



Patents & IP Sequences | Clinical Trials | Drug Pipelines

Creating IP Reports Integrating Sequence, Hit Structure, and Family data with BizInt Smart Charts

PIUG 2018 Biotechnology Conference, Boston MA

John Willmore

20 February 2017

www.bizint.com

Agenda

- Building IP Sequence reports
- GenomeQuest data enhancements
- Hit Structure reports
- Other data types

Agenda

- Building IP Sequence reports
- GenomeQuest data enhancements
- Hit Structure reports
- Other data types



BizInt Smart Charts



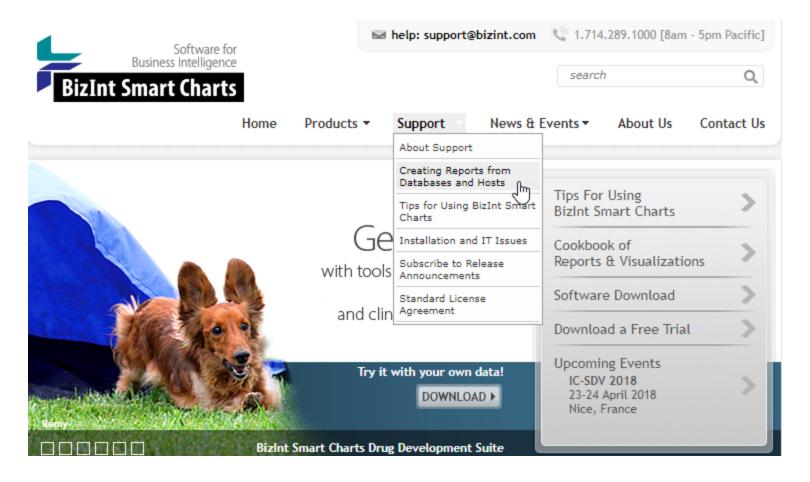
for Patents

IP Sequence Databases

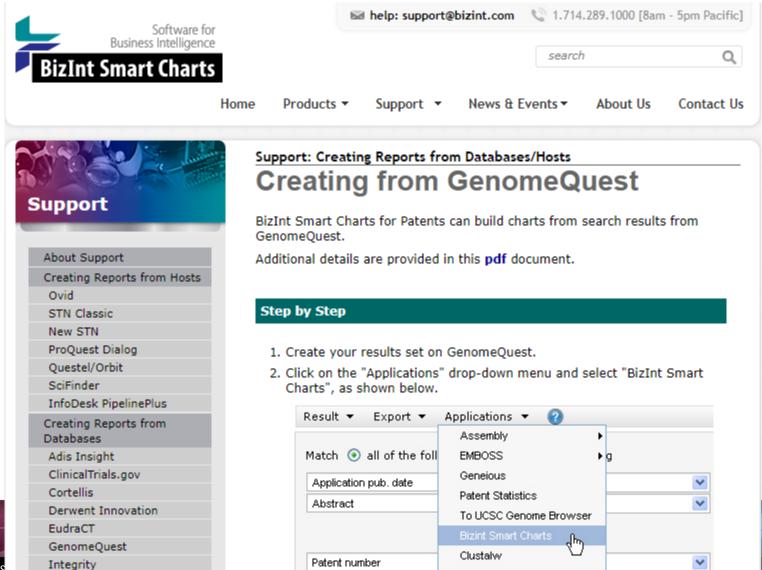
Provide data on sequences filed in patents

- GQ Life Sciences GenomeQuest (Geneseq, GQ-PAT)
- STN (USGENE, DGENE, PCTGEN)

Export your search results



Export from GenomeQuest



Sequence Search

Features of IP Sequences in BizInt reports

- Each row corresponds to a sequence in the context of a query.
- Columns contain bibliographic data, sequence details, and query results.
- You may see the same sequence more than once in a report.
- Family equivalents are not removed.

Sample sequence data report

GQPAT Proteins: Antibodies_GenomeQuest

peptide-based agents for use

with bi-specific antibodies

Production and use of novel

with bi-specific antibodies

use thereof

peptide-based agents for use

Covalently reactive transition

state analogs and methods of

Covalently reactive transition

1	relating to Bacteroides fragilis for diagnostics and therapeutics	PHARMACEUTICALS CORPORATION WALTHAM, MA	007030373-0002	Dacteroides fragilis	s: 340		70.00
2	Expression of microbial proteins in plants for production of plants with improved properties	MONSANTO TECHNOLOGY, LLC ST. LOUIS, MO	US7314974-14121	Pseudomonas fluorescens	Q: 1 s: 597	K-VSNRLY 7 KLVSDLNRLY 606	70.00
3	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS INC. MORRIS PLAINS, NJ	US6962702-0008	Artificial Sequence	Q: 1 s: 24	RSSQSIVHSNGNTYLQ 16 + RSSQSIVHSNGNTYLE 39	93.75
4	Chimeric, human and humanized anti-CSAP monoclonal antibodies	IMMUNIMEDICS, INC. MORRIS PLAINS, NJ	U87387772-0032	Murine sp.	Q: 1 S: 24	RSSQSIVHSNGNTYLQ 16 RSSQSIVHSNGNTYLE 39	93.75
5	Chimeric, human and humanized anti-CSAp monoclonal antibodies	IMMUNOMEDICS, INC. MORRIS PLAINS, NJ	US7414121-0032	Murine sp.	Q: 1 S: 24	RSSQSIVHSNGNTYLQ 16 RSSQSIVHSNGNTYLE 39	93.75
6	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS, INC. MORRIS PLAINS, NJ	US7429381-0008	Artificial Sequence	Q: 1 s: 24	RSSQSIVHSNGNTYLQ 16 RSSQSIVHSNGNTYLE 39	93.75
	Production and use of novel	IMMUNOMEDICS INC.	US6962702-0012	Artificial Sequence	Q: 1	RSSQSIVHSNGNTYLQ 16	93.75

Alignment

11111111111111+

1 RSSQSIVHSNGNTYLQ 16

11111111111111+

1 RSSQSIVHSNGNTYLQ 16

1111111111111+

24 RSSQSIVHSNGNTYLE

1 RSSQSIVHSNGNTYLQ

24 RSSQSIVHSNGNTYLE

24 RSSQSIVHSNGNTYLE

S:

Q:

S:

Q:

S:

0:

Artificial Sequence

Mus musculus

Mus musculus

domesticus

US7429381-0012

US6855804-0042

US7524663-0042

1 KV--SNR-LY 7

Percenta

70.00

93.75

93.75

93.75

Title Seq. ID Number **Organism Species** Patent Assignee Nucleic acid sequences OSCIENT US7090973-6862 Bacteroides fragilis 0:

MORRIS PLAINS, NJ

IMMUNOMEDICS, INC.

