

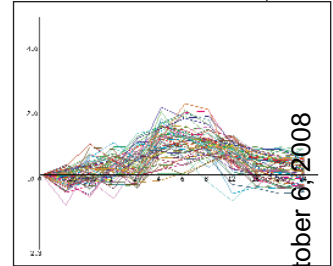


SOFTWARE

Crunching Gene Chips

By scrutinizing data from DNA chips that record the activity of multiple genes, molecular biologists hope to pinpoint which genes collaborate to operate a cell in sickness and in health. A new program

called CAGED, available from this Web site,* makes it easier to analyze data from these microarrays. Marco Ramoni, a computer scientist at Harvard, and colleagues crafted the program to analyze repeated gene expression measurements from, say, the same patient or cell line. Time series such as these confound traditional methods such as correlation because the values aren't independent, Ramoni says. Academic and nonprofit users can download CAGED for free.



*genomethods.org/caged

RESOURCES

Apes Go Multicultural

The clever chimps inhabiting the Tai forest of the Ivory Coast invented a nutcracker. They position a nut on a stone anvil and bash it with a stick or rock. Across the continent at the famous Gombe National Park in Tanzania, the apes haven't figured out the anvil trick, but they do know how to use crumpled leaves to sop up tasty ants.

Like people, chimps show cultural diversity and local traditions. The new Web site Chimpanzee Cultures documents these regional differences in behavior, drawing on research by Jane Goodall and other top primatologists. One of the site's databases allows you to check which of 65 geographically variable behaviors are present at 11 long-term study sites in central and western Africa. The other, still-growing database includes literature citations and photos or movies. They capture, for example, chimps winkling ants from a nest with a stem of grass and pelting a nosy primatologist with stones.

chimp.st-and.ac.uk/cultures3/default.htm

EXHIBITS

Electrifying

This e-museum deserves the name. The IEEE Virtual Museum, built by the Institute of Electrical and Electronics Engineers, aims to galvanize interest in electricity and information technology among students, teachers, and the general public. Current exhibits investigate the discovery and harnessing of electricity, how we record and play music, and the life of Thomas Edison.

www.ieee-virtual-museum.org

DATABASE

Sickened by War?

Although the 2-month Gulf War killed 148 U.S. soldiers, many more have developed health problems they blame on their service in the region. These illnesses remain controversial and unexplained. For a rundown of the U.S. government's research into ailments reported by soldiers stationed in the Gulf, try Medsearch, a database sponsored by the Department of Defense and two other government agencies.

The more than 100 projects described here examine the incidence of a host of conditions, such as amyotrophic lateral sclerosis and birth defects. Other studies investigate possible causes such as exposure to noxious smoke from oil well fires or to depleted uranium, a dense material used to increase the penetrating power of shells that some researchers suspect spurs cancer.

www.GulfLINK.osd.mil/medsearch

EXHIBITS

Saving a Sinking City

A combination of land subsidence and rising sea levels means that Venice, Italy, is 23 centimeters lower than a century ago, and high tides can turn streets into temporary waterways. But Venice isn't about to go under. This site from the Venice Water Authority describes efforts to protect the low-lying city and restore the surrounding environment.

The impetus for the massive project came from a giant flood in 1966, when tides surged nearly 2 meters above normal. The solutions profiled here include commonsense measures such as raising the level of waterside walkways and quays, as well as high-tech ventures, such as installing inflatable floodgates that would rise from the sea floor in case of high water. Plans also include rebuilding or enlarging beaches to absorb the force of storms and restoring salt marshes to prevent sediment from choking the city's famous canals.

www.salve.it/uk



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