Objectives

*By the end of this class you will be able to:*

- Identify appropriate resources for your research
- Understand how to execute both a basic and advanced search in PubMed
- Keep track of your research and stay current on developments in your field of study
- Manage your citations
<table>
<thead>
<tr>
<th>Idea Development</th>
<th>Funding</th>
<th>Proposal</th>
<th>Conducting</th>
<th>Disseminating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find background literature</td>
<td>Learn about grant seeking tools</td>
<td>Prepare data management plan</td>
<td>Manage citations</td>
<td>Select journals</td>
</tr>
<tr>
<td>Utilize research tools effectively</td>
<td>Identify specific grant opportunities</td>
<td>Describe data</td>
<td>Review IRB and IACUC protocols</td>
<td>Identify open access journals in field</td>
</tr>
<tr>
<td>Locate data sources</td>
<td>Find alternative funding sources</td>
<td>Navigate repository options</td>
<td>Conduct systematic reviews</td>
<td>Manage copyright</td>
</tr>
<tr>
<td>Identify collaborators</td>
<td></td>
<td>Track compliance with NIH Public Access Policy</td>
<td></td>
<td>Design effective posters</td>
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<td></td>
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<td></td>
<td></td>
<td>Cite grants</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Track research impact</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Deposit work in digital repository</td>
</tr>
</tbody>
</table>

https://libraryguides.mcgill.ca/hgen692
Managing your citations

http://libraryguides.mcgill.ca/citation
## Literature databases

<table>
<thead>
<tr>
<th>Database</th>
<th>Subject areas</th>
<th>Dates covered</th>
<th>Types of information indexed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDLINE (via PubMed or Ovid)</td>
<td>Biomedicine and health care</td>
<td>1946 to present</td>
<td>Journals, conference proceedings</td>
</tr>
<tr>
<td>BIOSIS previews</td>
<td>Biomedicine and biology</td>
<td>1926 to present</td>
<td>Journal articles, conference proceedings, patents, technical papers</td>
</tr>
<tr>
<td>Web of Science</td>
<td>Multidisciplinary</td>
<td>1900 to present</td>
<td>Journal articles, conference proceedings, patents, books, etc. Cited reference searching, Bibliometric tools</td>
</tr>
<tr>
<td>Google Scholar</td>
<td>Multidisciplinary</td>
<td>?</td>
<td>Journal articles, conference proceedings, patents, books, technical reports, court opinions, etc.</td>
</tr>
</tbody>
</table>

Check out the subject guides for more databases!!
• Free interface for the MEDLINE database
• 30 million + citations
• Links to NCBI molecular biology resources
• Access PubMed via McGill
This message contains search results from the National Center for Biotechnology Information (NCBI) at the U.S. National Library of Medicine (NLM) to this message

**Sender's message:** Andrea Miller-Nesbitt

Sent on: Mon Dec 2 15:01:00 2019

3 selected items

<table>
<thead>
<tr>
<th>PubMed Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items 1 - 3 of 3</td>
</tr>
</tbody>
</table>

1. **Advances in Bioprinting Using Additive Manufacturing.**
   Singh M, Jonnalagadda S.
   PMID: 31778785 [PubMed - as supplied by publisher]
   [Similar articles](https://www.ncbi.nlm.nih.gov/pubmed/31778785)

2. **3D Printing in Medicine for Preoperative Surgical Planning: A Review.**
   Tejo-Otero A, Buj-Corral I, Fenollosa-Artés F.
   PMID: 31741226 [PubMed - as supplied by publisher]
   [Similar articles](https://www.ncbi.nlm.nih.gov/pubmed/31741226)

3. **Effect of Non-parallel Applicator Insertion on 2.45 GHz Microwave Ablation Zone Size and Shape.**
   White AW, Day DD, Prakash P.
   In: Makarov S, Horner M, Noetscher G, editors.
   PMID: 31725243 [PubMed] [Free Books & Documents]
   [Similar articles](https://www.ncbi.nlm.nih.gov/pubmed/31725243)
Activity!

• Do a basic search in PubMed to find articles that talk about the role of epigenetics in depression.
• Export 3 of your results to EndNote.
Steps to searching

1. Define your question and break it down into its separate concepts
2. Identify database(s) to search
3. Develop a search strategy and run your search
4. Evaluate your results and modify your search
If you were specifically interested in the adverse effects of genetic therapies, how would you change your search strategy?

How are genetic therapies being used to treat Duchenne Muscular Dystrophy?
Limiting your search

**Age groups**
- Neonates, babies
- Elderly people

**Languages**
- English only
- French, German...

**Publication date**
- Last 5 years
- From 1990 –

**Publication Type**
- Systematic Reviews
- Case histories
<table>
<thead>
<tr>
<th><strong>Keyword</strong></th>
<th><strong>Subject Heading</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“natural language”</td>
<td>“controlled vocabulary”</td>
</tr>
<tr>
<td>Database will search multiple fields</td>
<td>Database will search descriptor field</td>
</tr>
<tr>
<td>May not be the focus of the article</td>
<td>Process involves humans, so results will be more relevant</td>
</tr>
<tr>
<td>Does not take the meaning of the word into account</td>
<td>Meaning of the word is considered ex. mouse (rodent) vs. mouse (computer mouse)</td>
</tr>
<tr>
<td>Can yield irrelevant results</td>
<td>Standard list of terms defines related synonyms</td>
</tr>
<tr>
<td>Necessary if database does not have a controlled vocabulary, if subject heading does not exist for your term, or to pick up articles that haven’t been indexed yet</td>
<td>Different in each database</td>
</tr>
</tbody>
</table>

Birth Weight /physiology
Caffeine /adverse effects
Coffee /adverse effects
Gestational Age
Maternal Exposure
Patient Compliance
Pregnancy
Pregnancy Complications /etiology
Pregnancy Outcome

Article
Birth weight
Body mass
Clinical trial
Coffee
Denmark
Food intake
Human

Gestation period
Maternal smoking
Pregnancy
Priority journal
Smoking
Caffeine
Activity!

- Using advanced search feature (MeSH, search tags, etc.) do a quick search on a topic of your choice.
- Export 3 citations to EndNote
- Save your search and set up an email alert
Steps to searching

1. Define your question and break it down into its separate concepts
   - Brainstorm search terms, use controlled vocabulary when possible

2. Identify database(s) to search
   - Use subject guides

3. Develop a search strategy and run your search
   - Search each concept separately
   - Combine search terms (AND/OR)
   - Apply limits

4. Evaluate your results and modify your search
   - Use EndNote to stay organized
Staying up to date

MyNCBI

• Email results
• Save searches
• Set up email alerts
• Create bibliographies and collections
• Link to the McGill Library
BCI and Interlibrary Loan

**BCI Card** *(Bureau de Coopération Interuniversitaire)*
- Your BCI Card gives you borrowing privileges at other academic libraries in Quebec and across Canada.
- BCI cards are available from any branch library during normal business hours.

**COLOMBO**
- Request a work-related book or article from anywhere in the world
Recap

*Things we covered:*

• Identifying appropriate resources for your research

• Understanding how to execute both a basic and advanced search in PubMed

• Keeping track of your research and stay current on developments in your field of study

• Managing your citations
Questions?

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