U.S/South African Workshop:
Life in Extreme Environments and Biotechnological Applications

Undergraduate Research Opportunity
December 15-23, 2002

The University of Tennessee (UT) is providing a unique, hands-on research experience for minority undergraduate students who are interested in careers in the Earth and Biological Sciences, Environmental Sciences, and Engineering. Students and faculty mentors will spend a week in South Africa examining the strange and unusual microbial life forms that exist in the deepest mines in the world. The workshop will be held at the University of Free State in Bloemfontein, South Africa and a collaborating gold mine. Students will receive a small stipend and housing for the seven day workshop. Black and minority South African and American students will work side by side under the joint supervision of U.S. and South African faculty. Students will spend five days doing experimental research at the University of Free State on the samples they collect. The students will also participate in a two-day symposium during which academic scientists from the U.S., Canada, Germany and South Africa and representatives of the South African mining industry and government describe their exploration of this new frontier and what potential environmental, educational, and technological benefits may develop for South African universities, government and industry. This workshop is funded by the **National Science Foundation**, Division of Earth Sciences, the UT Center for Environmental Biotechnology and the UT Waste Management Research and Education Institute.

Research Topics

Topics for this part of the workshop will include microbial field sampling, geochemical field measurements, aerobic and anaerobic media preparation, inoculation and incubation, DNA staining and optical microscopy of cells, and GC analyses of water samples. Also, the students will receive instruction on health and safety orientation, environmental engineering of the mines, how to collect samples under minimal contamination and how to process samples aseptically from the gold mines.

For further information and application forms, contact Dr. Susan M. Pfiffner (865-974-8031, pfiffner@utk.edu) or Ms. Kim Davis (865-974-1847, kdavis17@utk.edu). Detailed information on the workshop is available at http://geomicro.utk.edu.

Deadline: Monday, September 16, 2002.