

BizInt Smart Charts Workshop

Version 5.4

PIUG, October 26, 2020

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Agenda

- What's New in Version 5.4
- Using VP-SCE with Patent Data
- Detecting Changes with Update
- Dogs

Slides will be available at bizint.com/PIUG

BizInt Smart Charts



for Patents

Patent Databases

Provide data on patents filed worldwide

- STN Classic (including STNext) & New STN
- Questel Orbit.com (including FULLPAT)
- Minesoft PatBase 2.0
- Derwent Innovation
- Clarivate Cortellis IP, Integrity Patents
- Aptean GenomeQuest LifeQuest



FTO families from Orbit.com

BizInt Smart Charts

for Patents

• In BizInt Smart Charts for Patents 5.4 we combine two existing fields, Patent Family and Family Status (top line data extracted from Legal Status Actions)

Paten	Tramily	
Patent	Kind	Date
EP 2951159	B1	2018-08-22
EP 2951159	A1	2015-12-09
WO 2014116849	A1	2014-07-31
US 9643928	B2	2017-05-09
US 20160002170	A1	2016-01-07
JP 6437456	B2	2018-12-12
JP 2016505071	Α	2016-02-18
RU 2666144	C2	2018-09-06
RU 2015134420	Α	2017-03-03
TW 1685487	В	2020-02-21
TW 201444800	Α	2014-12-01
AU 2014209319	B2	2018-04-19
AU 2014209319	A1	2015-08-27
IL 240066	В	2019-08-29
IL 240066	Α	2015-09-24
CN 105452227B	В	2018-05-29
CN 105452227	Α	2016-03-30
MX 360048	В	2018-10-19
MX 2015009617	Α	2016-04-20
HK 1217331	A1	2017-01-06
DK 2951159T	T3	2018-11-19
ES 2694297	T3	2018-12-19

Datont Family

Family Status										
Pub No.	State	Status	Expiry							
EP 29511 9 A1	ALIVE	GRANTED	2034-01-23							
WO 2014116849 A1	DEAD	LAPSED	2016-07-24							
US 9643928 B2	ALIVE	GRANTED	2034-01-23							
JP 2016505071 A	ALIVE	GRANTED	2034-01-23							
RU 2015134420 A	ALIVE	GRANTED	2034-01-23							
CA 2899024 A1	ALIVE	PENDING	2034-01-23							
SG 11201505748U A	ALIVE	PENDING	2034-01-23							
KR 20150129679 A	ALIVE	PENDING	2034-01-23							
HK 1217331 A1	ALIVE	GRANTED	2034-01-23							
AU 2014209319 A1	ALIVE	GRANTED	2034-01-23							
CN 105452227 A	ALIVE	GRANTED	2034-01-23							
MX 2015009617 A	ALIVE	GRANTED	2034-01-23							
DK 2951159T T3	ALIVE	GRANTED	2034-01-23							
ES 2694297 T3	ALIVE	GRANTED	2034-01-23							
IL 240066 A	ALIVE	GRANTED	2034-01-23							
TW 201444800 A	ALIVE	GRANTED	2034-01-23							

FTO families from Orbit.com

BizInt Smart Charts

for Patents

• Linking the Patent Family and Family Status in two available views.

	FTO Family with Expiry													
Pub No.	Kind	Pub Date	State	Status	Est Expiry									
EP 2951159	B1	2018-08-22												
EP 2951159	A1	2015-12-09	ALIVE	GRANTED	2034-01-23									
WO 2014116849	A1	2014-07-31	DEAD	LAPSED	2016-07-24									
US 9643928	B2	2017-05-09	ALIVE	GRANTED	2034-01-23									
US 20160002170	A1	2016-01-07												
JP 6437456	B2	2018-12-12												
JP 2016505071	Α	2016-02-18	ALIVE	GRANTED	2034-01-23									
RU 2666144	C2	2018-09-06												
RU 2015134420	Α	2017-03-03	ALIVE	GRANTED	2034-01-23									
TW 1685487	В	2020-02-21												
TW 201444800	Α	2014-12-01	ALIVE	GRANTED	2034-01-23									
AU 2014209319	B2	2018-04-19												
AU 2014209319	A1	2015-08-27	ALIVE	GRANTED	2034-01-23									

