explore' and 'en' are on the right. A search bar with 'Search Cortellis' and buttons for 'Index' and 'Full Text' is present. A banner for 'Cortellis Supply Chain Network' is also visible. The main content area is divided into several sections:

- Drug Discovery Intelligence:** Includes buttons for 'Go to Drug Research Advisor' and 'Go to Drug Discovery Intelligence'. Below it, a 'Competitive Intelligence' section features a sidebar with filters for 'Drugs', 'Literature', 'Patents', and 'Patent gazette'. The main area shows 'Drugs From 07/09/2021 To 14/09/2021' and 'Active drugs coverage by highest status'.
- Deals Intelligence:** Features a 'Deals' section with a 'Latest | By date' filter and a list of deals, including one from 'University of Erlangen to study efficacy of Marinomed's Carrageose lo...'. There are buttons for 'Go to Deal Trends' and 'Go to Deal Predictions'.
- Clinical Trials Intelligence:** Includes 'Clinical Trial Sites' (with a world map), 'Clinical trials' (with a group of people), and an 'Analysis' section for 'Clinical trials timeline' with input fields for 'Condition' and 'Recruitment status' and an 'Analyze' button.

Innovation life cycle on selected example *Kyprolis*

Following Kyprolis as an example of an asset's journey

From discovery through in-market for its first indication, Multiple Myeloma



PHASE 1 RESEARCH, DISCOVERY AND PRECLINICAL

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- Tap into international & emerging markets

EPOXOMICIN, A NEW ANTITUMOR AGENT OF MICROBIAL ORIGIN

By: HANADA, M (HANADA, M); SUGAWARA, K (SUGAWARA, K); KANETA, K (KANETA, K); TODA, S (TODA, S); NISHIYAMA, Y (NISHIYAMA, Y); TOMITA, K (TOMITA, K); YAMAMOTO, H (YAMAMOTO, H); KONISHI, M (KONISHI, M); OKI, T (OKI, T)

JOURNAL OF ANTIMIOTICS
 Volume: 45 Issue: 11 Pages: 1746-1752
 DOI: 10.7164/antibiotics.45.1746
 Published: NOV 1992
 Document Type: Article

Abstract
 An actinomycete strain No. Q996-17 produced a novel compound, **epoxomicin**, which exhibited in vivo **antitumor** activity against B16 melanoma. Structural studies indicated that it is a new member of the epoxy-beta-aminoketone group, and is closely related to eponemycin.

Keywords
 Keywords Plus: BIOLOGICAL-ACTIVITY; MELANOMA

Author Information
 Corresponding Address: HANADA, M (corresponding author)
 BRISTOL MYERS SQUIBB, RES INST, 2-9-3 SHIMOMEGURO, MEGURO KU, TOKYO 153, JAPAN

Categories/Classification
 Research Areas: Biotechnology & Applied Microbiology; Immunology; Microbiology; Pharmacology & Pharmacy

Journal information
 Journal Of Antibiotics
 ISSN: 0021-8820
 Current Publisher: NATURE PUBLISHING GROUP, MACMILLAN BUILDING, 4 CRINAN ST, LONDON N1 9XW, ENGLAND
 Impact factor: Journal Citation Report
 Research Areas: Biotechnology & Applied Microbiology; Immunology; Microbiology; Pharmacology & Pharmacy
 Web of Science Categories: Biotechnology & Applied Microbiology; Immunology; Microbiology; Pharmacology & Pharmacy

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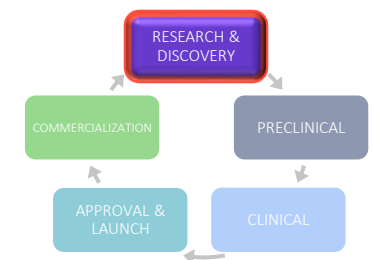
- 1 Irreversible inhibitors of serine, cysteine, and threonine proteases
 Powers, JC; Asejan, JL; (-); James, KE
 Dec 2002 | [Chemical Reviews](#)
 778 Citations
 764 References
[Full Text at Publisher](#)
- 2 Epoxomicin, a potent and selective proteasome inhibitor, exhibits in vivo antiinflammatory activity
 Meng, LH; Mohan, B; (-); Crews, CM
 Aug 31 1999 | [Proceedings Of The National Academy Of Sciences Of The United States Of America](#)
 746 Citations
 43 References
[Free Full Text From Publisher](#)
- 3 Potent activity of carfilzomib, a novel, irreversible inhibitor of the ubiquitin-proteasome pathway, against preclinical...
 Kuhn, D; Chen, Q; (-)
 Nov 1 2007 | [Blood](#)
 508 Citations
 43 References
 The proteasome has reversible proteasome not respond to bortezomib

Author Information
 Corresponding Address: Crews, CM (corresponding author)
 Yale Univ, Dept Mol Cellular & Dev Biol, 219 Prospect St, New Haven, CT 06520 USA
 E-mail Addresses: craig.crews@yale.edu
 Categories/Classification
 Research Areas: Science & Technology - Other Topics

Funding

Funding agency	Grant number
United States Department of Health & Human Services National Institutes of Health (NIH) - USA NIH National Cancer Institute (NCI)	R01CA074967
United States Department of Health & Human Services National Institutes of Health (NIH) - USA NIH National Cancer Institute (NCI)	R01 CA074967-03 CA74967

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<input type="checkbox"/> BIOSIS Citation Index	508	<input checked="" type="checkbox"/> Data Citation Index
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<input type="checkbox"/> MEDLINE®	425	<input checked="" type="checkbox"/> Derwent Innovations Index
<input type="checkbox"/> Current Contents Connect	373	<input type="checkbox"/> Chinese Science Citation Database™

0/59 Sort by: Citations: high

1 Alterations of the Intracellular Peptidome in Response to the Proteasome Inhibitor Bortezomib.
[Berezniuk, Iryna; Dasgupta, Sayani; \(...\); Sironi, Juan](#)
2013 | Figshare 1 | Data study | 1

Bortezomib is an antitumor drug that competitively inhibits proteasome beta-1 and beta-5 subunits. While the impact of bortezomib on protein stability is known, the effect of this drug on intracellular peptides has not been previously explored. A quantitative peptidomics technique was used to effect of treating human embryonic kidney 293T (HEK293T) cells with 5-500 nM bortezomib for various lengths of time (30 minute ... Show more

[View data](#) ***

2 Linkage of Bacterial Protein Synthesis and Presentation of MHC Class I-Restricted Listeria monocytogenes-Derived Antigenic Peptides
[Graulig-Halam](#)
2012 | Figshare 1 | Data study | 1

The processing of monocyctogenes processing to a ...