BOARD OF REGENTS,

THE UNIVERSITY OF

TEXAS SYSTEM

AUSTIN, TX ADLER; BENJAMIN

MORRIS PLAINS, NJ.

Sample sequence data report - features

GQPAT Proteins: Antibodies_GenomeQuest

	AT 1 Totellis: Allabodies_deliolile@dest											
	Title	Patent Assignee	Organism Species		Alignment		centa					
	Nucleic acid sequences	OSCIENT	Bacteroides fragilis	Q: 1	KVSNR-LY 7	70.0	00					
1	relating to Bacteroides fragilis	PHARMACEUTICALS		s: 340								
	for diagnostics and	CORPORATION										
	therapeutics	VVALTHAM, MA	Pseudomonas	Q: 1	K-VSNRLY 7	70.0	00					
2	Expression of microbial	MONSANTO	fluorescens	S: 597	 KLVSDLNRLY 606							
	proteins in plants for	TECHNOLOGY, LLC										
	production of plants with	ST. LOUIS, MO	Artificial Sequence	Q: 1		16 93.7	75					
3	improved properties			s: 24		39						
	Production and use of novel	IMMUNOMEDICS INC.										
	peptide-based agents for use	MORRIS PLAINS, NJ	Murine sp.	Q: 1		16 93.7	75					
4	with bi-specific antibodies			s: 24		39						
	тип орозино анилошно											
	Chimeric, human and	IMMUNIMEDICS, INC.	Murine sp.	Q: 1		16 93.7	75					
5	book	AINO NII		s: 24	+ RSSQSIVHSNGNTYLE	39						
	ma Bibliographic	Data										
	Bibliograpilio	Data	Artificial Sequence	Q: 1		16 93.7	75					
6	Chimeric, numan and	IMMUNUMEDICS, INC.		s: 24		39						
	humanized anti-CSAp	MORRIS PLAINS, NJ		200		5.51						
	monoclonal antibodies		Artificial Sequence	Q: 1		16 93.7	75					
7				s: 24		39						
	Production and use of novel	IMMUNOMEDICS, INC.										
	peptide-based agents for use	MORRIS PLAINS, NJ	Artificial Sequence	Q: 1		16 93.7	75					
8	with bi-specific antibodies			s: 24		39						
	The specific and source				1,000,011101101111111							
	Production and use of novel	IMMUNOMEDICS INC.	Mus musculus	Q: 1		16 93.7	75					
9	peptide-based agents for use	MORRIS PLAINS, NJ	domesticus	S: 24	+ RSSQSIVHSNGNTYLE	39						
	with bi-specific antibodies	MOTATIO Ballyo, 140		24	TANGET VITABOROTI TEE							
	The specific difference		Mus musculus	Q: 1	RSSQSIVHSNGNTYLQ	16 93.7	75					

AUSTIN, TX

Covalently reactive transition | ADLER; BENJAMIN

	Sample se	equence	e data rep	ort - featu	res	
GQ	PAT Proteins: Antibodies_	_GenomeQuest				
	Title	Patent Assignee	Seq. ID Number	Organism Species	Alignment	Percenta
1	Nucleic acid sequences relating to Bacteroides fragilis for diagnostics and therapeutics	OSCIENT PHARMACEUTICALS CORPORATION WALTHAM, MA	US7090973-6862	Bacteroides fragilis	1 KVSNR-LY 7 340 KVDMSNRILY 349	70.00
2	Expression of microbial proteins in plants for production of plants with improved properties	MONSANTO TECHNOLOGY, LLC ST. LOUIS, MO	US7314974-14121	Pseudomonas	1 K-VSNRLY 7 597 KLVSDLNRLY 606	70.00
3	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS IN MORRIS PLAINS, N.	<u> </u>	fluorescens	1 RSSQSIVHSNGNTYLQ 16 + 24 RSSQSIVHSNGNTYLE 39	93.75
4	Chimeric, human and humanized anti-CSAP monoclonal antibodies	IMMUNIMEDICS, INC MORRIS PLAINS, N.	US6962702-0008	Artificial Sequence	1 RSSQSIVHSNGNTYLQ 16 + 24 RSSQSIVHSNGNTYLE 39	93.75
5	Chimeric, human and humanized anti-CSAp monoclonal antibodies	IMMUNOMEDICS, IN MORRIS PLAINS, N.	Sequence [Muring on	1 RSSQSIVHSNGNTYLQ 16 + 24 RSSQSIVHSNGNTYLE 39	93.75
6	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDI MORRIS PLAI	U87414121-0032	Murine sp.	1 RSSQSIVHSNGNTYLQ 16 + 24 RSSQSIVHSNGNTYLE 39	93.75
7	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS IN MORRIS PLAINS, N.			1 RSSQSIVHSNGNTYLQ 16 + 24 RSSQSIVHSNGNTYLE 39	93.75
8	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS, IN MORRIS PLAINS, N.	US7429381-0008	Artificial Sequence	1 RSSQSIVHSNGNTYLQ 16 + 24 RSSQSIVHSNGNTYLE 39	93.75
9	Covalently reactive transition state analogs and methods of use thereof	BOARD OF REGENT THE UNIVERSITY OF TEXAS SYSTEM	US6962702-0012	Artificial Sequence	1 RSSQSIVHSNGNTYLQ 16 	93.75

