



# sabot – a Hub for Patent Resources

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Patent Information & Analysis  
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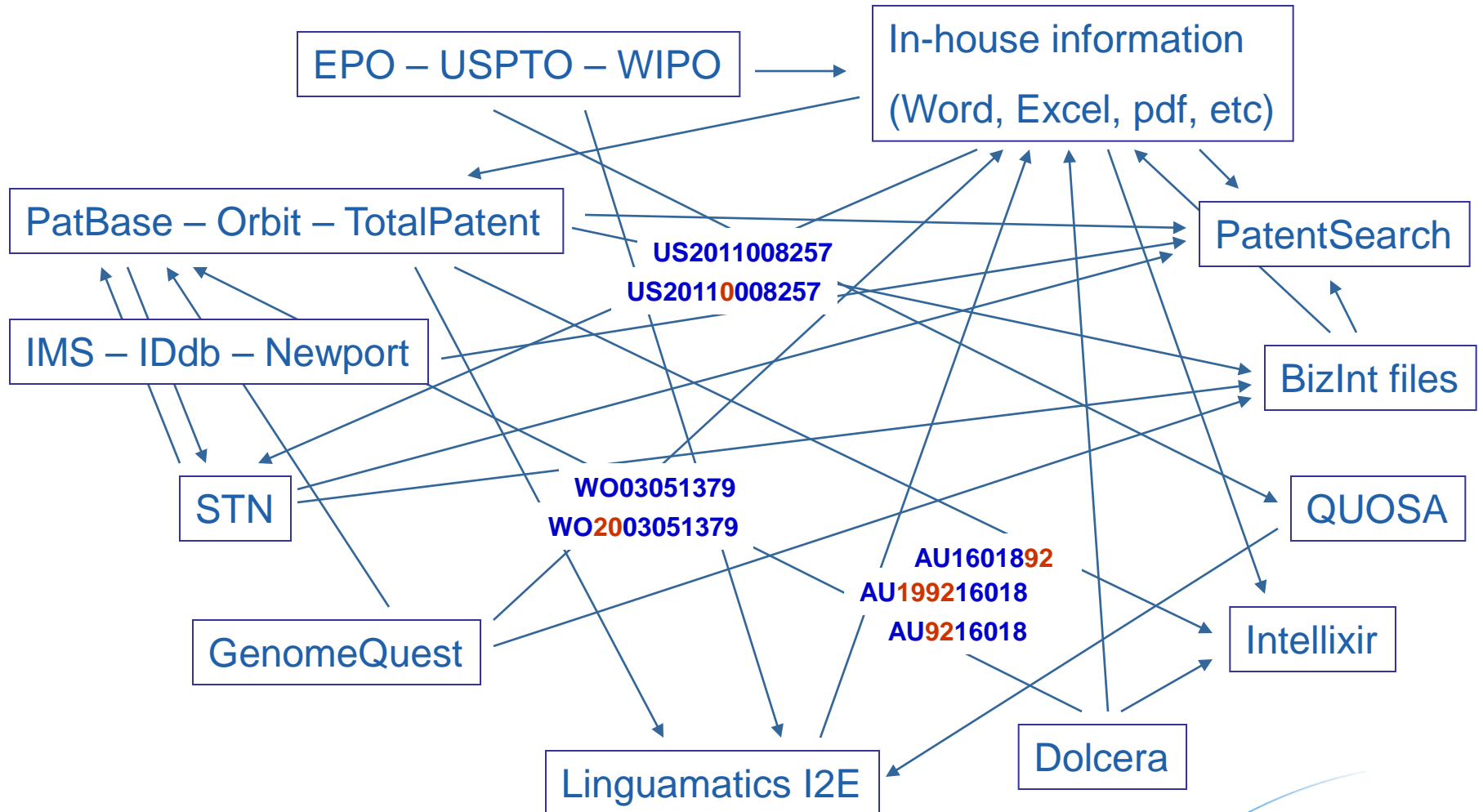


# Introduction

- Patent information professionals want more information
- Perhaps even more urgently, we need more simplicity
  
- This is work in progress: Please do not confuse
  - intended simplicity in organizing information
  - temporary “simplicity” (as in lack of features)
  