[View data](#) ***

3 GSE22853: E...
[Krueger, Elke](#) and
2010 | Gene Exp...
Coordinated reg...
requirements. T...
proteolytic activ...

[View data](#) ***

4 Transcriptio...
[Chang, Allen HK](#)
2009 | ArrayExpr...
The objective of...
that are activate...
responsible for...

[View data](#) ***

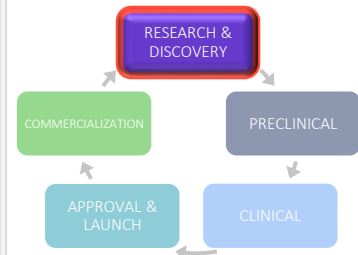
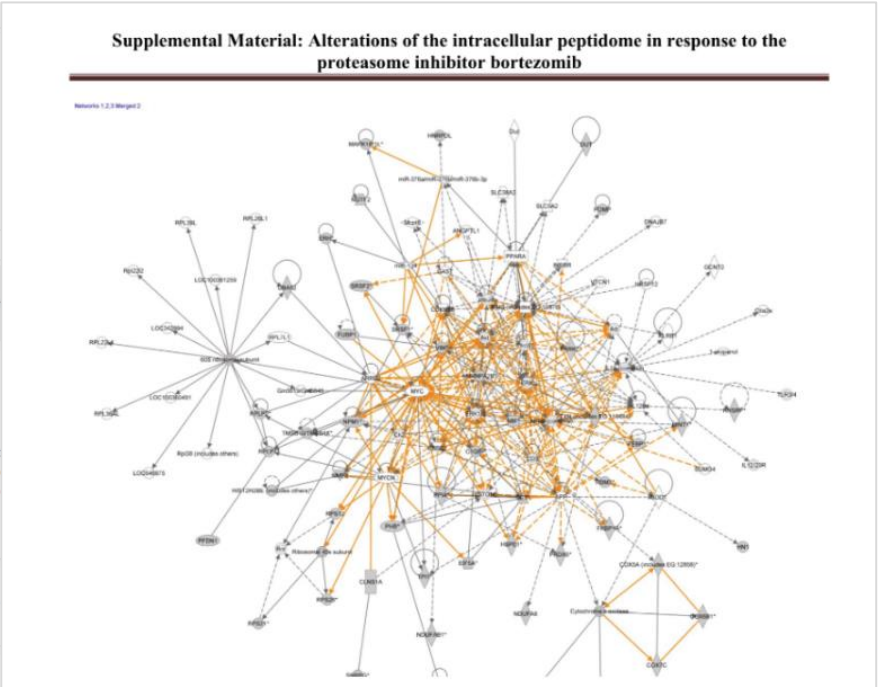
Alterations of the Intracellular Peptidome in Response to the Proteasome Inhibitor Bortezomib.

By: Berezniuk, Iryna; Dasgupta, Sayani; Castro, Leandro M; Gozzo, Fabio C; Ferro, Emer S; Fricker, Lloyd D; Gelman, Julia S; Sironi, Juan
Figshare
Volume: 1
Source URL: http://figshare.com/articles/Alterations_of_the_Intracellular_Peptidome_in_Response_to_the_Proteasome_Inhibitor_Bortezomib_/114879
Published: 2013
Indexed: 2013-08-31
Document Type: Data study

Abstract
Bortezomib is an antitumor drug that competitively inhibits proteasome beta-1 and beta-5 subunits. While the impact of bortezomib on protein stability is known, the effect of this drug on intracellular peptides has not been previously explored. A quantitative peptidomics technique was used to examine the effect of treating human embryonic kidney 293T (HEK293T) cells with 5-500 nM bortezomib for various lengths of time (30 minutes to 16 hours), and human neuroblastoma SH-SY5Y cells with 500 nM bortezomib for 1 hour. Although bortezomib treatment decreased the levels of some intracellular peptides, the majority of peptides were increased by 50-500 nM bortezomib. Peptides requiring cleavage at acidic and hydrophobic sites, which involve beta-1 and -5 proteasome subunits, were among those elevated by bortezomib. In contrast, the proteasome inhibitor epoxomicin caused a decrease in the levels of many of these peptides. Although bortezomib can induce autophagy under certain conditions, the rapid bortezomib-mediated increase in peptide levels did not correlate with the induction of autophagy. Taken together, the present data indicate that bortezomib alters the balance of intracellular peptides, which may contribute to the biological effects of this drug.

Keywords
Author Keywords: Cancer; Biochemistry; inhibitor; bortezomib; peptidome; Proteasome; intracellular; alterations
Categories/Classification
Research Areas: Science & Technology - Other Topics
Web of Science Categories: Multidisciplinary Sciences

+ See more data fields

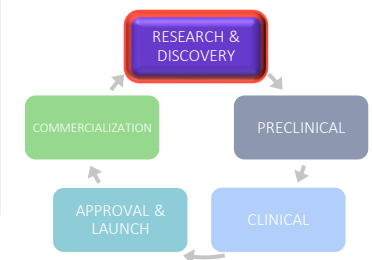
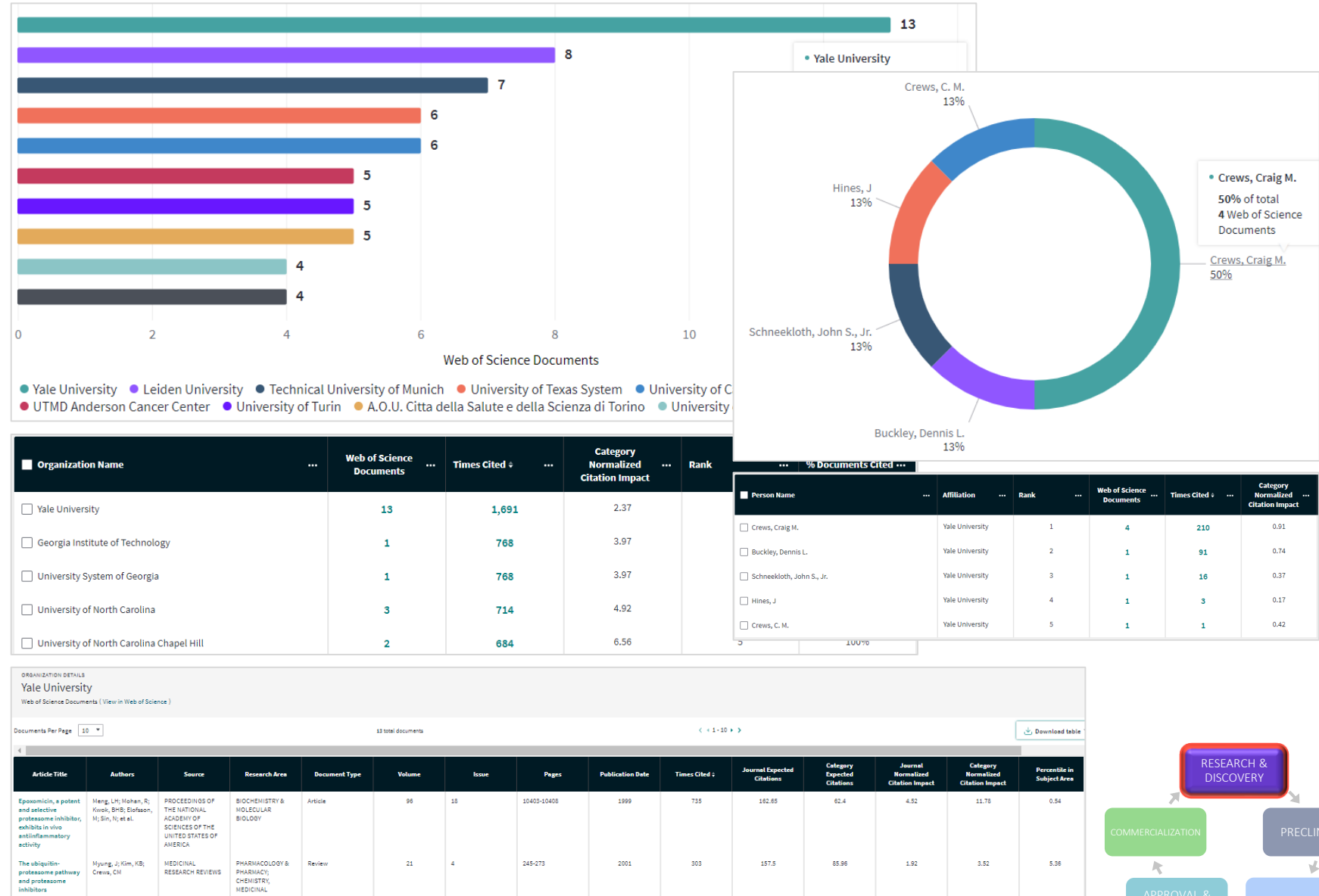


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WO2005105827A2

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Key summary data

Patent ❌ Dead DWPI family ✅ Alive View details INPADOC family ✅ Alive View details Original assignee PROTEOLIX INC., US Optimized assignee AMGEN INC	Publication date 2005-11-10 Expiration date - View factors Remaining life -
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Bibliography

DWPI title
New compounds for enzyme inhibition, useful for treating inflammation, muscle wasting disease, cancer, chr

Original Title
COMPOUNDS FOR ENZYME INHIBITION
COMPOSES POUR L'INHIBITION ENZYMATIQUE

English Title
COMPOUNDS FOR ENZYME INHIBITION

Assignee/Applicant
Standardized: [PROTEOLIX INC](#) [SMYTH MARK S](#) [LAIDIG GUY J](#) [BORCHARDT RONALD T](#) [BUNIN](#)
Original: PROTEOLIX INC., 225 Gateway Boulevard, South San Francisco, CA 94080, US

Abstract

DWPI abstract
(US20050245435A1)

Novelty
A compound for enzyme inhibition is new.

