

# Third-Party PubMed Tools



HEALTH SCIENCES LIBRARIANS OF ILLINOIS

NOVEMBER 10, 2016

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NN/LM GMR



# Objectives

Participants will be able to:

- ▶ Use and teach others about the latest updates to PubMed
- ▶ Name and gain familiarity using three types of third-party PubMed tools
- ▶ Identify situations in which using a third-party tool would be beneficial
- ▶ Stay current with new developments related to third-party PubMed tools

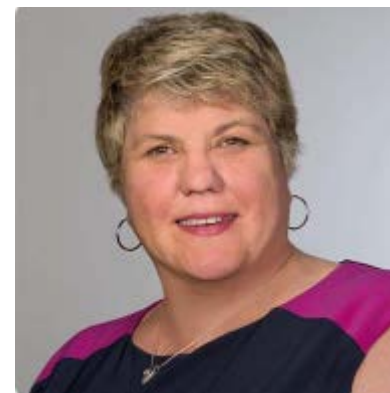


# Agenda

- ▶ Introductions (*15 minutes*)
- ▶ What's New in the NLM/NN/LM/GMR (*15 minutes*)
- ▶ What's New with PubMed (*20 minutes*)
- ▶ The PubMed API (*15 minutes*)
- ▶ Third-Party Tools
  - ▶ Semantic Searching (*20 minutes*)
  - ▶ Group Exercise #1 (*20 minutes*)
  - ▶ Visualization (*20 minutes*)
  - ▶ Group Exercise #2 (*20 minutes*)
  - ▶ Simplification (*30 minutes*)
  - ▶ Group Exercise #3 (*30 minutes*)
- ▶ Discussion Questions (*30 minutes*)

# What's new at NLM?

- ▶ Genetics Home Reference redesign - <https://ghr.nlm.nih.gov>
- ▶ Medline celebrates 45<sup>th</sup> anniversary!
- ▶ New National Library of Medicine Director, Dr. Patti Brennan
- ▶ Launched a Request for Information (RFI) to solicit feedback from stakeholders for strategic planning

A screenshot of the National Network of Libraries of Medicine (NN/LM) website. The header includes the NN/LM logo and the text 'NATIONAL NETWORK OF Libraries of Medicine'. A navigation bar contains links: Home, Member Services, Provide Outreach, Resource Sharing & Document Delivery, and Health. The main content area features a blue box titled 'NLM Strategic Planning' with a red arrow pointing to it. The text inside the box states that the NLM is undertaking a Strategic Planning Process and soliciting input from its broad stakeholder community, including network members. It mentions that the RFI closes on January 9, 2017. Below this, there is a 'Quick Links' section with a list of regional and organizational links. To the right of the text, there is a map of the United States with color-coded regions and labels for 'Hawaii' and 'Pacific Basin'.

**NLM Strategic Planning**

The National Library of Medicine is undertaking a Strategic Planning Process and is soliciting input from its broad stakeholder community, including our Network members. Please ensure that your [feedback](#) is included in our strategic visioning. The RFI closes on January 9, 2017.

**Quick Links**

- Region 1 - Middle Atlantic
- Region 2 - Southeastern/Atlantic
- Region 3 - Greater Midwest
- Region 4 - MidContinental
- Region 5 - South Central
- Region 6 - Pacific Northwest
- Region 7 - Pacific Southwest
- Region 8 - New England
- NN/LM DOCLINE Coordination Office
- NN/LM Evaluation Office
- NN/LM Public Health Coordination Office

**Resources for Members of the Nation**

Hawaii  
Pacific Basin

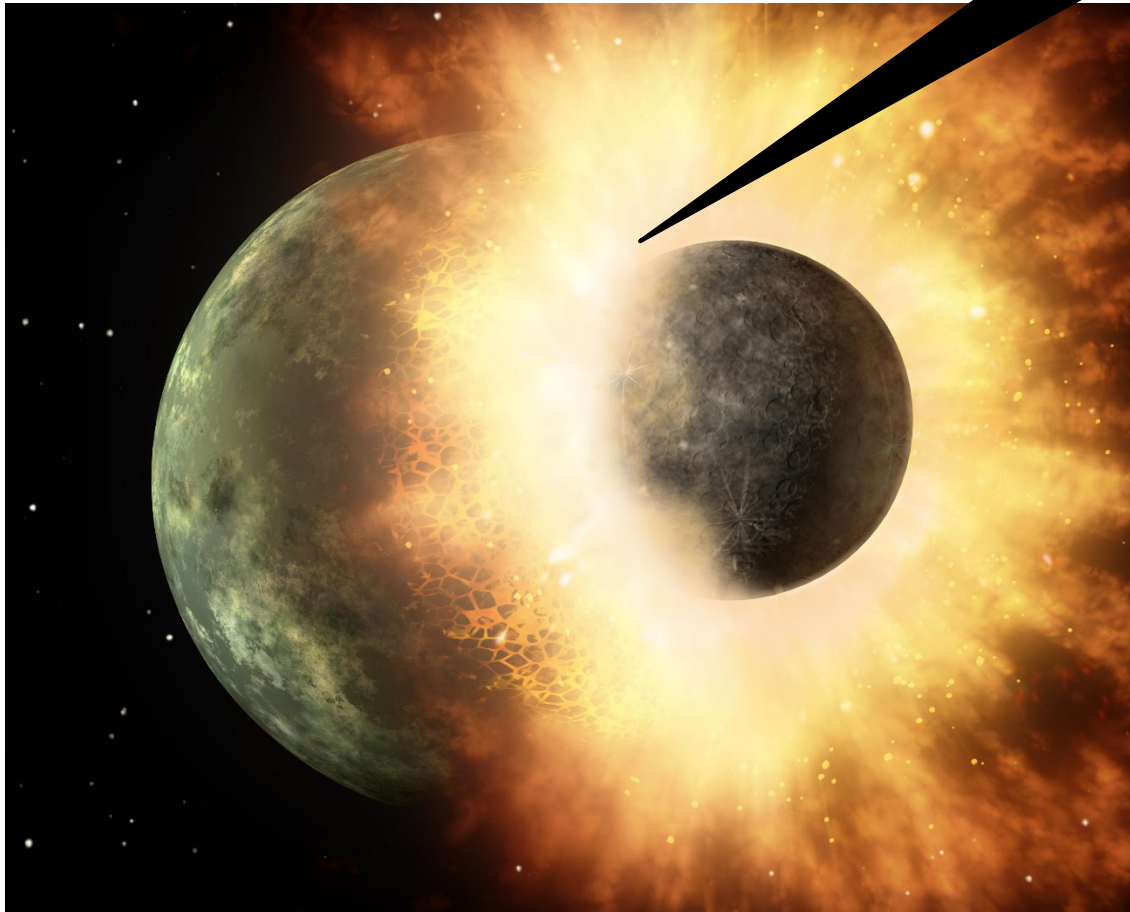
# What's new at NN/LM?

