

# TOUCHINGbase

## ● eScholarship and electronic space

In mid-October, the Scholarly Publishing and Academic Resources Coalition awarded three grants, totalling \$519,000, to winners of its Scientific Communities Initiative competition. The Initiative aims to push the creation of non-profit information communities for people in the fields of science, technology or medicine, and the winners were selected, in part, on the likelihood that they will become financially self-sustaining. One of the winners, eScholarship, aims to "provide an electronic infrastructure that allows scholars to experiment with new ways to disseminate their scholarship," according to John Ober of the California Digital Library (University of California), which will manage the project. A short-term goal is to mirror the Los Alamos e-print server (slated for January) and explore ways in which it could be enhanced—for example, through annotation of articles and citation tracking. eScholarship also intends, after consultation with editors and academics, to create electronic publications that will serve the needs of specific disciplines or subdisciplines that do not fall under the remit of the Los Alamos server. Current contenders include economic science, environmental engineering, and subdisciplines of the health and medical sciences. Ober does not think that overlap of content between electronic servers will be a problem for users, as the evolution of search engines that can deal with many servers seems likely. Rather, the proliferation and evolution of servers may better suit the needs of specific communities, and potentially provide a means for charting the evolution of and relationships between different disciplines.

*"... it is not just groups of "others" we mistrust; it is also groups of "us". The larger the group, the bigger the bureaucracy, the more complex the rules, the worse the job it does. The machine that runs society (government), we've decided, is like the one discovered by Copernicus, Kepler, Galileo and Newton, except this one doesn't work. The I.R.S., the Postal Service, the F.B.I. If it weren't for slick, insubordinate rogues like Agent Mulder constantly undermining our institutions and exposing their corruption from within, we wouldn't even be the "us" we're so suspicious of, because part of our DNA would be replaced with alien DNA, and we all know what that means. The end of "me".*

— Richard Russo,  
*The New York Times Magazine*

Centre, won the Biotechnology award. Sulston, an organic chemist turned biologist, was among the first to join Sydney Brenner in his quest to understand the biology of *Caenorhabditis elegans*. He initially focused on lineage analysis, and by 1983 had obtained a comprehensive cell lineage map, whereupon he realized that an appreciation of the mechanisms underlying cell fate would require knowledge of all relevant genes. Together with Robert Waterston (Washington University Genome Center), he embarked on the worm genome sequencing project, pioneering many large-scale sequencing techniques. A strong advocate for unrestricted public access to genome sequence, Sulston was selected from a short list of finalists that also included Craig Venter (Celera) and Ian Wilmot (The Roslin Institute). Bioethicist Daniel Callahan, philosopher and co-founder of The Hastings Center, an independent, nonpartisan interdisciplinary research centre dedicated to the study of ethical issues in the areas of health, medicine and the environment, won the award for Ethics. Callahan has published on issues such as physician-assisted suicide and cloning; his latest book is called *False Hopes: Why America's Quest for Perfect Health Is a Recipe for Failure*.

## ● Misregulation in muscular dystrophy

Facioscapulohumeral muscular dystrophy (FSHD) is a complicated neuromuscular disorder that progresses at an unpredictable rate and with variable severity. It is associated with deletion of tandemly arrayed 3.3-kb repeat units on chromosome 4q, but no transcribed sequences lie within this region, making the genetic basis of the disorder difficult to decipher. In a recent issue of *The Proceedings of the National Academy of Sciences* (vol. 96, 12650–12654; 1999), Michael Green and colleagues reported that generalized misregulation of muscle-specific transcripts is a hallmark of the disorder. The authors compared mRNA populations derived from muscle of people with FSHD with that of normal controls, and discovered profound changes in the expression of muscle-specific genes that encode structural proteins and myogenic regulatory factors, among others. How deletion of tandem repeats causes deregulation of the transcripts is unknown; one hypothesis is that it does so through aberrant expression of a transcription factor.

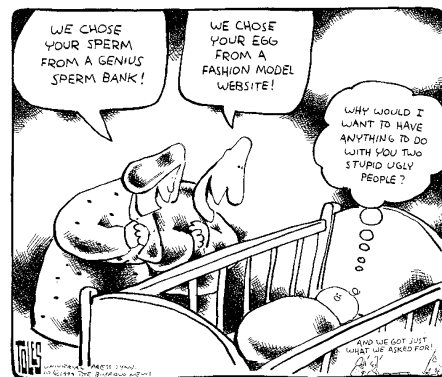
## ● 22 be or not 22 be....

...the first human chromosome sequenced is no longer the question. The Sanger Centre (UK) led a collaborative effort to sequence approximately 33.4 Mb of chromosome 22, attaining 97% coverage with only 11 gaps (which proved refractory to cloning). With the genes plotted and the Ts crossed, the first chapter in the "book of life" will be published in the December 2 issue of *Nature*. The sequence and analysis of chromosome 22 is also available (<http://www.sanger.ac.uk/HGP/Chr22>.) Richard Gibbs, director of the sequencing centre at Baylor College of Medicine (USA) heralds the report: "This is a landmark event—one down, 23 to go!"



## ● Worms, ethics and technology

In mid-November, the World Technology Awards were bestowed by the World Technology Network and *The Economist* upon those who are considered to have contributed most to the advance of emerging technologies for the benefit of business and society. John Sulston, director of the Sanger



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