

## Department of Chemistry and Biochemistry CBF Enrichment Program

The Department of Chemistry and Biochemistry student community has enthusiastically participated in creating CBF proposals that benefit our majors in labs and research as well as others who take courses in our degree programs.

### Computer Labs and Services

Our Computational Chemistry Molecular Modeling lab was completely updated with Intel iMacs and Spartan molecular modeling software In 2006-07. We have also been able to provide printers and paper for our majors as well as student assistant funds for lab proctors so that the room is accessible in the evenings and on weekends.

### Equipment for Instructional Labs and Undergraduate Research

Requests for equipment have been rotated among the sub-disciplines. A sampling of the major instruments that have been purchased with CBF funds are:



1: Students using the FT-IR in lab

#### ***Organic Chemistry***

- GC-mass spectrometer
- Digital polarimeter
- FT upgrades for 60MHz NMRs
- FT-IR spectrophotometers
- 300 MHz FT-NMR

#### ***Physical and Analytical Chemistry***

- Surface tensiometer
- Benchtop FT-NMR
- Flash photolysis instrument
- Atomic absorption spectrometer
- Bomb calorimeter
- IC chromatograph

## **Biochemistry**

- Gel Documentation Hardware and Software
- High Capacity Centrifuge
- Refrigerated microfuges
- Baths and culture racks
- Nanodrop spectrophotometer
- UV/Vis/Fluorescent plate reader

In addition, a large number of smaller pieces of equipment have made it easier to work in our shared lab space: analytical balances, pH meters, chromatographic columns, refrigerators, and a nanopure water system.



2: 2008 Summer Research students and their faculty mentors

## **Undergraduate Research Program**

Through CBF chemistry and biochemistry majors have been given the opportunity to participate in our summer research program working with their faculty directors. Providing student stipends through CBF allowed the program to dramatically expand from 4 students in summer 2002 to an anticipated 21 students in summer 2009. Student names are appearing on professional publications along with those of their faculty mentors. In Spring 2008 Dan Le, an undergraduate researcher with Dr. Eric Kantorowski, won the CSU Undergraduate Research Competition.

## **Travel and Presentations at Regional and National Meetings**

More than 70 students have received support to attend regional and national professional meetings and present research posters.