FTO Family											
Pub No.	Kind	Pub Date	Status								
EP 2951159	B1	2018-08-22									
EP 2951159	A1	2015-12-09	GRANTED								
WO 2014116849	A1	201/-07-31	LAPSED								
US 9643928	B2	2017-05-09	GRANTED								
US 20160002170	A1	2016-01-07									
JP 6437456	B2	2018-12-12									
JP 2016505071	Α	2016-02-18	GRANTED								
RU 2666144	C2	2018-09-06									
RU 2015134420	Α	2017-03-03	GRANTED								
TW 1685487	В	2020-02-21									
TW 201444800	Α	2014-12-01	GRANTED								
AU 2014209319	B2	2018-04-19									
AU 2014209319	A1	2015-08-27	GRANTED								

Publication Level Data

BizInt Smart Charts

for Patents

FULLTEXT on Orbit:

- Tags for several fields changed
- Updated tags, and cleaned up display
- Title, Abstract, Claims

PatBase enhancements

BizInt Smart Charts

- In BizInt Smart Charts for Patents 5.4 we improve the extraction and display of Legal Status data from PatBase.
- Latest Legal Status from all selected authorities.

Latest Lagal Status	Latest Legal Status Table							
Latest Legal Status	Pub	Date	Event					
AT263171 E [2011-12-15]: - (LSLE / REN) CEASED DUE TO NON-PAYMENT OF THE ANNUAL	AT263171 E	2011-12-15	- (LSLE / REN) CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE					
FEE AU200142085 A1 [2001-10-15]: +	AU200142085 A1	2001-10-15	+ (LSPB) published / reissued					
(LSPB) published / reissued AU785385 B2 [2007-03-29]: +	AU785385 B2	2007-03-29	+ (LSGT) granted / extensions (spc, cpc, pte)					
(LSGT) granted / extensions (spc, cpc, pte)	BG106155 A	2002-08-30	+ (LSPB) published / reissued					
BG106155 A [2002-08-30]: + (LSPB) published / reissued	BG65134 B1	2007-03-30	+ (LSGT) granted / extensions (spc, cpc, pte)					
BG65134 B1 [2007-03-30]: + (LSGT) granted / extensions (spc, cpc, pte) BRPI0105563 A [2010-05-11]: - (LSLE / B08K) LAPSE AS NO EVIDENCE OF PAYMENT OF THE	BRPI0105563 A	2010-05-11	- (LSLE / B08K) LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)					
ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART.	CA2368966 AA	2011-08-16	- (LSLE / FZDE) DEAD					

PatBase enhancements

BizInt Smart Charts

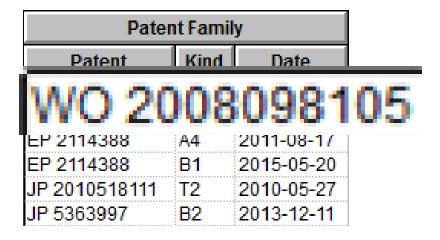
- In BizInt Smart Charts for Patents 5.4 we improve the extraction and display of Legal Status data from PatBase.
- Estimated Expiry Date (present as a special event type)

Family	Latest Evning Data				
Pub No.	State	Exp Date	Latest Expiry Date		
KR 20160000319 A	ALIVE		2034-06-24		
KR 101788665 B1	ALIVE	2034-06-24	(KR101788665 B1)		

PatBase enhancements

BizInt Smart Charts

- In BizInt Smart Charts for Patents 5.4 we improve the display of PCT publication numbers from PatBase.
- Using four-digit years for all WO publications 2004 and later.



