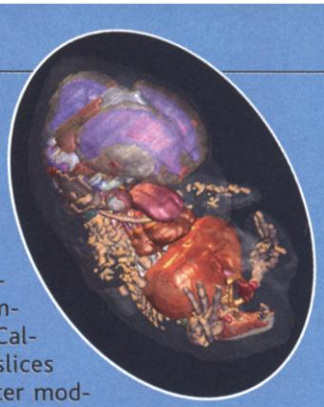
NETWATCH

edited by JOCELYN KAISER



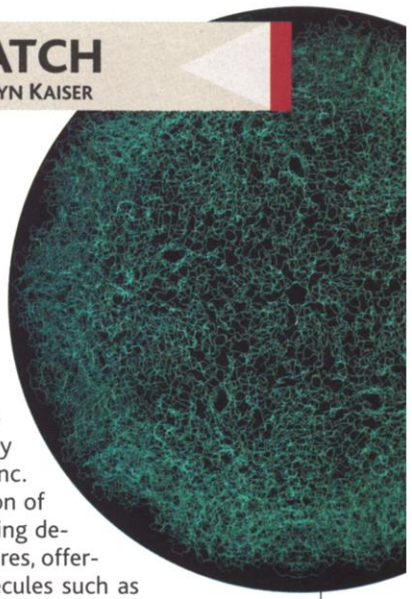
IMAGES

Mouse Views

Two digital atlases offer stunning views of how a mouse embryo develops. A new site at Caltech* provides labeled brain slices and rotating, 3D color computer models of the anatomy of a 13.5-day-old embryo. The researchers used microscopic magnetic resonance imaging (MRI), which allowed them to image an intact specimen without damaging the tissue. The site also has raw MRI movies that let you flip through slices of embryos at different developmental stages.

The second atlas,† from the Medical Research Council's Human Genetics Unit in Edinburgh, U.K., includes high-resolution, annotated images of histologic sections of a developing embryo from 5.5 to 9 days after conception. The site also links to a gene expression data bank: Click on the spinal cord, for example, to get a list of genes expressed in that tissue. Like their subject, the atlases are still growing, and both groups say more is coming soon.

*mouseatlas.caltech.edu
†genex.hgu.mrc.ac.uk



EDUCATION

Mad About Molecules

Want to enjoy a leisurely stroll through the world of atomic and molecular structures, from orderly crystals of sodium chloride to long, loopy chains of polymers? Head to Molecular Universe, a Web book by chemists at Molecular Simulation Inc. in San Diego and the Royal Institution of Great Britain in London. Accompanying detailed chapters are hundreds of pictures, offering viewers a peek at amazing molecules such as the enzyme lysozyme, a natural antiseptic in tears. There are also portraits of aspirin, caffeine, and the dreaded foot-and-mouth virus felling U.K. livestock (above). The site's index makes it easy to get to specific topics. And that's the goal, says Clive Freeman of Molecular Simulation: "to make molecular science approachable."

www.molecularuniverse.com

EXHIBITS

Human Evolution Online

In 1974 paleoanthropologist Donald Johanson found an elbow bone poking from sediments in Ethiopia that belonged to 3.2-million-year-old Lucy, then the oldest known human ancestor. Becoming Human, a new Web site from Johanson's Institute of Human Origins at Arizona State University, pulls out all the multimedia stops in telling the story of Lucy and human evolution.

The site is built around a half-hour Web documentary in which narrator Johanson describes his discovery of what he calls "the ape that shook up man's family tree." The film then moves on to other major finds and, with footage of African scenery, digs, and bones, explains how scientists locate and interpret fossils. Visitors can excavate further by clicking on Exhibits—pop-up windows on dozens of topics such as fossil dating and the out-of-Africa debate. Nifty graphics include a panoramic view of a dig and rotatable 3D hominid skulls, from 4.4-million-year-old *Ardipithecus ramidus* to *Homo sapiens*.

Rounding out Becoming Human are a glossary, references, Web links, and a news section (including the March report of a skull that may unseat Lucy). Come May you'll also find the Learning Center, with materials for precollege teachers.

www.becominghuman.org

BIBLIOGRAPHIES

Bridging the Bandgap

Research on high-tech "photonic band-gap materials" is growing by leaps and bounds, from 40 papers published in 1993 to more than 460 in 2000. That's according to the Photonic & Sonic Band-Gap Bibliography, a Web page where NASA Jet Propulsion Lab chemist Jonathan Dowling tracks findings on these latticelike structures, which transmit specific light or sound waves. The materials may someday be used for optical Internet networks or walls that can screen certain sounds. The site lists over 1000 publications, along with books, reports, and computer programs.

home.earthlink.net/~jpdowling/pbgbib.html

LINKS

Communication Net

For almost every disorder that affects speech and communication, from stuttering to a movement malady called apraxia, there are links aplenty on this site created by a Minnesota speech pathologist. Although many are aimed at the public, researchers and grad students will find useful resources as well, including grant and job leads, scientific papers, 3D views of sinuses, and a long list of e-mail groups.

www.mankato.msus.edu/dept/comdis/kuster2/welcome.html

Send great Web site suggestions to netwatch@aaas.org

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