- ▶ New leadership, interviews ongoing
- ▶ Development of strategic goals
- ▶ 2016-2021 cooperative agreement period brings two new offices:
  - ▶ NN/LM Docline Coordination Office
  - ▶ NN/LM Public Health Coordination Office
- ▶ Funding mechanism transitioned from a contract to a grant



# What's new at the GMR?

AAAAHHHHH!!!!



# What's new at the GMR?



# What's new at the GMR?

- ▶ New staff - <https://nnlm.gov/gmr/about/staff>
- ▶ Advisory groups
- ▶ Assessments coming your way!
  - ▶ Educational needs
  - ▶ Communication
- ▶ Development of all new....
  - ▶ Course offerings
  - ▶ Webinar series
  - ▶ Website and blog
  - ▶ Funding opportunities
  - ▶ Sponsored activities
  - ▶ Awards





# Wake up!

- ▶ Get your device ready (smartphone, tablet or laptop)
- ▶ Go to [kahoot.it](https://kahoot.it)
- ▶ Enter the game-pin number and a nickname




# What's new with PubMed

- ▶ DOI at the end of abstract display
- ▶ PubMed Journals released
- ▶ New Search Result filters in PMC: Open Access and back issue digitization
- ▶ PubMed celebrated its 20<sup>th</sup> anniversary!

resulted in misguided, inefficient leukocyte responses. Our experimental data unc directed, spatiotemporally organized, multicellular crosstalk that is essential for el leukocytes to the site of inflammation.

PMID: [27152726](#) PMCID: [PMC485936](#) DOI: [10.1371/journal.pbio.1002459](#)

[PubMed - in process] **Free PMC Article**



## PubMed Journals

Find, Browse, and Follow Biomedical Journals

Find a journal

# Stay current with PubMed

- ▶ PubMed Update broadcast - Wednesday, January 25<sup>th</sup>, 2017 at 3pm ET/2pm CT
- ▶ PubMed New and Noteworthy
- ▶ NLM Technical Bulletin
- ▶ [PUBMED-ALERTS@list.nih.gov](mailto:PUBMED-ALERTS@list.nih.gov)
- ▶ MEDLIB-L
- ▶ NN/LM GMR Weekly Digest



# PubMed API



# PubMed API (E-utilities)

- ▶ API = **A**pplication **P**rogramming **I**nterface
- ▶ Makes data available for use in other programs or interfaces

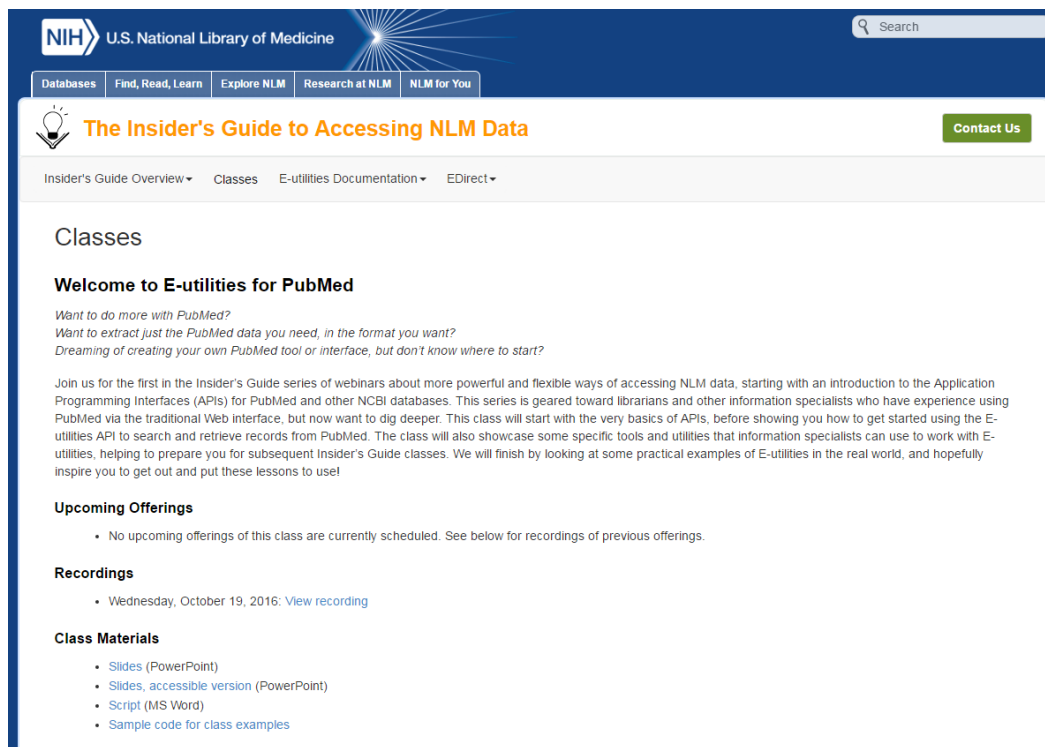




# Want to know more about APIs?

- ▶ How Stuff Works: How APIs Work:  
<http://tinyurl.com/27rw2kn>
  - ▶ Explanation of APIs, using conferencing software as an example.
- ▶ Entrex AJAX: <http://entrezajax.appspot.com/>
  - ▶ A third-party derivative of NCBI's EUtils designed for launching searches directly from the browser (improves speed)


# NCBI APIs series



The screenshot displays the NCBI website's header with the NIH logo and navigation tabs for Databases, Find, Read, Learn, Explore NLM, Research at NLM, and NLM for You. A search bar is located in the top right. The main content area features a light blue banner for 'The Insider's Guide to Accessing NLM Data' with a 'Contact Us' button. Below this is a breadcrumb trail: 'Insider's Guide Overview > Classes > E-utilities Documentation > EDirect'. The 'Classes' section is titled 'Welcome to E-utilities for PubMed' and includes three bullet points: 'Want to do more with PubMed?', 'Want to extract just the PubMed data you need, in the format you want?', and 'Dreaming of creating your own PubMed tool or interface, but don't know where to start?'. A paragraph follows, explaining the series of webinars. The 'Upcoming Offerings' section states that no offerings are currently scheduled. The 'Recordings' section lists a recording from Wednesday, October 19, 2016, with a 'View recording' link. The 'Class Materials' section lists four items: 'Slides (PowerPoint)', 'Slides, accessible version (PowerPoint)', 'Script (MS Word)', and 'Sample code for class examples'.

