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BizInt Smart Charts

How do I deliver my search results?

Matt Eberle & Diane Webb, BizInt Solutions

PIUG Annual Meeting 2023

Alexandria, VA

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Software for
Business Intelligence

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How do I deliver my

Choose Your Own Report Adventure

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Choose
the best
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CHARTS, RECORDS & BEYOND!

If you want a spreadsheet so you can sort and filter...
Go to the next slide

Or, if your client wants the report in Excel...
next slide please.

If you feel like you can pick any slide as long as it's the next one...
Next slide.

Spreadsheet (Excel)



Works for tabular presentation (and visualization)

Allows for analysis (filter, sort)

Clients think of it as an analysis tool

Not a good fit for records

Images float(not embedded in cells)

Tabular presentation not flexible

No Subtables

Single link per table cell

	A	B	C	D	E	F	G
1	Combined: CAS-9 October 2020 -- PatBase, FAMPAT, GenomeQuest, Innovation						
2		Title	Database	Patent Assignee	Patent Number	Inventor(s)	Abstract
3	1 Link	RNA-guided transcriptional regulation	FAMPAT	HARVARD COLLEGE	US 9267135 B2	CHURCH GEORGE M MALI PRASHANT G ESVELT KEVIN M	(US9267135) Methods of modulating expression of a target nucleic acid in a cell are provided including introducing into the cell a first foreign nucleic acid encoding one or more RNAs complementary to DNA, wherein the DNA includes the target nucleic acid, introducing into the cell a second foreign nucleic acid encoding a nuclease-null Cas9 protein that binds to the DNA and is guided by the one or [CONT.]
4	2 Link	Compositions and methods for targeted gene disruption in prokaryotes	FAMPAT	ZYMERGEN	WO 201570193 A1	LIU OLIVER KIM JEFFREY	(WO2015/070193) The present disclosure relates to engineered bacteriophage vector compositions comprising nucleic acids that express recombinant nucleases. Also provided are methods of using engineered bacteriophage vectors to effect genomic disruption or targeted gene disruption in prokaryotes. The disclosed compositions and methods are useful for reducing antibiotic resistance in bacteria cells.
5	3 Link	RNA-Guided Transcriptional Regulation	GQPAT Gold+ Proteins	HARVARD COLLEGE; President and Fellows of Harvard College	US 20140356959	Church George M. MALI Prashant G. Esvelt Kevin M.	Methods of modulating expression of a target nucleic acid in a cell are provided including introducing into the cell a first foreign nucleic acid encoding one or more RNAs complementary to DNA, wherein the DNA includes the target nucleic acid, introducing into the cell a second foreign nucleic acid encoding a nuclease-null Cas9 protein that binds to the DNA and is guided by the one or more RNAs, introducing into the cell a third foreign nucleic acid encoding a transcriptional regulator protein or domain, [CONT.]

	Title	Patent Number	Patent Assignee	Inventor(s)	Abstract
1 Link	Altering a target nucleic acid in a cell by introducing into the cell a first foreign nucleic acid encoding guide RNA sequences complementary to DNA, and introducing into the cell a second foreign nucleic acid encoding a Cas9 protein	US 20150140664 A1	HARVARD COLLEGE BYRNE S M CHURCH G M	BYRNE, Susan M. CHURCH, George M.	Alteration of a target nucleic acid in a cell comprises introducing into the cell a first foreign nucleic acid encoding one or more guide RNA sequences complementary to DNA, where the DNA includes the target nucleic acid, introducing into the cell a second foreign nucleic acid encoding a Cas9 protein that binds to the DNA and is guided by the one or more guide RNA sequences, introducing into the cell a third foreign nucleic acid encoding an exogenous nucleic