Detailed description
A compound having a structure of formula (I), (II), (III), or its salt, Formula (I), or Formula (II), where A=C=O, C=S, or SO₂, or optionally a covalent bond when adjacent to an occurrence of Z; L=absent or is C=O, C=S, or SO₂, preferably L is absent or C=O; M=absent or is C₁₋₁₂ alkyl; Q=absent or is O, NH, or N-C₁₋₆ alkyl; Y=absent or is O, NH, N-C₁₋₆ alkyl, S, SO, SO₂, CHOR¹⁰, or CHCO₂R¹⁰; Z=O, S, NH, and N-C₁₋₆ alkyl, or optionally a covalent bond when adjacent to an occurrence of A; R¹-R⁴=C₁₋₆ alkyl, C₁₋₆ hydroxyalkyl, C₁₋₆ alkoxyalkyl, aryl, or C₁₋₆ aralkyl, any of which is optionally substituted with one or more of amide, amine, carboxylic acid (or its salt),

Case Activity

Powered by [darts-ip](#) Part of [Clarivate](#)

WO2005105827A2 in case history
20 The patent **WO2005105827A2** appears in 20 cases.

PLAINTIFF	DEFENDANT	JURISDICTION
-	PROTEOLIX	Brazil
Onyx Therapeutics	Breckenridge Pharmaceutical	United States
Onyx Therapeutics	Cipla (+1 more party)	United States
-	Onyx Therapeutics	India
Onyx Therapeutics	Breckenridge Pharmaceutical	United States

15 more cases on Darts-ip [View cases](#)

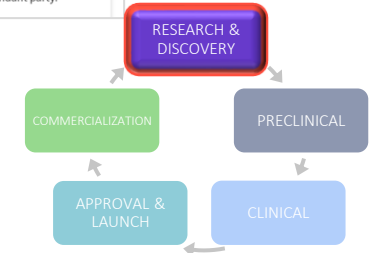
PROTEOLIX as plaintiff
0 No cases found

PROTEOLIX as defendant
20 **PROTEOLIX** appears in 20 cases as the defendant party.

Top inventors

Created 2020-09-10

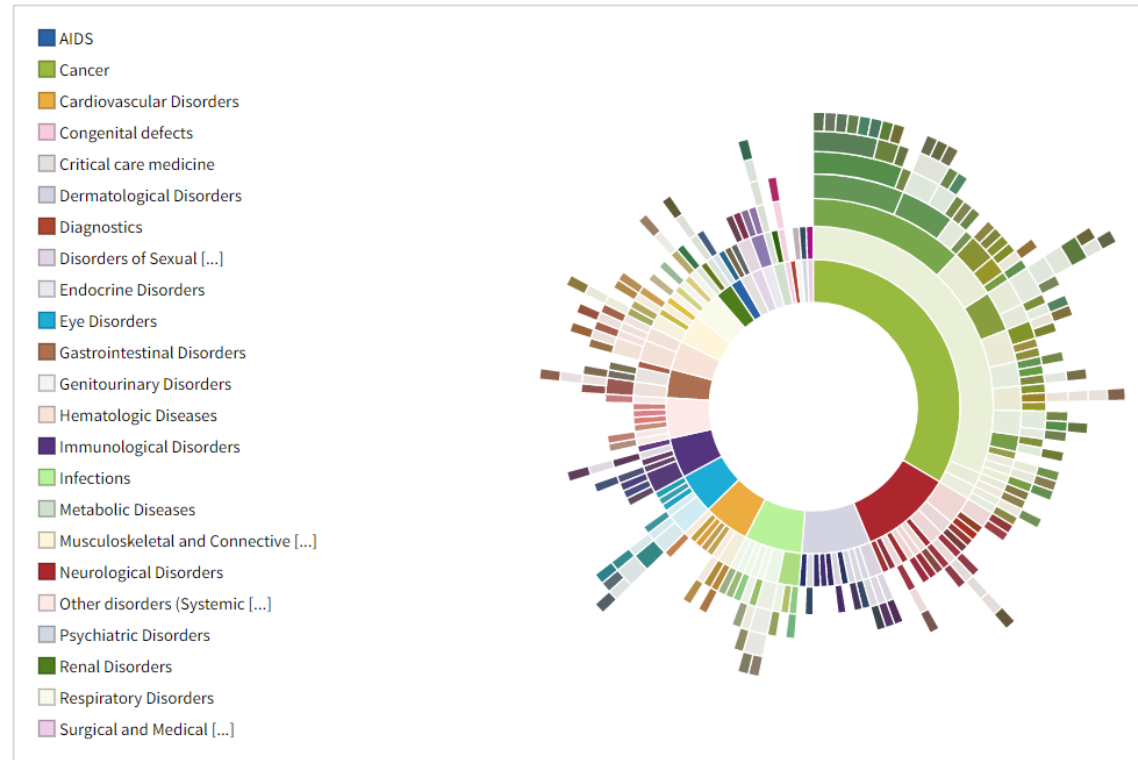
Inventor	Record count
1. Other	1349
2. Buggy, Joseph J.	56
3. GALMARINI, Carlos María	50
4. Loury, David J.	48
5. AVILÉS MARÍN, Pablo Manuel	47
6. GARCÍA FERNÁNDEZ, Luis Francisco	46
7. GUILLÉN NAVARRO, María José	46
8. MONEO OCAÑA, Victoria	46
9. Fyfe, Gwen	46
10. Elias, Laurence	44



Cortellis Drug Research Advisor – Target Druggability

Game-changing interactive target ID & validation tool

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- Verify if you have the best target
- Run a preliminary patent novelty check
- Investigate competition
- Prioritize your target



Lists

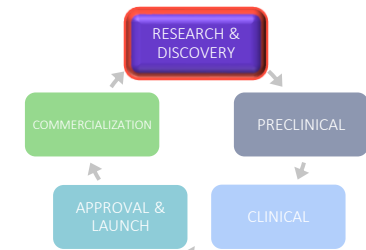
- Drugs
- Pathway maps
- Animal models
- Genetic evidence citations
- Patents
- References

Target prioritization: Complete novelty | **Condition novelty** | Early development | No prioritization

