USING BIOLOGICAL ABSTRACTS

Biological Abstracts (BA) covers the life sciences literature by indexing over 5,000 international journals. It includes references to all types of documents such as standard journal articles, short notes and communications of a technical nature, meeting reports, and reviews. (It does not, however, index meeting proceedings.)

Microbiology, zoology, biochemistry, biophysics, medicine, and biomedical techniques are a few of the many subjects included. There is about a 30% overlap between this database and MEDLINE; while MEDLINE tends to focus on clinical medicine, BA provides more in-depth coverage of pre-clinical and experimental medicine, pharmaceutical botany, pharmacognosy, proteomics, nanotechnology, and gene therapy. OhioLINK offers access to BA from 1980 to the present and updates the database twice a month. (Note: the Mulford Library does not have access to BIOSIS Previews.) Additional guides that may be of interest are *Assessing an Information Need,* located online at *http://www.utoledo.edu/library/mulford/pdf/assess.pdf* or *Step-by-Step Searching in Biological Abstracts* located online at *http://www.utoledo.edu/library/mulford/pdf/bastep.pdf*.

General Information

- The database can be accessed from the Library's Web page: *http://www.utoledo.edu/library/mulford/*. Click on **Databases by Subject** and scroll down to **Biology**. Remote access is available for those who are registered with the Library; for more information, see *http://www.utoledo.edu/library/mulford/remote.html*.

- If assistance is needed, contact a library staff member. From home or office, you can contact Mulford Reference Assistance by calling 419-383-4218, sending an email to *MulfordReference@utoledo.edu*, or by accessing instant message reference from *http://www.utoledo.edu/library/mulford/resources.html*. Reference appointments can also be requested.

BA Topic Search Hints

To do a topic search, enter the search term or phrase in the **Search for** box. This finds the term or phrase anywhere in the record. Unlike in MEDLINE, there is not a subject thesaurus in BA. BA does, however, have some controlled vocabulary to help with searching. For more information, see page 2. Because BA relies primarily upon word searches, there are special techniques that can be used to improve a search.

Synonyms   Synonyms and near-synonyms are important. In MEDLINE, a search for *heart attack* will be mapped to **myocardial infarction**. In BA, the search should include both terms: *heart attack or myocardial infarction.* Include common/Latin organism names and abbreviations as synonyms.

Truncation   Use $ for end-of-word truncation (any number of characters, including no character): **parasit$** retrieves terms such as **parasite**, **parasitology**, and **parasitic**.

Other Issues   Other problems to watch out for include variations in spelling (*estrogen or oestrogen*), in hyphenation (*in vitro or in-vitro*), and in the use of symbols (*beta lactamase, alpha 2 macrogloblin*).

Field Searching   One way of narrowing a search is to search for the word/phrase of interest in a specific field (fields identify different areas on an articles record, such as title, author, abstract, etc.). When typing in your topic plus a field label enclosed in brackets, you are telling BA to search for your term in a designated area only rather then the entire record). The general pattern of a field search is *term.fc.*, where *term* is the word/phrase, and *.fc.* (period-code-period) is the field code. See page 2 of this help sheet for a list of fields and their field codes. Field searching hints: To maximize precision, search only in the title and abstract fields (*asthma,ti.ab.*) To retrieve all possible records, do not limit to any fields; search without codes. Drop down menus are also available for searching by author names, article/book titles, journal titles, subject, and abstract. See page 2 for more information.

