BizInt Smart Charts

for Patents

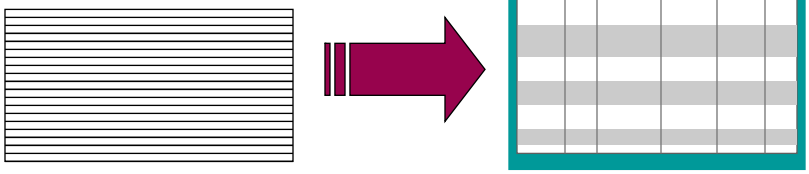
Creating Tabular Reports from Gene Sequence Databases

PIUG Boston Biotech Meeting

John Willmore, VP Product Development

February 10, 2010

BizInt Smart Charts software helps you create, customize and distribute tabular reports combining information from the leading patents and drug pipeline databases.



Many records matching search or alert

Easy-to-read summary table

Each row in a chart corresponds to a sequence

GQPAT Proteins: Sample Sequence Chart

	Title	Seq. ID Number	Patent Sequence Location	Organism Species	Sequence	Query Results
79	Humanized antibodies that recognize difucosyl Lewis blood group antigens Y-6 and B-7-2	US5562903-0009	disclosure		MKLPVRLLVLMFWIPASSSDVLMTQTPLSLPVSLGDQASISCRSSQSIVH SNGNTYLEWYLQKPGQSPKLLIKVSNRFSGVPDRFSGSGSGTDFTLKIS RVEAEDLGVYYCFQGSHVPYTFGGGTKLEIK	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 43- 58 nt (fwd), Identity subj= 11.45%, Nb gaps subj= 0
80	Antibody derivatives.	EP0528767-0002	disclosure	Homo sapiens (human)	MKLPVRLLVLMFWIPASSSDVLMTQTPLSLPVSLGDQASISCRSSQSIVH SNGNTYLEWYLQKPGQSPKLLISKVSNRFSGVPDRFSGSGSGTDFTLKIS RVEAEDLGVYYCFQGSHVPYTFGGGTKLEIK	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 43- 58 nt (fwd), Identity subj= 11.45%, Nb gaps subj= 0
81	IL-13 binding agents	US7501121-0145	disclosure	Mus musculus (house mouse)	MKLPVRLLVLMFWIPASSSDVLMTQ SLGDQASISCRSSQSIVH SNGNTYLEWYLQKPGQSPKLLIYKV PDRFSGSGSGTDFTLKIS	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 43- 58 nt (fwd), Identity subj= 11.45%, Nb gaps subj= 0
82	Anti-KC4 humanized monoclonal antibody and cells that express the antibody	USRE40535-0050	claim: 1		RVEAEDVGIYYCFQGSHVPYTFGGGTKLEIK	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 43- 58 nt (fwd), Identity subj= 11.45%, Nb gaps subj= 0
83	Use of modified antibodies with human milk fat globule specificity	US6315997-0095	disclosure		MKLPVRLLVLMFWIPASSSDVLMTQTPLSLPVTPGEPASISCRSSQSIVH SNGNTYLEWYLQKPGQSPQLLIYKVSIRFSGVPDRFSGSGSGTDFTLKIS RVEAEDVGIYYCFQGSHVPYTFGGGTKLEIK	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 43- 58 nt (fwd), Identity subj= 11.45%, Nb gaps subj= 0
	PEPTIDES AND ANTI-SENSE PEPTIDES WITH BROAD NEOPLASTIC SPECIFICITY.	EP0674710-0050	TBD		MKLPVRLLVLMFWIPASSSDVLMTQTPLSLPVTPGEPASISCRSSQSIVH SNGNTYLEWYLQKPGQSPQLLIYKVSIRFSGVPDRFSGSGSGTDFTLKIS RVEAEDVGIYYCFQGSHVPYTFGGGTKLEIK	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps

TIP: Select Sequence column
Change font to Courier New 8pt

View data from source patent of each sequence

GQPAT Proteins: Sample Sequence Chart

	Title	Patent Number	Patent Assignee	Priority Date	International Class	Patent Sequence Location	Organism Species	Main Claim
79	Humanized antibodies that recognize difucosyl Lewis blood group antigens Y-6 and B-7-2	US5562903	SANDOZ LTD. BASEL, SWITZERLAND	1991-08-21	A61K 039/395 C07K 016/28	disclosure		1. A humanized monoclonal antibody that recognizes the difucosyl Lewis blood group antigens Y-6 and B-7-2 comprising a humanized light chain variable region, a human light chain constant region, a humanized heavy chain variable region and a human heavy chain constant region, wherein the humanized light chain variable region has the sequence: DIVMTQSPLS LPVTPGEPAS ISCRSSQSIV HSNGNTYLEW YLQKPGQSPQ [CONT.]
80	Antibody derivatives.	EP0528767	SANDOZ LTD.; SANDOZ-PATENT-GMBH; SANDOZ-ERFINDUNGEN VERWALTUNGSGESELLSCHAFT M.B.H.	1991-08-21	A61K39/395 C07K15/28	disclosure	Homo sapiens (human)	1. Human/mouse chimeric monoclonal antibodies recognizing the difucosyl Lewis blood group antigens Y-6 and B-7-2.
81	IL-13 binding agents	US7501121	WYETH MADISON, NJ	2004-06-17	A61K 039/395 C07K 016/24	disclosure	Mus musculus (house mouse)	1. A purified molecule comprising a heavy chain immunoglobulin variable domain sequence and a light chain immunoglobulin variable domain that binds to IL-13 with a K<SB>D </SB>of less than 10<SP> −7 </SP>M, wherein the heavy chain variable domain comprises the amino acid sequence of: (i) G-(YF)-(NT)-I-K-D-T-Y-(MI)-H (SEQ ID NO:48), in CDR1, (ii) (WR)-I-D-P-(GA)-N-D-N-I-K-Y-(SD)-(PQ)-K-F-Q-G [CONT.]
82	Anti-KC4 humanized monoclonal antibody and cells that express the antibody	USRE40535	IBC PHARMACEUTICALS, INC. MORRIS PLAINS, NJ		C07K 016/00 A61K 049/00 C12N 005/16 G01N 033/53	claim: 1		1. A&REIsqb;modified chimeric&REsqb; <I>humanized anti-KC-4 </I>antibody which selectively binds to the human KC-4 antigen, comprising (1) the <I>humanized </I>variable regions of the light and heavy chains of an anti-KC-4 murine antibody and (2)