BizInt Smart Charts

- We tested Version 5.4 against PatBase 2.0 before release
- But you found more cases we didn't

BizInt Smart Charts

for Patents

Publication Level Data Improvements

- We have made improvements in AN/TI/CLM extraction, detecting and preferring English versions.

 PatBase 2.0 changed the language representation.
- A change in Version 5.4 to extract all publications in a family interacted badly with a PatBase 2.0 structure change - this caused extra "runt" rows in the chart when you include Legal Status from PatBase 2.0
- Version 5.4.1 fixes these issues

BizInt Smart Charts

- The presentation of machine translations in claims has changed in PatBase 2.0.
- Version 5.4.1 selects an appropriate set of claims when available.

BizInt Smart Charts

- PatBase 2.0 no longer indicates the language for Inventor and Assignee names in the export.
- For now, all values are included in cells.
- BizInt doesn't handle non-Latin languages well.
- You will see "junk" in Inventor and Assignee columns.
- Fixing this is on our to do list.

STN Transcript support

BizInt Smart Charts

- A series of improvements to our STN reader
- More reliable structure image extraction
- Fixed issues with incomplete records
- DEFULL
- Looking at options for better KWIC support

BizInt Smart Charts





for Patents

IP Sequence Databases

Provide data on sequences filed in patents

- GenomeQuest (Geneseq, GQ-PAT)
- STN (USGENE, DGENE, PCTGEN)
- New! CAS Biosequences on GenomeQuest



CAS Biosequences on GenomeQuest

	Title	Patent Sequence	Alimonant		CAS Registry	CAS Name	Biosequence Modifications		Role
	Tiue	Location		Alignment	Number	CAS Name	Position	Modification	Role
Soybean nucleic acids and encoded proteins associated with transcription in plants and their uses for plant improvement		SEQID 263138; claimed	s:	1 N-AFDAAAF 8 52 NKAFDAAAF 60	672458-79-6	Transcription-associated protein (Glycine max clone PAT_MRT3847_79635C.1.pep fragment)			Biological Study, Unclassified; Biological Use, Unclassified; Properties; Biological Study; Use:
36	Sorghum nucleic acids and encoded proteins and their uses improvement of transgenic plants	SEQID 46304; claimed	Q: S:	1 MLRHQMH 7 10 MLRAAHQMH 18	752630-89-0	Protein (sorghum clone LIB3480-022-P1-K1-C6.pep fragment)			Biological Study, Unclassified; Biological Use, Unclassified; Properties; Biological Study; Uses
37	Chimeric antigen receptors containing a chlorotoxin		Q: S:	1 ECCG-I-KCI 8 + 17 ECCGGIGKCV 26	2095313-89-4		1	bridge, cysteine-1 to cysteine-18, disulfide bridge	Properties; Therapeutic Use; Biological Study; Uses
	domain		3.	17 ECCGGIGROV 26			4	bridge, cysteine-4 to cysteine-25, disulfide bridge	
							15	bridge, cysteine-15 to cysteine-30, disulfide bridge	
							18	bridge, cysteine-1 to cysteine-18, disulfide bridge	
							19	bridge, cysteine-19 to cysteine-32, disulfide bridge	
							25	bridge, cysteine-4 to cysteine-25, disulfide bridge	
							30	bridge, cysteine-15 to cysteine-30, disulfide bridge	
							32	bridge, cysteine-19 to cysteine-32, disulfide bridge	

Improvements to Query Results

- A customer approached us about a number of issues in the Query Results column (all sequence databases)
- Missing fields
- Messy formatting
- Reworked data extraction and layout for version 5.4

Query Results

Align len 1368, Errors=0, Identity=100.00%, Similarity=100.00% Query len=1368, pos=1-1368 (fwd), Identity query=100.00%, Nb gaps query=0 Subject len=1368, pos=1-1368 (fwd), Identity subj=100.00%, Nb gaps subj=0