	A	B	C	D	E	F	G	H	I	J	K	L
1	CAS-9 October 2020 -- PatBase, FAMPAT, GenomeQuest, Innovation											
2		Title	Database	Patent Assignee	Patent Number	Patent Family (Patent : Kind : Date)	Inventor(s)	Abstract				
1	Link	RNA-guided transcriptional regulation	FAMPAT	HARVARD COLLEGE	US 9267135 B2	US 9267135 : B2 : 2016-02-23 US 20140356959 : A1 : 2014-12-04 US 10640789 : B2 : 2020-05-05 US 20160237456 : A1 : 2016-08-18 US 10767194 : B2 : 2020-09-08 US 20200024618 : A1 : 2020-01-23 US 20140356956 : A1 : 2014-12-04 US 20200299732 : A1 : 2020-09-24	CHURCH GEORGE M MALI PRASHANT G ESVELT KEVIN M	(US9267135) Methods of modulating expression of a target nucleic acid in a cell are provided including introducing into the cell a first foreign nucleic acid encoding one or more RNAs complementary to DNA, wherein the DNA includes the target nucleic acid, introducing into the cell a second foreign nucleic acid encoding a nuclease-null Cas9 protein that binds to the DNA and is guided by the one or [CONT.]				
2	Link	Compositions and methods for targeted gene disruption in prokaryotes	FAMPAT	ZYMERGEN	WO 201570193 A1	WO 201570193 : A1 : 2015-07-02 US 20150132263 : A1 : 2015-03-01 US 20150353901 : A1 : 2015-03-01 https://ppubs.uspto.gov/pubwebapp/external.html?q=(9267135).pn - Click once to follow. Click and hold to select this cell.		(WO2015/070193) The present disclosure relates to engineered bacteriophage vector compositions comprising nucleic acids that express recombinant nucleases. Also provided are methods of using engineered bacteriophage vectors to effect genomic disruption or targeted gene disruption in prokaryotes. The disclosed compositions and methods are useful for reducing antibiotic resistance in bacteria cells.				
3	Link	RNA-Guided Transcriptional Regulation	GQPAT Gold+ Proteins	HARVARD COLLEGE; President and Fellows of Harvard College	US 20140356959	US20140356959 : : 20141204 US20140356956 : : US2014356956 : : US2014356959 : : US20160237456 : : US2016237456 : : US20200024618 : : US9267135 : :	Church George M. MALI Prashant G. Esvelt Kevin M.	Methods of modulating expression of a target nucleic acid in a cell are provided including introducing into the cell a first foreign nucleic acid encoding one or more RNAs complementary to DNA, wherein the DNA includes the target nucleic acid, introducing into the cell a second foreign nucleic acid encoding a nuclease-null Cas9 protein that binds to the DNA and is guided by the one or more RNAs, introducing into the cell a third foreign nucleic acid encoding a transcriptional regulator protein or domain, [CONT.]				
4	Link	Modulating expression of a target nucleic acid comprises providing to the cell a guide RNA including a transcriptional activator or repressor domain as a fusion protein, and providing to the cell a nuclease null Cas9 protein	Derwent Innovation + DWPI	HARVARD COLLEGE CHURCH G M ESVELT K M MALI P G	US 20140356959 A1	US 20140356959 : A1 : 2014-12-04 US 9267135 : B2 : 2016-02-23	CHURCH, George M. MALI, Prashant G. ESVELT, Kevin M.	Modulating expression of a target nucleic acid in a cell comprises providing to the cell a guide RNA complementary to the target nucleic acid sequence including a transcriptional activator or repressor domain as a fusion protein for modulating target nucleic acid expression in vivo; and providing to the cell a nuclease null Cas9 protein that interacts with the guide RNA and binds to the target nucleic acid sequence in a site specific manner. [CONT.]				
5												
				</								



I like that I can sort and filter the table, but...

Could the Patent Family look nicer, and could I have links to family members, and to the records?

Go to the next slide



I do want both the chart with links and the records...

