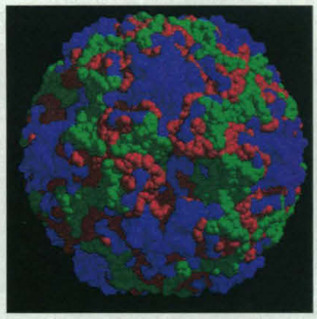
# NETWATCH

edited by JOCELYN KAISER

COOL IMAGES

## Virtual Viruses



It might make a nice Christmas tree ornament, this image of rhinovirus 14 (a culprit in the common cold) with its proteins colored in. "The colors come from my artistic inspiration of the moment," explains Jean-Yves Sgro of the Institute for Molecular Virology at the University of Wisconsin, Madison. Sgro and his colleagues build viruses on their computers using x-ray crystallographic and microscopy data, then shade them to highlight their contours. The resulting images—rhinoviruses studded with antibodies, bumpy mosaic and simian viruses—are more than pretty: They also help researchers see how the virus latches onto cell receptors or might be vulnerable to a drug. The institute's Web gallery holds hundreds of virus and protein images, including movies and 3D stereo pictures. Click on Home to see the Virus of the Month feature, currently poliovirus.

www.bocklabs.wisc.edu/virusviztop.html

HOT PICKS

**Ribo zone.** Databases like MEDLINE can get you a list of abstracts, but wouldn't it be nice to see the actual data? That's the idea behind RiboWEB, a new knowledge base that holds experimental data from 200 or so papers on the 30S subunit of the bacterial ribosome, or cellular protein factory. Type in the name of an RNA base or click on its picture, and you'll get a flood of data on just that base. www.smi.stanford.edu/projects/helix/riboweb/kb-pub.html

**Ocean view.** Pull up a recent photo of a tornado's funnel or deep-sea vent worms, or a 2-century-old drawing of the Gulf Stream by Benjamin Franklin at this National Oceanic and Atmospheric Administration archive of some 1000 images. www.photolib.noaa.gov

**Sounding off.** Learn all about how human ears work and the physics of sound, or try interactive applets on harmonics, the Doppler effect, and other concepts at The Soundry, the winning entry in the ThinkQuest '98 Web site contest for students. hyperion.advanced.org/19537

NET NEWS

## Undergrad Journals Take Root on the Web

Most undergraduates who complete a significant research project have little chance of publishing their work, their senior theses winding up buried in their own files or in college library stacks. Students can submit their work to an undergrad research journal—if their school has one—but it likely won't be read beyond campus.

That's changed in the past year, as Web-based undergraduate journals have "exploded," says Brian Conk, director of the half-year-old National Undergraduate Research Clearinghouse (clearinghouse.mwsc.edu) sponsored by the National Science Foundation (NSF). Conk and others describe at least a half-dozen, including psychology and physics journals and college journals planning to go online. And the Clearinghouse has already attracted about 30 papers posted by registered faculty members.

The latest to set up shop, the *National Journal of Young Investigators* (*JYI*) launched on 3 December, stakes its claim as the first multidisciplinary, national, undergrad Web journal peer reviewed by students (with faculty advisers), says CEO Andrew Medina-Marino (www.jyi.org). The journal advertised on campuses to attract around 80 initial submissions and presents 10 papers in its first issue, such as a Duke paper on the role of mitochondria in apoptosis. Bo Hammer, head of education programs at the American Institute of Physics, says he found nothing all that "new" on a quick browse of *JYI*—"but it's undergraduate work."

Some observers wonder about the long-term viability of a journal run by undergrads, which means high staff turnover. David Elmes of Washington and Lee University in Virginia adds another concern: "A really good paper may belong somewhere else," that is, in a regular journal, he says. But Alex Firestone of NSF, which is helping support the *JYI*, says the point isn't to siphon off research of that caliber but to teach students about peer review and writing a paper. "Individual students will benefit fantastically," Firestone says.

SITE VISIT

## Environmental Cyber-Library

Navigating the Web's glut of environmental resources can be an exercise in frustration. One group that's trying to pull it all together is the Committee for the National Institute for the Environment (CNIE), a nonprofit that is lobbying Congress to create a new environment institute. Not content to wait, the CNIE has already laid a cornerstone for the institute in cyberspace: an online "National Library for the Environment."

One major offering is The Population and Environment Database, which includes introductions to topics like food security and greenhouse gases, as well as links to thousands of reports, maps, slide shows, and other products. The CNIE posts nearly 400 U.S. Library of Congress reports otherwise available only on paper. Library visitors can also reach environmental laws and treaties, chemicals-in-your-backyard databases, online environmental news, and over 300 electronic environmental journals. There's a Directory of Higher Education Environmental Programs written by Rice University and the CNIE. Also stored on the library's virtual shelves is a Yellow Pages with contact info for Congress members, think tanks, environmental agencies around the world, and more.

www.cnie.org


CNIE executive director Peter Saundry says this is only a "prototype" for a national library, done "on a shoestring budget." But, he says, it shows "how valuable a major commitment of online information on the environment can be."

**Science ONLINE**

The holidays bring more than just carols and Christmas lights—meeting season is also in full swing. Get a quick research update from *Science*NOW, our daily news service. Tune in this week and next for highlights from the American Geophysical Union and American Society for Cell Biology meetings, both held in San Francisco. www.sciencenow.org

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