93.75

1 RSSQSIVHSNGNTYLQ 16

Sample sequence data report - features

GQPAT Proteins: Antibodies_GenomeQuest

	Title	Patent Assignee	Seq. ID Num		Alignment	Percentage
1	Nucleic acid sequences relating to Bacteroides fragilis for diagnostics and therapeutics	OSCIENT PHARMACEUTICALS CORPORATION WALTHAM, MA	US7090973-6	Q: 1 S: 340	KVSNR-LY 7 KVDMSNRILY 349	70.00
2	Expression of microbial proteins in plants for production of plants with improved properties	MONSANTO TECHNOLOGY, LLC ST. LOUIS, MO	US7314974-1	Q: 1	K-VSNRLY 7	70.00
3	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS INC. MORRIS PLAINS, NJ	US6962702-0	s: 597	 KLVSDLNRLY 606	
4	Chimeric, human and humanized anti-CSAP monoclonal antibodies	IMMUNIMEDICS, INC. MORRIS PLAINS, NJ	US7387772-0	Q: 1 S: 24	RSSQSIVHSNGNTYLQ 16 + RSSQSIVHSNGNTYLE 39	93.75
5	Chimeric, human and humanized anti-CSAp monoclonal antibodies	IMMUNOMEDICS, INC. MORRIS PLAINS, NJ	US7414121-0	Q: 1	RSSOSIVHSNOUTVLO 16 Ouery Results	93.75
6	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS, INC. MORRIS PLAINS, NJ	US7429381-0			00.75
7	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS INC. MORRIS PLAINS, NJ	US6962702-0	Q: 1 S: 24	RSSQSIVHSNGNTYLQ 16 + RSSQSIVHSNGNTYLE 39	93.75
8	Production and use of novel peptide-based agents for use with bi-specific antibodies	IMMUNOMEDICS, INC. MORRIS PLAINS, NJ	US7429381-0	Q: 1 S: 24	RSSQSIVHSNGNTYLQ 16 RSSQSIVHSNGNTYLE 39	93.75
9	Covalently reactive transition state analogs and methods of use thereof	BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM AUSTIN, TX	US6855804-0	Q: 1	RSSQSIVHSNGNTYLQ 16	93.75
	Covalently reactive transition	ADLER; BENJAMIN	US7524663-0	S: 24	RSSQSIVHSNGNTYLE 39	

About the Alignment Column

- The Alignment column appears in the same default font as all columns
- You might be tempted to change the font to Courier New - DON'T!
- Text menu | Fixed Width (e.g. Alignment) is the correct technique
- Preserves runs of whitespace when exporting to HTML, Word, or Excel

Features of IP Sequences in BizInt reports

	Title		Alignment							
	HEPATITIS C VIRUS GENE	Q:	1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60	Default						
1		S:	1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60							
		Q:	61 RRQPIPKDRRSTGKSWGKPGYPWPLYGNEGCGWAGWLLSPRGSRPTWGPTDPRHRSRNLG 120							
			+ ++ + +							
	HCV GENE	Q:	1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60	Changed Font						
2		S:	1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRE 60							
		Q:	61 RROPIPKDRRSTGKSWGKPGYPWPLYGNEGCGWAGWLLSPRGSRPTWGPTDPRHRSRNLG 120							
		۷.								
	HCV GENE	Q:	1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60	Text Fixed Width						
3		S:	1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRE 60							
		Q:	61 RROPIPKDRRSTGKSWGKPGYPWPLYGNEGCGWAGWLLSPRGSRPTWGPTDPRHRSRNLG 120							
		V.	61 RRQPIPRDRRSIGRSWGRPGIPWPLIGNEGCGWAGWLLSPRGSRPIWGPIDPRRRSRNLG 120							

Features of IP Sequences in BizInt reports

GQPAT Gold+ Proteins: hepc_claimed_gqprt

	Title	Alignment	Alignment Style
1 Link	HEPATITIS C VIRUS GENE	Q: 1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60	Default
2 Link	HCV GENE	Q: 1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60	Changed Font
3 Link	HCV GENE	Q: 1 MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRG 60	Text Fixed Width

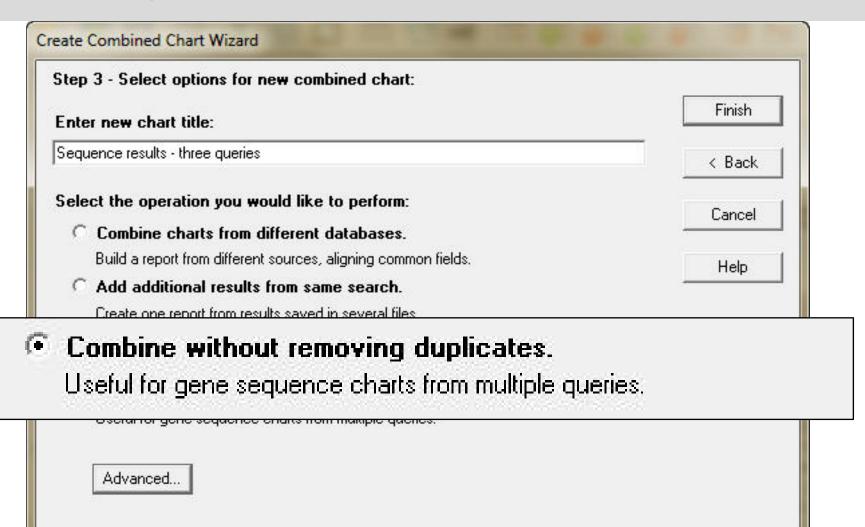
Customize your reports

- Select and rearrange columns
- Add your own columns.
- Create and apply chart templates.
- Hide rows that aren't of interest.
- Sort by multiple values, move rows.
- Edit text and highlight cells.
- Options for truncation and full text links.
- Tools | Statistics: simple statistics can help analyze search results.

Combining Charts

- You can combine two or more charts into a single report
- BizInt Smart Charts usually removes duplicate rows when combining
- Combining different queries? Use the "Combine without removing duplicates" option in the Combine wizard
- See 2013 PIUG Biotech presentation for more details (@ bizint.com/slides)

Combining multiple queries



Preserving Multiple Queries

- First combine non-sequence charts with standard options (remove duplicates)
- Then combine the resulting non-sequence chart with the sequence results (without removing duplicates)
- Only use "without removing duplicates" option when you want to see variations on a row "side by side"

Tools for integrating patent data

- Combine charts using File | Combine command
- Identify related records using the "Identify Common Patent Family" tool.