Go to the next slide

Text Document (Word)



Allows for a mix of presentations
- tables and records, text and images

Editable and can be added to an existing document or template

Tabular presentation can be flexible

Subtables

Images in cells and embeddable in the document

Multiple links in a table cell

Not designed for analysis

Interactivity is limited (model is a document/printed publication)

Title		Database	Probable Assignee	Inventor(s)	Patent Family			Abstract
					Patent	Kind	Date	
1	Modulating expression of a target nucleic acid comprises providing to the cell a guide RNA including a transcriptional activator or repressor domain as a fusion protein, and providing to the cell a nuclease null Cas9 protein	1a Patbase link	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	CHERCH DZHORDZH M CHURCH GEORGE M ESVELT KEVIN M GEORGE M CHURCH KEVIN M ESVELT KEVIN M IWANICKI MALI PRASHANT G PRASHANT G MALI	US 9267135	B2	2016-02-23	(US9267135) Methods of modulating expression of a target nucleic acid in a cell are provided including introducing into the cell a first foreign nucleic acid encoding one or more RNAs complementary to DNA, wherein the DNA includes the target nucleic acid, introducing into the cell a second foreign nucleic acid encoding a nuclease-null Cas9 protein that binds to the DNA and is guided by the one or [CONT.]
		1b FAM link			US 20140356959	A1	2014-12-04	
		1c GQP link			US 10640789	B2	2020-05-05	
		1d GQP link			US 20160237456	A1	2016-08-18	
		1e GQP link			US 10767194	B2	2020-09-08	
		1f GQP link			US 20200024618	A1	2020-01-23	
		1g GQP link			US 20140356956	A1	2014-12-04	
		1h Innov link			US 20200299732	A1	2020-09-24	
		1i Innov link						
		1i Innov	1a Patbase	1a Patbase			1b FAM	1b FAM
2	Altering a target nucleic acid in a cell by introducing into the cell a first foreign nucleic acid encoding guide RNA sequences complementary to DNA, and introducing into the cell a second foreign nucleic acid encoding a Cas9 protein	2a Patbase link	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	BYRNE SUSAN M CHURCH GEORGE M GEORGE M CHURCH SUSAN M BYRNE	EP 3071698	B1	2019-09-04	(EP3071698) Methods of simultaneously excising large nucleic acid sequences from a target nucleic acid and inserting large foreign
		2b FAM link			EP 3071698	A2	2016-09-28	
		2c GQP link			EP 3071698	A4	2017-06-28	
		2d GQP li						
		2e GQP li			6a CortPat			6c Patbase
		2f GQP li						6c Patbase
		2g GQP li						
		2h GQP li						
		2i GQP li						
		2j GQP li						
3	New bacteriophage comprising polynucleotide that expresses RNA-directed DNA-binding polypeptide and targeting module comprising guide RNA, used e.g. for treating autoimmune and inflammatory disease, and disease caused by bacterial infection	2k Innov li						
		2k Innov						
		3a Patbase						
		3b FAM li						
		3c GQP li						
		3d GQP li						
		3e Innov li						
		3f Innov li						
		3f Innov						

1. WO 2018107088

1a [Cortellis Patents from Clarivate Analytics](#) 1b [Clarivate Drug Discovery Intelligence](#) 1c [PatBase](#)

1a Cortellis Patents from Clarivate Analytics

| [Publisher Version](#) | [Back to chart](#) | [Next record](#) |

WO 2018107088 A2

Vaccines comprising RNA polynucleotides encoding human metapneumovirus or human parainfluenza virus 3 F proteins co-formulated with lipids - useful in treating metapneumovirus amd parainfluenza virus infections.

Patent ID Number: 4088378

Last Change Date: 2020-10-03

Original Assignee: ModeRNA Therapeutics

Inventors: Ciaramella, Giuseppe; Himansu, Sunny

Patent Publications

Patent	Kind	Date
WO 2018107088	A2	2018-06-14
EP 3551193	A2	2019-10-16
EP 3551193	A4	2020-08-19
US 20200069794	A1	2020-03-05

Priority Information

Application	Date

OK, but *my* attorneys would like to see the records *their way*.
With selected fields from the records in yellow boxes...
A space for their notes...
And the full claims...

Next slide please.

Yes, but my attorneys care more about the *chemical structures*.
They want to see each structure once...
In a Word table...
With all the associated references...

Next slide please.

