



## Toxics Reduction

### Greening UC Berkeley with a New Chemical Assessment Tool

#### Project Description

The Berkeley Center for Green Chemistry aims to use an on-line chemical database as a teaching tool in new green chemistry classes and ultimately to guide chemical choices made in campus facilities and labs. With a grant from the Chancellor's Advisory Committee on Sustainability, we are launching this project to:

- Conduct a *pilot study* of the cleaning products used on campus,
- Use the database to *assess the potential hazards* of their ingredients, and
- Develop a *user's guide* to facilitate use of the database as a teaching tool.

#### Background

Although 34 million metric tons of chemicals are produced in or imported into the U.S. every day, very little is known about the potential health or environmental impacts of the vast majority of these substances. For the toxicity information that does exist, there is no centralized, searchable source of the data, making it all but impossible for the people who design and use chemicals to make or choose the safest substance for their needs.

The consequences include the health impacts of toxic chemical exposures: for example, 10% of all cases of occupational asthma in California are associated with exposure to cleaning products in workplaces. Another consequence, evident on campus, is the 53 tons of hazardous waste generated by the College of Chemistry labs in 2009.

By bringing together publicly available information on known chemical hazards, new web databases (such as <http://plm.berkeley.edu>) can be used to compare chemicals and select those with the least impact on human health and the environment. This demonstration project will use a chemical database to evaluate cleaning products used on campus, and develop materials to facilitate application of the software in undergraduate chemistry labs and graduate courses. Ultimately, introducing a hazard information resource in UC Berkeley's chemical-intensive settings will support campus sustainability goals by improving purchasing decisions, reducing exposure to chemicals, and preventing pollution.

#### Requirements & Compensation

The project will require assembling background literature, collecting data on campus product use, conducting interviews (e.g., with UC purchasing staff and the Office of Environmental Health and Safety), using a database to evaluate chemical ingredients, and completing a written report. The student will also prepare a poster for the CACS Sustainability Summit in April, 2012.

To apply, students should have:

- Graduate or advanced undergraduate standing
- A background in chemistry or environmental health science
- Excellent writing skills
- Ability to work independently

Student will earn \$15/hr, with anticipated completion in 100 hours (20 hrs/ week for 5 weeks)

#### To Apply

Send a CV and a 1-2 paragraph description of your background and interests in the project to:  
Megan Schwarzman, [mschwarzman@berkeley.edu](mailto:mschwarzman@berkeley.edu)