BizInt Smart Charts

for Patents

Tools for integrating patent data

- Combine charts using File | Combine command
- Identify related records using the "Identify Common Patent Family" tool.
- Use BizInt Smart Charts
 Reference Rows to summarize related records in a single row.

BizInt Smart Charts

for Patents

BizInt Smart Charts

Reference Rows™

Reference Rows: Selection View

Unique fields are easily integrated in BizInt Smart Charts Reference Rows

S Fahanand Title	I. E. etiana	Defeat Tons	Classifications		Family	y Status	
Enhanced Title	Indications	Patent Type	Classifications	Pub No.	State	Status	Expiry
Monoclonal antibodies and vaccines against epitopes on the Ebola virus glycoprotein	Ebola virus infection 💚	Product 🗸	Anti-Infectives Biologicals and Immunologicals				
				WO200116183	DEAD	LAPSED	2006-03-26
				AU7089600	DEAD	LAPSED	2006-03-26
				US6630144	ALIVE	GRANTED	2020-08-29
Monoclonal antibodies against glycoprotein of Ebola Sudan Boniface (ESB) virus - useful in the diagnosis and treatment of ESB virus infection.	Ť	Diagnostic, Analysis and Assay Product (Macromolecule)	Biologicals and				
<u></u>				WO2011071574	ALIVE	PENDING	2030-09-01
4		7		EP2473525	DEAD	LAPSED	2014-08-27
					ALIVE	PENDING	2030-09-01
Ebola virus liposome vaccines - useful in eliciting immune responses against Ebola virus infection.	· ·	Formulation 💙	Anti-Infectives Biologicals and Immunologicals Pharmaceutics	•			
				WO2012050193	DEAD	LAPSED	2013-12-03
4				JP2014005205	ALIVE	PENDING	2030-10-14

Reference Rows: HTML exports

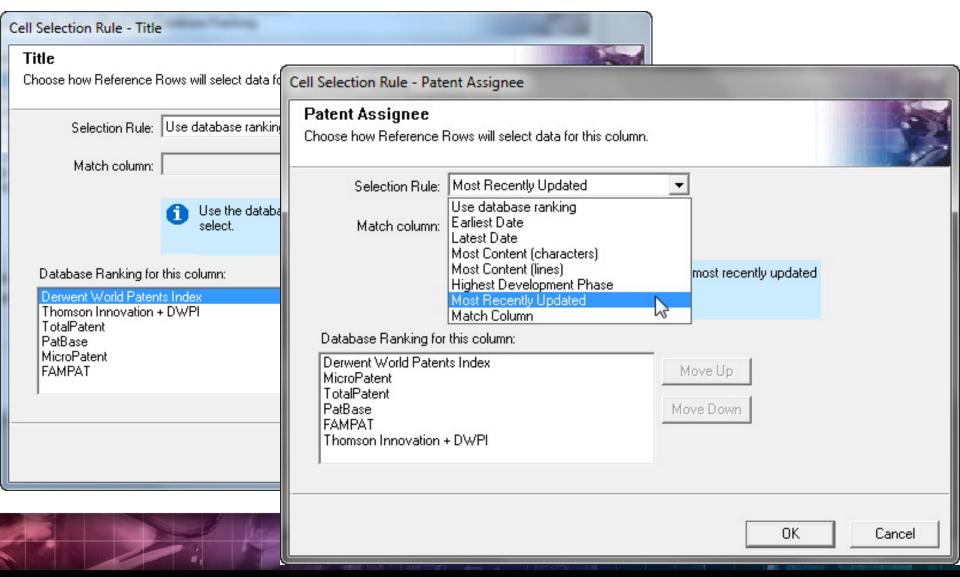
As seen in the fully integrated view

	Enhanced Title	Indications	Patent Type	Type Classifications Family Status				. Database		
	Limanoed Title	maioanono i atom typo		Classifications	Pub No.	State	Status	Expiry	Data	Jase
2.	Monoclonal antibodies	Ebola virus	Product	Anti-Infectives	WO200116183	DEAD	LAPSED	2006-03-26	2.1	CORTP link
	and vaccimes against epitopes on the Ebola	infection		Biologicals and Immunologicals	AU7089600	DEAD	LAPSED	2006-03-26	2.2	FAMPAT link
	virus glycoprotein				US6630144	ALIVE	GRANTED	2020-08-29		
	2.1 CORTP	2.1 CORTP	2.1 CORTP	2.1 CORTP				2.2 FAMPAT		
3.	Monoclonal antibodies	Ebola virus	Diagnostic, Analysis	Anti-Infectives	WO2011071574	ALIVE	PENDING	2030-09-01	3.1	CORTP link
٥.	against glycoprotein of Ebola Sudan	infection	and Assay Product	Biologicals and Immunologicals	EP2473525	DEAD	LAPSED	2014-08-27	3.2	FAMPAT link
	Boniface (ESB) virus -		(Macromolecule)	Diagnostics	US2012164153	ALIVE	PENDING	2030-09-01	3.2	TAME AT IMIK
	useful in the diagnosis									
	and treatment of ESB virus infection.									
	3.1 CORTP	3.1 CORTP	3.1 CORTP	3.1 CORTP				3.2 FAMPAT		
4.	Ebola virus liposome	Ebola virus	Formulation	Anti-Infectives	WO2012050193	DEAD	LAPSED	2013-12-03	4.1	CORTP link
4.	vaccines - useful in eliciting immune	infection		Biologicals and Immunologicals	JP2014005205	ALIVE	PENDING	2030-10-14		FAMPAT link
	responses against			Pharmaceutics					4.2	FAMPAI IIIIK
	Ebola virus infection.									
	4.1 CORTP	4.1 CORTP	4.1 CORTP	4.1 CORTP				4.2 FAMPAT		
5.	Chimeric filovirus	Marburg virus	Product	Anti-Infectives	WO02079239	DEAD	LAPSED	2006-03-29	5.1	CORTP link
J .	glycoproteins useful	infection		Biologicals and	US7731975	DEAD	LAPSED	2014-06-08		
	in vaccines against Ebola and Marburg	Ebola virus infection		Immunologicals					5.2	FAMPAT link
	virus infections									
	5.1 CORTP	5.1 CORTP	5.1 CORTP	5.1 CORTP				5.2 FAMPAT		

