

Solution

GenomeQuest

IRAC.

Search, Manage, Mine, Share the World's Sequence Data

GenomeQuest™ for IP

- Analyze 1 to tens-of-thousands of sequence queries at once
- Execute a variety of search strategies (BLAST, GenePAST)
- Organize your search results by patent, assignee, or patent family
- Detailed annotation with links
- Filter results down to the sequences of interest, in minutes
- Generate detailed reports to [view](#), [print](#) or [share](#)

GenomeQuest™ is a web-enabled sequence information platform enabling legal professionals to analyze, report and then share results of nucleotide, protein, and patent sequence database searches. GenomeQuest allows you to search patent data sources, execute any number of search strategies, and then quickly apply filtering parameters, across results sets from multiple sequence queries, to deliver the answers you need to questions of research validity, freedom-to-operate, patent infringement, business opportunity, and more, all through an easy-to-use web interface.

Centrally Manage, Mine and Share Complete Content

Sequence Patent Databases

GenomeQuest houses the largest annotated sequence patent database – GQ-PAT, with almost 150,000,000 sequences.

The GQ-PAT database includes patent sequences from multiple patent databases – global patent offices, publicly available bio-sequence databases and web resources including: United States Patent and Trademark Office (USPTO); European Patent Offices (EPO); patents posted online by World Intellectual Property Organization (WIPO) / Patent Cooperation Treaty (PCT) or with US equivalents, and the patent division of GenBank, EMBL and DDBJ, which contains sequences from Japanese patent documents. The International Patent

Documentation Center (INPADOC) family information allows us to extend our coverage to secondary issuing offices.

GQ-PAT data is both automatically filtered and manually curated to detect and eliminate errors originating from source databases to ensure consistency and accuracy. Data from all sources is processed in GenomeQuest's proprietary automated pipeline into GQ-PAT to make the sequences as well as all annotations searchable and browsable.

Biological Sequences

With GenomeQuest the latest sequence data is all in one place. Information from public nucleotide and protein sequence databases including GenBank, ENSEMBL, and RefSeq, UNIPROT (SwissProt and TrEMBL), GenPept and many others are all accessible. GenomeQuest also offers DrugBank Pro, a drug target database, which combines pharmacological information with sequence, and structure, as well as IND information. License holders can access GeneSeq data through GenomeQuest, as well.

Your Own Content

GenomeQuest can also house your own sequences in GQ Base. Simply upload your sequence databases - this could include sequences of interest to you, your proprietary sequences or a subset of public domain sequences of particular interest in a given search project. Access control is provided so you determine whether the upload is accessible for your own personal use or your company.

Flexible Sequence Search

Not all search algorithms are created equal so GenomeQuest gives you four different search algorithms to choose from including BLAST, Percent Identity (GenePAST), Fragment Search, and Motif Search. Each strategy includes a set of parameters that can be adjusted for your sequence.

Quickly paste in multiple sequences, apply a strategy and select the databases, from GenomeQuest's Sequence Search screen

GenePAST

Also referred to as Percent Identity, the GenePAST algorithm is perfect for investigating claims on similar sequences specified in terms of percentage identity over the sequence. GenePAST is also ideal for short query sequences such as primers, probes or peptides because, unlike BLAST, GenePAST is non-heuristic and allows the user to specify percentage identity on the sequence itself.

GenomeQuest also offers Fragment search to find alignments between fragments that are common between query and subject sequences as well as Motif search which makes necessary allowances for ambiguity in your query sequence. Motif works with Prosite patterns, regular expressions, and IUPAC ambiguity codes for nucleotides and amino acids.

Keyword Search

GenomeQuest keyword search enables you to find sequences by verifying with a keyword located in the annotation as your query. With GenomeQuest, users can execute keyword searches using wildcards, proximity/phrase searching, as well as boolean combinations of And/Or conditions. Search GQ-PAT or choose a protein or nucleotide database directly from the database tree to run the search against.

Users can then either generate a report, export sequences to perform a sequence search or launch various 3rd party applications.

Results	Match	Identity	Score	Subject	Annotation	
15 Results	Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of deg
1-3 of 15	Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of deg
	Perfect match	15.62	100	0	GENSET S.A. FRANCE	Expressed sequence tags

Alignment	Subject Annotation	Subject Sequence	Query Sequence
<p>Subject Identifier US6783961-31996</p> <p>Patent number US6783961 Link outs: Esp@cenet, USPTO, Delphion: (details, PDF), MicroPatent, Free Patent Online, PatBase.</p> <p>Patent title Expressed sequence tags and encoded human proteins</p> <p>Patent assignee GENSET S.A. FRANCE</p> <p>Publication date 31-Aug-2004</p> <p>Date of entry 04-Mar-2006</p> <p>Patent filing date 24-Feb-2000</p> <p>Earliest priority date 26-Feb-1999</p> <p>Priority info 19990226 US19990122487P; 20000224 US20000513999;</p> <p>Abstract The sequences of 5' ESTs derived from mRNAs encoding secreted proteins are disclosed. The 5' ESTs may be to obtain diagnostic, forensic, gene therapy, and chromosome mapping procedures. Upstream regulatory sequences may also be and secretion vectors.</p> <p>RELATED APPLICATION DATA This application claims priority from U.S. Provisional Patent Application Serial No. 60/122, enberty.</p>			

Browsing result details is easy with a simple click on the result row - alignment information, annotations, and sequence information is expanded below.

Powerful Results Management

GenomeQuest's results analysis functions allow users to easily filter, group, sort and export results. Users can also create informative reports and launch 3rd party applications for further analysis.

