

edited by Mitch Leslie



EXHIBIT

Living the High Life in the Andes

Last month, archaeologists burrowing into the lofty citadel of Cerro Baúl in southwestern Peru discovered what may be the world's earliest mass-production brewery (*Science*, 6 August, p. 774). Click on this site from the Field Museum in Chicago to tour the 1400-year-old city's ruins and examine the jars, pins, and other artifacts unearthed by recent expeditions to the site. Crowning a 2400-meter-high mesa, Cerro Baúl, built by the Wari empire, predates the Incas' famous mountaintop redoubt Machu Picchu by nearly 1000 years. Interactive maps let you wander the remains of impressive public buildings, tony apartments for the rich, and cramped laborers' quarters. (The temple annex above contained the ruins of a Wari lord's tomb.) The Cerro Baúl dig is just one of the museum's well-done Web expeditions chronicling scientists' field trips. For example, you can follow the fortunes of 13 pairs of peregrine falcons that nested in the Chicago area this year. Or take a trip to Oaxaca, Mexico, to uncover pre-Aztec ruins.

www.fieldmuseum.org/expeditions

TOOLS

A Clockwork Fungus

A baroque network of more than 20 interacting proteins governs the growth and reproduction of yeast cells. Researchers can probe this complex system by running a model crafted by researchers at Virginia Tech University in Blacksburg. Their site, launched to accompany a paper in the August issue of *Molecular Biology of the Cell*, includes an interactive diagram of the yeast control network; click on a protein to get information on its function, regulation, and activation, along with relevant references. A table indicates how more than 100 mutations alter the yeast cell cycle. Users can run the model online after downloading free software.

www.mpf.biol.vt.edu/research/budding_yeast_model/pp

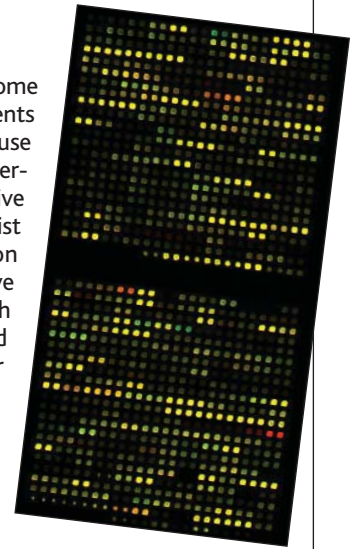
EDUCATION

Gene Chips for All

Although DNA microarrays have become a research staple, many college students never get to work with them because they are expensive and difficult to interpret. The Genome Consortium for Active Teaching (GCAT), headed by biologist A. Malcolm Campbell of Davidson College in North Carolina, aims to give more undergraduates experience with these tools, which are chips dotted with thousands of DNA strands for measuring gene activity.

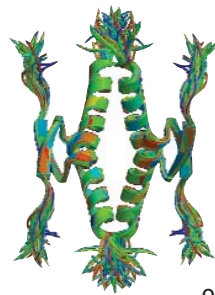
For labs that already have microarrays, the site provides free chip-reading software and sample images for students to practice with. Teachers can also apply to receive low-cost microarrays from GCAT (\$50 for the first one, \$20 for all subsequent chips). After the class runs its experiments, the teacher ships these chips to a project member's lab that has a microarray scanner. Students then download the results from the project's Web site. GCAT will dispatch gene chips to some 100 U.S. universities this year, says Davidson.

www.bio.davidson.edu/projects/GCAT/gcat.html



DATABASES

Monitoring the Genome's Guardian



The p53 protein prevents cells with marred DNA from dividing. But when the protein dubbed the "guardian of the genome" falters, tumors can sprout—about half of cancers carry errors in the p53 gene. A pair of databases in France lets you track these potentially disastrous genetic glitches.

Hosted by the International Agency for Research on Cancer in Lyon, this clearinghouse* profiles more than 20,000 sporadic and inherited p53 mutations reported in the literature. Users can find out how a specific mutation alters the DNA, its prevalence in different cancers, and other information. Entries also explain how more than 400 of these genetic flaws undermine the protein's function.

Along with a smaller mutation collection, this database† from the Curie Institute in Paris offers a nice p53 primer. You can explore the structure of the p53 gene or read about the protein's discovery in 1979. Other tidbits include its possible role in development—which might entail sheltering the embryo from toxins.

*www.iarc.fr/p53/index.html

†p53.curie.fr

Send site suggestions to netwatch@aaas.org. Archive: www.sciencemag.org/netwatch