TI	Article title	VO	Volume
OT	Original title, for translated titles	PG	Page
AB	Abstract	DS	Disease data; modifiers at *http://scientific. thomson.com/support/products/previews/bcv/dism/;* (1998-present)
SU	Subject; searches concept codes, taxonomic categories, and many of the fields listed below		
CC	Concept codes; *http://etextb.ohiolink.edu/ help/bioa-concept.html*	CB	Chemical Data (1993-present); also includes drug modifiers: *http://scientific.thomson.com/support/products/previews/bcv/drugm/*
MC	Major concepts; http://scientific.thomson.com/support/products/previews/bcv/mc/		
		GN	Gene name; names of genes, gene families, and loci (2001–present)
ST	Super taxa; *http://scientific.thomson.com/support/products/previews/bcv/st/*	SD	Sequence data; databank accession numbers; also includes sequence type; *http://scientific.thomson com/support/products/previews/bcv/stm/*
TN	Taxa notes; *http://scientific.thomson.com/support/products/previews/bcv/tnt/*		
		GE	Geographic Data; names of city, state, country, or region; *http://scientific.thomson.com/support/products/previews/bcv/gc/* (1993-present)
OR	Organism data; includes biosystematic codes and taxonomic categories		
PS	Parts and structures; organ system modifiers at *http://scientific.thomson.com/support/products/previews/bcv/os/;* (1998-present)	RN	Registry numbers; contains 5- to 10-digit CAS registry numbers
MESH	Medical Subject Headings for Diseases (1999-present)	ME	Methods and equipment; descriptors for methods, apparatus, and scientific techniques (1998-present)
AU	Author	TM	Geological time (1993-present)
JN	Journal Title	MI	Miscellaneous descriptors
YR	Year		

For a step-by-step guide to searching in BA, see the *Step-by-Step Searching in Biological Abstracts* help sheet.

Author Searching

Up to 100 authors per article are included in BA, which include full first names when available. Searches for articles by a particular author can be accomplished in two ways.

Search   Select **Author Names** from the drop-down menu on the main search screen and enter the author's last name and first name/initials, if known (*smith susan p* or *smith sp*). Authors may publish under their full names or just with initials, so try the truncation symbol ($): (*smith s$* or *smith $*). Because of the variations in author names, it might be more helpful to browse by author:

Browse   Select **by Author** from the **Browse** menu at the top of the main search screen. Enter the author's last name and first initial. From the resulting list, select the name of interest. For name variants (*smith s* and *smith sp*), do a separate search for each name then combine the resulting sets with the OR operator. (See the section on combining sets on the next page.)

Journal Title Searching

Searches for articles in a particular journal can be accomplished in two ways.

Search   Select **Journal Titles** from the drop-down menu on the main search screen and enter words from the journal title. Do not use abbreviations. A word of warning: a search for the journal *Circulation* will retrieve citations from the journal "Circulation Research" in addition to "Circulation."

Browse   Select **by Journal** from the **Browse** menu at the top of the main search screen. Enter the first few words of the journal title. Do not use abbreviations. If you need complete journal names for abbreviations, ask a library staff member for help. From the resulting list, select the journal of interest.

Article Title Searching

To search for an article title in BA, select **Article/Book Titles** from the drop-down menu on the main search screen and enter words from the article title.

Combining Sets using Search History

Most searches in BA are complex searches that require two or more component searches that must be combined. You can either search within a particular search set (**Search in current results** option, located below the **Search for** box) or do a new search. Doing a new search is recommended because it allows more control over combining sets.

Search for the first component, and then search for the second component, and so on, until all component searches are completed. As each search is completed, it is added to the search history, which can be viewed by clicking on **Search History**. If you used the **New search** option, there are two ways to combine search sets into a more complex search:

(1) Click in the boxes to the right of the search sets to combine. Select an operator (AND or OR), then click on the **Combine Sets** button. Using **AND** between components will narrow the search (*neoplasms and gene therapy*); using **OR** between synonymous terms will broaden it (*cardiac or heart*).

(2) The second way to search is entering set numbers into the **Keyword or phrase** field. Notice that the searches are labeled **s1**, **s2**, and so on. These set numbers can be used to combine sets using the operators **AND** or **OR** (*s1 and s2*; *s1 or s2*). After the search has been entered, click on the **Submit Search** button.

Restricting Retrieval by Limiting Search Results

Near the top of the results list screen, click on the desired limit (options are next to **Limit To)** or on **All Limit Options** link. The following limits are available on the limit page. After selecting the desired limits, click on the **Limit Results Now** button at the bottom of the screen.   (Note: You can also sort records on the **Limit Options** page.)