Browsing Result Details

Just click on the results row and expand one of four tabs: Alignment, Subject Annotation, Subject Sequence, or Query Sequence. Users can quickly find links to bibliographic information, as well as claims text, families, legal status, Seq ID no., patent sequence location and more.

Result ▾ Export ▾ Applications ▾

Match all of the following any of the following

Align % Id

Earliest priority date

Legal status

View ▾ Grouped By Query

Grouping

- Query
- Subject
- Alignment
- Patent Number
- Patent Family
- Gene Name
- Organism

My Views

-
-

Show Only Checked Results

- Show All Results
- Show Only New Subjects
- Expand all Detail

Grouping	Group Size	Define Columns	Query	ect. %	Align % Id	Nb. Diff.	Patent assignee	Patent title
			Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d
			Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d
			Perfect match	15.62	100	0	GENSET S.A. FRANCE	Expressed sequence tag
4	1 Result 1-1 of 1		Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d
7	16 Results 1-3 of 16		Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d
			Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d
		96	0.3	82.76	5	AMGEN CANADA INC. MISSISSAUGA, CANADA -AMGEN INC. THOUSAND OAKS, CA	Genes encoding telomer	
8	5 Results 1-3 of 5		Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d
			Perfect match	100	100	0	AFFYMETRIX, INC. SANTA CLARA, CA	Methods of analysis of d

Results Page - GenomeQuest lets you ask the questions - what do I want to know about my sequence search results (global filtering), how do I want to organize my results (grouping), how do I want this information presented (sorting, viewing, display columns); executed using simple menu structures.

FilterSmart™ Technology

Some searches return hundreds or thousands of results per query. GenomeQuest’s FilterSmart technology enables flexible and fast analysis of search results. Simultaneously filter on any number of alignment and/or annotation properties through simple pull-down menus, reducing results to highly relevant sequences in minutes.

Result ▾ Export ▾ Applications ▾

Match all of the following any of the following

Align % Id

Earliest priority date

Legal status

GenomeQuest is the only tool which provides filter-on-the-fly capabilities using its proprietary FilterSmart technology.

For instance filters applied to results might include sequence identifier, alignment statistics, query length, patent filing date and legal status (granted or application), which enables you to determine and filter on whether a patent is granted.

Grouping

In GenomeQuest the default grouping of results in the results table is by Query but information can easily be regrouped by Subject, Alignment, Patent, Patent Family, Gene Name or Organism. With GenomeQuest you can also control the number of visible best hits to be 1, 3, 5 or “all” results per group.

Changing your View

Quickly add or remove columns for display in the results table. You can then sort based on any of these columns.

Once you have defined the groups and columns, you can name and save the “View” to quickly apply these settings to other sequence search results.

Saving Your Workspace

GenomeQuest allows you to exit from your Results page before you have completed your analysis, and pick up right where you left off – an hour, a day, or months later. Saving your workspace preserves your filters, check boxes, display, sorting, etc, in a static state so you can recall them in a single click from the My GenomeQuest page, and continue your work.

Reporting

Whether producing reports for your customers or sharing results with a colleague, GenomeQuest makes it easy. Generate a concise Table (Excel) or detailed Document (Word) report on your sequences of interest. The reports reflect

the column layout of the table as well as the grouping and group size options you selected in the GenomeQuest application. For example, if you Grouped results by Patent, selected to View three results per, and added the display column "Detailed Legal Status", the report output would reflect those decisions. GenomeQuest reports provide a full audit trail detailing your search filters, parameters, database strategies, etc.

GenomeQuest also includes special reports - Patent Number, and Patent Number plus Family list – to enable you to export this information for use in other search systems.

Application Launching

Further manage results by launching sequence analysis applications e.g. Clustalw, BizInt Smart Charts, Vector NTI or others. With an enterprise installation of GenomeQuest, users can add-on their own sequence analysis applications.

Alerting

Stay abreast of updates to a chosen search. When you set an alert on a sequence search in GenomeQuest, the exact same search is run (same query, strategy, parameters, and database(s)) every time any one of the databases is updated. Then GenomeQuest automatically notifies you via e-mail if new results are found.

Exporting

GenomeQuest enables you to export sequences into a text file for analysis in another application. Formats for export include FASTA, GenBank or EMBL.

Saving and Sharing Results

GenomeQuest automatically saves all sequence search results and houses them in My GenomeQuest - a central repository of searches you can organize into project folders and then allow others users to access, for collaboration and information sharing.

The Right Fit

Get the right combination of access, economy, and security to make GenomeQuest fit your usage and business needs with two access choices.

GQLive!

If you'd like to get started searching today, sign up for GenomeQuestLive! A secure, hosted Internet service providing GenomeQuest patent sequence search, content, analysis and reporting right at your fingertips.



Enterprise Installation

GenomeQuest offers those looking for internal hosting and data access, on-site installation of GenomeQuest. This includes the GenomeCast Update Service, a through-the-firewall updating service that delivers content to keep your data current. Also provided is the GQ Content Manager module which enables you to easily integrate your own proprietary data into GenomeQuest, so you can search your in-house data along side the data produced by GenomeQuest.

About GenomeQuest, Inc.

GenomeQuest, Inc. is the leading sequence informatics company providing search, content, and analysis functions to manage and mine the world's sequence data. Backed by a continually-updated collection of databases, GenomeQuest delivers confident sequence search to it's over 160 customers of leading life science companies and IP law firms, worldwide.



Corporate Headquarters

GenomeQuest, Inc.

1700 West Park Drive
Suite 260
Westborough, MA 01581
Phone: 508 616 0100
Fax: 508 616 0110

sales@genomequest.com

France

GenomeQuest SA
147, Avenue Paul Doumer
92500 Rueil Malmaison France
Phone: +33 (0)1 41 96 80 30
Fax: +33 (0)1 41 96 80 31