- Agenda
  - software concept and design
  - 3 specific examples of use

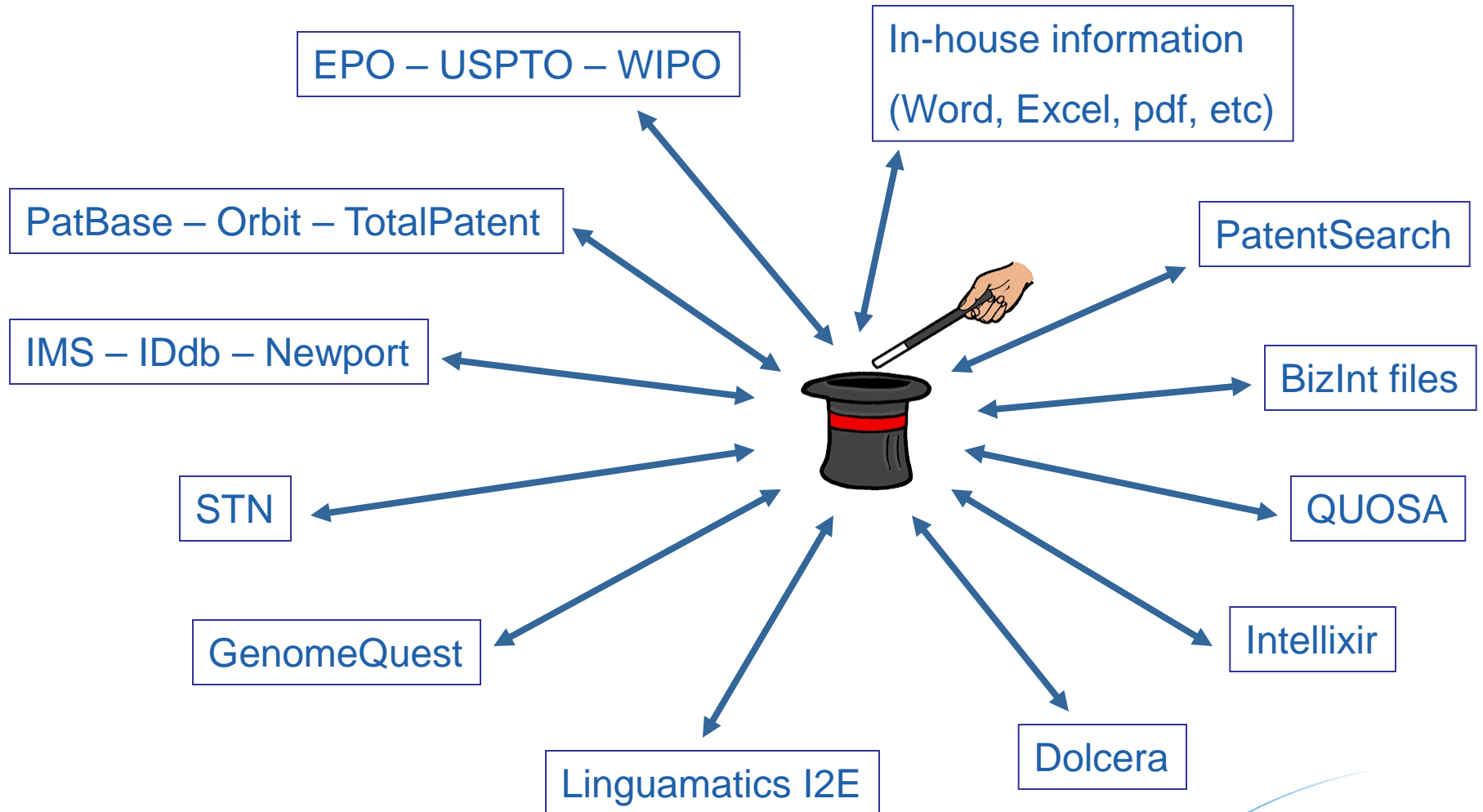


# Complexity of Patent Resources





# Simplicity of Patent Resources





# sabot Design

- sabot is a Java application, designed to facilitate rapid development and installation of data converters as plugins
- sabot core infrastructure includes:
  - Relational database (JavaDB a.k.a. Derby)
  - Easy access to Internet resources (REST, SOAP, browser)
  - Support for XML input and output
  - Properties file for user preferences, proxy address, etc.
- sabot core functionality can be accessed through:
  - application programming interface (API) – by plugins
  - **graphical user interface (GUI) – interactively by users**



# What's a sabot?





# sabot GUI: Main Application Window

The screenshot displays the sabot GUI interface. At the top left, a 'Plugins' menu is open, showing options: 'Get MEDLINE Abstracts', 'Dolcera Converter', and 'STN-2-BizInt Update Filter'. A red arrow points from the 'STN-2-BizInt Update Filter' option to the 'Plugins' menu item in the main application window. The main application window has a menu bar with 'File', 'Help', and 'Plugins'. The 'File' menu is open, showing options: 'New Collection Ctrl+N', 'Load from XML...', 'Edit Node... Ctrl+E', 'Delete Node... Ctrl+D', and 'Exit Ctrl+Q'. The 'Plugins' menu is also open, showing options: 'Read at Patent Office', 'Read at PatBase Express', 'Get OPS Claims', 'Edit Node...', and 'Delete Node...'. The main window features a tree view on the left under 'SabotDB' with 'ALERTS' expanded to show 'EIM Patent Alerts'. Under 'EIM Patent Alerts', 'EIM Patent Alert #01 - 7/6/09' is expanded to show 'CD38', 'CXCR3', 'GPR34', 'GPR44', 'HRH4', 'MIF', 'P2RX3', and 'P2RX7'. The 'CD38' folder is expanded to show 'US20090170764' (highlighted with a blue box), 'US7553926', and 'US20090169561'. The main pane displays the 'Biblio:' information for 'US2009170764':

```
US2009170764  Biblio:
=====
PN: US2009170764 A1
PD: 20090702
TI: COMPOSITIONS CONTAINING ANTI-HIV PEPTIDES
AND METHODS FOR USE
PA:
AB: Peptides representing sequences from region
45-74 of the human CD38 leukocyte surface
antigen are provided which may be used to
inhibit or prevent transmission or replication
of the HIV virus. The peptides have from 13 to
30 amino acids and include the amino acid
sequence GPGTTK (SEQ ID for topical application
to inhibit or prevent transmission of the HIV
virus.
=====
```

Database content as a tree or outline

Information pane

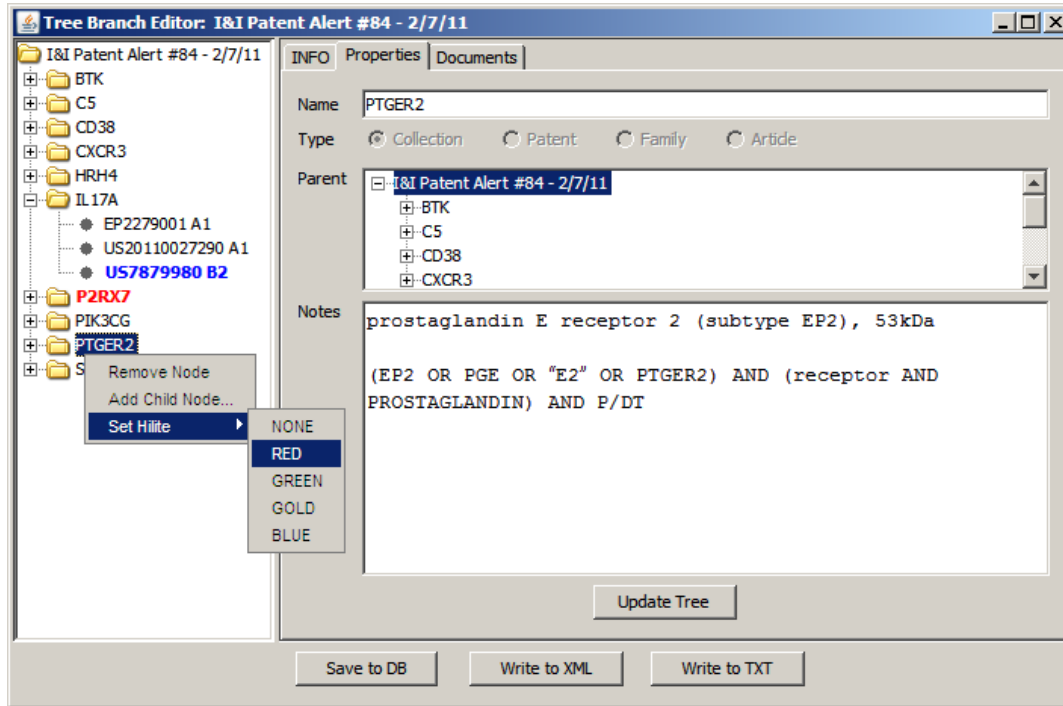
Plugins menu

Other menus

- Menu bar
- Contextual (right-click)