Cancer

Rank	Target main name	Gene symbol	Number of related records				
			Drugs	Experimental pharmacology	Animal models	Biomarker uses	Genetic evidence
	<input checked="" type="checkbox"/> Select targets <input type="checkbox"/> Deselect		filtered (total)		filtered (total)	filtered (total)	filtered (total)
1	<input checked="" type="checkbox"/> Ubiquitin carboxyl-terminal hydrolase BAP1	[SYN] BAP1			0 (10)	1 (336)	1 (276)
2	<input checked="" type="checkbox"/> Ubiquitin carboxyl-terminal hydrolase CYLD	[SYN] CYLD		2	0 (8)	12 (163)	9 (121)
3	<input checked="" type="checkbox"/> Hyaluronan-binding protein 2	[SYN] HABP2		37	0 (2)	0 (144)	1 (26)
4	<input checked="" type="checkbox"/> Disintegrin and metalloproteinase domain-containing protein 23	[SYN] ADAM23				0 (81)	1 (26)
5	<input checked="" type="checkbox"/> A disintegrin and metalloproteinase with thrombospondin motifs 18	[SYN] ADAMTS18				1 (72)	1 (30)
6	<input checked="" type="checkbox"/> A disintegrin and metalloproteinase with thrombospondin motifs 14	[SYN] ADAMTS14				0 (57)	1 (18)
7	<input checked="" type="checkbox"/> Calpain-5	[SYN] CAPN5	0 (1)		0 (3)	0 (62)	1 (21)
8	<input checked="" type="checkbox"/> A disintegrin and metalloproteinase with thrombospondin motifs 19	[SYN] ADAMTS19				0 (36)	1 (12)
9	<input checked="" type="checkbox"/> Ubiquitin carboxyl-terminal hydrolase 49	[SYN] USP49				0 (17)	1 (12)
10	<input checked="" type="checkbox"/> Ubiquitin carboxyl-terminal hydrolase 17-like protein 11	[SYN] USP17L11				0 (2)	1 (1)

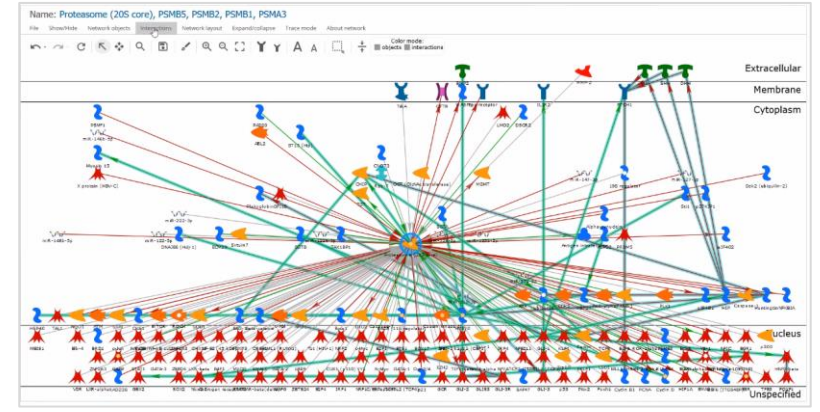
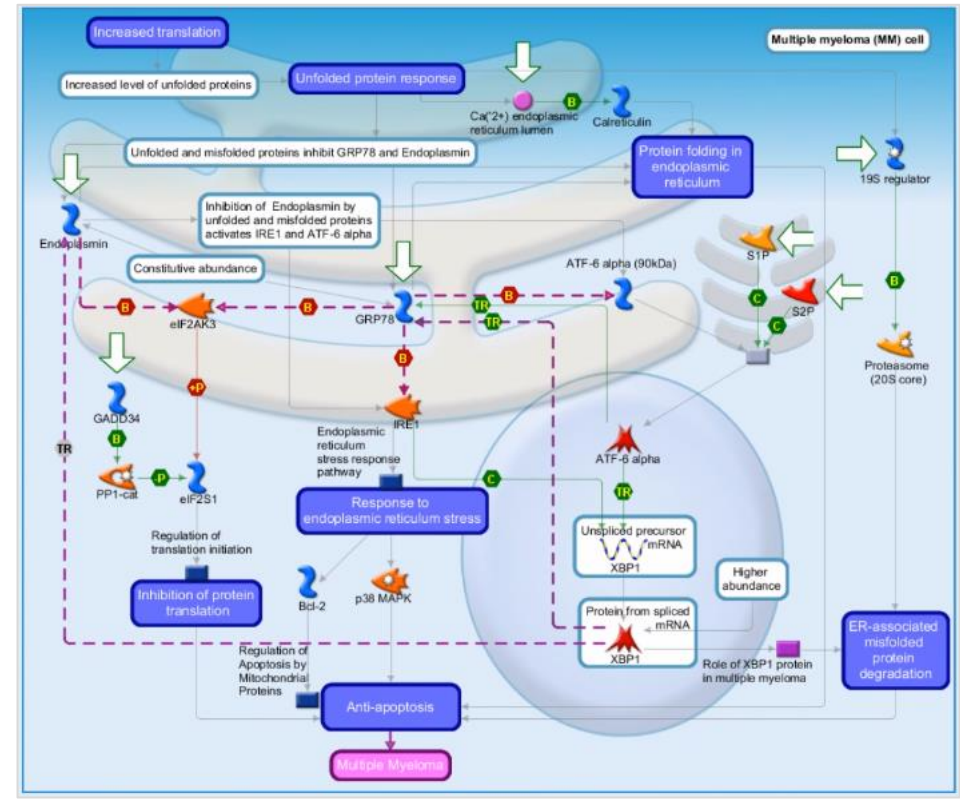
Increase the likelihood of selecting the best-in-class or first-in-class asset.



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- Visualize how your target works
- Examine genetic evidence
- Gain a molecular understanding of the disease
- Identify novel biomarkers



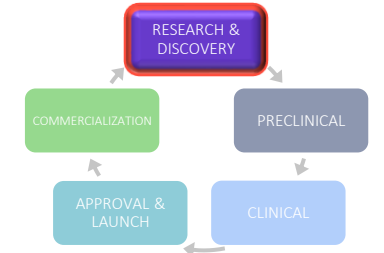
Accelerate biomarker discovery and make better initial go/no-go decisions on your target.

Multiple Myeloma

Table of Contents

Causal Associations (by Gene)

#	Gene	Alteration Level	Alteration Type	Alteration Subtype	Details	Abundance	Activity/Gain/Loss of Function	Normal/Pathology Concentration	Subcellular Localization Change	Organ/Tissue Distribution	Disease	Info
1	IGFBP2	DNA level	Epigenetics	Methylation	IGFBP2_HUMAN_Methylation	up				Bone Marrow	Multiple Myeloma	
2	CDKN2C	DNA level	Gene rearrangements	Large Deletion	CDKN2C_HUMAN_Deletion					Plasma Cells	Multiple Myeloma	
3	CD4	DNA level	Haplotype/SNP		CD4_HUMAN_rs2072212(C) / CD4_HUMAN_rs2072212(C)					Blood	Multiple Myeloma	
4	CDKN2A	DNA level	Epigenetics	Methylation	CDKN2A_HUMAN_Methylation	up, Indifferent	Indifferent, down			Bone Marrow Cells, Bone Marrow, Leukocytes, Mononuclear, Plasma Cells, Blood	Multiple Myeloma, Leukemia, Plasma Cell	
5	IL18	DNA level	Haplotype/SNP		IL18_HUMAN_rs1143622(C) / IL18_HUMAN_rs1143622(C)					Leukocytes, Mononuclear	Multiple Myeloma	
6	L6G3	DNA level	Haplotype/SNP		L6G3_HUMAN_rs3762722(A) / L6G3_HUMAN_rs3762722(A)					Blood	Multiple Myeloma	
7	IL18	DNA level	Haplotype/SNP		IL18_HUMAN_rs1143622(C)					Leukocytes, Mononuclear	Multiple Myeloma	
8	L6G3	DNA level	Haplotype/SNP		L6G3_HUMAN_rs2365094(C) / L6G3_HUMAN_rs2365094(C)					Blood	Multiple Myeloma	
9	CYP2C8	DNA level	Haplotype/SNP		CYP2C8_HUMAN_rs1934980(C)					Blood	Multiple Myeloma	
10	IL6-AS1	DNA level	Haplotype/SNP		IL6-AS1_HUMAN_rs1800797(A)					Blood	Multiple Myeloma	



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- Examine drug-drug interactions

