## **Suggested Research Topics**

## Chem21L, Organic and Biochemistry Lab

Topics can only be selected once, with the order of choice being Group 1, then Group 2, then Group 3 students. A chosen topic can also be not on this list upon approval by the instructor.

## **Suggested Topics:**

- 1. Use and side-effects of performance-enhancing drugs in athletics
- 2. Stem cell research
- 3. Genetically modified organisms (GMOs)
- 4. The Human Genome project
- 5. Gene-replacement therapy
- 6. "Beginnings of life" (i.e., what elements and processes gave rise to the first cell)
- 7. Use and side-effects of artificial sweeteners (i.e., aspartame and high fructose corn syrup)
- 8. PKU screening (phenylketonuria disorder, causes mental retardation)
- 9. Genetic engineering
- 10. Cloning
- 11. Pathways of drug-resistance in bacteria
- 12. Drug therapy for cancer treatment
- 13. Cancer tumor suppression genes
- 14. Natural products syntheses
- 15. Colorblindness
- 16. Cystic fibrosis
- 17. Down syndrome
- 18. Sickle-cell anemia
- 19. Hemophilia
- 20. Fermentation and the brewing industry
- 21. Biofuels
- 22. Diabetes
- 23. Any other topic in biochemistry, pending instructor approval