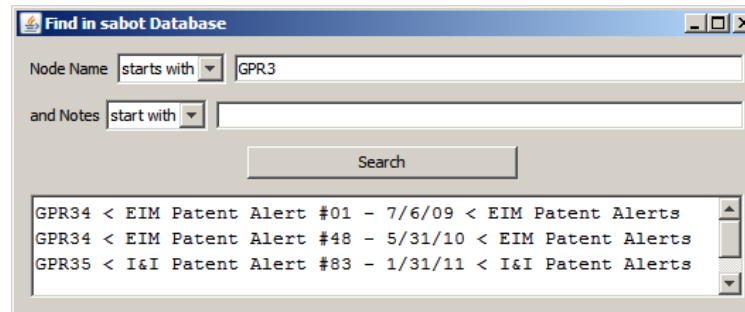


# More sabot GUI to Play with



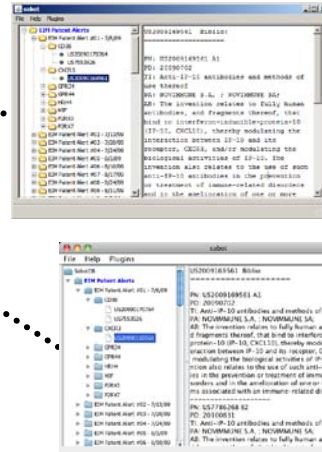
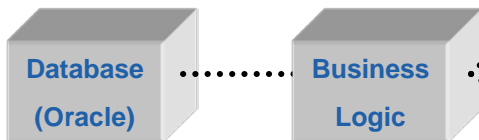
✦ 'Tree Branch Editor' gives the user full control over the data

✦ 'Find in sabot Database' dialog allows searching



# Deployment: Distributed or Desktop App?

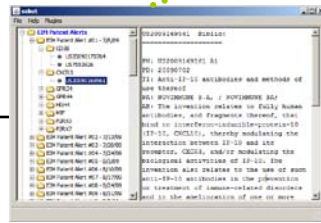
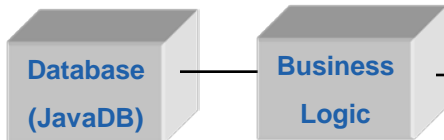
## Company Intranet



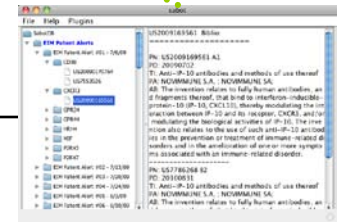
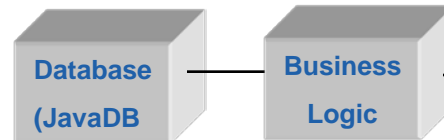
- ▶ **Distributed Application**
  - Java WebStart, RMI, etc.
  - On-line collaboration
  - Professional administration
- ▶ **sabot is a Desktop Application**
  - Simplicity: unzip & click!
  - Full control over data
  - Can be re-deployed

XML

## Windows Computer



## Macintosh Computer





# Case Studies

## Plugin: 'STN-2-BizInt Update Filter'

- Automation of the Weekly Patent Alerts
- Regularly used for a year

## Plugin: 'Dolcera Converter'

- Capturing Patent Landscaping data from a contractor
- Testing the system with massive amount of data

## Interactive Data Entry: 'BSI-201'

- An executive summary of multiple search reports
- Some ideas for future development

# Case Study 1: Weekly Alerts Workflow

- ▶ Weekly alerts run in CPlus on STN with **40 queries**
- ▶ Results received by STN email
- ▶ **Over 100 CPlus patent families** captured in RTF transcript with graphics
- ▶ STN transcript analyzed in BizInt Smart Charts:
  - Is the recent publication from US, EP or WO?
  - Is this publication really relevant?
  - Remove duplicates and previously reported patents
- ▶ Final report in PDF format: **10-20 publications** with links to PDF copies of the original documents
- ▶ Very tedious task to do manually!



# Case Study 1: Weekly Alerts - Documents

SDI REQUEST 'CXCR5CA/S'  
 MEMBER OF MFILE SDI REQ 'CXCR5/S'  
 CHEMOKINE (C\_X\_C MOTIF) RECEPTOR 5  
 RUN # 003 - JAN 21, 2011

1 ANSWERS PRINTED IN FORMAT 'IBIS ABS'  
 IN FILE 'CAPLUS'

USING QUERY:

L1 QUE (CXCR5 OR BLR1 OR CD185 OR MDR15 OR MGC117347) AND (CHEMOKINE AND RECEPTOR) AND P/DI  
 L2 1 SEA FILE=CAPLUS L1 AND 20110114-20110120/UPP

ENTER (NEXT), PREVIOUS, ANSWER NUMBER, ENTIRE, OR END:entire

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2011 ACS ON STN

ACCESSION NUMBER: 2004:80231 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 140:139540

TITLE: Compositions and methods for detecting and treating diseases and conditions related to chemokine receptors

INVENTOR(S): Burns, Jennifer M.; Miao, Zhenhua; Wei, Zheng; Howard, Maureen C.; Premack, Brett A.; Schall, Thomas J.

PATENT ASSIGNEE(S): ChemoCentryx Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 45 pp., Cont.-in-part of U.S. Ser. No. 245,850. CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040018563	A1	20040129	US 2003-452015	20030530
US 7413866	B2	20030819		
US 20030124628	A1	20030703	US 2002-245850	20020916
US 7442512	B2	20031028		
AT 310955	T	20051215	AT 2002-256808	20020930
US 20040170634	A1	20040902	US 2003-698541	20031030
US 7253007	B2	20070807		
WO 2004108887	A2	20041216	WO 2004-US16815	20040528
WO 2004108887	A3	20060105		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TZ, TH, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20050074826	A1	20050407	US 2004-912638	20040804 <--
US 7871619	B2	20110118		