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Entry Number	Highest Phase	Code Name	Generic Name	Brand Name	Product Category	Therapeutic Group	Mechanism of Action	Organization
<input type="checkbox"/> 91537	Withdrawn - 2007	Bay-9-128 RP-9221	Aprotinin	Trasylol		Breast Cancer Therapy Hemostatics	Serine Protease Inhibitors	Bayer (Originator) National Cancer Institute (NCI)
<input checked="" type="checkbox"/> 211732	Launched - 1997	AG-1343 ARV-SR0121 LX-312857	Nelfinavir mesilate	Virecept	Radiosensitizers	Anti-Coronavirus (CoV) Drugs Anti-HIV Agents Anti-Herpes Virus Drugs Cervical Cancer Therapy	HIV-1 Protease Inhibitors Proteasome Inhibitors Viral Fusion Inhibitors	Agouron (Originator) Japan Tobacco (JT) Japan Tobacco (Japan Tobacco (JT)) Maastricht Radiation Oncology (MAASTRO)
<input type="checkbox"/> 199183	Launched - 1996	L-735524 MK-639	Indinavir sulfate	Crixivan		Anti-HIV Agents Kaposi's Sarcoma Therapy	HIV Protease Inhibitors	Istituto Superiore di Sanita MSD KK (Originator) Merck & Co. (Originator)

Drug-Drug Interactions

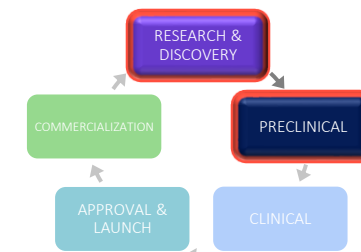
Prescription

0 Contraindicated	0 Not Recommended	0 Warning/Precaution	8 No Interaction	14 Beneficial	0 Undisclosed
----------------------	----------------------	-------------------------	---------------------	------------------	------------------

▼ Apply Filters ⚙ Sorted by relevance ⌵ Expand all Showing 1-20 of 22 Drug-Drug Interactions records for "Carfilzomib"

<input type="checkbox"/>	Evaluated Entity	Interacting Entity	Interaction Type	Outcome	Prescription	Population / Study Model	
<input type="checkbox"/>	> Dexamethasone	Carfilzomib	Pharmacokinetics (ADME)	No Interaction	No Interaction	Humans	View record
<input type="checkbox"/>	> Carfilzomib	Dexamethasone	Pharmacokinetics (ADME)	No Interaction	No Interaction	Humans	View record
<input type="checkbox"/>	> Lenalidomide	Carfilzomib	Pharmacodynamics	Pharmacodynamics	Beneficial	Humans/Adult/Multiple myeloma	View record
<input type="checkbox"/>	> Lenalidomide	Carfilzomib	Pharmacodynamics	Pharmacodynamics	Beneficial	Humans/Asian/Adult/Multiple myeloma	View record
<input type="checkbox"/>	> Selinexor	Carfilzomib	Pharmacodynamics	Pharmacodynamics	Beneficial	Mice/Multiple myeloma:Severe combined immunodeficiency disease (SCID)	View record

Make better informed go/no-go pipeline and competitor-based decisions.



Cortellis CDDI – Biomarkers

Broadest coverage of biomarker uses at every stage of Drug R&D

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- Classify biomarkers into lifecycle phases

Increase your probability of success in clinical trials, and accelerate drug development.

Biomarkers ▾ "Protease Inhibitors" 🔍 ⚙️

Biomarkers **Biomarker Uses** Biomarker Kits

▼ Apply Filters ⚡ Sorted by relevance Showing 1-20 of 8544 Biomarker Uses records for "Protease Inhibitors"

Biomarker Uses - C... (620) ✕

<input type="checkbox"/> ? Biomarker Name	Indication	Population	Role	Highest Validity	Drugs	Supporting	Supporting / Conflicting	Conflicting	
<input type="checkbox"/> Alanine transaminase	C Sepsis, severe	Adult	Monitoring Treatment Efficacy	Late Studies in Humans	1	1	0	0	View Use
<input type="checkbox"/> Creatine Kinase, MB Form	Tx Systemic inflammatory response syndrome	Cardiovascular Disorders	Monitoring Treatment Efficacy	Late Studies in Humans	1	1	0	0	View Use
<input type="checkbox"/> Antithrombin III- protease complex	C Occlusion, arterial coronary	High Risk	Monitoring Treatment Efficacy	Late Studies in Humans	1	1	0	0	View Use
<input type="checkbox"/> Hemoglobin	C Occlusion, arterial coronary	High Risk	Monitoring Treatment Efficacy	Late Studies in Humans	1	1	0	0	View Use
<input type="checkbox"/> Lactate Acid	C Sepsis, severe	Adult	Monitoring Treatment Efficacy	Late Studies in Humans	1	1	0	0	View Use

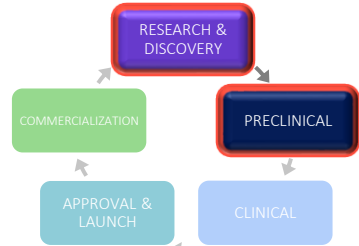
Biomarker Use Record Biomarker Kits

General Information

Biomarker Name	Caspase-3	Role	Monitoring Treatment Efficacy
Indication Type	Condition	Highest Validity	Early Studies in Humans
Indication	Multiple myeloma	Population	All

Techniques & Substrates

Technique	Substrate	Validity	Drugs	Genetic Variants	Supporting	Supporting/Conflicting	Conflicting
Not specified	Not specified	Experimental	4	0	3	0	0
Spectrophotometry	Cell lysates	Experimental	2	0	1	1	0
High Throughput Nucleotide Sequencing	DNA	Early Studies in Humans	0	0	0	0	1
Real Time PCR	mRNA	Experimental	1	0	1	0	0
Immunofluorescence	Cell lysates	Experimental	1	0	1	0	0



OFF-X

The largest translational safety & toxicity intelligence portal

- Anticipate toxicity & safety events
- Examine the safety profile of in-licensing candidates
- Investigate the toxicity of competing treatments
- Differentiate your asset
- Monitor regulatory concerns and liabilities

Design better and safer protocols which mitigate unintended risks to patients.

ADVERSE EVENT | SYSTEM ORGAN CLASS | TARGET NAME: 20-S PROTEASOME

Show 100 entries

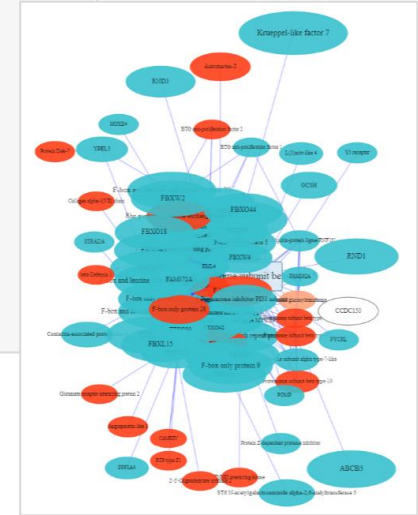
ADVERSE EVENT / SOC	COMPARATIVE GLOBAL ADVERSE EVENT TRANSLATABILITY	BIOLOGICAL ROLE & PRECLINICAL PHARMACOLOGICAL EVIDENCE				CLINICAL PHARMACOLOGICAL EVIDENCE					
		TARGET EXPRESSION (Source: Human Protein Atlas)	HUMAN GENETIC VARIANTS	KNOCKOUT / KNOCKDOWN ANIMAL DATA	IN VITRO DATA / PATIENTS SAMPLE	PRECLINICAL	PHASE I	PHASE II	PHASE III	CLINICAL REGULATORY	POST-MARKETING
All Adverse Events	817	0	0	38	184	308	405	228	1255	499	567
Death (General disorders and adm...)				1	7	3	3	3	11	13	5
Neurotoxicity (Nervous system disorders)				5	6				1	7	4
Neuropathy peripheral (Nervous system disorders)				1	6	8	9	9	12	23	45
Cardiotoxicity (Cardiac disorders)									3	4	7