View Query Results for Each Sequence

GQPAT Proteins: Sample Sequence Chart

	Title	Seq. ID Number	Patent Sequence Location	Alignment	Query ID	Query Results
110	Monoclonal antibody 1A7 and use for the treatment of melanoma and small cell carcinoma	US7517967-0066	disclosure	Q: 1 RSSQSIVHSNGNTYLQ 16 S: 175 RSSQSIVHSNGNTYLE 190	CDR1	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 175- 190 nt (fwd), Identity subj= 5.70%, Nb gaps subj= 0
111	Monoclonal antibody 1A7 and use for the treatment of melanoma and small cell carcinoma	US6509016-0066	disclosure	Q: 1 RSSQSIVHSNGNTYLQ 16 S: 175 RSSQSIVHSNGNTYLE 190	CDR1	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 175- 190 nt (fwd), Identity subj= 5.70%, Nb gaps subj= 0
112	Polynucleotides related to monoclonal antibody 1A7 and use for the treatment of melanoma and small cell carcinoma	US5935821-0066	disclosure	Q: 1 RSS NGNTYLQ 16 S: 175 RSS NGNTYLE 190	CDR1	Align len= 16 nt, Errors= 1, Identity= 93.75%, Similarity = 100.00% Query len= nt, pos= 1- 16 nt (fwd), Identity query= 93.75%, Nb gaps query= 0 Subject len= nt, pos= 175- 190 nt (fwd), Identity subj= 5.70%, Nb gaps subj= 0
113	Anti-IGF-IR antibodies and uses thereof	US7241		S: 1 KVSNRLY 7	CDR2	Align len= 7 nt, Errors= 0, Identity= 100.00%, Similarity = 100.00% Query len= nt, pos= 1- 7 nt (fwd), Identity query= 100.00%, Nb gaps query= 0 Subject len= nt, pos= 1- 7 nt (fwd), Identity subj= 100.00%, Nb gaps subj= 0
114	Anti-IGF-IR antibodies and uses thereof	US7241444-0065	claim: 10; 11; 12	Q: 1 KVSNRLY 7 S: 55 KVSNRLY 61	CDR2	Align len= 7 nt, Errors= 0, Identity= 100.00%, Similarity = 100.00% Query len= nt, pos= 1- 7 nt (fwd), Identity query= 100.00%, Nb gaps query= 0 Subject len= nt, pos= 55- 61 nt (fwd), Identity subj= 6.25%, Nb gaps subj= 0
115	Anti-IGF-IR antibodies and uses thereof	US7241444-0054	claim: 5	Q: 1 KVSNRLY 7 S: 55 KVSNRLY 61	CDR2	Align len= 7 nt, Errors= 0, Identity= 100.00%, Similarity = 100.00% Query len= nt, pos= 1- 7 nt (fwd),

TIP: Select Alignment column
Change font to Courier New 8pt

Show a combination of these views

GQPAT Proteins: Sample Sequence Chart

	Title	Patent Family: Patent	Kind	Date	Patent Assignee	Patent Sequence Location	Main Claim	Query ID	Percentage Identity	Align
110	Monoclonal antibody 1A7 and use for the treatment of melanoma and small cell carcinoma	US7517967		20090414	UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION LEXINGTON, KY	disclosure	1. A monoclonal antibody 1A7 produced from hybridoma cell line deposited under ATCC Accession No. HB-11706.	CDR1	93.75	16
111	Monoclonal antibody 1A7 and use for the treatment of melanoma and small cell carcinoma	US6509016 CA2210158 WO9622373 AU5414996 US5612030 EP0807176 US5935821 US5977316 AU713331 AU713331B JP2002508661 US20030114398 US20050287148 JP3816103B2		20030121	THE BOARD OF TRUSTEES OF THE UNIVERSITY OF	disclosure	1. A method of delaying recurrence of a GD2-associated tumor in an individual, comprising	CDR1	93.75	16
112	Polynucleotides related to monoclonal antibody 1A7 and use for the treatment of melanoma and small cell carcinoma	US5935821 CA2210158 WO9622373 AU5414996 US5612030 EP0807176 US5977316 AU713331 AU713331B JP2002508661 US6509016 US20030114398 US20050287148 JP3816103B2							93.75	16
	Anti-IGF-IR antibodies and uses thereof	US7241444 CA2473039 WO03059951		20070710	PIERRE FABRE MEDICAMENT; BOULOGNE-BILLANCO	claim: 1	1. An isolated antibody, or binding fragment thereof, comprising: a light chain complementarity	CDR2	100.00	7

Sort Rows

Columns:
Abstract
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Alignment Class
Alignment Length
Application
Application Date
Bits
ECLA Class
Errors
Full Text Link
International Class
Main Claim
Organism Species
Patent Assignee
Patent Date
Patent Number
Patent Sequence Location
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Inventors

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Alternate row shading when primary sort key changes

