

Library Assistance with BIOL 1340 Essay Guide: Planning your literature search; Searching for literature; Referencing/citing assistance

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This guide is designed to assist you with your BIOL 1340 essay and this guide is divided into three parts:

- 1) Planning your literature search on your essay topic (see page 1 and appendix A on pages 8-10 of this guide)
- 2) Searching for literature on your essay topic (see pages 2-7 of this guide)
- 3) Getting referencing/citing assistance with your essay at the University of Manitoba (see page 7 of this guide)

Notes on this Guide: This guide is designed to be comprehensive but may not answer all your questions you may have when searching and using literature for your BIOL 1340 essay. You are encouraged to contact Vickie directly, if you have questions or need additional assistance with finding information for your essay.

1) PLANNING YOUR LITERATURE SEARCH

Before looking for literature, you may want to ask yourself the following questions:

- i. What do you know about your essay topic? Do you know a lot or a little? If you know a little, then you should start by looking at some general information sources that provide you a topic overview like a general website such as Wikipedia, book chapter, or reference article from an encyclopedia or dictionary.
- ii. What types of information do you need for your essay? For example, do you need journal articles? Is there a minimum amount of information sources you need to find? Knowing this information before you start searching will help you to stay focused and use your search time effectively.
- iii. Is there an aspect of the topic you are interested in or want to focus on? If you are allowed to pick a topic, pick one that is of interest to you. The more interested you are in the topic, the easier it will be for you to write the essay.
- iv. Brainstorm and write down words and phrases that may be used for your topic. For example, the phrase "climate change" you may see phrases like global warming to mean the same thing. If you have similar words written down then this can be useful when searching.

Note: You may find it easier to do the above steps in a different order or when you have gathered some information on your essay topic.

SUGGESTION: If you want step by step worksheet with planning your searches, see "Keeping Track of Your Literature Searching" in Appendix A of this handout for guidance starting on page 9.

2) SEARCHING FOR LITERATURE

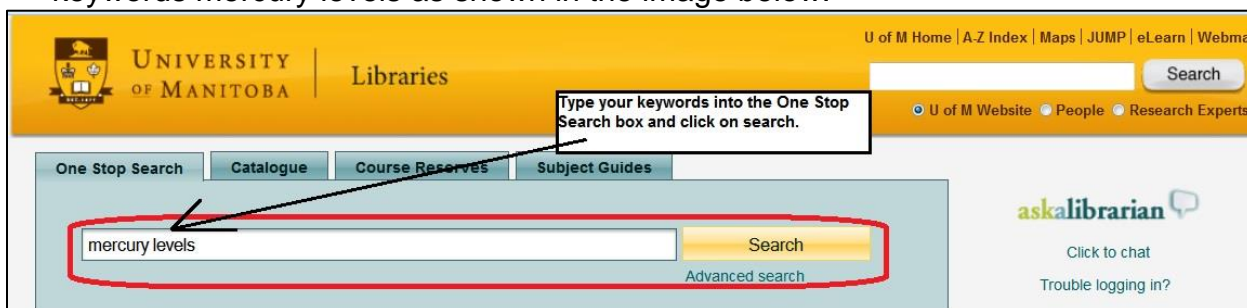
For searching for literature on your essay topic, here are two suggestions for starting:

1. Use the One Stop Search box from the University of Manitoba Libraries' website <http://umanitoba.ca/libraries>; it is the blue box at the top of the screen. The One Stop Search box is similar to a search in Google except instead of searching for websites, the One Stop Search box searches all library resources such as journal articles, books, conference proceedings, etc. More detailed instructions on searching the One Stop Search box is provided further on in this handout (see pages 2-5 of this guide).
2. Use a library database(s). A database typically contains primary literature such as journal articles. A database may also cover a specific subject such as environmental studies. The University of Manitoba Libraries' subscribes to hundreds of databases with the complete list at this website <http://libguides.lib.umanitoba.ca/articlesdatabases> or go to the Databases A-Z link from the libraries' homepage. The database suggested and shown in further on in this handout is GREENR (stands for Global Reference on the Environment, Energy, and Natural Resources) (see pages 5-7 of this guide).