NIH U.S. National Library of Medicine

Databases Find, Read, Learn Explore NLM Research at NLM NLM for You

 **The Insider's Guide to Accessing NLM Data** [Contact Us](#)

[Insider's Guide Overview](#) > [Classes](#) > [E-utilities Documentation](#) > [EDirect](#)

## Classes

### Welcome to E-utilities for PubMed

- Want to do more with PubMed?
- Want to extract just the PubMed data you need, in the format you want?
- Dreaming of creating your own PubMed tool or interface, but don't know where to start?

Join us for the first in the Insider's Guide series of webinars about more powerful and flexible ways of accessing NLM data, starting with an introduction to the Application Programming Interfaces (APIs) for PubMed and other NCBI databases. This series is geared toward librarians and other information specialists who have experience using PubMed via the traditional Web interface, but now want to dig deeper. This class will start with the very basics of APIs, before showing you how to get started using the E-utilities API to search and retrieve records from PubMed. The class will also showcase some specific tools and utilities that information specialists can use to work with E-utilities, helping to prepare you for subsequent Insider's Guide classes. We will finish by looking at some practical examples of E-utilities in the real world, and hopefully inspire you to get out and put these lessons to use!

### Upcoming Offerings

- No upcoming offerings of this class are currently scheduled. See below for recordings of previous offerings.

### Recordings

- Wednesday, October 19, 2016: [View recording](#)

### Class Materials

- [Slides \(PowerPoint\)](#)
- [Slides, accessible version \(PowerPoint\)](#)
- [Script \(MS Word\)](#)
- [Sample code for class examples](#)

# Ideas for a project involving NLM APIs?

- ▶ Apply for funding through our office!
- ▶ Technology Improvement/Express Outreach





# Wake up!

- ▶ Get your device ready (smartphone, tablet or laptop)
- ▶ Go to [kahoot.it](https://kahoot.it)
- ▶ Enter the game-pin number and a nickname

# PubMed alternatives



PMinstant.com



HubMed:



SLIM  
v.2



LigerCat  
Literature and Genomics Resource Catalogue



# Themes

- ▶ Semantic searching
- ▶ Visualization
- ▶ Simplification



# HelioText (formerly ETblast)

<http://helioblast.heliotext.com/>

## **Developed by:**

HelioText, developers formerly of Virginia Biometrics  
Institute and UT Southwestern

Harold 'Skip' Garner is the PI

## **Claim to fame:**

Analyzes large chunks of text

From Skip Garner: <https://youtu.be/QvwVSvQytAA>



## Ask HelioBLAST

Search in: ☒ Medline Would you like to add your own database? [Get in touch with us.](#)



**Submit to HelioBLAST**

MEDLINE index last updated Tuesday, November 01, 2016.

NLM data are produced by a U.S. Government agency and include works of the United States Government that are not protected by U.S. copyright law but may be protected by non-US copyright law, as well as abstracts originating from publications that may be protected by U.S. copyright law.

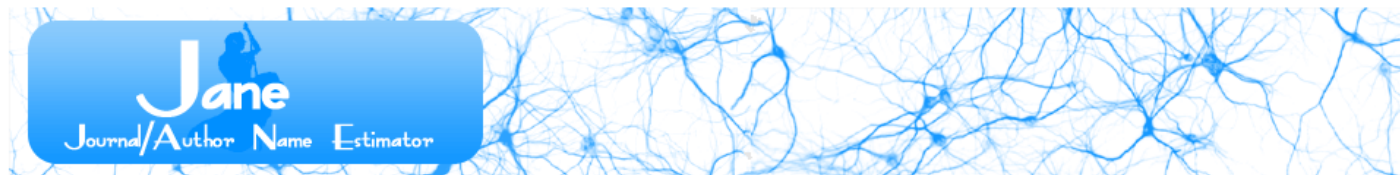
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### Welcome to HelioBLAST

HelioBLAST is a free service provided by HelioText. The HelioBLAST text similarity engine finds text records that are similar to the submitted query. HelioBLAST uses our super-fast search engine, and this service is provided to demonstrate what can be done using text similarity searching. HelioBLAST can be customized to search a particular database or multiple ones; and proprietary databases can be created for individual clients.

Here, your query is searched against the citations (abstract and titles) in Medline/PubMed. **Submissions are limited to 1,000 words**, so we recommend your query should be an abstract or paragraph.

# Jane (Journal/Author Name Estimator)



Insert your title and/or abstract here: (or, click [here](#) to search using keywords)

Scramble Clear Show extra options

Find journals Find authors Find articles

## Welcome to Jane

Have you recently written a paper, but you're not sure to which journal you should submit it? Or maybe you want to find relevant articles to cite in your paper? Or are you an editor, and do you need to find reviewers for a particular paper? Jane can help!

Just enter the title and/or abstract of the paper in the box, and click on 'Find journals', 'Find authors' or 'Find Articles'. Jane will then compare your document to millions of documents in *Medline* to find the best matching journals, authors or articles.

### Keyword search

Instead of using a title or abstract, you can also search using a keyword search, similar to popular web search engines. Click [here](#) to search using keywords.

### A new home!

JANE has moved to a new home for improved stability. Many thanks to the [Observational Health Data Science and Informatics](#) for providing the hosting! Please update your bookmarks.

[Additional information about Jane](#)

# BioMedLib Search Engine

## BioMedLib Search Engine [ goto HOMEPAGE ]

Advanced Search Search History MeSH Query Page Format Clarify the query Login  SHARE    ...