Integrate data from related records

	Enhanced	Database	Pater	nt Fam	nily	N.	Family	Status	140	Alignmen					%
	Title	Database	Patent	Kind	Date	Pub No.	State	Status	Expiry	Angninen					Identity
5.	Methods for	5.1 FAMPAT link	WO 201048615	A2	2010-04-29	WO2010048615	ALIVE	PENDING	2029-10-26	Q:	1	SFKAALSSL	9		100.00
•	detecting the presence of	5.2 CORTP link	CA 2741523	A1	2010-04-29	AU2009308422	ALIVE	PENDING	2029-10-26			111111111			
	isolated	5.3 GPATPRT link	AU 2009308422	A1	2010-04-29	CA2741523	ALIVE	PENDING	2029-10-26	_					
	attenuated		WO 201048615	A3	2010-11-25	EP2350270	ALIVE	PENDING	2029-10-26	S:	279	SFKAALSSL	287		
	hEbola virus - useful as	5.4 GPATPRT link	EP 2350270	A2	2011-08-03	IN3817/DELNP/2011	ALIVE	PENDING	2029-10-26						
	vaccines.	5.5 GPATNUC link	EP 2350270	A4	2012-04-11	US2012251502	ALIVE	PENDING	2029-10-26						
		5.6 GPATNUC link	US 20120251502	A1	2012-10-04										
		5.7 GENESEQ link	IN 2011DN03817	Α	2013-09-27										
	5.2 CORTP				5.1 FAMPAT				5.1 FAMPAT					5.3 GPATPR1	5.3 GPATPR1
6.	Recordinant	6.1 FAMPAT link	WO 2009128867	A2	2009-10-22	WO2009128867	DEAD	LAPSED	2010 08	Q:	1	SFKAALSSL	9		100.00
•	bio ¹	6.2 GENESEQ link	WO 2009128867	A3	2010-03-25							111111111		4	
	filov									S:	1	SEZAALSSL	9		
	6.1 FAMPAT				6.1 FAMPAT				6.1 FAMPAT			ν,		8.2 GENESE	6.2 GENESE
7.	Nucleic acid	7.1 FAMPAT link	WO 200637038	A1	2006-04-06	WO2006037038	ALIVE	PENDING	2025-09-27	Q:	1	HNTPVYKLDI	SEATQ	VE 17	100.00
٠.	comprising a polynucleotide	7.2 CORTP link	CA 2581840	A1	2006-04-06	AU2005289439	ALIVE	GRANTED	2025-09-27			11111111111	11111	П	
	encoding a		AU 2005289439	A1	2006-04-06	CA2581840	ALIVE	GRANTED	2025-09-27	13376					
	modified	7.3 GPATPRT link	WO 200637038	A9	2006-05-26	EP1797113	ALIVE	GRANTED	2025-09-27	S:	389	HNTPVYKLDI	SEATQ	VE 405	
	filovirus glycoprotein -	7.4 GPATPRT link	WO 200637038	B1	2006-08-03	IL182225	DEAD	LAPSED	2012-09-20						
	useful as	7.5 GPATPRT link	EP 1797113	A1	2007-06-20	IN2674/DELNP/2007	ALIVE	GRANTED	2025-09-27						
	vaccines	7.6 GPATPRT link	IN 2007DN02674	Α	2007-08-03	JP2008514203	ALIVE	GRANTED	2025-09-27						
	against filovirus	7.7 GPATPRT link	IL 182225	D0	2007-09-20	US2009232841	ALIVE	GRANTED	2027-06-07						
	infections,	7.8 GENESEQ link	JP 2008514203	Α	2008-05-08	US8101739	ALIVE	GRANTED	2027-06-07						
	specifically	7.9 GENESEQ link	US 20090232841	A1	2009-09-17	US2012156239	ALIVE	PENDING	2025-09-27						
	Ebola virus.	7.10 GENESEQ link	AU 2005289439	B2	2011-12-01										
			US 8101739	B2	2012-01-24										
			US 20120156239	A1	2012-06-21										
			JP 5046941	B2	2012-10-10										
			IN 259912	В	2014-04-04										
			CA 2581840	С	2014-08-05										ı
			EP 1797113	B1	2014-11-26										
-	7.2 CORTP				7.1 FAMPAT				7.1 FAMPAT				7	7.3 GPATPR1	7.3 GPATPR1
10	THE RESERVE TO SERVE					1 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日				107000000					5000

Reference Rows: user-defined rules



Summarize data from related records

	Title	Database	Patent Assignee	Query ID		Sequen	ce Locatio	ons	
	Title	Database	ratent Assignee	Query ID	Seq. ID Number	% Identity	Length	Location	
1.	PRODUCTION OF PEPTIDES IN PLANTS AS VIRAL COAT PROTEIN FUSION	1.1 Patbase link	LARGE SCALE BIOLOGY CORP.	query2	WO20050108564-0101	100.00	17	Example 6; SEQ ID NO 101;	1.2
	1.1 Patbase		1.2 GENESE						
2.	Chimeric ebola virus	2.1 Patbase link	UNIV	query2	US20050255123-0001	100.00	17	claim: 17	2.2
	envelopes and uses therefor	2.2 GPATPRT link	PENNSYLVANIA.	quen	WO03092582-0009	100.00	498	claim: 17	2.5
		2.3 GPATPRT link			WO03092582-0001	100.00	17	claim: 17	2.4
		2.4 GPATPRT link			US20050255123-0009	100.00	498	claim: 17	2.5
		2.5 GPATPRT link			WO20030092582-0001	100.00	17	Claim 17; SEQ ID NO 1; 107pp; English.	2.6
		2.6 GENESEQ link			WO20030092582-0009	100.00	498	Claim 17; SEQ ID NO 9; 107pp;	2.7
		2.7 GENESEQ link						English.	
	2.1 Patbase		2.6 GENESE						
3.	ANTIGEN FRAGMENT AND TRUNCATION	3.1 Patbase link	BIOENGINEERING RES INST ACAD	query2	CN103864904-0008	100.00		NO 8; 28pp;	3.2
	BASED ON EBOLA VIRUS ENVELOPE PROTEIN AS WELL AS APPLICATION	3.2 GENESEQ link 3.3 GENESEQ link	MEDICAL SCI.		CN103864904-0002	100.00	17	Example 1; SEQ ID NO 2; 28pp; Chinese.	3.3
	3.1 Patbase		3.2 GENESE						
4.	HUMAN EBOLA VIRUS SPECIES AND	4.1 Patbase link	US DEPT HEALTH & HUMAN	query7	US20120251502-0011	100.00	9	claim: 8; 11; 12	4.2
	COMPOSITIONS AND	4.2 GPATPRT link	SERVICES.	query5	EP2350270-0011	100.00	9	TBD (information not in GQ-Pat)	4.3
	METHODS THEREOF	4.3 GPATPRT link			US20120251502-0027	100.00	20	probable disclosure (not found by automated parsing)	4.4
		4.4 GPATNUC link			EP2350270-0027	100.00	20	TBD (information not in GQ-Pat)	4.5
		4.5 GPATNUC link			WO20100048615-0027	100.00	20	Claim 30; SEQ ID NO 27; 98pp;	4.6
		4.6 GENESEQ link						English.	
	4.1 Patbase		4.6 GENESE		54.7460				