Note: Limits are ways to restrict a search to a broad category of organisms. See above for information on search for a particular organism, such as vascular plants and: **Vertebrates**, **Mammals**, **Bacteria**, **Non-Vascular Plants**, **Vascular Plants,** and **Invertebrates**
Quick limits are provided at the bottom of the page:

English Only	Retrieves articles in English
Abstract	Retrieves records with an abstract included in Biological Abstracts
Literature Review	Retrieves review articles
Humans	Retrieves articles on humans
Organism type	Microorganisms, Plants, Viruses, and Animals
Latest Update	Retrieves articles that were added when the database was last updated. Typically this limit restricts the search too much.

Most databases have a way to limit to publication types. The **All Limit Option** page does not have a limiter for publication type: limiting to publication type is done with field searching. Note: these are all published in journals.

Document type (.at.)	INDEX, LETTER, MEETING, TECHNICAL REPORT
Literature type (.lt.)	CHECKLIST, EDITORIAL, ERRATA, LITERATURE REVIEW, MANUAL, MEETING ABSTRACT, MEETING PAPER, MEETING POSTER, MEETING REPORT, MEETING SUMMARY, OBITUARY, SOFTWARE REVIEW, STANDARD, TAXONOMIC REVIEW

Exploring Other Search Options

Also in the gray limit box, on the search result page, next to the heading **View most frequent** there are options to see the most frequently occurring field codes (see page 2), journal titles, and author names. These options may help refine or expand your search.

Viewing, Printing, Emailing, and Downloading Citations

After searching, combining, or limiting, the system will display the results list. To view the full record of a citation in this list, click on the article title. This will call up the record display for the citation. Any linked item on the full record can be searched (author name, journal title, concept code) by clicking on it. To select a record, click on **Store record** before clicking on **Next.** To return to the list of citations, click on **Results List**.

To store a citation from this list, click in the **Store** box. (To delete an item from the stored records list, click on the **Stored Records** tab, then click on the **Remove** link next to the item you want to remove.) Clicking on the Stored Records button at the top of the page allows you to see what's been stored as well as to print, email, or download the stored records.

The stored records page provides options for output: display (using the browser's built-in function to print, save, or e-mail), download, print, email, export (EndNote, ProCite, Reference Manager, or Refworks), and pocket (to PDA). It also allows you to include the search history and provides recommended formatting options on the page. Depending on the option selected, there will be other options from which to choose. Choose the desired options and click on the **View Now** button (or **download, print, mail, export)** on the page when ready.

Checking Availability and Full Text Availability

NOTE: With the wide range of online journal providers and the lack of publishing standards, it is very difficult to provide *simple* access to every online article available to the University community. You may need to attempt several options to obtain the full text of an article. Be assured that the Mulford Library and OhioLINK are doing everything possible to provide easy access to these materials. Any questions about the availability of a journal article should be directed to Mulford Reference Assistance at 419-383-4218.

To determine if an article is available, click on **Find It!** to call up the OLinks window. OLinks will indicate if the article is available online from one of the major journal systems. If OLinks does not show an online full-text link (or if the link is broken), look in the sub-window to determine if the Mulford Library has the journal.

If Mulford has the journal, holdings information can be found at the top of the sub-window. Click on the link **View details in the University of Toledo library catalog** to confirm which issues are available from Mulford and to reach the link for available full text. If OLinks indicates that Mulford does not have the journal, double check by clicking on the **Search by title...** link.

Other Features

Sorting Output	There are two ways to designate how the output will be sorted. The first method is prior to issuing the search. First, below the **Search For** box, go to **Show Limit Options**. The second method is after issuing the search. On the result list page, go to the **Sort By** drop down menu, or, go to the **All Search Options** link where is an option for primary and secondary sort orders. (NOTE: A useful sort order is by Journal Title. All articles from the same journal title will then be together in the record list.)
Change Database	Click on **Exit** to change from the current database to another.
Saving Searches	To save a search strategy to run in another database or to run in the same database at a future time, run the desired search. At the search form, go to **Search History,** then click on **Save Search Strategy**. A temporary save is stored at OhioLINK for three hours; a permanent save is stored on the local computer. To rerun a search, click on **Run Saved Search** and enter either the code (for temporary saves) or the file name (for permanent saves).
Citation Formatter	OLinks will format the active reference in one of five commonly used styles. Be aware that the reference might be incomplete; check the reference against your style manual. You can see this feature by clicking on the **Find It!** link at the end of each article citation.