Heatmap based on OFF-X Drug Score
 Very High Evidence (Red), Medium Evidence (Orange), High Evidence (Yellow), Low Evidence (Light Green), Not Associated (White), Target/Class Evidence Only (Light Blue)

ADVERSE EVENT | SYSTEM ORGAN CLASS | ALERT TYPE

Show 50 entries

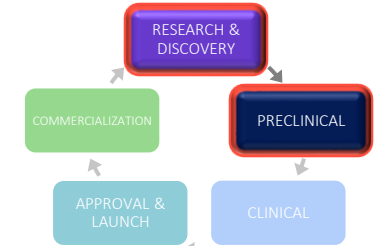
ADVERSE EVENT	SYSTEM ORGAN CLASS	CLASS ALERT	DRUG ALERT	ALERT TYPE									
				BORTEZOMIB LAUNCHED (2009)	CARFILZOMIB LAUNCHED (2012)	DELANTZOMIB LAUNCHED (2015)	IXAZOMIB LAUNCHED (2015)	LACTACISTIN	MARIZOMIB PHASE III	MLN273	OPROZOMIB PHASE I/II		
All Adverse Events	All System Organ Classes	817	25	44	3271	1568	1180	13	471	1	135	4	36
Neuropathy peripheral	Nervous system disorders	4	106										
Thrombocytopenia	Blood and lymphatic system disorders	0	98										
Diarrhoea	Gastrointestinal disorders	0	79										
Nausea	Gastrointestinal disorders	0	79										
Fatigue	General disorders and administration site ...	0	73										
Anaemia	Blood and lymphatic system disorders	0	59										



DRUG NAME: CARFILZOMIB

Show 50 entries

OFF-X DRUG SCORE	ADVERSE EVENT	SYSTEM ORGAN CLASS	ALERT TYPE		ALERT PHASE		NUMBER OF ALERTS	LABEL REFERENCE	
			CLASS ALERT	DRUG ALERT	TARGET DISCOVERY / PRECLINICAL	CLINICAL / POST MARKETING		FDA	EMA
All Adverse Events	302	All System Organ Classes	23	55	1144	79	1117	1196	
Very High Evidence	Anaemia	Blood and lymphatic system dis...	0	26	1	0	26	26	L L
Very High Evidence	Cardiac failure	Cardiac disorders	3	43	1	3	43	46	L L
Very High Evidence	Cardiotoxicity	Cardiac disorders	8	19	1	5	22	27	L L
Very High Evidence	Death	General disorders and administr...	1	22	1	3	20	23	L L
Very High Evidence	Dyspnoea	Respiratory, thoracic and media...	0	26	1	0	26	26	L L



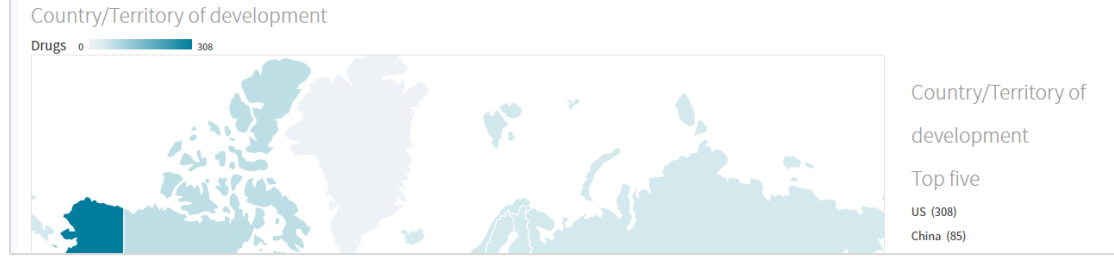
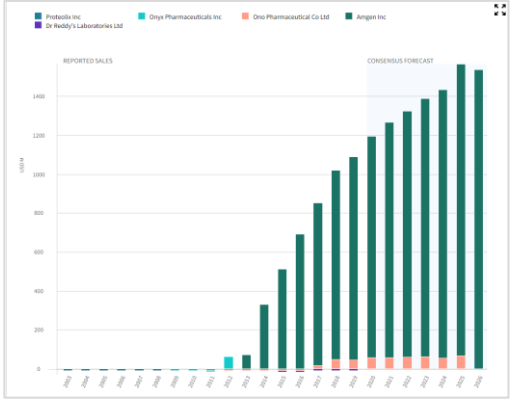
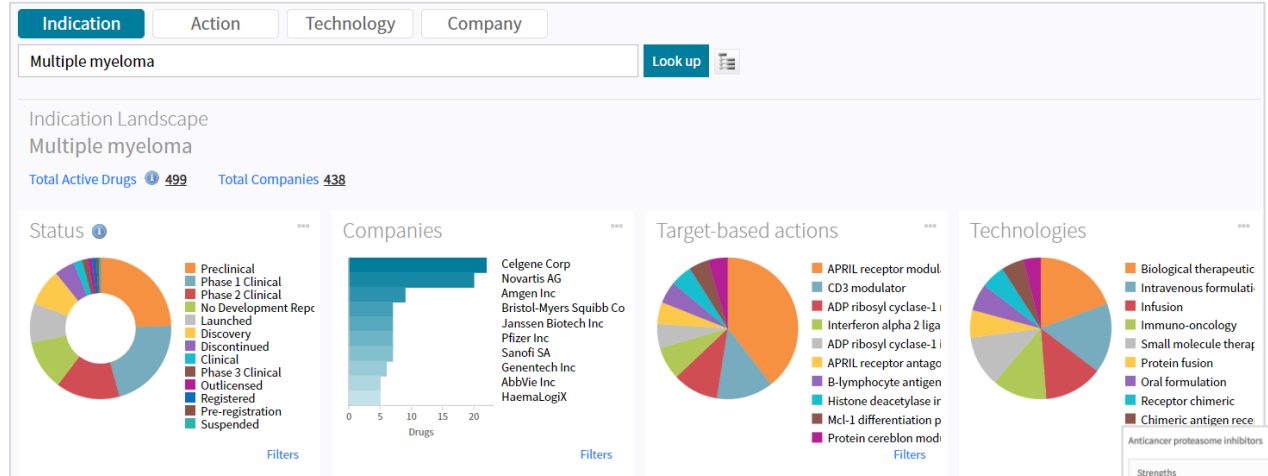
PHASE 2 MARKET ASSESSMENT

Competitive Intelligence

The trusted and industry-leading drug pipeline database

- Efficiently track the competitive landscape
- Understand competitors' product positioning
- Differentiate your asset
- Assess expected product performance
- Determine potential market share
- Examine safety findings

Confidently make critical product, portfolio and competitor-based decisions.



Strengths

- Novel second-generation irreversible proteasome inhibitor; induces apoptosis and cell cycle arrest in multiple myeloma (MM) cells resistant to Velcade [1235208]
- Equal potency to Velcade, but lower incidence of neurotoxicity and neutropenia, possibly due to greater selectivity for the chymotrypsin-like protease and lack of off-target activity resulting from less cross-reactivity at the trypsin and caspase-like proteases in the 26S proteasome [1235212], [1235213]
- Good efficacy in the salvage setting; in phase II studies for relapsed and/or refractory MM, single-agent Kyprolis resulted in an overall response rate (ORR) of 24% and overall survival of 15.6 months; ORR for Velcade-naïve patients was 53% [1198101], [1192705], [1062444]
- Also approved for use in combination with Revlimid and dexamethasone in relapsed MM, based on ASPIRE data which showed a progression-free survival (PFS) of 29 months, an unprecedented PFS benefit in second-line treatment; safety was also confirmed, vindicating the drug from previous concerns of potential cardiac, renal and pulmonary toxicities [1880249]
- ENDEAVOR showed an impressive 50% reduction in risk of disease progression for Kyprolis plus dexamethasone compared with Velcade plus dexamethasone (median PFS of 18.7 versus 9.4 months, median duration of response of 21.3 versus 10.4 months, and median overall survival of 47.8 versus 38.8 months, respectively) in patients with relapsed MM [1637451], [1664217], [1527893]