Export Citations Search Results RSS Email Articles' Details Start new query Reset All

seizure alcohol

Search




Refine your query (more in Advanced-Search):

[Focus on the recent 5 years](#) [Focus on the current year](#) [Focus on the last 30 days](#) [More choices ...](#)

[Focus on articles with free fulltexts](#) [More choices ...](#)

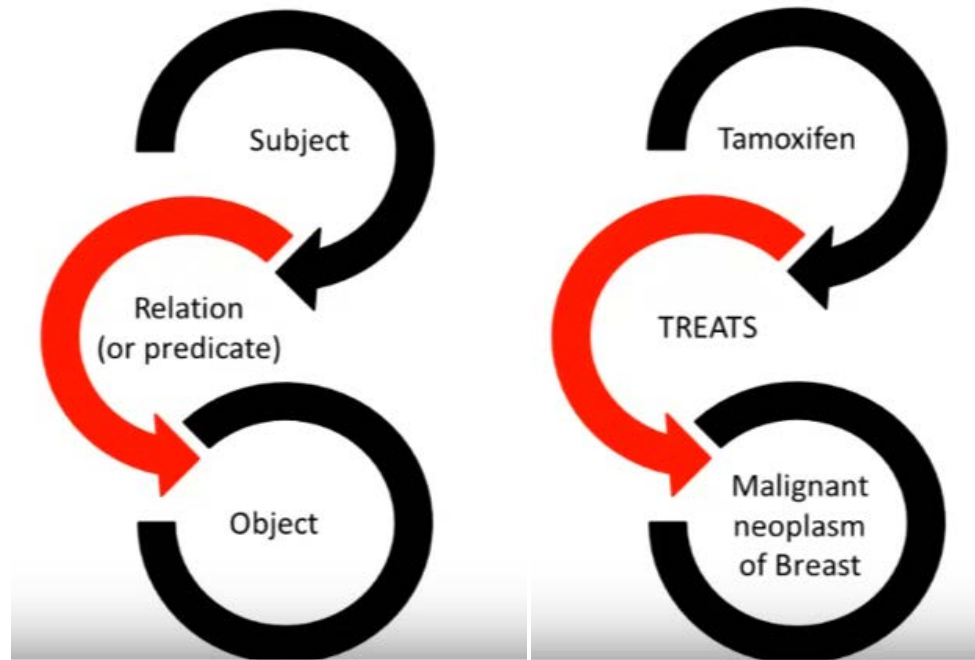
[Do simple 'keyword' search \(no query expansion\)](#)

### Items 1 to 10 of about 8692

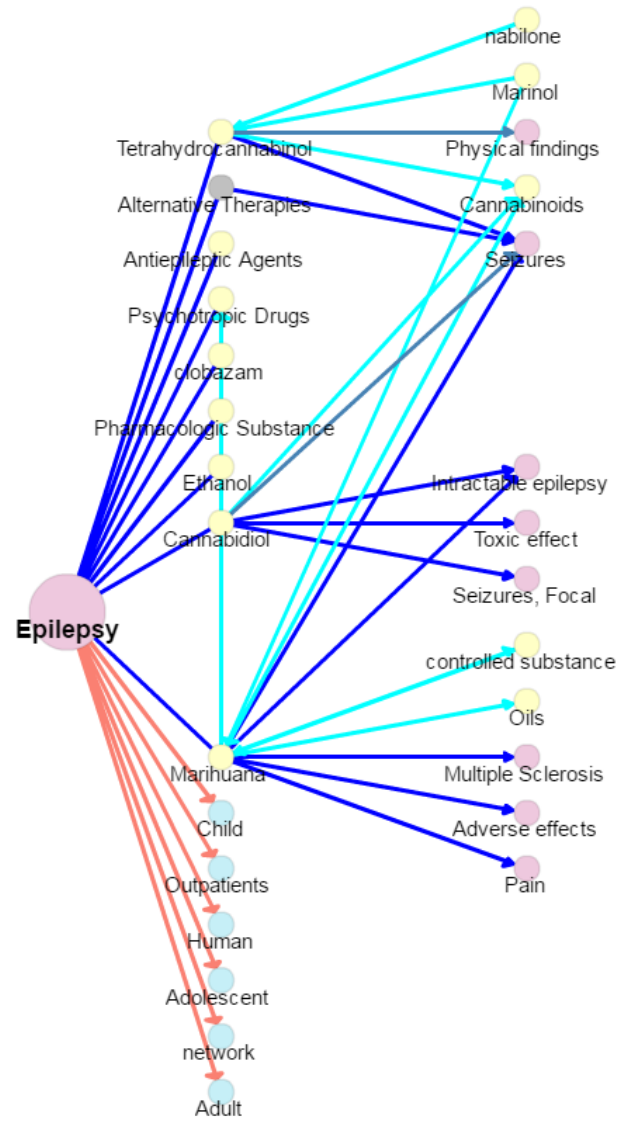
- ☐ [Lahmek P, Michel L, Meunier N, Aubin HJ: A seizure attributed to ofloxacin in a woman undergoing detoxification for alcohol dependence. \*Case Rep Med\*; 2009;2009:705635](#)  
 [Fulltext service] Download [fulltext PDF](#) of this article and others, as many as you want.
- ☐ [Silverstone PH, Williams R, McMahon L, Fleming R, Fogarty S: Alcohol significantly lowers the seizure threshold in mice when co-administered with bupropion hydrochloride. \*Ann Gen Psychiatry\*; 2008;7:11](#)  
 [Fulltext service] Download [fulltext PDF](#) of this article and others, as many as you want.
- ☐ [Riegle MA, Masicampo ML, Caulder EH, Godwin DW: Ethosuximide reduces electrographical and behavioral correlates of alcohol withdrawal seizure in DBA/2J mice. \*Alcohol\*; 2014 Aug;48\(5\):445-53](#)  
 [Fulltext service] Download [fulltext PDF](#) of this article and others, as many as you want.