BizInt Smart Charts





for Patents

Future IP Sequence Databases

Provide data on sequences filed in patents

- Clarivate SequenceBase
- Questel BioSequences
- BLAST on REGISTRY (classic STN)





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), SciFinder, Dialog, Ovid, PubMed

Improvements to Literature

- Still working on Common Literature detection
- Data element extraction from SO on STN
- PubMed XML going away
- Looking at options for generic (RIS?) support

Options for DOI

Option to include full path in DOI

MEDLINE: Pertussis NCT pubmed_result

	Title	DOI	Grants	Clinical Trials	
1 Link	Increasing provision of adolescent vaccines in primary care: a randomized controlled trial.	10.1542/peds.2013-4257	R25 CA057726 (NCI NIH HHS - United States)	NCT01544764	
2 Link	Pertussis booster vaccination in HIV-infected children receiving highly active antiretroviral therapy.	10.1542/peds.2007-0729	N01-HD-3-3345 (NICHD NIH HHS - United States) U01 AI068632 (NIAID NIH HHS - United States)	NCT00013871	
3 Link	A population-based, postlicensure evaluation of the safety of a combination diphtheria, tetanus, acellular pertussis, hepatitis B, and inactivated poliovirus vaccine in a large managed care organization.	10.1542/peds.2008-1977	N01 AI 25463 (NIAID NIH HHS - United States)	NCT00146835	



Patents & IP Sequences | Clinical Trials | Drug Pipelines

BizInt Smart Charts: BizDash in 60 seconds

Fall 2020

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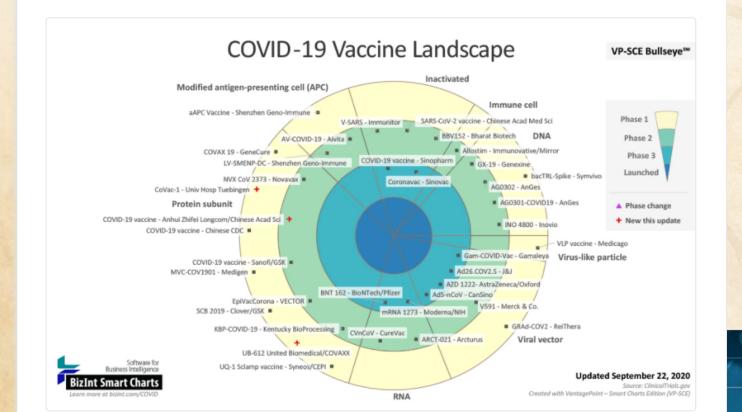
Resources

COVID-19 Vaccine Landscape (Bullseye)

September 22, 2020

The COVID-19 pandemic has generated intense interest in efforts by the global pharmaceutical community to develop COVID-19 vaccines. The BizInt Smart Charts team has applied tools in the BizInt Smart Charts product family, including VantagePoint – Smart Charts Edition (VP-SCE), to create a concise visualization of the leading COVID-19 vaccines in development.

Another visualization in this family is our COVID-19 Vaccine Timeline.