Weaknesses

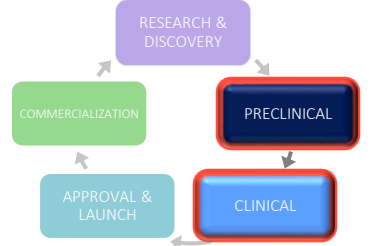
- Only approved in relapsed MM [1310245]
- The phase III CLARION trial in frontline MM missed its primary endpoint of superiority over Velcade in PFS (22.3 versus 22.1 months) [1799376]
- The FOCUS trial testing Kyprolis versus best supportive care in relapsed/refractory MM did not achieve its primary endpoint of improving median overall survival (10.2 and 10.0 months, respectively) [1585336], [1596111]
- Safety concern of cardiac toxicity; the label notes 6 and 8% rates of cardiac failure reported in two trials. Also of renal and pulmonary toxicity (renal insufficiency, including renal failure, in 10% and dyspnea in 28% of patients) [1310245]
- Label also warns of pulmonary hypertension, tumor lysis syndrome, hepatic toxicity and failure, and venous thrombosis and hemorrhage [1310245]
- The most common adverse events reported in at least 20% of patients include anemia, fatigue, thrombocytopenia, dyspnea, diarrhea and cough [1310245]
- Inconvenience of frequent intravenous dosing (2 consecutive days each week for 3 weeks, followed by 12 days rest period) [1310245]
- Development in other indications, including chronic lymphocytic leukemia and small-cell lung cancer, has presumably been [1172398], [1235430], [1310245], [1572624]
- Generic entry in Europe of market leader Velcade in 2015 could also

Opportunities

- Disease burden; MM is the second most common hematological cancer, affecting approximately 230,000 people worldwide, with an estimated 114,000 new cases diagnosed annually. Also increasing prevalence of MM due to better diagnosis and improved patient survival [1676798], [1398970]
- Around 70% of patients with active MM are not eligible for stem cell transplantation due to age or other health conditions and will be reliant on drug-based therapies. The majority of patients with MM relapse and require additional therapy [1573690], [1398970]

Threats

- Pomalyst, which was approved in the salvage setting in February 2013 and has compelling response rates [1368875], [1268895]
- Competition from entrenched market leaders Velcade and Revlimid, although these are usually used more in the front-line setting, as well as other established drugs including thalidomide, peripheral neuropathy is a more limited concern with the subcutaneous version of Velcade which may negate Kyprolis's toxicity advantage [1172398], [1235430], [1310245], [1572624]
- Generic entry in Europe of market leader Velcade in 2015 could also



Deals Intelligence

The gold standard biopharma deals database

- Quickly examine deal valuations & financial terms
- Easily benchmark funding, licensing, and M&A deals
- Analyze potential partners' deal history
- Inform deal negotiations
- Easily visualize deal trends & deal predictions (Q2 2021)

Make confident buy or build decisions and strike your best possible deal.

Indications: Multiple myeloma ✕ [Clear All](#)

Showing 1-10 of 766 results

Customize Columns ▾ Sorted by Deal Start Date ▾

Start date & Status	Title	Principal Company
10-Jan-2022 Active	Sana Biotechnology to use IASO Bio's BCMA CAR Construct to develop and commercialize in vivo gene therapy and ex vivo hypimmune	Nanjing IASO Biotherapeutic...

Sana Biotechnology to use IASO Bio's BCMA CAR Construct to develop and commercialize in vivo gene therapy and ex vivo hypimmune cell therapy for multiple myeloma

Snapshot	Highlight	Search Terms & Synonyms	< Previous	Next >
Drugs	SNAPSHOT			
Patents	Deal Title	Sana Biotechnology to use IASO Bio's BCMA CAR Construct to develop and commercialize in vivo gene therapy and ex vivo hypimmune cell therapy for multiple myeloma		
Contract	Principal Company	Nanjing IASO Biotherapeutics Co Ltd (China) (Biotech)		
Events	Other Company Names (Principal Company)	Nanjing Xunlu Medical Technology Co Ltd		
Financial	Partner Company	Sana Biotechnology Inc (US) (Biotech)		
Venture Funding	Other Company Names (Partner Company)			
Mergers & Acquisition	Agreement Type	Drug - Development/Commercialization License		
Sources	Deal Asset Type	Drug; Product(s) only		
Similar Deals New	Deal Transaction Type	Basic License (Licensee takes over)		
	Deal Status	Active		
	Territories			
	Total projected value (Current-USD M)	204.00		
	Total projected value (At Signing-USD M)	204.00		
	Total Paid (USD M)	Payment Unspecified		
	Therapy Area	Cancer		
	Indications	Multiple myeloma(Primary)		
	Target-based Actions	APRIL receptor modulator		
	Other Actions	T-lymphocyte stimulator; Anticancer; Genetically engineered autologous cell therapy; Immunostimulant		
	Technologies	Chimeric antigen receptor T cell therapy(Primary); Biological therapeutic; Immuno-oncology; Infusion; Intravenous formulation; Protein fusion; Receptor chimeric		
	Number of Products/Options	Multiple (More than 5)		

Company (Top 10)

US Government	75
National Cancer Institute	51
Bristol-Myers Squibb Co	50
Multiple Myeloma Research Foundation	41
Johnson & Johnson	31
Harvard Medical School	30
Celgene Corp	25
Amgen Inc	24
Dana-Farber Cancer Institute Inc	24
Society	23

[Browse Company](#)

Phase

Total Upfront

Phase	Mean	Median
Phase 1 Clinical	~10	~5
Phase 2 Clinical	~15	~8
Phase 3 Clinical	~12	~6
Pre-registration	~5	~2
Registered	~80	~40
Launched	~60	~10

APPROVAL & LAUNCH CLINICAL

PHASE 3 CLINICAL TESTING

Cortellis Clinical Trials Intelligence

Insights into the landscape of ongoing clinical trials

- Evaluate the design of precedent studies
- Benchmark patient enrollment and timelines
- Define the right endpoints and select biomarkers
- Pinpoint adverse events
- Monitor competing trials
- Search for experienced sites
- Prioritize sites by performance, availability and competition

13733 Clinical Trial results with filter(s) applied: Coronavirus disease 19 Infection

Report Type: Results Per page: 10 Sort by: Last Change Date Most Recent Order Columns

Show selected only: Clinical Trials (483380)

Refine Search: Search within Results

Condition: Coronavirus disease 19 Infection (13733)

Patient Segment: A Clinical Study of Nasya and Rasayan In Post COVID-19 Syndrome

Site Name	City	State / Province / County	Postal Code	Country / Territory	Total Trial Count	Matched Trial Count	Top Therapy Areas
University Hospital for Tumors Ambulance	Zagreb	Grad Zagreb	10000	Croatia	276	33	Cancer; Gastrointestinal;
Sisters of Charity Hospital	Zagreb	Grad Zagreb	10000	Croatia			
Clinical Hospital Dubrava	Dubrava	Zagrebacka	10000	Croatia			
Clinical Hospital Center Rijeka	Rijeka	Primorsko-Goranska	51000	Croatia			
KBC Split	Split	Špišsko-Dalmatinska	21000	Croatia			
Zadar General Hospital	Zadar	Zadarska	23000	Croatia			
Special Hospital for Medical Rehabilitation	Krapinske Toplice	Krapinsko-Zagorska	49217	Croatia			
Merkur Clinical Hospital	Zagreb	Grad Zagreb	10000	Croatia			
Sveti Duh							
General Hospital Karlovac							