# Semantic MEDLINE

- ▶ <https://skr3.nlm.nih.gov/SemMed/>
- ▶ Interface for MEDLINE that uses Natural Language Processing







# GoPubMed

gopubmed

refine search

- ★ Favorite concepts
- ▼ Highly related concepts
  - Cannabis 71
  - Seizures 69
  - Dronabinol 17
  - Research Report 35
  - Anticonvulsants 15
  - Street Drugs 13
  - Male 42
  - cannabinoid receptor binding 9
  - Medicalization 19
  - Female 33
  - ▼ more
- ▶ All related concepts
- ▶ Authors
- ▶ Locations
- ▶ Journals
- ▶ Publication Dates
- ▶ Find concepts in Knowledge Base
- ▶ Previous queries
- ▶ Explore current query

powered by TRANSINSIGHT Enterprise Semantic Intelligence® Server

★ Seizures[mesh] AND Cannabis[mesh]

show abstracts documents statistics top author clipboard

208 documents found

▼ "Just one bad high:" considering synthetic cannabinoid outcome expectancies in adolescents.

Authors: Mathai, David S, et.al.

Journal: The American journal on addictions (Am J Addict), 2016

METHODS/RESULTS: An 18-year-old male presented with altered mental status and seizure, complicated by respiratory failure.

PubMed 27749024 Related Articles Read Full Text

Affiliation: Baylor College of Medicine, Houston, Texas. dmathai@bcm.edu. Menninger Department of Psychiatry and Behavioral Sciences, Baylor College of Medicine, Houst

▼ Δ9-THC Intoxication by Cannabidiol-Enriched Cannabis Extract in Two Children with Refractory Epilepsy: Full

Authors: Crippa, José A S, et.al.

Journal: Frontiers in pharmacology (Unknown Journal), Vol. 7, 2016

We describe the cases of two children with treatment-resistant epilepsy (Case A with left frontal dysplasia and Case B with Dravet Syndrome) with initial symptom short time.

PubMed 27746737 Related Articles Read Full Text

Affiliation: Department of Neuroscience and Behavior, University of São Paulo Ribeirão Preto, Brazil. Department of Clinical Medicine, Federal University of Paraná Curitiba, E

▼ Comparison of illegal drug use pattern in Taiwan and Korea from 2006 to 2014

# Group Exercise #1

- ▶ Break into three groups (5/group)
- ▶ Experiment with GoPubMed and HelioBlast (and Semantic Medline with Liz's credentials)
  - ▶ Semantic Medline credentials:
    - ▶ Username: lizlib & Password: 8008search!
- ▶ Answer these questions:
  - ▶ What are the pros/cons of each?
  - ▶ Is there a scenario in which you would recommend one of these tools to a library user?
  - ▶ Is there a scenario in which you would use one of these tools yourself?



# Theme II

- ▶ Semantic searching
- ▶ Visualization
- ▶ Simplification



# LigerCat

## Developed by:

Biology of Aging project at Marine Biological Laboratory –  
Woods Hole Oceanographic Institution Library

## Claim to fame:

Produces tag clouds based on MeSH headings

<http://ligercat.ubio.org/>

vitamin D AND multiple sclerosis

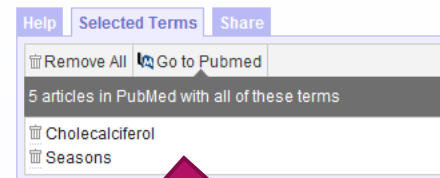
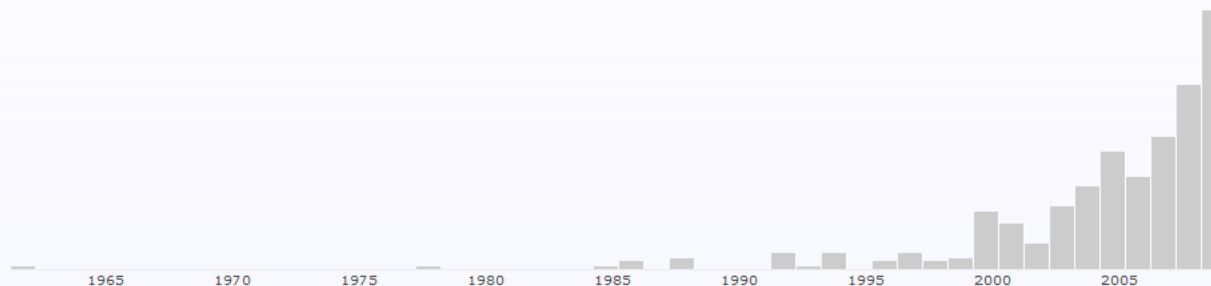
Search

MeSH Cloud for *vitamin D AND multiple sclerosis*

Generated from 322 articles

Adolescent **Adult** Age Factors Age of Onset Aged Aged, 80 and over Alleles Arthritis, Rheumatoid Autoimmune Diseases Biological Markers Bone and Bones Bone Density Brain Calcifediol Calcitriol Calcium Case-Control Studies Child **Cholecalciferol** Cohort Studies Comorbidity Cross-Sectional Studies Cytokines Diabetes Mellitus, Type 1 Diet Dietary Supplements Disability Evaluation Disease Models, Animal Dose-Response Relationship, Drug Encephalomyelitis, Autoimmune, Experimental Environment Environmental Exposure **Female** Gene Frequency Genetic Predisposition to Disease Genotype Geography HLA-DR Antigens Humans Immune System Incidence Life Style Magnetic Resonance Imaging **Male** Mice Mice, Inbred C57BL Middle Aged Models, Biological **Multiple Sclerosis** Multiple Sclerosis, Relapsing-Remitting Neoplasms Osteoporosis Parathyroid Hormone Polymorphism, Genetic Polymorphism, Single Nucleotide Pregnancy Prevalence Rats Receptors, Calcitriol Risk Assessment Risk Factors **Seasons** Sex Factors Skin Smoking Sunlight T-Lymphocytes Ultraviolet Rays United States **Vitamin D** Vitamin D Deficiency Vitamin D-Binding Protein Vitamins Young Adult

## Publication History



Runs MeSH  
search  
directly in  
PubMed

## Search PubMed Articles

Search PubMed using words or even a DNA/protein sequence to create a [tag cloud](#) showing an overview of important concepts and trends. LigerCat aggregates multiple articles in PubMed, combining the associated MeSH descriptors into a cloud, weighted by frequency.

## Visualize MeSH Descriptors

Medical Subject Headings (MeSH) is a [controlled vocabulary](#) created and maintained by the National Library of Medicine and applied to categorize and index journal articles in biomedical science.