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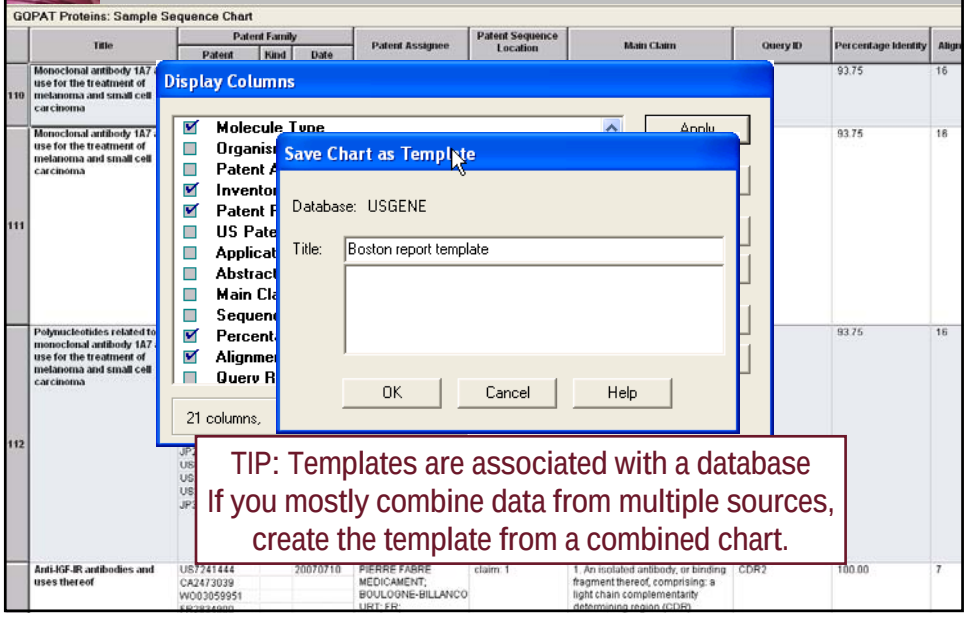

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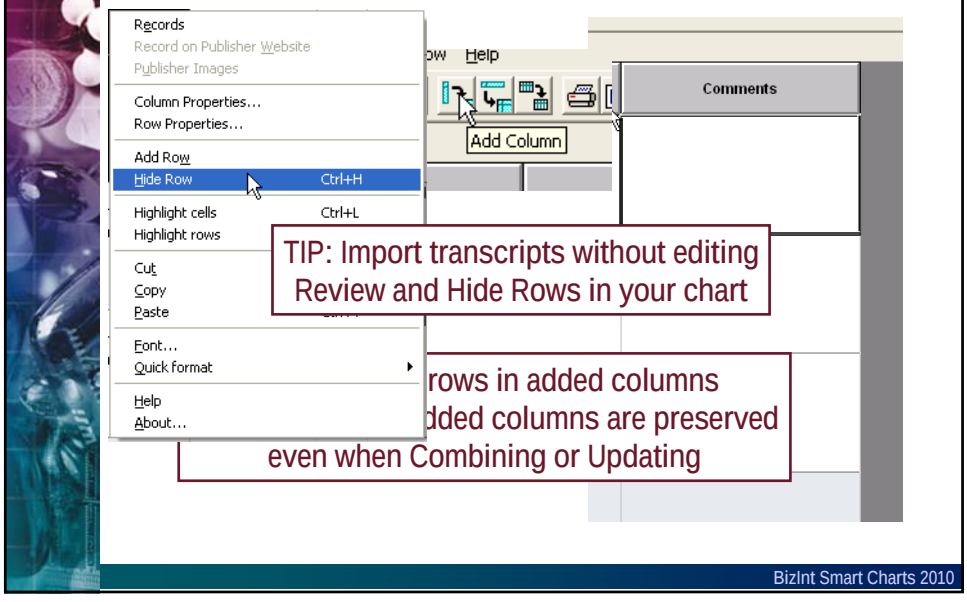


Supported Sources – Version 3.3

- Patent databases: from STN, Dialog, Questel, MicroPatent, Delphion, PatBase, QPAT & Qweb, IDdb, Integrity, TPharma IP
- Non-patent literature databases: Embase, Biosis, Medline, Chemical Abstracts, and selected other databases on STN & Dialog
- Gene sequence databases: GenomeQuest – Geneseq & GQPAT - Proteins & Nucleotides, USGene on STN (new)

USGENE on STN – NEW!