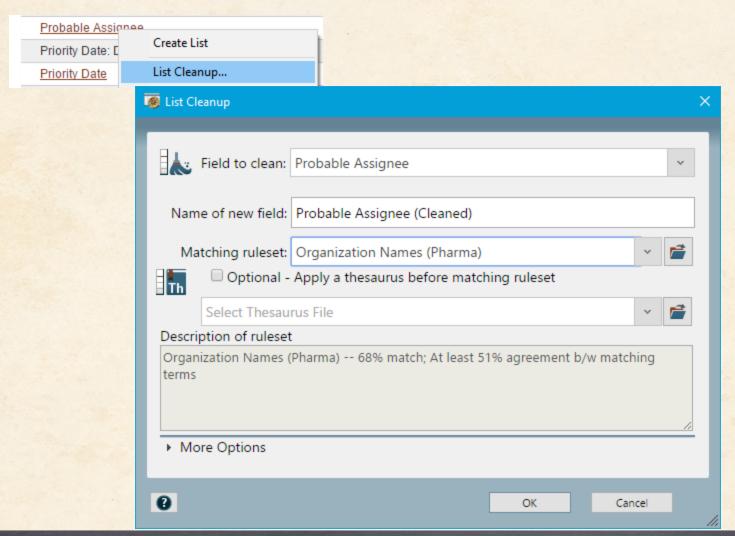




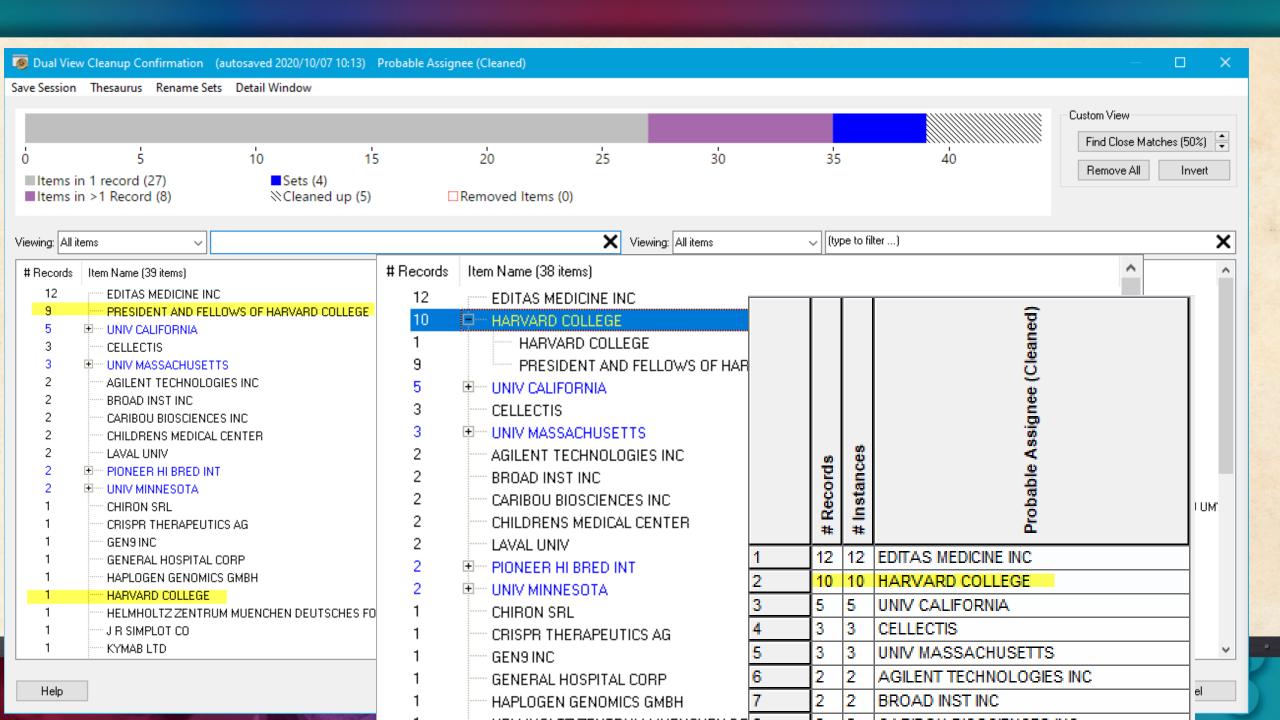
Commonly Used Features

- Further Processing
 - Divide multiple item fields
 - Extract years
 - Extract countries
- List Cleanup Cleanup Assignees
- Thesauri Save cleanup steps for new projects
- Concatenate & Merge Fields combine related fields from different sources
- Filter
 - Filter Patent Family by authority
 - Create a new field with patent numbers from a selected authority