## Search from Tag Clouds

Simply click on one or more MeSH descriptors in a tag cloud to [instantly search PubMed](#) for those terms instantly. Selecting more than one term finds articles tagged with all selected MeSH descriptors.

LigerCat is brought to you by the [Biology of Aging](#) project at the [MBLWHOI Library](#)

[Contact Us](#)  
[Citation Information](#)





```
>
GGATCAGCTGACTCGCCTGGCTCTGAGCCCCGCCGCCGCTCGGGCTCCGTGAGTTTCTCGGCAGCGG
TAGGCGAGAGCAGCGGAGGAGCGTGC CGGGGGCCCCGGGAGACGGCGCGGTGGCGGCGGGCAGAG
CAAGGACGCGCGGATCCCACTCGCACAGCAGCGCACTCGGTGCCCGCGCAGGGTCGCGATGCTGCCCG
GTTTGGCACTGCTCCTGCTGGCCGCTGGACGGCTCGGGCGCTGGAGGTACCCACTGATGTAATGCTGG
CCTGCTGGCTGAACCCAGATTGCCATGTTCTGTGGCAGACTGAACATGCACATGAATGTCCAGAATGGG
AAGTGGGATTGAGATCCATCAGGGACCAAAACCTGCATTGATACCAAGGAAGGCATCCTGCAGTATTGCC
AAGAACTCTACCCCTGAACATGCAGATCACCAATGTGGTAGAAGCCAACCAACAGTGACCATCCAGAAGTG
GTGCAAGCGGGGCGCAAGCAGTGCAAGACCCATCCCCACTTTGTGATTCCCTACCGCTGCTTAGTTGGT
GAGTTTGTAAAGTATGCCCTTCTCGTTCTGCAAGTGCATTTCTTACCCAGGAGGATGGATGTTT
```

Search

## MeSH Cloud for Blast Results

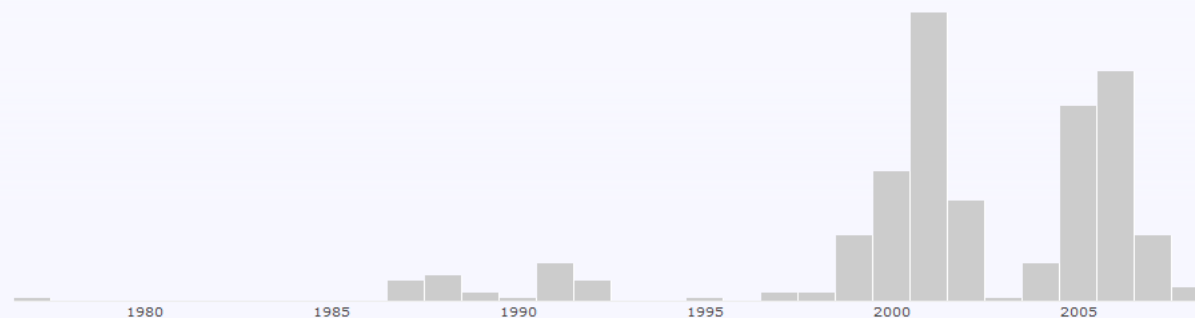
[Africa](#) [Alternative Splicing](#) [Alzheimer Disease](#) [Americas](#) [Amino Acid Motifs](#) [Amino Acid Sequence](#) [Amyloid](#) [Amyloid beta-Protein](#)  
[Amyloid beta-Protein Precursor](#) [Asia](#) [Bacteriophage lambda](#) [Base Sequence](#) [Brain](#) [Cats](#) [Chromosome Mapping](#)  
[Chromosomes, Mammalian](#) [Cloning, Molecular](#) [Computational Biology](#) [Conserved Sequence](#) [Cricetinae](#) [Databases, Genetic](#) [DNA](#)  
[DNA, Complementary](#) [DNA, Mitochondrial](#) [Europe](#) [Evolution](#) [Expressed Sequence Tags](#) [Felidae](#) [Felis](#) [Female](#)  
[Fossils](#) [Gene Expression Regulation](#) [Gene Library](#) [Genes](#) [Genetic Speciation](#) [Genome](#) [Genomics](#) [Humans](#)  
[Image Cytometry](#) [LynX](#) [Male](#) [Mammals](#) [Membrane Proteins](#) [Mice](#) [Mice, Inbred C57BL](#) [Molecular Sequence Data](#) [Panthera](#)  
[Phylogeny](#) [Physical Chromosome Mapping](#) [Placenta](#) [Polymerase Chain Reaction](#) [Pregnancy](#) [Promoter Regions \(Genetics\)](#)  
[Protein Biosynthesis](#) [Protein Structure, Tertiary](#) [Puma](#) [Rats](#) [Regulatory Sequences, Ribonucleic Acid](#) [Reproducibility of Results](#) [RNA](#) [RNA Caps](#)  
[RNA Interference](#) [RNA Splicing](#) [RNA, Antisense](#) [RNA, Messenger](#) [RNA, Untranslated](#) [Sensitivity and Specificity](#)  
[Sequence Analysis, DNA](#) [South America](#) [Templates, Genetic](#) [Transcription Initiation Site](#) [Transcription, Genetic](#)  
[X Chromosome](#) [Y Chromosome](#)

[Help](#) [Blast](#) [Selected Terms](#)

The terms shown to the left are organized in a "tag cloud," a visual way of representing the occurrence of MeSH Descriptors. More occurrent terms appear larger than less occurrent terms.

Click on any of the MeSH Descriptors or Text Words shown at left to select or deselect them. Using the selected terms, LigerCat will craft a query to PubMed. The number of articles returned by this query to PubMed is displayed in the "Selected Terms" tab, and can be clicked to go straight to PubMed

## Publication History





# PubAnatomy

## Developed by:

National Center for Integrative Bioinformatics, University of Michigan

## Claim to fame:

Maps the journal literature to brain anatomy and gene expression correlations

<http://brainarray.mbni.med.umich.edu/brainarray/prototype/pubanatomy/>

Windows Internet Explorer

http://brainarray.mbi.med.umich.edu/Brainarray/prototype/PubAnatomy/run/#app=5725&4065-selectedIndex=0&d022-selectedIndex=01

File Edit View Favorites Tools Help

Brain Map Gene Expression Correlation Image Section

Color legend: the darker the color the greater the number of articles.