USGENE: Sample Chart

	Title	Molecule Type	Inventors	Patent Family			Percentage Identity	Alignment
				Patent	Kind	Date		
52	Methods, nucleotide sequences and host cells for assaying exogenous and endogenous protease activity (Patent)	DNA	Su Michael (Newton, MA)	US 5861267	A	1999-01-19	99%	Query: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Sbjct: 1 gccagccccct gat ggggcgacact ccaccat agat cact Query: 61 tctt cacgcagaaagcgtctagccat ggcgtt agt at gagt [CONT.]
53	Non-A, non-B hepatitis virus genomic cDNA and antigen polypeptide (Patent)	DNA	Okayama Hiroto (Minoo, JP) Fuke Isao (Takamatsu, JP) Mori Chisato (Kanonji, JP) Takamizawa Akihisa (Kanonji, JP) Yoshida Iwao (Kanonji, JP)	US 5998130	A	1999-12-07	99%	Query: 14 tgggggcgacact ccaccat gaat cact ccccct gt gagga Sbjct: 5 tgggggcgacact ccaccat agat cact ccccct gt gagga Query: 74 agcgt ct agccat ggcgtt agt at gagt gt cgt gcagcct [CONT.]
54	Antisense inhibition of hepatitis C virus (Patent)	nucleic acid	Wands Jack R. (Waban, MA) Wakita Takaji (Winchester, MA) Moradpour Darius (Charlestown, MA)	US 6001990	A	1999-12-14	98%	Query: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Sbjct: 1 gccagccccct gat ggggcgacact ccaccat agat cact Query: 61 tctt cacgcagaaagcgtctagccat ggcgtt agt at gagt [CONT.]
55	Functional DNA clone for hepatitis C virus (HCV) and uses thereof (Patent)	DNA	Rice Charles M. (University City, MO) Kolykhalov Alexander A. (St. Louis, MO)	US 6127116	A	2000-10-03	99%	Query: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Sbjct: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Query: 61 tctt cacgcagaaagcgtctagccat ggcgtt agt at gagt [CONT.]
56	Functional DNA clone for hepatitis C virus (HCV) and uses thereof (Patent)	DNA	Rice Charles M. (University City, MO) Kolykhalov Alexander A. (St. Louis, MO)	US 6127116	A	2000-10-03	99%	Query: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Sbjct: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Query: 61 tctt cacgcagaaagcgtctagccat ggcgtt agt at gagt [CONT.]
57	Compositions and methods for treatment of hepatitis C virus associated diseases (Patent)	DNA	Anderson Kevin P. (Carlsbad, CA) Hanecak Ronnie C. (San Clemente, CA) Nozaki Chikateru (Kumamoto, JP)	US 6174666	B1	2001-01-16	98%	Query: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Sbjct: 1 gccagccccct gat ggggcgacact ccaccat agat cact Query: 61 tctt cacgcagaaagcgtctagccat ggcgtt agt at gagt [CONT.]
58	Hepatitis C virus vaccine (Patent)	DNA	Pachuk Catherine J. (Lansdowne, PA) Wands Jack (Waban, MA) Wakita Takaji (Winchester, MA) Zurawski Jr. Vincent R.	US 6235888	B1	2001-05-22	98%	Query: 1 gccagccccct gat ggggcgacact ccaccat gaat cact Sbjct: 1 gccagccccct gat ggggcgacact ccaccat agat cact Query: 61 tctt cacgcagaaagcgtctagccat ggcgtt agt at gagt