SEARCHING FOR LITERATURE USING THE ONE STOP SEARCH

NOTE: A made up example is being used to show searches. The example topic is mercury levels: what are safe levels for humans and impacts mercury has on the environment?

1. Go to <http://umanitoba.ca/libraries> and there you will see a blue box that says One Stop Search. To start searching for your topic type into the One Stop Search box keywords on your topic and click on Search. For my example topic, I typed in the keywords mercury levels as shown in the image below.



2. You will then be taken to the results screen for the One Stop Search which will look similar to the screen below.

There are 25,995 results for my search on mercury levels!! So there is a lot of information written about this topic. If you have more than 200 results it is too much to go through. 25,995 results are too many results for me to read, so I will

The screenshot shows the University of Manitoba Libraries One Stop Search interface. At the top, there's a navigation bar with 'One Stop Search', 'Catalogue', and 'Course Reserves'. The search term 'mercury levels' is entered in the search bar. Below the search bar, there are filters for 'Expand my results' (including 'Include results beyond U of M') and 'Show only' (Peer-reviewed Journals, Full Text Online, Available in the Library). The 'Refine My Results' section on the left lists 'Content Type' (Articles, Newspaper Articles, Reviews, Conference Proceedings, Text Resources) and 'Subject' (Mercury, Index Medicus). The main results area shows 'Results 1 - 10 of 25,995 for University of Manitoba'. A callout box points to the search results count. The first result is 'Fish consumption and blood mercury levels.(Perspectives: Correspondence)(Letter to the editor)' by Groth, Edward, Iii. The second result is '1981-1982 mercury levels in fish of the Assiniboine, Red, Souris and Winnipeg Rivers' by A. E. Beck (Alfred Ernest).

need to narrow down the results which are also known as refining my results.

3. When you have too many results, you can refine your results to display fewer results. Your refine options for your search are displayed on the left-hand side of the screen as shown in the sample screen below:

The screenshot shows the University of Manitoba Libraries One Stop Search interface. At the top, there's a navigation bar with 'One Stop Search', 'Catalogue', and 'Course Reserves'. The search term 'mercury levels' is entered in the search bar. Below the search bar, there are filters for 'Expand my results' (including 'Include results beyond U of M') and 'Show only' (Peer-reviewed Journals, Full Text Online, Available in the Library). The 'Refine My Results' section on the left lists 'Content Type' (Articles, Newspaper Articles, Reviews, Conference Proceedings, Text Resources) and 'Subject' (Mercury, Index Medicus). A callout box points to the 'Refine My Results' section, highlighting the 'Content Type' and 'Subject' options. The main results area shows 'Results 1 - 10 of 25,995 for University of Manitoba'. The first result is 'Fish consumption and blood mercury levels.(P' by Groth, Edward, Iii. The second result is '1981-1982 mercury levels in fish of the Assinibo' by A. E. Beck (Alfred Ernest). The third result is 'Blood mercury levels and neurobehavioral fun' by Weil, Megan; Bressler, Joseph; Parsons, Patrick; et al.

A useful refine option is "Content Type" where you can limit to a particular information types such as journal articles, reviews, books, etc. To display the books option under "Content Type" you will need to click on "More options" dropdown menu. Another useful refine option is "Subject". The "Subject" refine option will allow you to focus on results directly related to your topic. For example/in the screen above there is the subject "mercury" which is directly related to refine my search on mercury levels. Once you click on one of the refine options, your results screen will be updated. You can always go back to your original results by

either clicking on the back button in your browser or clicking on the x beside mercury, as shown below:

Results 1 - 10 of 9,957 for University of Manitoba Sorted by: Relevance

Show only Peer-reviewed Journals (7,652) Full Text Online (9,948) Available in the Library (6)

Refined by: subject: Mercury x **Click on the X beside the word if you do not want the refine option.**

☆ **Screening Mercury Levels in Fish with a Selective Fluorescent Chemosensor**
 Yoon, S ; Albers, A ; Wong, C ; Chang, S Yoon, S (correspondence author)
 Journal of the American Chemical Society, Nov 23, 2005, Vol.127(46), pp.16030-16031
 ● Full text available
 View all versions
 Get It @ UML Details Recommendations Times Cited

☆ **Mercury levels in wildlife within the Nelson River basin of Manitoba**
 E. A. Driver (Edwin A.) A. J Derksen; Manitoba. Department of Mines, Natural Resources and Environment
 Winnipeg : Manitoba Dept. of Mines, Natural Resources and Environment 1979
 ● Available at Neil John Maclean Health Sciences Library Aboriginal Health (QV 293 D782m 1979) and other locations
 Availability Details Virtual Browse

4. Next look at the results on the screen. Each result will provide you with the basic information about the result including what type of information it is (example/ article), title, authors, and if the University of Manitoba Libraries has access to the full text. Additionally, articles from peer reviewed journals will be labeled as [Peer Reviewed Journal].