Brain region name abbreviations

Brain map is now color coded according to the number of articles retrieved by the search that correspond to that brain region.

Search Panel

Keywords:  
p2x  
(And/Or) Gene ID or Symbol

Search

Search Engine Options:  
PubAnatomy search engine  
Abstract search range: 500  
(Large limit may take minutes)

Mapping Options:  
Brain Structure Term Mapping  
Image Resolution(micron): 50

Current image section: 164

Number of articles displayed/retrieved

417/417 citation

Citation Gene MeSH Author Disease In Situ Image Interaction Expression Correlation Gene Expression Significant Gene Import

Filter

PMID	Year	Journal	Title	Abstract
11380521	2001	M. Clin Exp Pharmacol	An electrophysiological study of the effects of propofol on rat	1. Pharmacological evidence suggests that some of the clinical actions of propofol may be r
11007994	2000	Al. Pharmacol Ther	Diadenosine polyphosphate receptors, from rat and guinea-p	Diadenosine polyphosphates are a family of naturally occurring nucleotidic compounds prese
11133527	2001	Ja. Clin Exp Pharmacol	Differential patterns of sympathetic responses to selective sti	1. Studies are described that indicate that stimulation of different purinergic receptor subtyp

Citation tab: Literature search results are displayed; click on a row to display the full citation information.

Done

Internet | Protected Mode: On 100%



# Genes2WordCloud



[CREATE](#) [VIEW](#) [HELP](#)

Generate WordClouds from a list of genes, single genes, free text, URLs, or find the themes of the currently most popular articles in BMC Bioinformatics.  
*Please be patient, sometimes it may take several minutes to generate a WordCloud.*

[GENES](#) [FREE TEXT](#) [URL](#) [AUTHOR](#) [PUBMED SEARCH](#) [BMC BIOINFORMATICS](#)

Generate a WordCloud for a specific gene, or a list of genes:

Paste Mammalian Entrez Gene symbols in the text area below:  
(separated by either : ; , - \r \t \n or spaces)

KLF4

Source for the WordCloud:

Generif annotations ▼

Create WordCloud

# PubNet

## PubNet Publication Network Graph Utility

<input type="text"/>	<input type="button" value="Clear"/> <input type="button" value="Submit"/>	<input type="text"/>
Query 1		Query 2 (optional)

[documentation](#) | [gallery](#) | [user submissions](#) | [recent queries](#)

Node	Edge
<input checked="" type="radio"/> Author	<input checked="" type="radio"/> Co-Authorship
<input type="radio"/> Paper	<input type="radio"/> MeSH Term
<input type="radio"/> PDB ID	<input type="radio"/> Shared Location
<input type="radio"/> GenBank	<b>Drawing Options</b>
<input type="radio"/> SwissProt	<input type="checkbox"/> Omit nodes with degree < 1
	<input type="checkbox"/> Do not scale edge thickness

PubNet: a flexible system for visualizing literature-derived networks  
SM Douglas, GT Montelione, M Gerstein  
(2005) Genome Biol 6:R80

# Group Exercise #2

- ▶ Break into three groups (5/group)
- ▶ Experiment with PubNet, Genes2WordCloud, PubAnatomy and LigerCat
- ▶ Answer these questions:
  - ▶ What are the pros/cons of each?
  - ▶ Is there a scenario in which you would recommend one of these tools to a library user?
  - ▶ Is there a scenario in which you would use one of these tools yourself?





# Theme III

- ▶ Semantic searching
- ▶ Visualization
- ▶ Simplification

# BibliMed

BibliMed

BibliMed: [www.bibliomed.com](http://www.bibliomed.com)  
an intuitive Medline interface

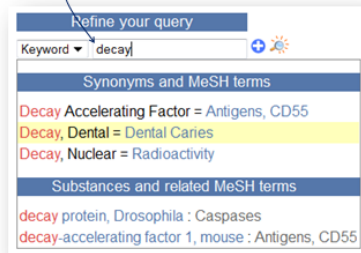
## How to enhance your search with BibliMed?

“ Are you looking for  
dental decay treatments? ”

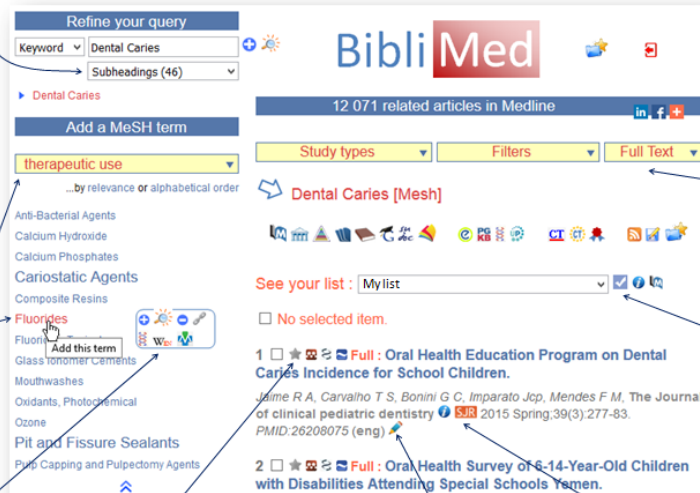
\* Use Medline MeSH thesaurus  
to optimize your search process!

1 Type: **decay** and choose: **dental caries**  
from the **suggested MeSH terms\***.

Add a **subheading** if needed.



2 Add a MeSH term: **fluorides**  
related to the qualifier: **therapeutic use**.



3 See **related links**.

4 Add to  
"My list".

5 Type a  
comment.

6 See **impact factor**.

8 Add  
**filters**.

7 See and  
**share your favorites**.

# PubMed PubReMiner

## PubMed PubReMiner

[Start New Search](#)

Your query resulted in 63 references

[Goto PubMed with query](#)

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Manual adjustment: psoriasis AND gluten

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Operator: AND Merge similar words: YES Minimalcount: 2 Search Again