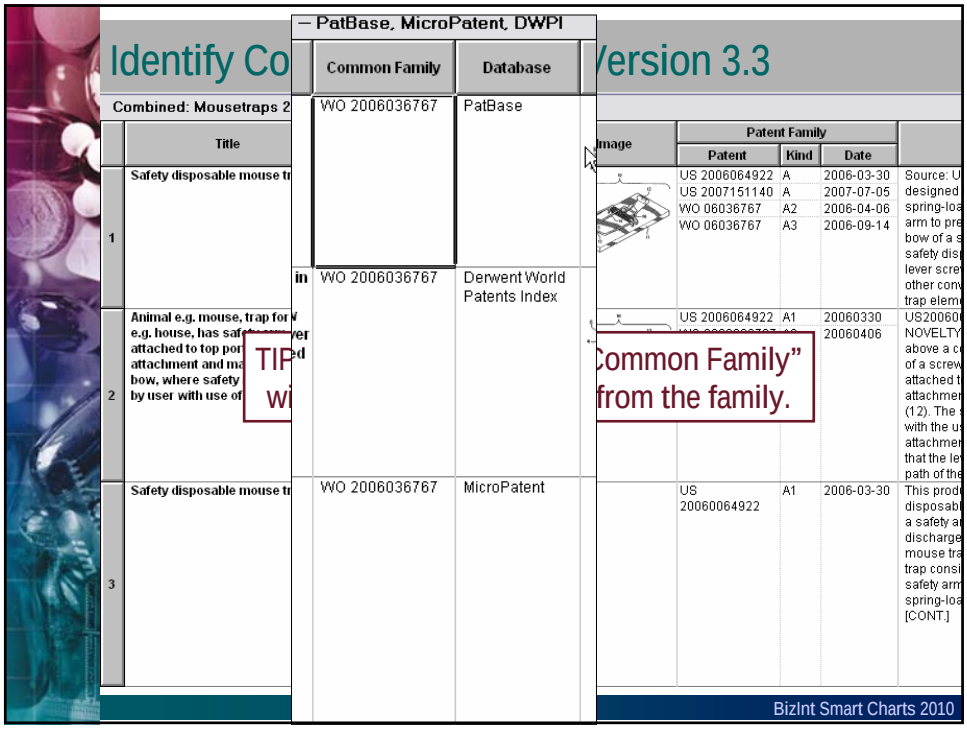
USGENE on STN – new in Version 3.3.18 (2/8/10)

- Currently supports GETBLAST fully
- Some support for GETSIM
- TIP: Recommended display formats
  - BIB ALIGN
  - BRIEF ALIGN

Combine charts – Version 3.3

- Combine data from different sources
- Combine data from different search strategies
- Combine data over time - update