Chemical Abstracts: accepted

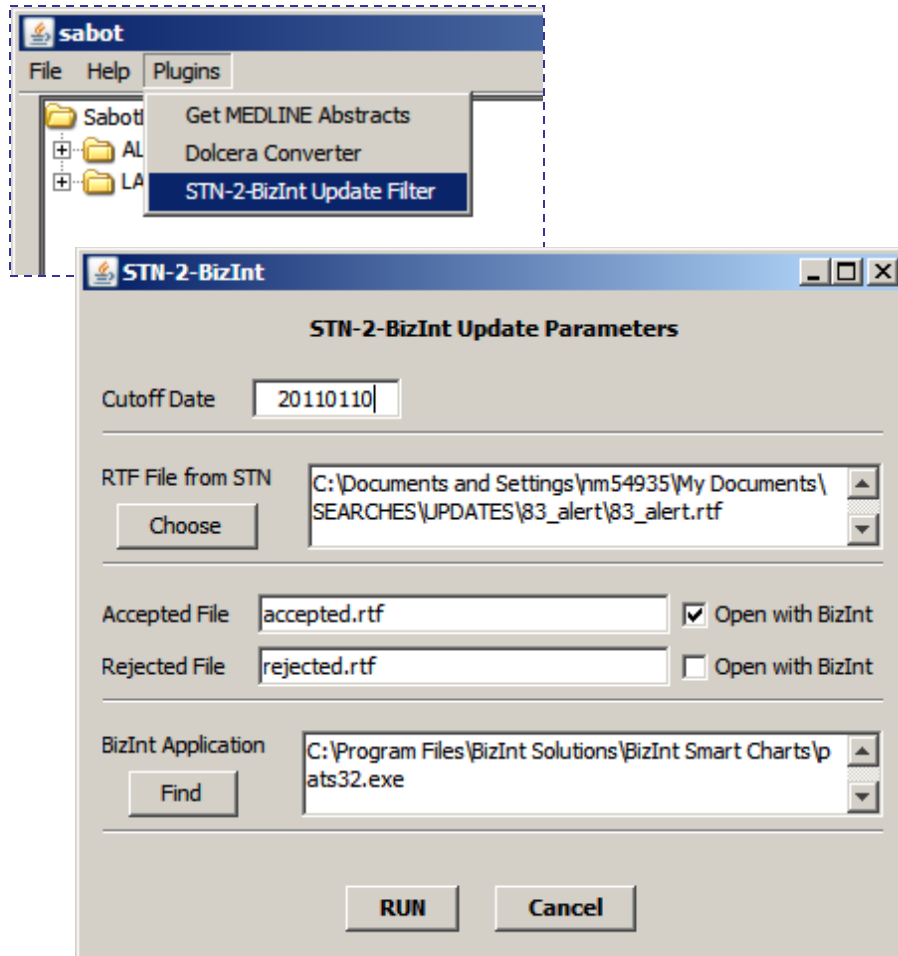
Title	Project	US Patent Number	Graphic Information	Abstract	Patent Assignee	Patent	Patent Family	Kind	Date
Preparation of indolocarbazoles for treatment of diseases modulated by prostaglandin D2.	OPR44, FTGGR	US 20091143449 US 7741350 US 20100331797		The compounds I = O, SO, R1 = H, halo, cyano, NO2, SO2R4, OR, OR1, SR5R6, aryl, heteroaryl, etc.; R2 = H, halo, cyano, SO2R4, CONRR5, (substituted) aryl, cycloalkyl, etc.; R3 = (substituted) aryl, heteroaryl, R4 = (substituted) aryl, heteroaryl, heterocyclic, aryl, etc.; R5 = H, aryl, heteroaryl, (substituted) alkyl, cycloalkyl, etc. = R2, with proviso, were prepared. Thus, (5-fluoro-2-methylindol-1-yl)acetic acid, biphenyl-4-ylol, and iodine were stored in DMF overnight to give 15-(biphenyl-4-yl)indan-5-ylidene-2-methylindol-1-yl)acetic acid. The latter had a pIC50 of 7.7 in a ligand binding assay using HEK-293T membranes containing CXCR2.	AstraZeneca AB, Sweden AstraZeneca UK, Limited	WO 2007138262 WO 2007138262 JP 200933289 EP 2121722 IN 20080409330 US 20090143449 US 7741350 CN 101454294 US 20100331797	A1 A1 T A2 A1 A1 A1	20071208 20080228 20091105 20091202 20090612 20090604 20100662 20090510	
Preparation of IL12 disubstituted aminoalkylphenyl antagonists of PTGFR prostaglandin D2 receptors	OPR44, FTGGR	US 2009197959		The title compounds represented by the formula I [wherein R1 = H, CH3, (fluoro)alkyl, etc.; R5 = H, halo, heteroaryl, etc.; R22 = (cycloalkyl, -O-alkyl, (unsubstituted) C6H4, etc.; R11 = Me, CF3, cyclopropyl, etc.; and pharmaceutically acceptable salts thereof] were prepared as antagonists of prostaglandin D2 receptors. For example, I (R4 = MeO, R5 = CF3, R11 = R22 = Me) was provided in a multi-step synthesis starting from 2-bromo-4-methylphenylacetic acid. The prepared invention compounds were tested in the assays of DP2/CRTH2 binding, GTPgammaS binding and cPI binding, and their pharmaceutical formulations were described. Thus, I and their pharmaceutical comps., are useful for the treatment of respiratory, cardiovascular, and other PGD2-dependent or PGD2-mediated conditions or diseases.	Amira Pharmaceuticals, Inc. USA	US 2009197959 AU 2009021448 CA 2713139 US 2009099901 US 2009099902 GB 2405097 GB 2405097 EP 2245002 KR 2010125298 EP 2257524 KR 72241	A1 A1 A1 A1 A1 A1 B A1 A1 A1 A1	20090809 20090813 20090813 20090813 20091209 20100421 20101103 20101130 20101208 20100818	
Preparation of oxazolidinone substituted diaryl ether compounds as prostaglandin D2 receptor antagonists	OPR44, FTGGR			The title compounds with general formula I [wherein G = tetrazolyl, COOH, C(=O)-O-alkyl, C(=O)-H, etc.; X = O, S, SO2, SO2, etc.; R1 = independently H, F, or alkyl; R2, R3 = independently H, halogen, CH3, NO2, etc.; A = C(=O), SO2, CH2, C(=NR), etc.; B = O, S, NH, CH2, etc.; R10 and R12 = independently H, CH3, aryl, heteroaryl, etc.; or R10 and R12 taken together with the carbon atoms to which they are attached to form an (unsubstituted) monocyclic carbocyclic, bicyclic carbocyclic, heterocyclic, or bicyclic heterocyclic; R11 and R13 = independently H, halogen, alkyl, heteroalkyl, etc.; or R11 and R13 taken together to form a benzyl or pharmaceutically acceptable salts, solvates, or prodrugs thereof] were prepared as antagonists of prostaglandin D2 (PGD2) receptors for the treatment of respiratory, cardiovascular, and other PGD2-dependent or PGD2-mediated conditions or diseases. For example, compound II was prepared in a multi-step synthesis. Compound I showed human PGD2 receptor inhibitory activities in DP2/CRTH2 binding assay using [3H]DPD2 with IC50 values of less than 100 nM. Formulations containing I as active ingredients were also disclosed in the present invention.	Amira Pharmaceuticals, Inc. USA	WO 2009102893 EP 2257536	A2 A2	20090820 20101208	