# OR Year	# OR	Journal	# OR	Author	# Count OR	Word	# OR	Mesh	# OR	Substances
3 2015	16	Br J Dermatol	10	MICHAELSSON G	62 236	PSORIASIS	138	/immunology	23	Gladiin
8 2014	3	J Am Acad Dermatol	8	HAGFORSSEN E	57 65	HUMAN *	66	/complications	19	Immunoglobulin A
2 2013	2	Acta Derm Venereol	5	GERDEN B	53 125	GLUTEN *	57	Humans	16	Glutens
4 2012	2	Am J Clin Dermatol	5	LOOF L	52 217	DISEASE *	46	Psoriasis	11	Transglutaminases
2 2011	2	Clin Dermatol	4	ABENAVOLIL	47 237	PATIENT *	45	/blood	10	Immunoglobulin G
4 2010	2	World J Gastroenterol	4	ADDOLORATO G	39 110	DIET *	37	/pathology	7	Autoantibodies
2 2009	1	Am J Gastroenterol	4	GASBARRINI G	37 93	CELIAC	35	Male	6	Antibodies
2 2008	1	An Bras Dermatol	4	KRAAZ W	36 138	IMMUNOLOGY	34	Female	5	Antibodies, Anti-Idiotypic
6 2007	1	Ann Dermatol Syphillog (Paris)	4	LEGGIO L	35 135	ANTIBODY *	31	Celiac Disease	3	Biological Markers
4 2006	1	Ann Ophthalmol	3	LUNDIN IP	35 39	FEMALE *	30	/diet therapy	3	Vitamin B 12
2 2005	1	Australas J Dermatol	2	CAPRONI M	35 42	MALE *	29	Middle Aged	2	Antigens
2 2004	1	Blomed Pap Med Fac Univ Palacky Olomouc Czech Repub	2	CUNLIFFE WJ	34 74	AGE *	29	/etiology	2	Antioxidants
4 2003	1	Cas Lek Cesk	2	DE LORENZI G	32 47	FREE	28	Adult	2	Autoantigens
2 2002	1	Clin Exp Dermatol	2	HJELMQUIST G	31 66	SKIN	26	/analysis	2	Inflammation Mediators
2 2000	1	Curr Pharm Des	2	NILSSON B	30 30	MIDDLE	23	Gladiin	1	Acetylcholine
2 1998	1	Curr Vasc Pharmacol	2	PARENTE A	29 43	ADULT *	23	/metabolism	1	Anti-Inflammatory Agents, Steroidal
1 1997	1	Dermatology	2	PIHL-LUNDIN J	28 83	GLIADIN *	22	Aged	1	Antibodies, Anticardiolipin
1 1996	1	Digestion	2	PROIETTI	27 58	BLOOD	22	Gladiin/immunology	1	Anticoagulants
1							1	- Gladiin/immunology/metabolism		



# PubGet

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multiple sclerosis AND vitamin D

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Matteo C Lopiccolo and Henry W Lim

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Sivaramakrishnan

*mult scler* : (2010) PMID 20876154

☐ PDF Gender Differences in 1,25 Dihydroxyvitamin D3 Immunomodulatory Effects in Multiple Sclerosis Patients and Healthy Subjects.

Jorge Correale, María C Ysraelit and María I Gaitán

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*J IMMUNOL* : (2010) PMID 20855882

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*Neurology* 75:1029 (2010)

☐ Vitamin D and multiple sclerosis: what are the guidelines for a reliable clinical trial?

François Féron

Evaluation of: Mowry EM, Krupp LB, Milazzo M et al. Vitamin D status is associated with relapse rate in pediatric-onset multiple scl...

*Expert Rev Neu...* 10:1375 (2010) PMID 20819008

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## Emerging concepts in pediatric-onset multiple sclerosis and related disorders

Silvia N. Tenembaum

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Current Opinion in Pediatrics 2010, 22:000-000

### Purpose of review

Pediatric-onset multiple sclerosis (MS) is increasingly recognized. Conversely, MS diagnosis in the pediatric population continues to be challenging, particularly in the youngest group of patients. An interesting amount of data has been recently published concerning immunopathogenesis, environmental factors, diagnosis, and treatment of MS in pediatric patients.

### Recent findings

Recent studies have demonstrated that brain MRI criteria may distinguish MS from acute disseminated encephalomyelitis, and from nondemyelinating disorders in children. The presence of native myelin oligodendrocyte glycoprotein antibodies strongly correlates with a particular pediatric MS phenotype. Vitamin D, Epstein-Barr virus infection, and cigarette smoke are risk factors likely to act at specific stages during life. Diffuse tissue damage was confirmed in normal-appearing white matter at early stages of disease in children with MS, pointing to the need for early treatment interventions. The cognitive involvement of MS in children is progressive.

### Summary

Pediatric-onset MS needs a prompt identification and early treatment. Further multinational research studies are still necessary to advance on genetic, immunologic, and imaging features on the initial and ongoing aspects of this disorder in the pediatric population.

### Keywords

acquired demyelination, acute disseminated encephalomyelitis, auto-antibodies, encephalopathy, environmental factors, MRI, pediatric multiple sclerosis, treatment

Curr Opin Pediatr 22:000-000  
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1040-8703



# PMInstant

## Developed by:

Jonathan Bourman with Pubmed AJAX API


## Claim to fame:

Fast. Very fast. Displays search results while you are still typing.

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# Group Exercise #3

- ▶ Break into three groups (5/group)
- ▶ Experiment with PMInstant, PubGet, PubReMiner and BibliMed
- ▶ Answer these questions:
  - ▶ What are the pros/cons of each?
  - ▶ Is there a scenario in which you would recommend one of these tools to a library user?
  - ▶ Is there a scenario in which you would use one of these tools yourself?

# Third-party tools we have known...

- ▶ Quertle – went commercial
- ▶ Healia
- ▶ PubFocus
- ▶ Clustermed





# Keeping Current with PubMed Third Party Tools

# Ah, another listserv...

## ► E-Utilities listserv

### Utilities-announce

#### About Utilities-announce

To see the collection of prior postings to the list, visit the [Utilities-announce Archives](#).

#### Using Utilities-announce

To post a message to all the list members, send email to [utilities-announce@ncbi.nlm.nih.gov](mailto:utilities-announce@ncbi.nlm.nih.gov).

You can subscribe to the list, or change your existing subscription, in the sections below.

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# Feedback

- ▶ What ideas from third-party developers should NCBI adopt for PubMed?
- ▶ Which third-party tool(s) are you likely to use again? In what circumstances?
- ▶ If you could offer NLM one piece of advice, what would it be?



Thank you!

PLEASE DON'T FORGET  
TO COMPLETE YOUR  
EVALUATION....