TIP: Update allows you to see changes between charts, such as where two queries don't match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Version 3.3
PatBase, MicroPatent, DWPI
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Kind
Date
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US 2007151140 A 2007-07-05
WO 06036767 A2 2006-04-06
WO 06036767 A3 2006-09-14
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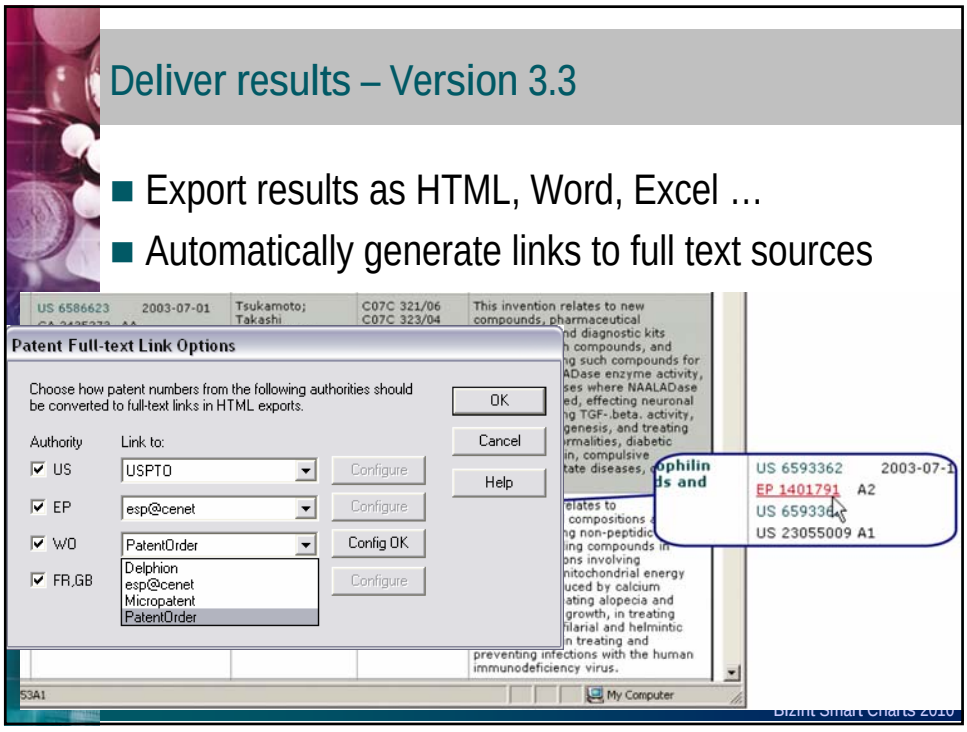
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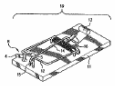
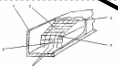
US 6586623 2003-07-01 Tsukamoto; Takashi C07C 321/06 C07C 323/04
US 6593362 2003-07-1
EP 1401791 A2
US 659336
US 23055009 A1
My Computer

Future developments for sequence data

- Additional databases
  Literature databases on GenomeQuest
  Additional databases on STN (DGENE, etc)
  In-house BLAST systems
- Common sequence identification across dbs (?)

Version 4.0 – Reference Rows (HTML)

	Title	Common Family	Image	Patent Family			Abstract	Claims
				Patent	Kind	Date		
1.	Animal e.g. mouse, trap for use in e.g. house, has safety arm attached to top portion of screw attachment and maneuvered over bow, where safety arm is rotated by user with use of lever.	1.1 PatBase 32761335 1.2 Derwent World Patents Index 2006-230770 1.3 MicroPatent US20060064922A1 1.4 MicroPatent WO2006036767A2 1.5 MicroPatent WO2006036767A3		US 2006064922 A 2006-03-30 US 2007151140 A 2007-07-05 WO 06036767 A2 2006-04-06 WO 06036767 A3 2006-09-14			US2006064922 A UPAB: 20060410 NOVELTY: The trap has a lever (4) located above a collar and attached to a top portion of a screw attachment. A safety arm (5) is attached to the top portion of the screw attachment and is maneuvered over a bow (12). The safety arm is rotated by a user with the use of the lever. The screw attachment is anchored to the base such that the lever is located outside a swing path of the bow. [CONT.]	1. An animal trap comprising: (a) a base; a screw attachment anchored to the base; (lever located on the scr attachment; (d) a safety arm located on the scre attachment and maneuverable over a b and (e) said bow connected to a coil spri and attached to the bas a manner that allows th bow to be held in a coc position with the use of locking bar attached on end of the [CONT.]
	1.2 Derwent World		1.1 PatBase	1.1 PatBase			1.2 Derwent World Patents	1.3 MicroPatent
2.	Rat or mouse trap comprises box (1) whose entry is blocked by swiveling grille (2), which is bent into V-shape and point of V faces into the box so that animal trying to get out of trap pushes wires (4) at its base against tran	2.1 Derwent World Patents Index 2006-125704		WO 2006010279 A1		20060202	WO2006010279 A UPAB: 20060224 NOVELTY: The rat or mouse trap comprises a box (1) whose entry is blocked by a swiveling grille (2). This is bent into a V-shape and the point of the V faces into the box so that an animal trying to get out of the trap pushes the wires (4) at its base	

Reference Row

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