IL1 Patent Alert December 3 - 9, 2010

Title	Project	US Patent Number	Graphic Information	Abstract	Patent Assignee	Patent	Patent Family	Kind	Date
Preparation of oxazolidinone substituted diaryl ether compounds as prostaglandin D2 receptor antagonists	OPR44, FTGGR			The title compounds with general formula I [wherein G = tetrazolyl, COOH, C(=O)-O-alkyl, C(=O)-H, etc.; X = O, S, SO2, SO2, etc.; R1 = independently H, F, or alkyl; R2, R3 = independently H, halogen, CH3, NO2, etc.; A = C(=O), SO2, CH2, C(=NR), etc.; B = O, S, NH, CH2, etc.; R10 and R12 = independently H, CH3, aryl, heteroaryl, etc.; or R10 and R12 taken together with the carbon atoms to which they are attached to form an (unsubstituted) monocyclic carbocyclic, bicyclic carbocyclic, heterocyclic, or bicyclic heterocyclic; R11 and R13 = independently H, halogen, alkyl, heteroalkyl, etc.; or R11 and R13 taken together to form a benzyl or pharmaceutically acceptable salts, solvates, or prodrugs thereof] were prepared as antagonists of prostaglandin D2 (PGD2) receptors for the treatment of respiratory, cardiovascular, and other PGD2-dependent or PGD2-mediated conditions or diseases. For example, compound II was prepared in a multi-step synthesis. Compound I showed human PGD2 receptor inhibitory activities in DP2/CRTH2 binding assay using [3H]DPD2 with IC50 values of less than 100 nM. Formulations containing I as active ingredients were also disclosed in the present invention.	Amira Pharmaceuticals, Inc. USA	WO 2009102893 EP 2257536	A2 A2	20090820 20101208	
Anti-human interleukin 17A antibodies for treating inflammatory, autoimmune and proliferative diseases	IL17A	US 2009175001 US 7046443		Engineered antibodies (e.g. chimeric and humanized antibodies) specific to human IL-17A are provided, as well as uses thereof.	Schering Corporation, USA	WO 2008021156 WO 2008021156 AU 2007040260 CA 2660463 AR 63603 EP 2046365 US 20090175061 US 7241443 JP 2010000209 IN 20090360798 MX 2009001620 NO 2009001604 KR 2009052347 CN 101046890	A1 A3 A1 A1 A1 A1 B2 A1 A1 A1 A1	20080221 20080703 20090221 20090221 20090221 20090415 20090709 20101207 20100307 20090529 20090620 20090507 20090529 20100210	
Antibodies that bind both interleukin (IL)-17A and IL-17F and therapeutic and diagnostic methods of using the same in inflammation	IL17A	US 20090054199 US 7790163 US 20070218065 US 20080209129 US 20100110595		The present invention relates to binding, inhibiting, antagonizing or neutralizing the activity of IL-17A and IL-17F. IL-17A and IL-17F are cytokines that are involved in inflammatory processes and human disease. The present invention includes antibodies that bind both IL-17A and IL-17F, hybridomas that produce the antibodies, and methods of using the same in inflammation.	ZymoGenetics, Inc. USA	US 20090054199 US 7790163 US 20070218065 CA 2683145 US 20090209129 EP 2150564 US 20100110595	A1 A1 A1 A1 A1 A1 A1	20090611 20090611 20090611 20091106 20090919 20090210 20100109	



# Case Study 1: 'STN-2-BizInt' Plugin



- Parameters of the last run, retrieved from properties file
  - Cutoff date
  - STN RTF transcript file
  - Output file names
  - Open them in BizInt?
- When launched, the plugin
  - Extracts the US, EP and WO documents published after the cutoff date
  - Writes their families – annotated with the project name – to a new RTF file
  - Optionally opens the file with BizInt Smart Charts
  - Displays the documents in Tree Branch Editor for easy lookup



# Case Study 1: 'STN-2-BizInt' Plugin Simplifies Patent Analysis

The screenshot displays the BizInt Smart Charts for Patents 3.4.2 interface. On the left, the 'Tree Branch Editor: Patent Collection' shows a hierarchical view of patent folders. The 'EP227704 A1' patent is selected and highlighted with a red circle. A red arrow points from this selection to the 'INFO' tab in the main window, which displays the patent's bibliographic information:

**EP2277044 Biblio:**  
PN: EP2277044 A1  
PD: 20110126  
TI: ANALYSIS OF ANTIBODY DRUG CONJUGATES BY BEAD-BASED AFFINITY CAPTURE AND MASS SPECTROMETRY  
PA: GENENTECH, INC;  
AB:

Below the patent information, there are buttons for 'Save to DB', 'Write to XML', and 'Write to TXT'. A red arrow points from the 'Write to TXT' button to a web browser window. The browser window shows the URL [v3.espacenet.com/publicationDetails/claims;jsessionid=37A28C5B7252D3F7884D183B4EC2FDE8.espacenet\\_levelx\\_prod\\_6?CC](http://v3.espacenet.com/publicationDetails/claims;jsessionid=37A28C5B7252D3F7884D183B4EC2FDE8.espacenet_levelx_prod_6?CC). The browser content displays a list of claims, with claim (29) highlighted in red:

(29) **CXCR5 (Burkitt's lymphoma receptor 1);**  
(30) HLA-DOB (Beta subunit of MHC class II molecule (Ia antigen));  
(31) P2X5 (Purinergic receptor P2X ligand-gated ion channel 5);  
(32) CD72 (B-cell differentiation antigen CD72, Lyb-2);  
(33) LY64 (Lymphocyte antigen 64 (RP105));  
(34) FCRH1 (Fc receptor-like protein 1);  
(35) IRTA2 (Immunoglobulin superfamily receptor translocation associated 2); and  
(36) TENB2 (putative transmembrane proteoglycan, related to the EGF/heregulin family of growth factors and follistatin).

Below the list of claims, the text of claim 28 is visible:

28. The method of claim 1 wherein the antibody-drug conjugate compound is administered to a mammal at a dose of 0.1 to 10 mg/kg body weight.

29. The method of claim 1 wherein L is covalently attached to an amino, carboxyl or thiol of Ab.

30. The method of claim 1 wherein L is formed from a linker reagent selected from N-succinimidyl-4(2-



# Case Study 1: 'STN-2-BizInt' Plugin – Archiving Patent Alerts

The screenshot shows the 'sabot' application window. On the left is a tree view under 'EIM Patent Alerts' containing 30 sub-items, each representing a patent alert with a date. The selected item is 'EIM Patent Alert #01 - 7/6/09', which contains a folder 'CD38' with two patent numbers: 'US20090170764' and 'US7553926'. Below that is a folder 'CXCR3' containing 'US20090169561'. Further down are folders 'GPR34' and 'GPR44', and a folder 'US20090170116'. The right pane shows the details for 'US2009169561 Biblio:'. The text includes: 'PN: US2009169561 A1', 'PD: 20090702', 'TI: Anti-IP-10 antibodies and methods of use thereof', 'PA: NOVIMMUNE S.A. ; NOVIMMUNE SA;', and 'AB: The invention relates to fully human antibodies, and fragments thereof, that bind to interferon-inducible-protein-10 (IP-10, CXCL10), thereby modulating the interaction between IP-10 and its receptor, CXCR3, and/or modulating the biological activities of IP-10. The invention also relates to the use of such anti-IP-10 antibodies in the prevention or treatment of immune-related disorders and in the amelioration of one or more symptoms associated with an immune-related disorder.'

