

## Internet Research

The Internet has greatly widened our horizons for learning science and about scientific subjects. In fact, a whole new field, computational science, is developing, that uses computers to pore through the vast amounts of data that we can now accumulate --- in weather, geography, DNA sequence, or protein structure --- to name just a few examples.

We can also now access vast libraries of reports as well as data.

Try visiting the National Institutes of Health library of biomedical reports in PubMed, which is stored on computer servers housed at the National Center for Biotechnology Information at the National Library of Medicine at the National Institutes of Health. The URL is:

<http://www.ncbi.nlm.nih.gov>

Click on "PubMed"

Search for reports about **yeast catalase** **catalase enzyme** **catalase assay** and you will find numerous reports dating even from the early 1970's, as far back as the data entries converted for PubMed start. You will probably first find many articles that were just published, because yeast is a popular organism to study and because catalase is an important indicator for many diseases and cell responses.

You will also find articles using **contact lens and catalase** **eye and catalase**

When you get the lists of articles, click on one, and then note that there is an "Abstract" on display. Click on the selection and set "Citation" to display. You will see the same abstract, but if you scroll down the web page, you will also see a listing of keywords or "MeSH terms."

Note that these keywords will be helpful when you go out to the world wide web and use a search engine like AltaVista or Lycos.

Also note the names of the researchers. Over time, once you have found a specific topic that interests you, you might look up these authors' other articles or find out about the research that they conduct by visiting their University or business web site.

You can go back to the main NCBI page and look up the catalase gene information using "Entrez" and then "Nucleotide."

Find out about human diseases involving catalase using "OMIM."

Find out about the structure of the various catalase enzymes by clicking "Structure."

As you explore all this information, take notes on the authors and their institutions. You can often find links to these researchers through their university or business web sites.

You will discover that this Internet research takes time too, but it provides students with a gateway to independent learning so they can follow their own interests to meet your educational standards.