Sequence Summary Recipe

- Recipe for creating the sequence summary table at bizint.com/cookbook
- Create Subtable from any columns you want NOTE: alignment loses fixed width formatting
- In Reference Rows, choose Summarize All Values column rule
- Export chart

Tools for integrating patent data

 Combine charts using File | Combine command

BizInt Smart Charts

for Patents

- Identify related records using the "Identify Common Patent Family" tool.
- Use BizInt Smart Charts
 Reference Rows to summarize related records in a single row.
- You aren't limited to grouping by patent family!

BizInt Smart Charts

Reference Rows™

Summarize at Patent or Sequence Level

- Always start with Tools | Identify Common Patent Family to create the Common Family column (this is a "magic" column)
- Replace contents of the Common Family column with the data you want to group by Select column, copy Select Common Family, paste
- Patent level: Patent Number
- Sequence level: Sequence ID (pub+seqidno)

"Summary Record" export

1. Title:		cription	nal activator o	r repressor domain	viding to the cell a guide as a fusion protein, and
Database:	Derwent World Patent Derwent World Patent GQPAT Gold+ Protein GQPAT Gold+ Protein PatBase FAMPAT	s Index s			
Patent Family:	Patent US 2014356959 US 2014356956 AU 2014274939 WO 14197568 WO 14197568 CA 2914638 KR 20160014036	Kind A AA A2 A3 AA A	Date 2014-12-04 2014-12-04 2014-12-11 2014-12-11 2015-03-12 2015-12-04 2016-02-05		
Family Status:	Pub No. US 20140356956 A1 US 9267135 B2	State ALIVE ALIVE	Status PENDING GRANTED	Expiry 2034-06-04 2034-06-04	
Probable Assignee:	PRESIDENT AND FEL	LOWS (OF HARVARD	COLLEGE	
Sequence Locations:	Seq. ID Number US20140356959-000 US20140356956-000	100.0	3 3333	h probable disclosu automated parsin probable disclosu automated parsin	ig) ire (not found by
Notes					



Alignment:

Q: 1 MDKKYSIGLDIGTNSVGWAVITDEYKVPSKKFKVLGNTDRHSIKKNLIGALLFDSGETAE 60

S: 1 MDKKYSIGLDIGTNSVGWAVITDEYKVPSKKFKVLGNTDRHSIKKNLIGALLFDSGETAE 6

Agenda

- Building IP Sequence reports
- GenomeQuest data enhancements
- Hit Structure reports
- Other data types



4. Title: BIOSYNTHETIC PRODUCTION OF CAFFEINE

Database: GQPAT Gold+ Nucleotides

Num. Sequences: 84

Unique Family Sequence ID: 19d7ecbc7eed4810855f15d1dc2b509f_1155_56074947

Sequence Listing EP3223621; US20170362616; WO2016085929

Equivalents:

Patent Assignee: CODEXIS; COCA COLA

Hyperlinks: Source EP3223621

GenomeQuest

- The "publisher" link for a GQPAT sequence goes to the sequence in the context of your query.
- Links were broken for a while... Please let us know when you see problems with any platform we support!

GenomeQuest

- Version 4.6 includes several improvements
- Patent Assignee now comes from Normalized Patent Assignee when present
- Number of Sequences available in column

Would # nucleotides/proteins be useful? # claimed sequences?

GenomeQuest

- Added Unique Family Sequence ID
- Possible development: each unique sequence only appears once per family
- Added Sequence Listing Equivalents
- Useful in publication-level reports

Agenda

- Building IP Sequence reports
- GenomeQuest data enhancements
- Hit Structure reports
- Other data types

Index Terms

- Version 4.5 includes major improvements to Index Terms display
- Index Terms appear as single paragraphs in record display
- Hit Index Terms extracted on New STN
- Table of Hit Index Terms with RN, RL, and Notes for each IT
- Classic STN and New STN

Index Terms

Hit Index Terms table in the chart

Improved Index Terms display in the records

Hit Index Terms						
RN	Role	Notes				
1655492-02-6P	Preparation (PREP); Reactant (RCT); Reactant or Reagent (RACT); Synthetic Preparation (SPN)	prepn. and biol. applications of tricyclic benzoxaborole compds.				
	Biological Study (BIOL); Pharmacological Activity (PAC); Preparation (PREP); Synthetic Preparation (SPN); Therapeutic Use (THU); Uses (USES)	prepn. of benzoxaborole derivs. useful for treating bacterial infections				
	Preparation (PREP); Reactant (RCT); Reactant or Reagent (RACT); Synthetic Preparation (SPN)	prepn. of benzoxaborole derivs. useful for treating bacterial infections				