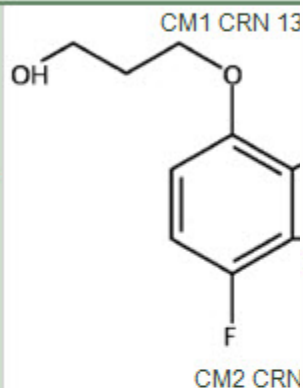
Summary Record export with Hit Structures

3. Basic Patent Number: CA2810021A1
Title: Boron-containing small molecules
Inventor(s): Hernandez, Vincent S.; Ding, Charles Rock, Fernando; Zhang, Suoming; E
Patent Assignee: Anacor Pharmaceuticals, Inc., United States
Hyperlinks: CA2810021A1

Hit Structures:

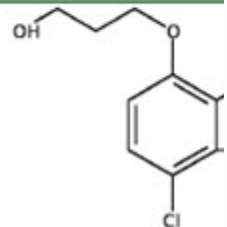
1364682-96-1 ([Cmpd. 2](#))

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



1364683-03-3 ([Cmpd. 3](#))

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



Index of Hit Structures

	Substance	Structure	
1	1655492-02-6 2,1-Benzoxaborole, 4-fluoro-1,3-dihydro-1-hydroxy-3-(nitromethyl)-7-[2-(phenylmethoxy)ethoxy]-		prep. and application of benzoxaborole compds. Reference 1
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)		prep. and application of benzoxaborole compds. useful for treating bacterial infections Reference 2 Reference 3

Each hit substance identified

Structures with annotations

Links to references for each structure

Multiple images (continuation) or mixtures



Summary records are nice, but all the colors are distracting...

Next slide please.

Allow styles for summary records

1.	Title: New aryl sulfoxide derivatives useful for controlling animal pests in crop protection, material protection and/or in veterinary sector		
	Database: Derwent World Patents Index PatBase		
	Use: (I) or the composition is useful for controlling animal pests in crop protection, material protection and/or in the veterinary sector (claimed).		
	Probable Assignee: BAYER CROPSOURCE AG		
	Patent Family:	Patent	Kind
		WO 2014202510	A1
		TW 201536739	A
			2014-12-24
			2015-10-01
	Hyperlinks:	Source	PatDocs Family Tree
Notes			

1.	Title: New aryl sulfoxide derivatives useful for controlling animal pests in crop protection, material protection and/or in veterinary sector			
	Database: Derwent World Patents Index PatBase			
	Use: (I) or the composition is useful for controlling animal pests in crop protection, material protection and/or in the veterinary sector (claimed).			
	Probable Assignee: BAYER CROPSOURCE AG			
	Patent Family:	Patent	Kind	Date
		WO 2014202510	A1	2014-12-24
		TW 201536739	A	2015-10-01
	Hyperlinks:	Source	WO 2014202510 A1	PatDocs Family Tree
Notes				

2. **Title:** Composition for reducing overall damage of plants caused by insects, mites, nematodes and phytopathogens comprises isolated gougerotin (I) and at least one insecticide which is other than gougerotin

Database: Derwent World Patents Index
Derwent World Patents Index
[PatBase](#)

Use: The composition is useful: as a fungicide and/or insecticide for reducing overall damage of plants and plant parts and losses in harvested fruits or vegetables caused by insects, mites, nematodes and/or phytopathogens; (all claimed); for improving stress tolerance against drought, heat, salt, UV, water and cold; and improving root growth, root size maintenance, root effectiveness, and plant height. Test details are described but no results given.

