



Phylogenetics Crunch

Evolutionary biologists looking for patterns in DNA sequences often have to learn a different software program for each kind of analysis. To make things easier, Wayne and David Maddison at the University of Arizona are working on Mesquite, "a modular system for evolutionary analysis." Their goal is to build a Java-based system that makes it possible to integrate disparate packages, such as the popular PAUP program and MacClade, which the same duo also developed. Download a beta version of Mesquite at:

mesquite.biosci.arizona.edu/mesquite/mesquite.html

DATA

Sizing Up Genomes

Does genome size matter? One place to ponder that question is the Animal Genome Size Database, where a zoology graduate student has been compiling tables of all the animal genomes for which he can find data. You can look up chromosome numbers and size (in haploid C-values) for over 2900 vertebrates and invertebrates, from sponges to *sapiens*. There are also links to some similar sites for animal and plant genomes.

www.genomesize.com

RESOURCES

Peroxisome Primer

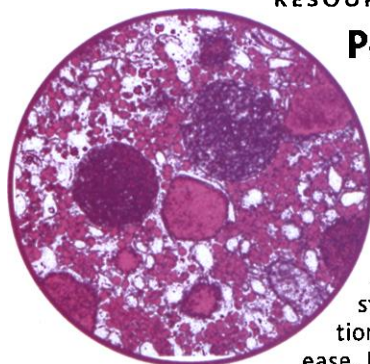
Although the movie *Lorenzo's Oil* brought fame to a neurological disorder known as adrenoleukodystrophy, the film didn't spotlight peroxisomes—tiny, fat-metabolizing structures in cells that malfunction in boys with the deadly disease. But now these organelles are getting star billing at the new Peroxisome

Web Site at Johns Hopkins University.

Peroxisomes, which are basically bags of enzymes, perform tasks such as breaking down fatty acids, synthesizing cholesterol, and making parts of the myelin sheath that protects nerves. "I wanted a place where scientists could go to quickly find all publications available for a specific gene, or to get background on an aspect of the peroxisome that they are unfamiliar with," says Katherine Sacksteder, who created the site as part of her Ph.D. thesis with cell biologist Stephen J. Gould. Visitors will find descriptions of the 24 known proteins, or peroxins, involved in the formation and function of these organelles, along with links to PubMed references and gene sequences in GenBank. The site also includes diagrams showing, for instance, bile acid synthesis and the pathways by which proteins are transported into peroxisomes.

Separate sections for lay readers and physicians cover peroxisome-associated disorders such as adrenoleukodystrophy and Zellweger syndrome, a spectrum of typically fatal diseases marked by developmental delays, facial abnormalities, and heart, liver, and kidney dysfunction.

www.peroxisome.org



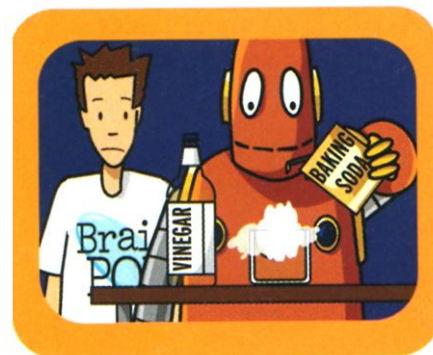
FUN

Animated Science

The periodic table is not exactly the stuff of Disney. But animating such concepts seems to come easy to BrainPop, an educational site packed with cartoon movies on science, health, and technology. In

over 120 entertaining shorts, a guy named Tim and his robot sidekick, Toby, lucidly cover everything from nerves to fuel cells to relativity. Aimed at 5th to 8th graders; visitors can watch up to five movies a day for free.

www.brainpop.com



PERSONAL PAGES

On Beyond Zillion

Ever get tongue-tied trying to read the English name of a multi-multidigit number like 372,469,737,190,393,701 (the number of inches in a light-year)? Let computer expert Landon Curt Noll's name-that-number Web site do the parsing for you. Enter the digits, and out comes the name, in your choice of American (million, billion, trillion, quadrillion, ...) or European (million, milliard, billion, billiard, ...) units. Noll's site includes links to the latest on Mersenne primes, the largest currently known one of which is $2^{6,972,593} - 1$ —or, as the site will tell you, four sescentnovemnonaginmilliasescentdoquinquagintillion, and 46.5 megabytes more of the same.

www.isthe.com/chongo/tech/math/number/number.html

DATABASES

Latin America Field Guide

Wondering how many primate species are found in Brazil, or which birds are at risk of extinction in Ecuador? Find out at InfoNatura, a new Web database that lists the birds and mammals of Latin America and the Caribbean—over 5500 species. (Answers: a whopping 88; and the dark-rumped petrel at right is one.) The site includes info on endangered status, distribution maps, and scientific and common names in English, Spanish, and Portuguese.

www.infonatura.org



Send great Web site suggestions to netwatch@aaas.org