Index Terms

1364682-96-1P 1364683-03-3P RL: Biological Study (BIOL); Pharmacological Activity (PAC); Preparation (PREP); Synthetic Preparation (SPN); Therapeutic Use (THU); Uses (USES) (prepn. of benzoxaborole derivs. useful for treating bacterial infections)

1364684-69-4P 1364684-75-2P RL: Preparation (PREP); Reactant (RCT); Reactant or Reagent (RACT); Synthetic Preparation (SPN) (prepn. of benzoxaborole derivs. useful for treating bacterial infections)

Hit Structures

- Work in progress now to capture hit structures both Classic STN and New STN
- Hit structures supported for New STN starting with Version 4.5
- Initial display is in the Summary Records export
- Summary Records can include abstract image in addition to hit structures.
- Limited display options for display today

Support for hit structures in summary records

Title: Boron-containing small molecules

Basic Patent Number: CA 2810021 A1

Inventor(s): Hernandez, Vincent S.; Ding, Charles; Plattner, Jacob J.; Alley, Michael Richard Kevin; Rock,

Fernando; Zhang, Suoming; Easom, Eric; Li, Xianfeng; Zhou, Ding

Patent Assignee: Anacor Pharmaceuticals, Inc., United States (US)

International Patent A61 K0031/69; A61 P0031/04; C07 F0005/02

Class:

CA Classification: Organometallic And Organometalloidal Compounds (29)

Hit Structures:

1364682-96-1

1-Propanol, 3-[[3-(aminomethyl)-4-fluoro-1,3-dihydro-1-hydroxy-2,1-benzoxaborol-7yl]oxy]-, 2,2,2trifluoroacetate (1:2)

CM1 CRN 1364682-95-0

CM2 CRN 76-05-1

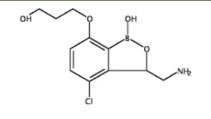
Biological Study (BIOL); Pharmacological Activity (PAC); Preparation (PREP); Synthetic Preparation (SPN); Therapeutic Use (THU); Uses (USES)

prepn. of benzoxaborole derivs. useful for treating bacterial infections

- New STN now
- Classic STN coming soon

1364683-03-3

1-Propanol, 3-[[3-(aminomethyl)-4-chloro-1,3-dihydro-1-hydroxy-2,1-benzoxaborol-7yl]oxy]-, hydrochloride (1:1)



HCI

Biological Study (BIOL); Pharmacological Activity (PAC); Preparation (PREP); Synthetic Preparation (SPN); Therapeutic Use (THU); Uses (USES)

prepn. of benzoxaborole derivs. useful for treating bacterial infections

Hit Structures - Version 4.6

- Support for Combine and Update
- Support in Reference Rows
- Can have both sequence alignments and hit structures in the same family in a Summary Records export

Structure-oriented table

Index of Hit Structures

٠									
		SUBSTANCE	STRUCTURE	REFERENCE					
	1	1655492-02-6 2,1-Benzoxaborole, 4- fluoro-1,3-dihydro-1- hydroxy-3-(nitromethyl)-7- [2- (phenylmethoxy)ethoxy]-	O PHONO NO.	prepn. and antimycobacterial activity of benzoxaborole compds. <u>Reference 1</u> prepn. and biol. applications of tricyclic benzoxaborole compds. <u>Reference 2</u>					
	2	1364682-96-1 1-Propanol, 3-[[3- (aminomethyl)-4-fluoro- 1,3-dihydro-1-hydroxy- 2,1-benzoxaborol-7- yl]oxy]-, 2,2,2- trifluoroacetate (1:2)	CM1 CRN 1364682-95-0 OH OH OH NH2 CM2 CRN 76-05-1	prepn. of benzoxaborole derivs. useful for treating bacterial infections Reference 3					





Index of Hit Structures

- A table of contents to the hit structures
- Each RN appears once, with links to all of the corresponding CAplus documents
- Possible options for the link PN.B, AN, Answer number, Row number in chart
- Initial deployment as part of a Summary Record export

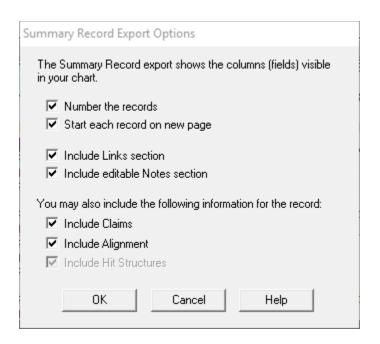
Hit Structures - Next Steps

- Classic STN hitstr support
- Index of Hit Structures
- Improved formatting of display
- Full resolution structure images in export
- Options for content

Hit Structures - Future Applications

- DCR + DWPI
- ReaxysSUB + ReaxysBIB
- MARPAT
- DWPIM?
- Hit Structures in other export formats

Hit Structures - Future Applications



- Summary Records export allows both Alignment and Hit Structures
- Combine a chart with both Sequence and Structure searches
- Reference Rows will show both in the same family

Agenda

- Building IP Sequence reports
- GenomeQuest data enhancements
- Hit Structure reports
- Other data types





for Patents

Patent Databases

Provide data on patents filed worldwide

- STN Classic & New
- Questel Orbit.com (incl FULLPAT)
- Minesoft PatBase
- Thomson Innovation, Cortellis IP, Integrity Patents
- LexisNexis TotalPatent
- GQ Life Sciences LifeQuest





for Patents

Literature Databases

Provide data on technical and scientific publications

- Biomedical (Embase, Biosis, Medline)
- Scientific (SciSearch, Chemical Abstracts, PQSciTech, etc)
- Technical (INSPEC, RAPRA, GEOREF, etc.)
- Hosts: STN (Classic & New), ProQuest Dialog, Ovid, PubMed