Probable Assignee: BAYER CROPSOURCE LP

Patent Family:

Patent	Kind	Date
WO2014124373	A1	20140814
US20140228213	A1	20140814
CA2899334	A1	20140814

Hyperlinks: [Source](#) | [WO 2014124368 A1](#) | [PatDocs Family Tree](#)

Notes

You may select a visual style for the export:

Color - original style with yellow boxes

Color - original style with yellow boxes

Simple - clean style without color backgrounds

Open Save Cancel

2.	Title: Composition for reducing overall damage of plants caused by insects, mites, nematodes and phytopathogens comprises isolated gougerotin (I) and at least one insecticide which is other than gougerotin			
	Database: Derwent World Patents Index Derwent World Patents Index PatBase			
	Use: The composition is useful: as a fungicide and/or insecticide for reducing overall damage of plants and plant parts and losses in harvested fruits or vegetables caused by insects, mites, nematodes and/or phytopathogens; for treating conventional or transgenic plants or its seed (all claimed); for improving stress tolerance against drought, heat, salt, UV, water and cold; and improving root growth, root size maintenance, root effectiveness, and plant height. Test details are described but no results given.			
	Probable Assignee: BAYER CROPSOURCE LP			
	Patent Family:	Patent	Kind	Date
		WO2014124373	A1	20140814
		US20140228213	A1	20140814
		CA2899334	A1	20140814
	Hyperlinks:	Source	WO 2014124368 A1	PatDocs Family Tree
Notes				

Depending on your search, you could be happy with records
that are a mix of summary and detail --
seek no further, happily ever after, here you are.
The End.

Really? You're looking for something more?

More than these records?

Where we're going there are no roads (and not much
software).
But there are....slides.



But, my clients want a spreadsheet so they can sort and filter,

And the summary records...
Time to go beyond.

Next slide



In the Future?

Excel export with automatically generated links to Summary Records in a separate Word file.

	Drug Name(s)	Database	bookmark link	Enhanced Title
1 a	mRNA-1653	Cortellis Patents from Clarivate Analytics	Link	Vaccines comprising RNA polynucleotides encoding human metapneumovirus or human parainfluenza virus 3 F proteins co-formulated with lipids - useful in treating metapneumovirus and parainfluenza virus infections.
1 b	mRNA-1653	Clarivate Drug Discovery Intelligence		

1 c	1	Combined: RNA vaccine Cortellis+Integrity+Patbase			
	2	Drug Name(s)	bookmark link	Enhanced Title	Probable Assignee
	1	mRNA-1653 {1b CDDI}	Link to record	Vaccines comprising RNA polynucleotides encoding human metapneumovirus or human parainfluenza virus 3 F proteins co-formulated with lipids - useful in treating metapneumovirus and parainfluenza virus infections. {1a CortPat}	MODERNATX INC
2 a	2	SARS-CoV-2 vaccine (im, COVID-19/S/ CureVac			
2 b	3	R-6717			
2 c	4				
	5	3 PR/8 HA-DVG {3b CDDI}	Link to record	In vitro-transcribed RNA encoding an antigen (hemagglutinin) and a RNA activating RIG-1 - cancer or pathogenic {3a CortPat}	

1.	Drug Name(s):	mRNA-1653		
	Database:	Cortellis Patents from Clarivate Analytics Clarivate Drug Discovery Intelligence PatBase		
	Enhanced Title:	Vaccines comprising RNA polynucleotides encoding human metapneumovirus or human parainfluenza virus 3 F proteins co-formulated with lipids - useful in treating metapneumovirus and parainfluenza virus infections.		
	Probable Assignee:	MODERNATX INC		
	Patent Family:	Patent	Kind	Date
		WO 2018107088	A2	2018-06-14
		WO 2018107088	A3	2018-07-12
		EP 3551193	A2	2019-10-16
		EP 3551193	A4	2020-08-19
		US 2020069794	A	2020-03-05
		HK 40016413	A1	2020-09-11
	Indications:	Infection, metapneumovirus (MPV); Infection, parainfluenza virus		
	Hyperlinks:	Source	WO 2018107088 A2	PatDocs Family Tree
Notes				
Claims:				
US2020069794AA				
1. A vaccine comprising (a) a RNA polynucleotide comprising the nucleic acid sequence identified by SEQ ID NO:4 or a RNA polynucleotide comprising a nucleic acid sequence at least 95 percent identical to the nucleic acid sequence identified by SEQ ID NO:4 encoding a human metapneumovirus (hMPV) F protein, and (b) a RNA polynucleotide comprising the nucleic acid sequence identified by SEQ ID NO:5 or a RNA polynucleotide comprising a nucleic acid sequence at least 95 percent identical to the nucleic acid sequence				



THE JOURNEY CONTINUES...

