LITERATURE SEARCH RESOURCES

Common Literature Databases

- **PubMed** (http://www.pubmed.org/)

  This is the nation's main portal for searching publications in all biomedical and related fields. It is free, funded by the US Government through NCBI. Many records are cataloged back to 1966, but some go as far back as the 1800s. All new medical research is added to PubMed shortly after publication. PubMed also encompasses "PubMed Central" a separate database that contains full-text content of many of the articles in PubMed, in compliance with NIH's Public Access Policy

  PubMed has a unique system for refining searches; for example:

  ```
  Smith_J [auth] AND Jones_D [auth] AND 1997 [dp]
  ```

  This query will search for articles published by J. Smith and D. Jones in the year 1997. More information on the search syntax can be found in your protein database notes.

- **Scopus** (http://www.scopus.com/)

  Scopus is a subscription-based citation indexing service. MSU is a subscriber, but you must be on campus (or connected via VPN) to use Scopus. It is focused on a broader range of topics than PubMed, which just focuses on biomedical journals. Scopus indexes not only the publications themselves, but also the all of the cited articles in a given publication. This makes it possible to view a list of papers that have cited a paper of interest. This can be extremely useful, but it only applies to papers published after 1995. Scopus is rather limited for papers published before 1995.

- **SciFinder** (http://scifinder.cas.org/)

  SciFinder is a literature database maintained by the Chemical Abstracts Service (CAS) of the American Chemical Society. While it includes biochemistry topics, it also includes all other divisions of chemistry. Its strength is the ability to search chemical compounds and reactions and link then with publications. MSU has access, but you must first create an account at http://guides.library.msstate.edu/scifinder.

- **Web of Science/Web of Knowledge** (http://isiknowledge.com/)

  MSU does not subscribe to this database, so our access is limited. However, it has two primary strengths: First, since it is published by the same company that produces EndNote, so Web of Science can be tightly integrated into that software. Second, this was one of the first databases to allow you to look up which articles cite a particular publication of interest, and it is particularly strong and exhaustive in this regard.

- **Google Scholar** (http://scholar.google.com)

  Google Scholar is a free service for searching citations and text of a broad arrange of articles. It can be very useful, especially for finding old literature not covered in other databases; however, the results can be inconsistent or incomplete. The results it gives will not be inaccurate, and it may find full-text articles that you may not be able to locate otherwise. Currently, though, it is recommended to use the other search engines listed above while Google Scholar matures.

Tips for Searching the Literature

- **Start with a review.** Review articles contain a summary of the research in a given field. They usually do not contain new experiments, but they can help you understand how the field is currently thinking about a topic. Review articles generally cite more research-centric papers, and these are often important papers in the field, so be sure to look at the list of references, too. In PubMed, you can often find review articles simply by adding "review" in the search field.

- **Science is a web.** An easy way to review the newest research is to find an informative article and see what papers have cited that article. Scopus and Web of Science let you search "up" to find newer research, so it's possible to find work published today by starting from a 10-year old paper.

- **Citations count.** Generally, important papers will be cited more frequently. Sorting by the number of times a paper is cited will allow you to find high-impact publications. *But watch out:* often times these papers are review articles, which may not contain original research.

- **Look at the reference list.** Even if the results of a paper aren't relevant to your work, the introduction may contain an invaluable discussion of important points. And the list of references may give you a starting point for creating your own literature review.

- **Don't be an age discriminator.** Often the most important work in the field was performed many years ago. Don't shy away from work published in the 1950's, 1960's, or even earlier, particularly if it is highly cited. At the same time, remember that online databases may not cover the earliest dates, and you may need to venture to the library (or use Google/Wikipedia) to see if you're missing a critical history.

- **Ask for help.** Your research adviser, the reference librarian, and other researchers in the field have been where you are now. Ask them how they find good papers, and see if they have advice on what you should read.

- **Subscribe!** Many journals offer a free table of contents service that you can subscribe to via email. This lets you see the most current articles as they are published. While you don't want to be overwhelmed, if there is a particularly relevant journal, it may be worth subscribing to their eTOC service.