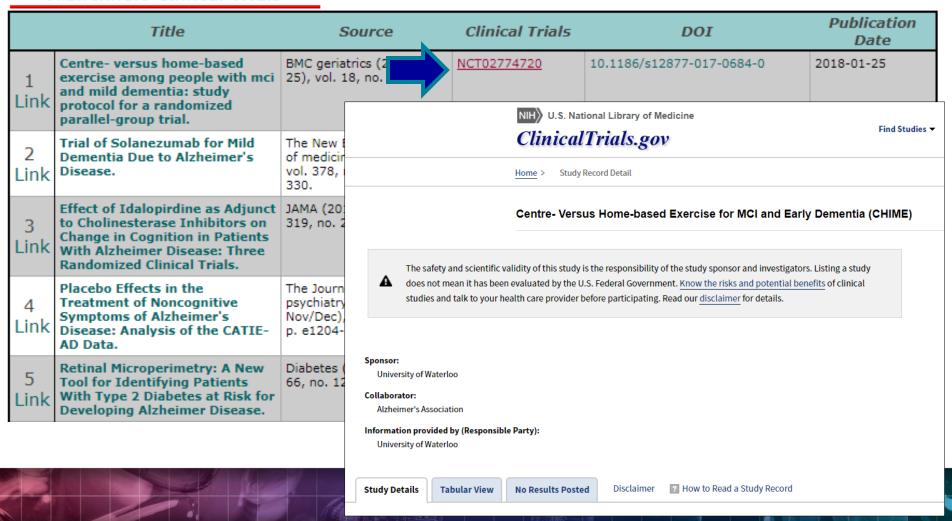
NEW! NCT number and DOI links

Alzheimers Clinical Trials

	Title	Source	Clinical Trials	DOI	Publication Date
1 Link	Centre- versus home-based exercise among people with mci and mild dementia: study protocol for a randomized parallel-group trial.	BMC geriatrics (2018-01- 25), vol. 18, no. 1, p. 27.	NCT02774720	10.1186/s12877-017-0684-0	2018-01-25
2 Link	Trial of Solanezumab for Mild Dementia Due to Alzheimer's Disease.	The New England journal of medicine (2018-01-25), vol. 378, no. 4, p. 321-330.	NCT01900665	10.1056/NEJMoa1705971	2018-01-25
3 Link	Effect of Idalopirdine as Adjunct to Cholinesterase Inhibitors on Change in Cognition in Patients With Alzheimer Disease: Three Randomized Clinical Trials.	JAMA (2018-01-09), vol. 319, no. 2, p. 130-142.	NCT01955161 NCT02006641 NCT02006654	10.1001/jama.2017.20373	2018-01-09
4 Link	Placebo Effects in the Treatment of Noncognitive Symptoms of Alzheimer's Disease: Analysis of the CATIE- AD Data.	The Journal of clinical psychiatry (2017 Nov/Dec), vol. 78, no. 9, p. e1204-e1210.	NCT00015548	10.4088/JCP.17m11461	2017 Nov/Dec
5 Link	Retinal Microperimetry: A New Tool for Identifying Patients With Type 2 Diabetes at Risk for Developing Alzheimer Disease.	Diabetes (2017-12), vol. 66, no. 12, p. 3098-3104.	NCT02360527	10.2337/db17-0382	2017-12

Link from NCT numbers to CT.gov

Alzheimers Clinical Trials

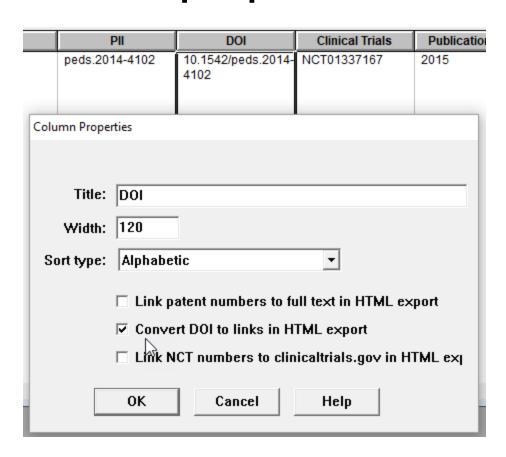


Link from DOI's to articles

Alzheimers Clinical Trials

	Title		Source	e	Clinical Trial	5 DOI		Publication Date
1 Link		BMC geriatrics (2018-01- 25), vol. 18, no. 1, p. 27.		NCT02774	10.1186/s12877-017	<u>7-0684-0</u>	2018-01-25	
		BMC	Explo	ore journals	Get published	About BMC		
2 Link	Dementia Due to Alzheimer	BMC Ge						
		Home	About	<u>Articles</u>	Submission Guidelir	nes		
3 Link	Randomized Clinical Trials	Abstract Background		Study	y protocol Open Access	S Open Peer Review		
4 Link	Placebo Effects in the Treatment of Noncognitive Symptoms of Alzheimer's Disease: Analysis of the CAT AD Data.	Methods & design Centre- versus home-based exercise amount of the properties of the				: study		
5 Link	Retinal Microperimetry: A N Tool for Identifying Patients	References		Laura	ı E. Middleton ⊠, Sandra I	E. Black, Nathan Herrmann, Paul I	. Oh, Kayla Regan a	
				<u>https</u>	://doi.org/10.1186/s12877	7 <u>-017-0684-0</u> © The Author(s). 1 ted: 12 December 2017 Publishe	2018	
				⊗ 0	Open Peer Review reports			

Column properties for NCT and DOI links



- NCT numbers link to clinicaltrials.gov
- DOI currently links to doi.org
- Set your own link resolver in next release



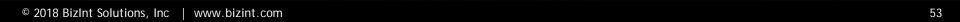


Drug Development Suite

Drug Pipeline Databases

Provide data on drugs in development worldwide

- Citeline Pharmaprojects
- IMS R&D Focus
- Adis R&D Insight
- Thomson Reuters Cortellis
- Thomson Reuters Integrity
- And, support for Infodesk PipelinePlus





Drug Development Suite

Clinical Trials Databases

Provide data on drug trials worldwide



- Commercial: Citeline TrialTrove Adis Clinical Trials Insight Cortellis Trials Intelligence
- Public: ClinicalTrials.gov, WHO ICTRP, EudraCT
- Biomedical literature on Ovid, ProQuest Dialog, PubMed, STN



- Clean-up, filter and visualize information from BizInt Smart Charts reports.
- Piano Chart direct to PowerPoint
- Version 10 available today

"Cookbook" of techniques

 The Cookbook is a collection of sample reports and visualizations which you can create with the BizInt Smart Charts product family.



Updated February 2018.

bizint.com/Cookbook