Will develop
features for
papers!





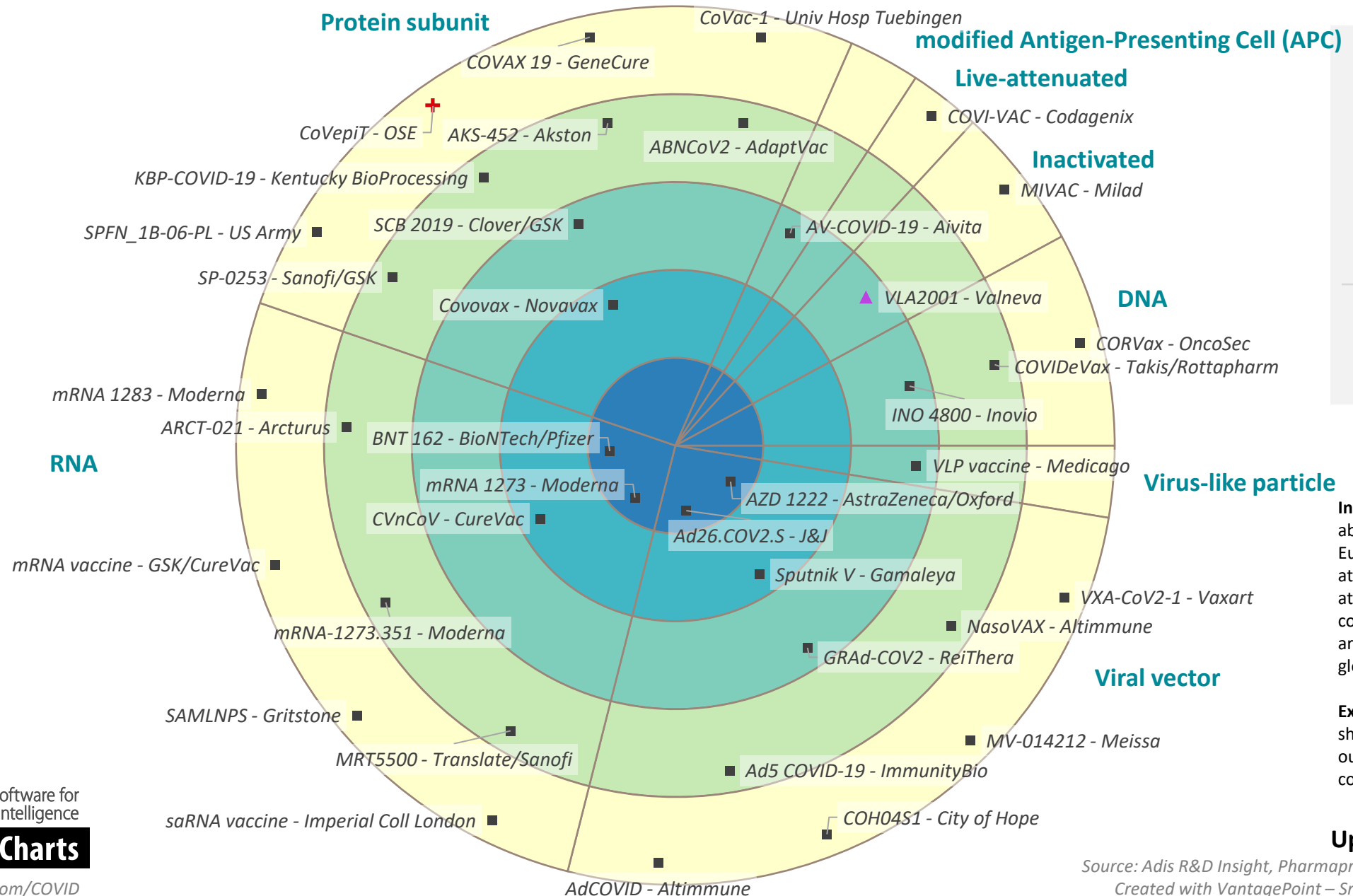
My client doesn't want a big table, they want the search results presented on a slide.