Publication numbers from all alerts are maintained in the database

Bibliography (EPO) with full publication cycle allows easy update of the legal status

Yes, we did report the granted patent!

The screenshot shows a search window titled 'Find in sabot Database'. It has two search criteria: 'Node Name starts with' and 'and Notes start with'. The 'Node Name' field contains 'US7786268'. Below the search fields is a 'Search' button. The results pane shows: 'US7786268 B2 < CXCR3 < EIM Patent Alert #62 - 9/6/10 < EIM Patent Alerts'.



## Case Study 2: Patent Landscaping

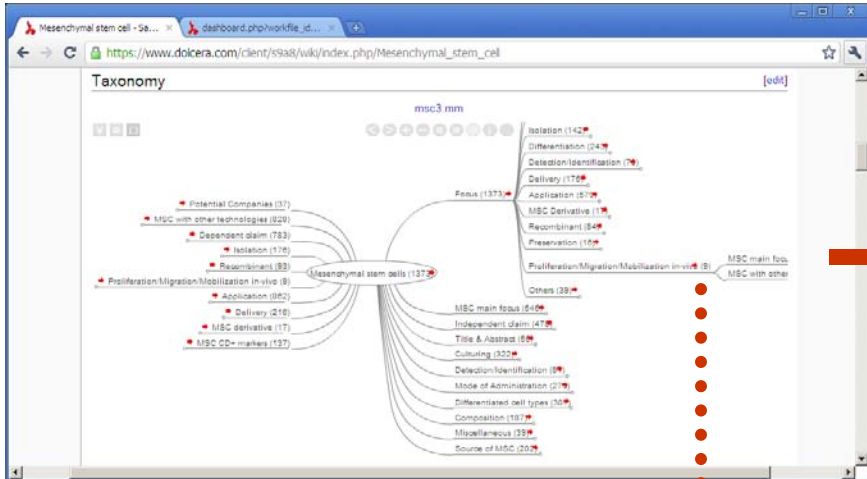
**Dolcera's** Patent Landscape maps out **past and present IP activity** of various big and small players in the broad-spectrum of **any technology**. A thorough analysis of patents and other scientific literature by our SMEs is summarized in a **white space analysis**, a strategic tool to identify technology gaps. It also features a deep dive analysis of **competitors' area of work**. The landscape also includes **interactive widgets** with easy-to-understand analyses.

**INTELLIXIR** System is a hosted and secure web application allowing its users to **analyze references** of patents and non-patent literature exported from commercial or private databases. **Statistical measures are graphically represented** through dynamic and interactive web pages.

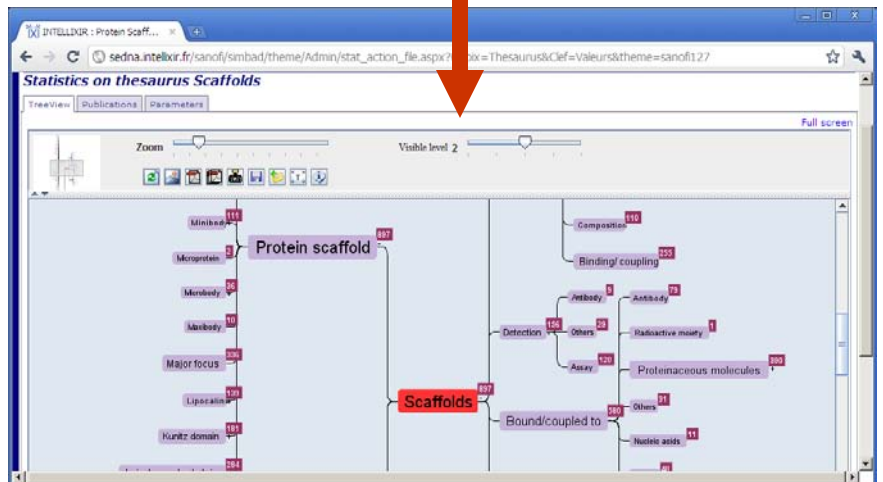
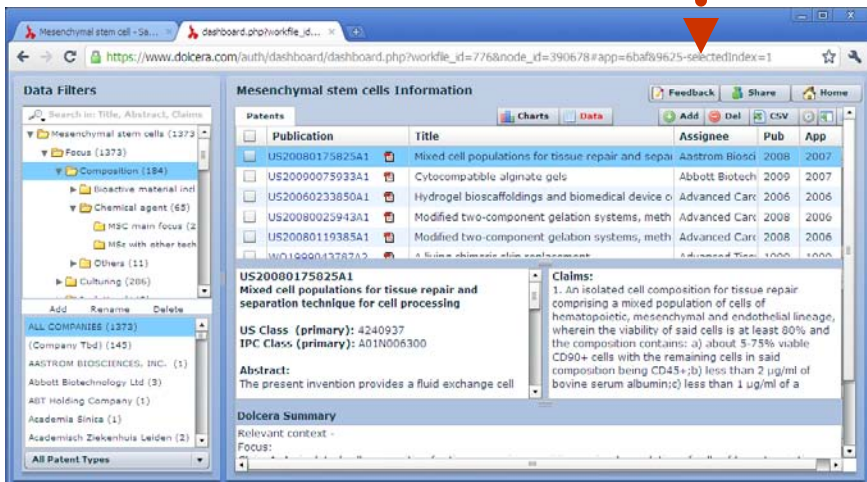
- **We want to archive and annotate Dolcera's data, but transferring it to Intellixir has proved very difficult to arrange.**
- **Could sabot help?**



