



An Adaptive Biomedical Literature Search Tool



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Users Manual

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CONTACTS

MiSearch Help

NCIBI maintains a listserv (ncibi-list@umich.edu <<mailto:ncibi-list@umich.edu>>) that provides tool and data support for users and collaborators.

Click here to join. <<https://listserver.itd.umich.edu/cgi-bin/lyris.pl?enter=ncibi-list>>

Non-list members may also e-mail the list at ncibi-list@umich.edu for technical support as well as browse the list archive.

Website: <http://msearch.ncibi.org>

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TERMS OF USE

Supported through a grant from the NIH, the National Center for Integrative Biomedical Informatics (“NCIBI”) is one of seven National Centers for Biomedical Computing (“NCBC”) in the NIH Roadmap. Based at the University of Michigan, part of the UM Center for Computational Medicine and Biology (“CCMB”), the NCIBI develops efficient software tools, data integration methods, and systems modeling environments. This *Suite of Tools and Data* (the “Tools”) allows the Center to provide researchers with web-accessible knowledge analysis, collaborative work environments to create and utilize computationally-enabled models, and workflows to better understand complex biomedical processes. By agreeing to these Terms of Use governing the use of the NCIBI tools, you agree as follows:

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A Note on the MiSearch Name

Independent of this project, another adaptive search tool also called miSearch has been developed by Dr. Susan Gauch at the University of Kansas. That tool reranks Google searches based on user behavior and is available at <http://www.ittc.ku.edu/~mirco/demo/search.php>.

ABOUT MISEARCH

What is MiSearch?

MiSearch works with the National Center for Biotechnology Information's Entrez system and your history of browsing to build a profile of your areas of interest, and uses this information to rank citations likely to be of most information to you at the top of the list.

Background

MiSearch uses a classification algorithm based on Medical Subject Heading (MeSH) term, substance names and author names associated with citations. Two sets are defined: one is the set of articles you have previously clicked on to view; the other is all of PubMed. For each citation in the retrieval set, the algorithm calculates the likelihood that the citation is a member of these two sets. Article having the highest likelihood of belonging to the set of articles you have viewed are ranked at the top of the list.

MiSearch uses an information based metric to rank terms and authors: $It = \text{fq}_t * \log(\text{fq}_t/\text{ftdb})$ where fq_t is the frequency of documents indexed with term t in the query result set and ftdb is the frequency of documents indexed with term t in the full database. This metric avoids terms like "human" that may be frequent in the query set but not particularly more so than in the database as a whole.

The "User" field is used as an identifier to track usage. If you do not provide a name, the IP address of your request will be used as a default. If you know you will be doing searches for different tasks with different subject areas, feel free to define a "User" for each task.

Status

MiSearch is updated daily with the latest PubMed data.

Privacy

MiSearch records both your queries and the citations that you click on to view. We will not share this information with third parties, but we may use this data to refine and improve MiSearch and other NCBI applications.

Suggested Citation

States DJ, Ade AS, Wright ZC, Bookvich AV, Athey BD. MiSearch Adaptive PubMed Search Tool. *Bioinformatics*. 2009; 25(7):974-6.

USER REGISTRATION AND LOGIN

MiSearch is available at:

<http://msearch.ncibi.org>

User Registration

In order to create personalized results ranking, you will need to register to create a user account.

1. Click on **Login** in the upper right hand corner.
2. If you have previously registered, go to the [Login](#) section below; otherwise, click on **Register** to create an NCIBI User Account.
3. Fill in all fields (First Name, Last Name, Title, Organization, Department, Email Address, Confirm Email Address, Password, Confirm Password).
4. Enter the Image Confirmation Code.
5. Click the Submit button.

Login

If you have already registered with NCIBI or MiSearch previously, then proceed with the login procedures.

1. Click on **Login** in the upper right hand corner.
2. On the User Login page, fill in your email address that you used for registration and your password.
3. Click the Login button.

Forgotten Password

If you have forgotten your password:

1. On the User Login page (click on **Login** in the upper right hand corner), click on the “Update” link.
2. Fill in your email address.
3. Enter the Image Confirmation Code.
4. Click on the Submit button.

A link will be emailed to you where you can proceed to update your password.

GETTING STARTED

Searching

After you have logged in:

1. Type your query into the "Query" text box (for example, "gab2").
2. Click the **MiSearch** button.

Results

Your query will be sent to NCBI, and the results will be displayed in your browser.

1. Click on the checkboxes or use the underlined PMID number to view articles that seem to be of interest to you.
2. When you click on the hyperlinks, the browser will open a new window or tab with the NCBI Entrez page on each citation you click. Simultaneously, these citations are being added to your profile on MiSearch.
3. The checkboxes allow you to add or remove a citation from your profile.
4. After you have added a few articles to your profile, repeat your initial search by clicking the **MiSearch** button again.

The citations that you selected as well as other articles with similar features will be ranked at the top of the result set. As you continue to browse and view articles of interest, the system will build a more extensive and refined profile of your interest areas and should do a better and better job of ranking articles according to your interests.

Refining Results

On the left you will also see lists related to your query for

- Key Authors
- MeSH terms
- Compounds

You may add these terms to your query to refine your search results.

1. Click on the **Show/Hide** button to display or hide these lists.
2. Click the **+** next to the term of interest to add the term to your query.
3. Click on the MiSearch button to run your query.

Clicking on a MeSH term link will take you to the NCIBI Gene2MeSH browser and show the top genes associated with that MeSH term.

It is best to start with a query that you expect will return a dozen or so citations of interest; queries returning hundreds of citations can take a long time to process.

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