University Hospital for Tumors Ambulance

Zagreb Grad Zagreb Croatia 10000

Matched Condition: Cardiovascular disease

Top Therapy Areas: Cancer, Gastrointestinal, Neurology/Psychiatric

Top Sponsors: Roche Holding AG, Hoffmann-La Roche AG, Abbvie Inc

Total Trials: 276, Matched Trials: 33, Ongoing Trials: 74

Site Statistics: 10 Ongoing Matched Trials, 0 Completed Total Trials in past 12 months, 0 Completed Matched Trials in past 12 months

400K+ Global clinical trials, 2900+ Diseases and therapeutic areas, 200K+ Clinical sites across 200+ countries, 39 Trial registries

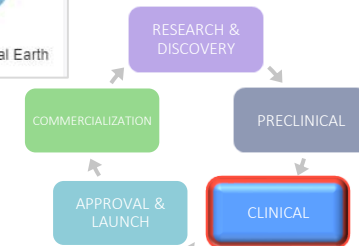
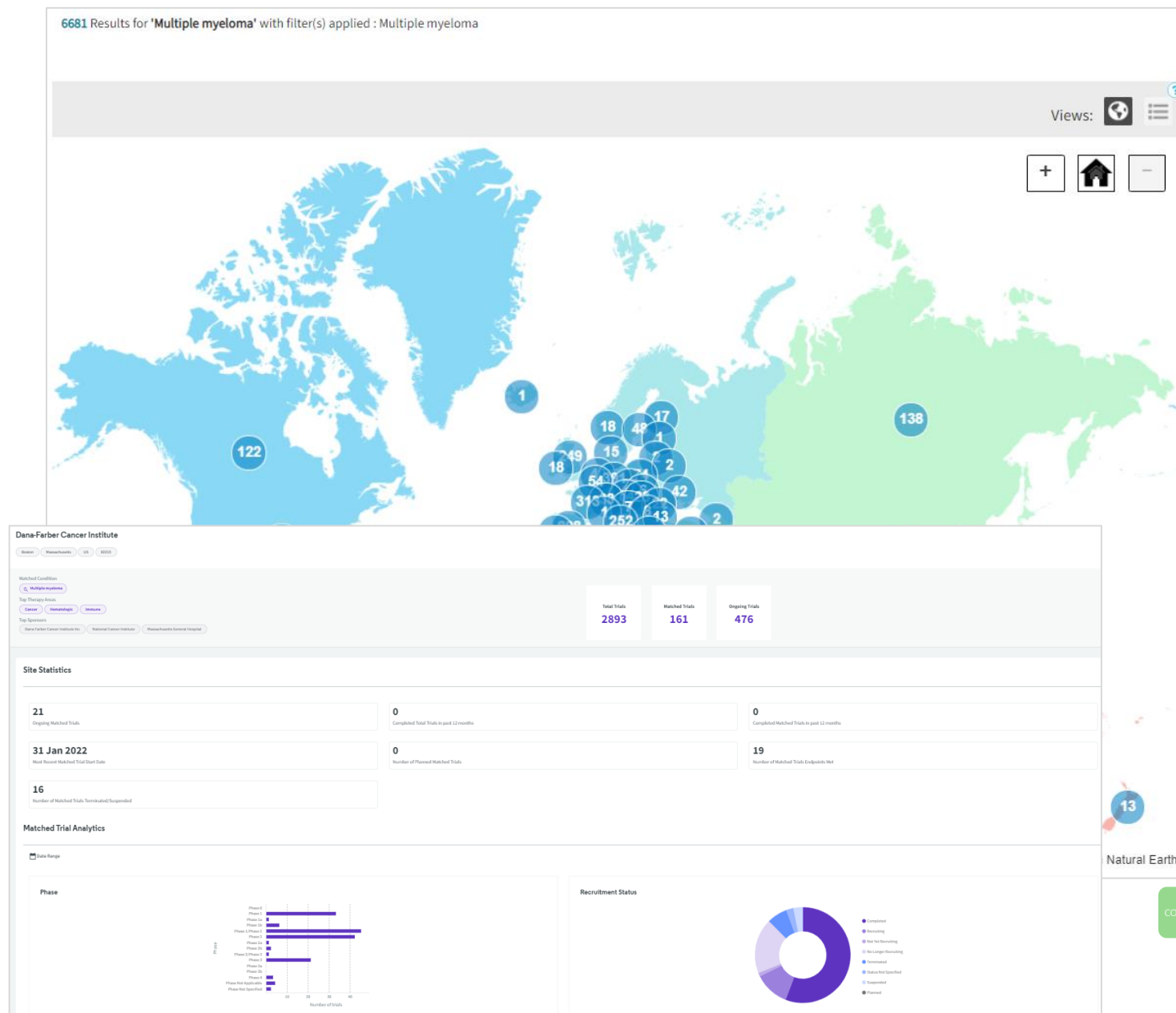
[Download the factsheet →](#)

Cortellis Clinical Trials Intelligence

Insight on global trial sites

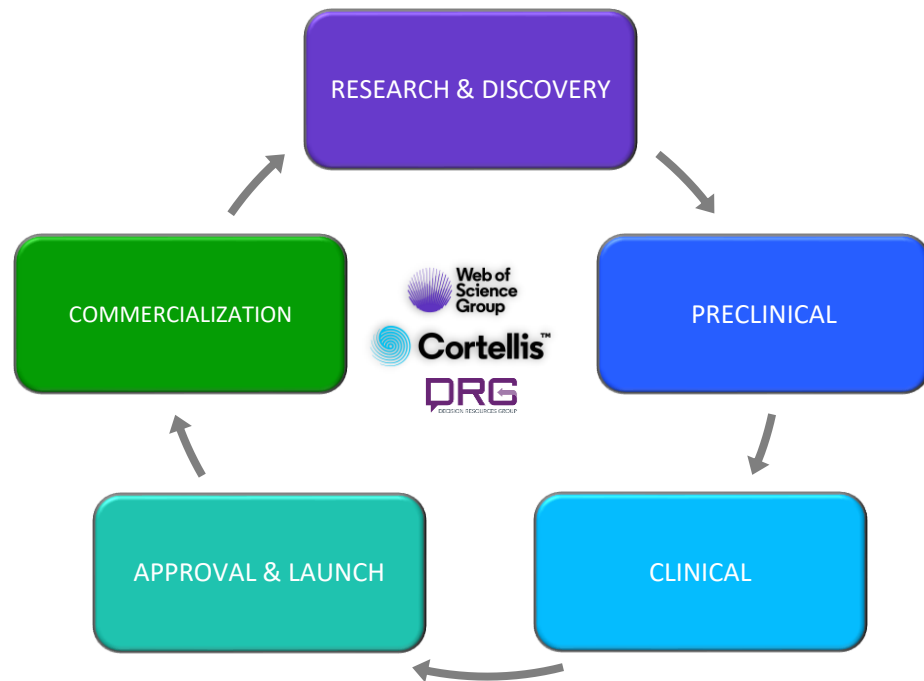
- Search for experienced sites
- Prioritize sites by performance, availability and competition
- Validate CRO input
- Uncover high level incidence and prevalence
- Identify experienced investigators (2022)

Position your clinical trials for greater success by selecting the best sites.



Summary

Unprecedented value from an end-to-end lifecycle perspective that empowers more proactive and better-informed decisions with speed and confidence.



Every product we use, medical treatment we receive and service we consume has been imagined, created and improved in a continuous, connected cycle of innovation.

Clarivate operates at the heart of that lifecycle. We give our customers the lens of clarity—the insights they need to turn bold ideas into life-changing innovations



Vă mulțumesc!

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Solutions Consultant

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www.clarivate.com

Additional resources

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[Web of Science Academy](#) >

[Events & Webinars](#) >

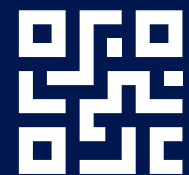
[LibGuides](#) >

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