# Case Study 2: Patent Landscaping – Documents

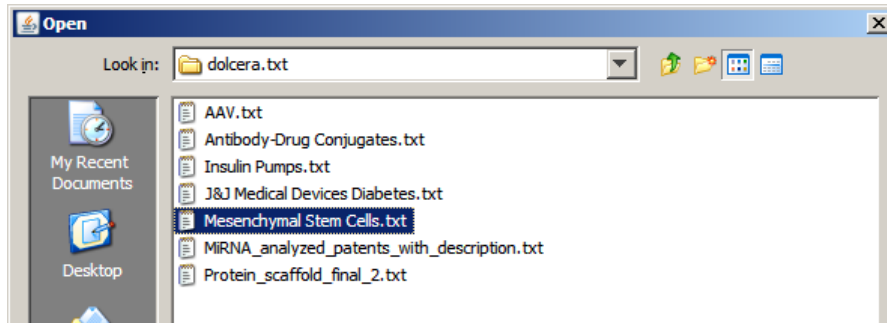


S.No.	Patent/Publication No.	English Claims	Family Members	Legal Status	Remark	Composition	Culturing	Isolation Method of Isolation	Isolated cell	Differentiation	Detection/Identification	Delivery	Application	MSC Derivative	Recombinant
1	US2005015442A1	1. A catheter	CA2553174411	Date:20061106								t			
2	US2005015445A1	1. A system	AT457706T1	Date:20061106								t			
3	US20050158397A1	1. A therapeutic	AU2003205141A1	Date:20051115									t		
4	US20050158952A1	1. A method	None	Date:20041213			t								
5	US20050159820A1	1. A member	AU2003235838A1	Date:20050705										t	
6	US20050159822A1	1. A particulate	AT48886T1	Date:20050829		t									
7	US20050164380A1	1. A method	AU2004288226A1	Date:20050629											
8	US20050176141A1	1. A composition	AU2005213226A1	Date:20050221		t									

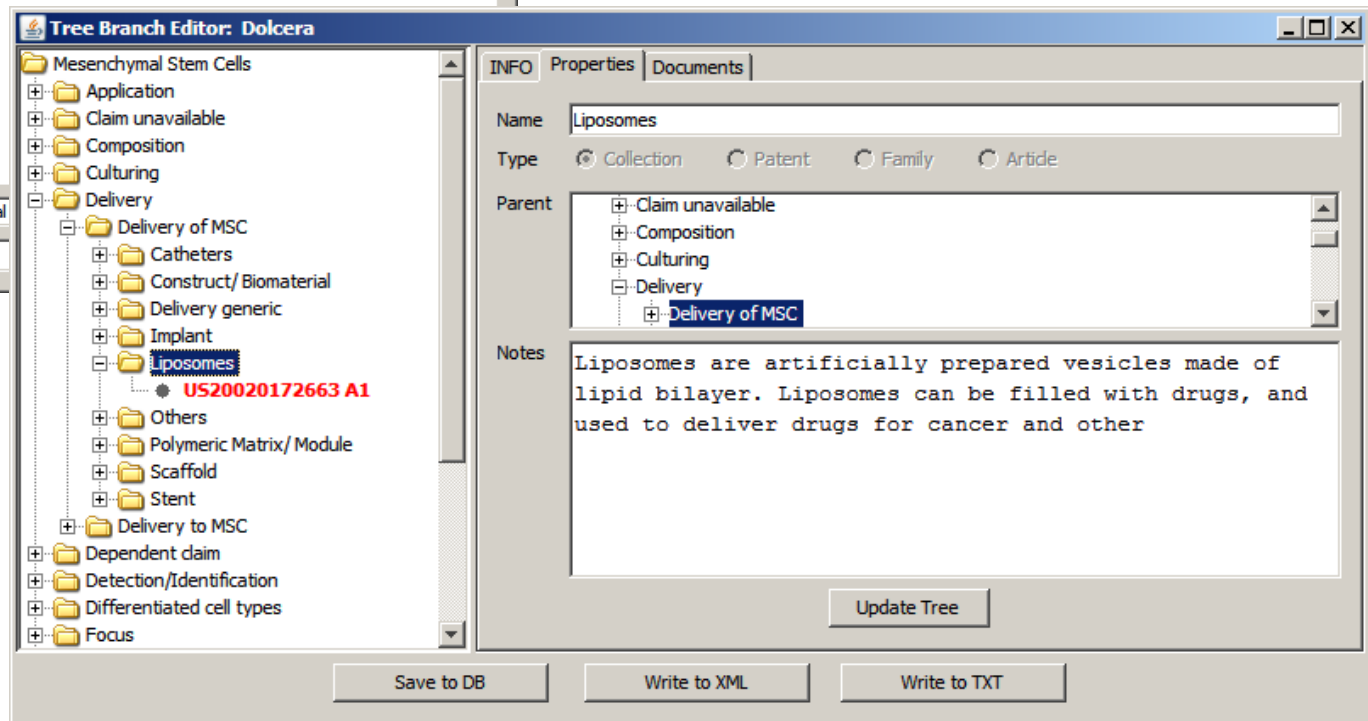




# Case Study 2: 'Dolcera Converter' Plugin – Point and Edit



- ✦ The plugin opens a standard system file selection dialog...
- ✦ Then loads the file content into the familiar Tree Branch Editor!





# Case Study 2: 'Dolcera Converter' Plugin – Sometimes Lazy Works Better

- Building a full tree from 40,000 database records took over a minute
- Lazy loading dramatically improves performance, making it feel instantaneous
- When user unfolds a node:
  - “Grandchildren” nodes are loaded from the database – so we see if “children” have their own “children”
  - If “children” nodes are patents, a thread pool is started to fetch their bibliographic data from the Open Patent Services at EPO

The screenshot shows the SabotDB application window. The left pane displays a hierarchical tree view of the database structure. The tree is expanded to show the 'Cells' folder, which contains sub-folders like 'Corneal Cells', 'Others cells', and 'Retinal cells'. Under 'Corneal Cells', three patent records are listed: 'US20020068050 A1', 'US20030045498 A1', and 'US20050175591 A1'. A red circle highlights the first record, 'US20020068050 A1', with the word 'OPS' written next to it. A dashed blue box encloses the 'Corneal Cells' folder and its children, with a blue arrow labeled 'DB' pointing to the first record. The right pane displays the bibliographic data for the selected record, starting with 'US20020068050 Biblio:' followed by a series of fields: 'PN: US2002068050 A1', 'PD: 20020606', 'TI: Corneal cells expressing active agents and methods of use thereof', 'PA: WILLIAMS KERYN ANNE, ; COSTER DOUGLAS JOHN, ; KLEBE SONJA;', 'AB: The invention relates to methods of modifying cells of corneal tissue to express an active agent, to modified corneal tissue, to vectors utilized in such methods and to methods of xeno- and allo-transplantation utilizing the modified corneal tissue. The method of modifying cells of corneal tissue to express an active agent involves exposing harvested corneal tissue to an effective concentration for transfection of an expression vector which comprises a nucleotide sequence encoding for the active agent for a period sufficient to allow infection, such that cells of said corneal tissue will express the active agent.'