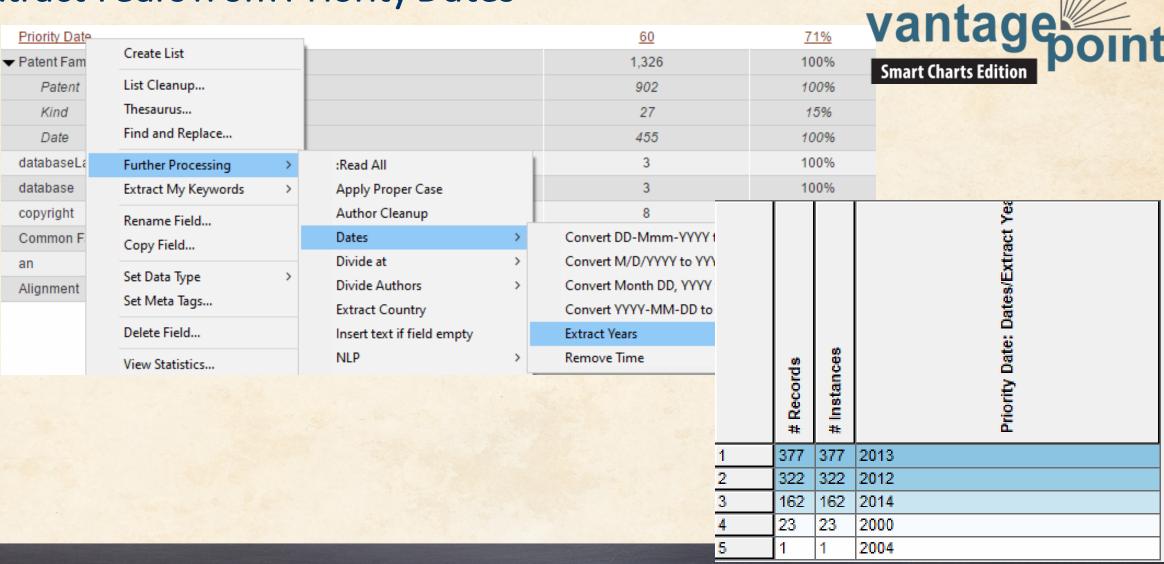
List Clean-up: Cleanup Assignees







Extract Years from Priority Dates



Filter Patent Family by US/PCT

		8	Patent Family					
	# Records	# Instance	Patent	Kind			Date	US/PCT
1	1	1	US 2006210579	Α			2006-09-21	
2	1	1	US 2006210580	A			2006-09-21	
3	1	1	US 2006210581	A			2006-09-21	
4	1	1	US 2006210582	A			2006-09-21	
5	1	1	US 2006258849			60		Pat



4	1	1	US 2006210582	A			2006-09-21				
5	1	1	US 2006258849			ces	P	atent Family - US/PC	T		
6	1	1	US 2010105865		rds	ğ				1.	
7	1	1	US 2013129740		8	star	i i			S/PCT	
8	1	1	US 2013315884		<u>S</u>	Ins	Patent	Kind	Date	15	
9	1	1	US 2014068797		#	#	Pa	₹	ő	ő	
10	1	1	US 2014134142	4		a	HC 2000240570	Δ.	2000 00 24	┢	
11	1	1	US 2014154397	1	<u> </u>	1	US 2006210579	Α	2006-09-21	-	
12	1	1	US 2014170753	2	1	1	US 2006210580	A	2006-09-21		
13	1	1	US 2014179006	3	1	1	US 2006210581	Α	2006-09-21		
14	1	1	US 2014179770	4	1	1	US 2006210582	A	2006-09-21		
				5	1	1	US 2006258849	A	2006-11-16		
				6	1	1	US 2010105865	A	2010-04-29		
•	-A			7	1	1	US 2013129740	A	2013-05-23		NAME OF TAXABLE PARTY.
				8	1	1	US 2013315884	A	2013-11-28		
				9	1	1	US 2014068797	Α	2014-03-06		

...and send to BizInt Smart Charts as new columns.