Note: Peer reviewed means that other scientists/professionals in the field have read and approved the article for publication in the journal/magazine/publication. You may also want to review the video “Peer review in 3 minutes” at <http://youtu.be/rOCQZ7QnoN0>.

For more details about a given result either click on the resource’s title or click on “details” under the basic information. This is shown in the screen below.

Results 1 - 10 of 9,957 for University of Manitoba Sorted by: Relevance

Show only Peer-reviewed Journals (7,652) Full Text Online (9,948) Available in the Library (6)

Refined by: subject: Mercury x

☆ **Screening Mercury Levels in Fish with a Selective Fluorescent Chemosensor**
 Yoon, S ; Albers, A ; Wong, C ; Chang, S Yoon, S (correspondence author)
 Journal of the American Chemical Society, Nov 23, 2005, Vol.127(46), pp.16030-16031
 ● Full text available
 View all versions
 Get It @ UML **Details** Recommendations Times Cited

Open the Details tab or click on the title to see information about the article. Often will have the abstract in the Details tab under Description section.

Is Part Of: Journal of the American Chemical Society, Nov 23, 2005, Vol.127(46), pp.16030-16031
 Description: Societal concerns over toxic mercury accumulation in humans from fish and other dietary and environmental sources provide motivation to develop new tools and tactics for mercury detection in a wide range of laboratory and field settings. Here we report the synthesis, properties, and application of a selective and sensitive small-molecule chemosensor for fluorescence screening of mercury levels in fish. ercuryfluor-1 (MF1) is a water-soluble, fluorescein-based reagent that features excellent selectivity for Hg super(2+) over competing analytes and the largest turn-on fluorescence response to date (>170-fold increase) for reporting this heavy metal ion in aqueous solution. Combining this chemoselective Hg super(2+) probe with a microwave digestion protocol provides a facile method for assaying mercury levels in fish samples with mercury concentrations spanning 0.1 to 8 ppm, a range well matched with the United States Environmental Protection Agency (U.S. EPA) standard for the maximum safe level of mercury in edible fish (0.55 ppm).

5. If there is a result that you want to read the complete text, click on the yellow Get It @ UML icon. This will open up a tab that provides you with a link to the full text, sometimes there will be more than

☆ **Screening Mercury Levels in Fish with a Selective Fluorescent Chemosensor**
 Yoon, S ; Albers, A ; Wong, C ; Chang, S Yoon, S (correspondence author)
 Journal of the American Chemical Society, Nov 23, 2005, Vol.127(46), pp.16030-16031
 ● Full text available
 View all versions
 Get It @ UML Details Recommendations Times Cited
 Open source in a new window

Full text available at: CKRN American Chemical Society Journals Show license
 Available from 1996 volume: 118 issue: 1.

Additional services
 askalibrarian
 Conditions of Access
 Technical Services

First click on the yellow Get It @ UML tab then click on the blue hyperlinked text in the box that opens up. For example/ to get the full text of this article I would click on CKRN American Chemical Society Journals.

