

III. Biomanufacturing

Scientists are using genetically engineered cells to produce useful molecules for people, including enzymes and pharmaceuticals.

Possible topics for research include: Cell Transformation; Cloning; Drug Design & Production; Fermentation Technologies; Production & Uses of Industrial Enzymes; etc...

Below, we have provided a few reputable resources to get your project started. Please do not plagiarize from these sources, but put the information in your own words. As you write the text for each section of your poster, indicate the references used in that section by using an “in text” citation (see the contest directions for more information on using references correctly). In addition to the resources provided, we encourage all contestants to seek out other scientifically reliable sources of information, media images, and artistic elements in building the Biotech Expo poster entries.

Online Resources on Biomanufacturing:

BayBio

<http://www.baybio.org/wt/page/index>

Biotechnology Industry Organization (BIO)

<http://www.bio.org/>

BioBasics: Industrial Biotechnology

<http://biobasics.gc.ca/english/View.asp?x=614>

CheckBiotech

<http://www.checkbiotech.org/>

Genencor International

<http://www.genencor.com/cms/connect/genencor>

Genentech

<http://www.gene.com/>

Genetic Engineering & Biotechnology News

<http://www.genengnews.com/>

Northeast Biomanufacturing Center & Collaborative

<http://www.biomanufacturing.org/index.htm>

Novartis

<http://www.novartis.com/>

Novozymes

<http://www.novozymes.com/en>

Science Daily

http://www.sciencedaily.com/news/plants_animals/biotechnology/

Articles & Books on Biomanufacturing:

Liberation Biology: The Scientific And Moral Case For The Biotech Revolution, Ronald Bailey, 2005,

http://www.amazon.com/Liberation-Biology-Scientific-Biotech-Revolution/dp/1591022274/ref=sr_1_1?ie=UTF8&s=books&qid=1215369387&sr=1-1

Risk: The Science and Politics of Fear, Dan Gardner, 2008,

http://www.amazon.com/Risk-Science-Politics-Dan-Gardner/dp/0771032595/ref=sr_1_1?ie=UTF8&s=books&qid=1215370221&sr=1-1

Note: We are using the above links to suggested reading materials for reasons of convenience and do not specifically endorse Amazon.com or other publishers/book vendors. Opinions and philosophies expressed by the authors of suggested reading materials are not necessarily those of our program and should be viewed as part of the larger societal discussion surrounding biotechnology. Nor do we recommend that students buy suggested reading materials. Please consider using the school and/or public library systems to obtain these materials. Remember, the websites, articles and books listed above are only suggested source materials and are not required.

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