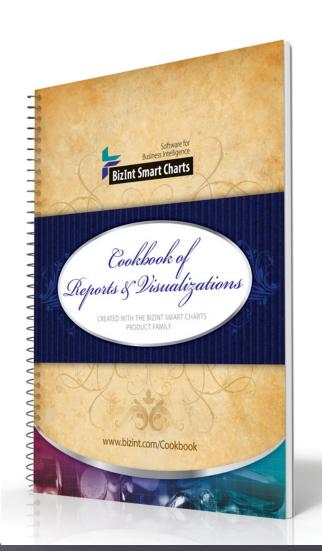
				Pater	nt Fami	ly		Patent Fa	Patent Family - US/PCT			
	Title	Database	Probable Assignee	Patent	Kind	Date	Priority Date	Patent	Kind	Date	Priority Year	Probable Assignee (Cleaned)
1	ORTHOGONAL CAS9 PROTEINS FOR RNA-GUIDED GENE REGULATION AND EDITING	PatBase	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	WO 15006294 WO 15006294 AU 2014287397 AU 2014287397 US 2015259684 CA 2917639	AA	2015-01-15 2015-11-26 2015-01-15 2016-02-04 2015-09-17 2016-01-06	2013-07-10	US 2015259684 WO 15006294 WO 15006294		2015-09-17 2015-01-15 2015-11-26	2013	HARVARD COLLEGE
2	THERAPEUTIC USES OF GENOME EDITING WITH CRISPR/CAS SYSTEMS	PatBase	CHILDRENS MEDICAL CENTER	WO 15006498 WO 15006498 US 2015152436	A2 A3 A	2015-01-15 2015-04-02 2015-06-04	2013-07-09	US 2015152436 WO 15006498 WO 15006498		2015-06-04 2015-01-15 2015-04-02	2013	CHILDRENS MEDICAL CENTER
3	METHODS AND COMPOSITIONS FOR PRODUCING DOUBLE ALLELE KNOCK OUTS	PatBase	LARIX BIOSCIENCE LLC	WO 15010114 US 2015024500	A1 A	2015-01-22 2015-01-22	2013-07-19	US 2015024500 WO 15010114		2015-01-22 2015-01-22	2013	LARIX BIOSCIENCE LLC
4	GENOME ENGINEERING	PatBase	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	WO 15013583 WO 15013583 WO 15013583 US 2015031133 US 2015031132 AU 2014293015 CA 2918540	Α	2015-01-29 2015-03-05 2015-04-23 2015-01-29 2015-01-29 2015-01-29 2016-01-15	2013-07-26	US 2015031132 US 2015031133 WO 15013583 WO 15013583 WO 15013583	A3	2015-01-29 2015-01-29 2015-01-29 2015-04-23 2015-03-05	2013	HARVARD COLLEGE

BizInt Smart Strategy Dashboards (BizDash)



- Don't have the time to learn the BizInt tools?
- BizInt will use the BizInt Smart Charts tools to build BizInt Smart Strategy Dashboards and/or other reports/visualizations for you.
- Could "jumpstart" using the tools yourselves?
- Included in BizInt licenses through 2020.
- See the Cookbook for ideas: bizint.com/Cookbook

- The Cookbook is a collection of sample reports and visualizations which you can create with the BizInt Smart Charts product family.
- Patent Edition released October 2020.
 bizint.com/Cookbook



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There's a recipe for that...