Not slides, mind you, just one slide.

Next slide?

COVID-19 Vaccines – US, UK, & Europe

VP-SCE BullseyeSM



Slideshow/Visualizations (Powerpoint)



Provides a different way to look at your search results

Can allow you to see multiple items at once along with context

Allows for analysis

A single visualization is generally not enough.

Generally leads back to a review of the chart and records

If you decide that picture is worth a 1,000 records,
you've reached The End.

But.

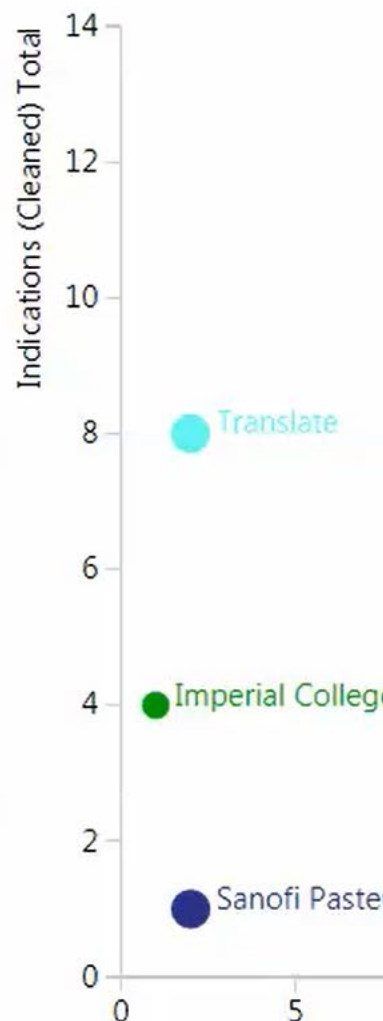
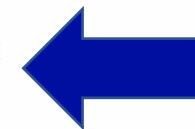
Your client was promised visualizations.
When they see the visualizations they want to see
the records...




Companies appearing in the mRNA sector

Count of patent families

Filtered by Application Date: Dates/Extract Years up to: < 2020 >



	Drug Name(s)	Patent Number	Database	Probable Assignee	Indications
1	mRNA based prophylactic vaccines (infectious diseases), CureVac	WO 2019092153 A1	1a CortPat link 1b Patbase link	CUREVAC AG	Influenza virus infection
	1a CortPat	1a CortPat		1b Patbase	1a CortPat
2	Compound from patent WO 2018096179 A1	WO 2018096179 A1	2a CortPat link 2b Patbase link	CUREVAC AG	
	2a CortPat	2a CortPat		2b Patbase	
3	CV-9103	WO 2015024664 A1	3a CortPat link 3b CDDI link	CUREVAC AG	Prostate tumor Metastatic prostate cancer

 **Espacenet**
Patent search

WO2019092153A1

Office/Language

My Espacenet Help Classification search Results Advanced search Filters Popup tips Report data error Feedback

Home > Results > WO2019092153A1

★ WO2019092153A1 RNA SEQUENCE ADAPTATION

Available in Patent Translate

Bibliographic data Description Claims Drawings Original document Citations Legal events Patent family

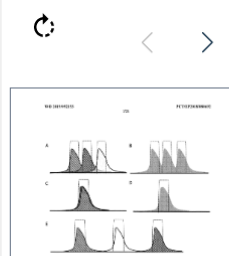
Register Global Dossier

Applicants CUREVAC AG [DE] +

Inventors HEINZ STEFAN [DE]; ROOS TILMANN [DE]; VAHRENHORST DOMINIK [DE]; CONZELMANN MARKUS [DE] +

Classifications

IPC A61K31/7105; C12N15/10; C12P19/34;





THE JOURNEY CONTINUES...

So...

How do *you* deliver
search results?

Thank You!