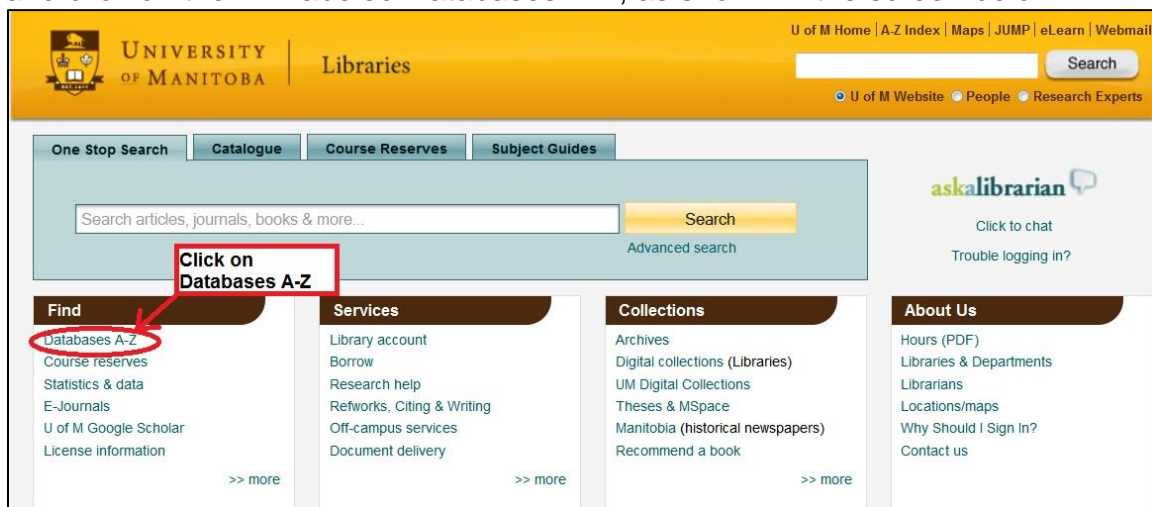
one option. To get to the full text you need to click on the blue hyperlink text right after the words “full text available at” as seen in the sample screen on the previous page. The link should open up to a webpage where you can either read and/or download the full text.

If you need more assistance with using the One Stop Search, you can send your questions and/or make an appointment with Vickie Albrecht Vickie.Albrecht@umanitoba.ca. Alternatively, you can use the AskALibrarian online chat service from the University of Manitoba Libraries or ask for assistance in-person from any University of Manitoba Libraries’ services desk.

SEARCHING FOR LITERATURE USING GREENR DATABASE

The GREENR database is focused on environmental information. Most of the results are full text and it is easy to use. You will find fewer results when searching GREENR database compared to the One Stop Search box.

1. Go to the University of Manitoba Libraries webpage <http://umanitoba.ca/libraries> and click on the link labeled Databases A-Z, as shown in the screen below:



2. Next click on the G tab. This will take you to all the databases that start with the letter G. Scroll down the page until you see “GREENR”. Click on “GREENR” and this should take you to the GREENR database’s homepage which looks similar to the screen here.



IMPORTANT NOTE: if you are accessing databases from home you will be asked for your UMnetID and password before going to the database's homepage. Your UMnetID and password is the same you use for D2L, University of Manitoba email, JUMP, computer login, etc. If you having difficulties logging in, please contact the Libraries for assistance.

- Next type in your search terms in the Basic Search box which is shown in the sample screen in step 2. Once you have typed in the search terms click on Search.
- You will then be taken to the results screen for GREENR. The results screen lists out the results by document type such as "primary literature" and "academic journals". A sample search is shown in the screen below.

The screenshot shows the GREENR database search results for the keyword 'mercury levels'. The page is titled 'Academic Journals' and lists three results. A red box highlights the 'VIEW ALL 95 >>' link. A red arrow points from a text box to this link. The text box contains the following text:

This is the results screen for the search terms mercury levels. The results are displayed by document type and to see all the results for a given document type you need to click on "View All".

The search results are as follows:

Document Type	Title	Author(s)	Publication
CORRECTION NOTICE	Erratum to "Prenatal and neonatal peripheral blood mercury levels and autism spectrum disorders"	[Environ. Res. 133 (2014) 294-303].	<i>Environmental Research</i> , Oct 2014.
ARTICLE	Metals in tissues of migrant semipalmated sandpipers (<i>Calidris pusilla</i>) from Delaware Bay, New Jersey.	Joanna Burger, Michael Gochfeld, et al.	<i>Environmental Research</i> , August 2014.
ARTICLE	Rice methylmercury exposure and mitigation: A comprehensive review.	Sarah E. Rothenberg, Lisamarie Windham-Myers, et al.	<i>Environmental Research</i> , August 2014.