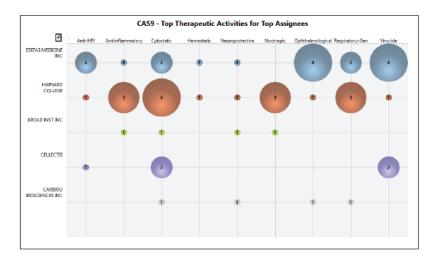
Cookbook of Reports & Visualizations

www.bizint.com/Cookbook | © 2019 Bizint Solutions, Inc., 4/2019



Analyzing Companies by Therapeutic Activity with a Bubble Chart [Patents PT-12]

This is one example of a bubble chart created with VantagePoint – Smart Charts Edition (VP-SCE) using data exported from Bizint Smart Charts for Patents (see other recipes in this Cookbook for bubble charts with pipeline and clinical trial data.) Here the bubble chart shows companies by therapeutic activity based on records from Derwent WPI, and PatBase. A single record for each patent family was created with Bizint Smart Charts Reference Rows and then exported to VP-SCE. We linked Probable Assignee from PatBase with Therapeutic Activity from DWPI to build the bubble chart in VP-SCE.



Cookbook of Reports & Visualizations

www.bizint.com/Cookbook | © 2019 Bizint Solutions, Inc., 4/2019



Analyzing Companies by Therapeutic Activity with a Bubble Chart [Patents PT-12]

How did we create this?

SEARCHES:

- GenomeQuest: Identify sequences in GenomeQuest for CRISPR/CAS9.
- PatBase & Derwent World Patents Index: Search using the patents numbers from the GenomeQuest sequence results.

BIZINT SMART CHARTS FOR PATENTS

- . Import each set of search results into BizInt Smart Charts and use the File Combine feature to create a combined chart.
- 2. Run the Identify Common Patent Families tool and sort by the Common Family field.
- 3. Display the Probable Assignee and Therapeutic Activity columns.
- 4. Save the chart. Select File | Send to Reference Rows to open the chart in BizInt Smart Charts Reference Rows.

BIZINT SMART CHARTS REFERENCE ROWS

5. Use File Export to export the visible columns to VantagePoint - Smart Charts Edition.

VANTAGEPOINT - SMART CHARTS EDITION

- If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using Import from BizInt Smart Charts under the Home tab. Save your .vpt file.
- Cleanup Assignees: Right-click on Probable Assignee and select List Cleanup... On the List Cleanup panel, under Matching ruleset, select Organization Names (Pharma) and click OK.
- Use the Cleanup Confirmation panel to further cleanup company names and then click Accept. See "Technique: Using List Cleanup" recipe for more details.
- Select the top assignees, then right click to select Add Selection to Group.... In the Add Items panel, type the word "top" and click OK. To focus on industry, you can uncheck individuals and a cademic institutions.
- Cleanup Therapeutic Activity: Return to the Summary Sheet. Double-click on Therapeutic Activity to see values for this
 field. Under the Refine tab, select Further Processing | Divide at | Semicolon. Then apply Further Processing | Read Until First | Period
- Select the top therapeutic activities, then right click to select Add Selection to Group.... In the Add Items panel, type the word "top" and click OK.
- Create the Bubble Chart: Save the file. Under the Report tab, select Bubble Chart and a window will open with options for the Bubble Chart.
- For "Step 1: Select Field for Rows", select the cleaned assignees field Probable Assignee (Cleaned). Choose the "Select a
 group" radio button and then select the "top" group.
- 14. For "Step 2: Select Field for Columns", select your cleaned therapeutic activity field Therapeutic Activity: Divide at/ semicolon: Read Until - First/Period from the drop-down. Choose the "Select a group" radio button and then select the "top" group.
- For Step 3, you can enter a template name if you want to save these settings.
- 16. Click "Run" and the a bubble chart showing assignees by therapeutic activity will be created.
- Edit the Bubble Chart: You can click the "#" at the top left of the bubble chart to display the number of records in each bubble. Click on the chart title to edit it.
- 18. In VP-SCE, you can click on a bubble and see information about the records in each bubble in detail windows.
- 19. Export the Bubble Chart: Under the Report tab, click on Export Image to export the bubble chart in a variety of formats.