# Case Study 3: 'BSI-201' Searches Summary

- **Could we use sabot to provide patent attorneys with an executive summary of a search project in a user-friendly format?**



# Case Study 3: 'BSI-201' Searches Summary – Computer-Friendly Format

- ▶ 'BSI-201' project: 8 separate searches, reported in several documents each
- ▶ Reports retrieved from internal database
- ▶ Used to interactively create a new patent collection in sabot Tree Branch Editor
- ▶ The whole collection was saved as an XML file

```
<?xml version="1.0" encoding="UTF-8" ?>
- <patent_tree_node hilite="0" name="BSI-201" type="3">
- <patent_tree_node hilite="0" name="Any patents filed by Octamer, Inc in China" type="3">
  2453.93825: Sunny Wang 10/29/10 Would it be possible to do a very quick search for
  patents/applications filed in the name of Octamer, Inc., in China? From prior searches we
  are aware of two: App. No.: 988063891 Filed: 05/13/1998 Corres. to: PCT/US98/010033
  (WO 98/51308) App. No.: 97196979 Filed: 05/30/1997 Corres. to: PCT/US97/09086 (WO
  97/46228) One common inventor is Ernest Kun.
- <patent_tree_node hilite="0" name="Methods for treating inflammation..." type="3">
  AN: 2001:757816 CAPLUS DN: 135:283191 TI: Methods for treating inflammation,
  inflammatory diseases, arthritis and stroke using poly-ADP ribose polymerase
  (pADPRT) inhibitors IN: Kun, Ernest PA: Octamer, Inc., USA AB: A method is provided
  for treating inflammation or inflammatory disease, bacterial infection, arthritis and
  stroke, which comprises administering an effective amount of a pADPRT inhibitory
  compound, e.g. 5-Iodo-6-amino-1,2-benzopyrone.
  <patent_tree_node hilite="0" name="AU745790" type="1" />
  <patent_tree_node hilite="0" name="AU9874847" type="1" />
  <patent_tree_node hilite="0" name="AU9874926" type="1" />
  <patent_tree_node hilite="0" name="BR9809115" type="1" />
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  <patent_tree_node hilite="10" name="CN1198614C" type="1" />
  <patent_tree_node hilite="10" name="CN1261278" type="1" />
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  <patent_tree_node hilite="0" name="MX9910417" type="1" />
  <patent_tree_node hilite="0" name="NZ501650" type="1" />
  <patent_tree_node hilite="0" name="US5908861" type="1" />
  <patent_tree_node hilite="0" name="US6303629" type="1" />
  <patent_tree_node hilite="0" name="WO9851307" type="1" />
  <patent_tree_node hilite="0" name="WO9851308" type="1" />
  </patent_tree_node>
+ <patent_tree_node hilite="0" name="Preparation of thyroxine analogues..." type="3">
</patent_tree_node>
- <patent_tree_node hilite="0" name="BSI-201 for PARP" type="3">
  2453.93752: May Peng 09/10/10 BSI-201; PARP; Iniparib 3 searches:
  file://ressibmnas1/patentsearchdocuments$/93752_Iniparib_PARP_Raw data.rtf
- <patent_tree_node hilite="0" name="HCAPLUS - 20 hits" type="3">
- <patent_tree_node hilite="0" name="A method using a peroxyinitrite decomposition agent"
  type="3">
  <patent_tree_node hilite="0" name="US20090257999" type="1" />
```



# Case Study 3: 'BSI-201' Searches Summary – User-Friendly Format (Perhaps)

The screenshot shows the 'Tree Branch Editor: BSI-201' application. The left pane displays a hierarchical tree structure:

- BSI-201
  - Any patents filed by Octamer, Inc in China
    - Methods for treating inflammation...
      - AU745790
      - AU9874847
      - AU9874926
      - BR9809115
      - CA2289119
      - CN1198614C
      - CN1261278
      - EP1009404
      - JP2002502367
      - JP2009227681
      - JP4362638
      - MX9910417
      - NZ501650
      - US5908861
      - US6303629
      - WO9851307
      - WO9851308
    - Preparation of thyroxine analogues...
  - BSI-201 for PARP
    - HCAPLUS - 20 hits
      - A method using a peroxyinitrite decomposition agent
        - Acta Pharmacol Sin. 2010 Sep;31(9):1172-80
      - Anti-neoplastic combination therapeutic regimen
      - Benzamide compound PARP inhibitors

The right pane shows the 'INFO' tab for the selected node 'Methods for treating inflammation...':

- Name: Methods for treating inflammation...
- Type:  Collection  Patent  Family  Article
- Parent: BSI-201
  - Any patents filed by Octamer, Inc in China
  - BSI-201 for PARP
  - BSI-201: First disclosure with chemical structure
  - BSI-201: Lung cancer drug list
- Notes:

TI: Methods for treating inflammation, inflammatory diseases, arthritis and stroke using poly-ADP ribose polymerase (pADPRT) inhibitors  
IN: Kun, Ernestt  
PA: Octamer, Inc., USA

AB: A method is provided for treating inflammation or inflammatory disease, bacterial infection, arthritis and stroke, which comprises administering an effective amount of a pADPRT inhibitory compound, e.g. 5-iodo-6-amino-1,2-benzopyrone.

Buttons at the bottom: Save to DB, Write to XML, Write to TXT, Update Tree.



# Case Study 3: sabot Core – Development Plans

Implement Article object with 1-click link to PubMed/full text

Custom icons for patents, articles, collections?

The screenshot shows a web browser window with the URL [www.ncbi.nlm.nih.gov/pubmed?term=Acta%20Pharmacol%20Sin.%202010%20Sep;31\(9\):11](http://www.ncbi.nlm.nih.gov/pubmed?term=Acta%20Pharmacol%20Sin.%202010%20Sep;31(9):11). The search results show a PubMed entry for "Acta Pharmacol Sin" with a search button. Below the browser, a software window titled "Branch Editor: BSI-201" is open. The left pane shows a tree view of a collection named "BSI-201 for PARP" with various sub-items, including "Acta Pharmacol Sin. 2010 Sep;31(9):1172-80". The right pane shows the "Properties" window for the selected article, with fields for Name, Type, Parent, and Notes. The Notes field contains text and a search path: "3 searches: file://ressibmna1/patentsearchdocuments\$/93752\_Iniparib\_P ARP\_Raw data.rtf".

Enable hyperlinks from the Notes field



# Conclusions: Complex Technology Enables Simple Solutions

## Data Format Convertors

- Can be developed easier, faster, and more efficiently as plugins using sabot core infrastructure
- Could encourage vendors to focus on their strengths, rather than labor on export/import options compatible with other platforms

## sabot Graphical User Interface

- Allows archiving, in the relational database and in XML files
  - Data processed by plugins
  - Data entered interactively in GUI
- Allows organization, annotation and display of patent-related information

Constantly updated high-quality data is available on the Internet – often it makes more sense to efficiently manage hyperlinks than to store the data locally



# THANK YOU FOR YOUR ATTENTION

## Special thanks to

- Sunny Wang for advice and encouragement
- Mei Peng for beta testing

Please let me know if you would like to see a demo during the break

I will appreciate all questions, comments and suggestions

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