- To see more information about a given result, you need to click on the title. Some results will be available as full text and can be directly downloaded from GREENR database. However, most articles you will need to click on the yellow Get It @ UML link as shown in the screen below:

The screenshot shows the full-text access page for the article 'Differential exposure of alpine ospreys to mercury: Melting glaciers, hydrology or deposition patterns?'. A red box highlights the 'Get It @ UML' link. A red arrow points from a text box to this link. The text box contains the following text:

Click on Get It @ UML to get full text of this article.

The article details are as follows:

Title: Differential exposure of alpine ospreys to mercury: Melting glaciers, hydrology or deposition patterns?

Author(s): Melanie F. Guigueno, Kyle H. Elliott, et al. *Environment International*, Apr 1, 2012.

Abstract: Mercury (Hg) is a global contaminant impacting even remote environments. In alpine watersheds, glacial meltwater is a source of Hg, which accumulated in glaciers during the 1960-1980 cooling cycle. The considerable variation observed for Hg exposure of alpine animals in proximal watersheds could result from differences among those watersheds in Hg loading from glacial meltwater. Alternatively, variation may be the result of hydrology, atmospheric Hg deposition patterns, or food web characteristics. To examine those possibilities, we measured Hg in osprey (*Pandion haliaetus*) soot nestlings in 15 watersheds in western Canada. **Mercury**

3) GETTING REFERENCING/CITING ASSISTANCE AT THE UNIVERSITY OF MANITOBA

There are thousands of reference styles to choose from and it is often difficult to decide on a reference style. Take a look at the chart below to see which reference style may be appropriate for your subject area. Whichever reference style you choose it is critical that you use it consistently.

Reference Style	Discipline
APA (American Psychological Association)	Social sciences including nursing
MLA (Modern Language Association)	Liberal arts and humanities
Chicago	Humanities and social sciences
CSE (Council of Science Editors)	Natural sciences; similar to APA style

Now that you have chosen a reference style, it is good to know that there are several places at the University of Manitoba that you can get assistance.

1. Academic Learning Centre <http://umanitoba.ca/student/academiclearning/> : The Academic Learning Centre has a free Writing Tutor service where students can make appointments to get someone to assist with their writing including citing/referencing. You can book an appointment with a writing tutor online (from the website above) or drop-in to see a writing tutor at either the Elizabeth Dafoe Library or the Sciences and Technology Library in Machray Hall. It is recommended that you book an appointment in advance as spaces are limited.
2. University of Manitoba Libraries: All Libraries have quick helpsheets on reference styles. Some of these reference style helpsheets are also available online through the Libraries' subject guides. One you may want to look at is the citing page on the Biology subject guide at <http://libguides.lib.umanitoba.ca/content.php?pid=356300&sid=2913538> which contains links to some of the reference style helpsheets. You can also come into any library on campus and ask for assistance.

APPENDIX A: Keeping Track of Your Literature Searching

This is a worksheet you may want to use when doing your literature searching. It will help you to keep track of what you have searched, where you searched and what information you found.

1. Write down your essay topic in the space provided below.

2. Write down the key concepts for your essay topic from 1. A concept is typically a single thing. For example in the topic/ the effect of climate change on the boreal forest. The key concepts are: effect, boreal forest, climate change. Note: concepts are not verbs or action words but nouns (people, places, things).

3. Now write down keywords similar to your concepts from number 2. For example/ a keyword similar to climate change may include global warming or a keyword to boreal forest may include hardwood forest. Tip: you can use an online thesaurus such as [thesaurus.com](https://www.thesaurus.com) to help you find similar keywords.

4. Now you can start searching for information on your essay topic. Where do you want to search? Write down in the space below where you went to start your search (such as a website address or a database name) and what you typed into the search box. TIP: You may want to search just using the concepts you brainstormed in 2 or other keywords in 3.

5. Skip this step if you filled in something in 4. If you are unsure where to start searching for information on your essay topic. Go to umanitoba.ca/libraries where you can access the One Stop Search box (blue gray box near the top of the screen). In the space provided below write down what you typed in the search box.

6. Did you get a lot of results from your search in 4 or 5? Yes No
How many results?

7. If you did not get many results, change the words you had in the search box. You can do this by using fewer keywords (if you searched 3 keywords try 2 keywords). If you got too many results, add a few more words to your search to make your search more specific. Write down your new search in the space below as well as the number of results.
