MEMORANDUM

Department of Chemical Engineering
Michigan Technological University

TO: CM4710 Students

FROM: David R. Shonnard;
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DATE: 21 October, 2007

SUBJECT: Instructions for Writing Assignment. Due Dec. 19 at 5 pm in the CM office.

Dear Students (you may work in a group of 2 students or solo)

Pharmaceuticals are gaining increasing importance in modern health care. For your writing assignment, conduct a literature review of a prominent drug that is to be selected by you. In your report you should address underlying modes of action of the drug, comment on aspects of its manufacture (for example whether the drug is a recombinant protein), and other issues that come up. You might begin your search by using the internet (http://www.drugs.com). Additional resources will be found in the library. The Kirk-Othmer Encyclopedia of Chemical Technology might be a good starting point to for background reading on drugs or even on specific drugs. The library might also have other books in the reference section that the librarians would assist you in finding. Two web sites at the bottom of this page might also be useful in getting information.

A Possible Topic, but the actual topic is up to you!
1. Drug development - what steps are needed in developing a new drug? What kinds of testing are needed? Are there special standards in manufacture of drugs? See section 5 of Chapter 1 for a start.

Structure of Report: (10 pages double spaced maximum, 5 pages minimum)
1. Title, Author, Date
3. Introduction: describe the drug to be reviewed, its importance, size of the market if information is available.
4. Mode(s) of action of the drug: if information is available.
5. Manufacturing process: process steps (if information is available).
6. Summary/Conclusions
7. References/Bibliography

Oral presentation: 10 slide summary of report to be given in class Dec. 10-14.
Here are a couple of trade organizations with web sites for further reading possibilities.

**Pharmaceutical Research and Manufacturers of America (PhRMA)**

1100 15th Street NW  
Washington, DC 20005  
(202)-835-3400  
Web Site: http://www.phrma.org  
*Trade association representing prescription pharmaceutical firms in legislative and regulatory affairs. Publishes industry statistics.*

**The Biotechnology Industry Organization (BIO)**

1625 K Street NW, Suite 1100  
Washington, DC 20006  
(202)-857-0244  
Web Site: http://www.bio.org  
*Trade association representing biotechnology companies, academic institutions, and state biotechnology centers in legislative and regulatory affairs. Publishes industry statistics. Look under Issues and Policies, Overview: Guide to Biotechnology*