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LETTERS

"MegaYAC" Library

In Christopher Anderson's article "Genome shortcut leads to problems" (News & Comment, 19 Mar., p. 1684), I am quoted several times as being critical of the Centre d'Etude du Polymorphism Human (CEPH)/Généthon yeast artificial chromosome (YAC) library and its contributions to the genome effort. This is not the case, and I am a great admirer of its contributions. The CEPH/Généthon group, and Daniel Cohen in particular, have made great contributions to the international genome effort and have fostered a spirit of sincere international cooperation by distributing their reagents freely to the scientific community.

Clearly the "megaYAC" library produced by CEPH/Généthon is not the end of the project to create a human genome map. Like all reagents and materials used in the laboratory, it has some advantages and some disadvantages when compared with other methods. The megaYAC library contains some cloning artifacts that are well known to everyone in the field. Nevertheless, it is still of great use for furthering the genome effort and particularly for linking sequence tagged sites (STSs) into an STS content map, where the issue of chimerism is irrelevant. The CEPH/Généthon chromosome 21 map that was produced with the use of this YAC library represents a major scientific achievement and, as with all such information, will be refined, with minor errors corrected, as the project proceeds.

One of our major problems as scientists is the lack of understanding of our work by the general public, whose tax dollars and charitable contributions support our research. It is critical that the unselfish effort of the many scientists involved in the genome effort be presented to the public in a realistic way so that the value for human society of knowing and understanding our own DNA sequence can be fully appreciated. We are done a disservice when relatively minor technical issues are made the focus of public attention, as in this case.

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Interdisciplinary Symposia

Helping scientists "become better generalists" is considered to be a worthy goal in a News & Comment discussion (26 Feb., p. 1255) of the annual National Academy of Sciences "Frontiers of Science" symposia that are held in Irvine, California. I would like to describe an effective method for achieving this goal that could be used at any college or university.

At the University of California, Los Angeles (UCLA), an interdisciplinary group, the Center for the Study of Evolution and the Origin of Life (CSEOL), has been meeting every week during the past dozen academic years. We discuss a wide variety of topics that are related to the concept of evolution in its broadest sense. The format is highly interactive give and take, so that speakers may need up to 30 minutes to show just their first few viewgraphs. Participants in CSEOL include faculty, post docs, and graduate students, primarily in the sciences, with a healthy smattering of writers, nonacademic researchers, high school teachers, and others. CSEOL supports visiting senior fellows, who generally have Ph.D.'s, and junior fellows who are UCLA graduate students. Since 1990, we have sponsored annual symposia, open to all, on topics such as "The Endangered Earth"; "Major Events in the History of Life"; "Origin and Evolution of Humans and Humanness"; "Creative Evolution?"; and, planned for 1995, "Origin and Evolution of the Universe." Typically, books have resulted from these meetings.

Sustaining such a group requires the guiding hand of an energetic, dedicated, talented director—at CSEOL, professor of paleobiology J. William Schopf. Unfortunately, such leaders are few and far between, so that interdisciplinary groups, no matter how desirable, are likely to remain the exception rather than become the rule.

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Funding for Gene Therapy

Christopher Anderson's article "A speeding ticket for NIH's controversial cancer star" (News & Comment, 5 Mar., p. 1391) reports the recent decision of the Board of

Scientific Counselors (BSC) of the Division of Cancer Treatment (DCT) to delete 1 year of funds from a specific contract that provides laboratory support for a clinical trial of tumor necrosis factor (TNF) transfection into tumor-infiltrating lymphocytes (TILs). Anderson correctly observes that this decision would have no effect on intramural funding for the study, but attributes to Steven Rosenberg the incorrect statement that "The DCT board has authority only over the outside contract . . ." and not over internal NIH funding. In fact, all intramural DCT programs, including those of Rosenberg's Surgery Branch, are subjected to careful review every 4 years by site-visit teams composed of members of the BSC and ad hoc experts. The BSC reviews the findings of each site visit and recommends promotions, tenure actions, and changes in personnel, space, and budget for specific projects. While these recommendations are not binding, they weigh heavily in the future distribution of intramural resources.

In the case of Rosenberg's TIL contract, the BSC's intention was to withhold a portion of the contract funding related to TNF transfection studies in patients pending further developmental work to improve TNF secretion rates and tumor localization. The BSC will reconsider this project in February 1994 and has the option of restoring the deleted funds if satisfied with progress at that time. While the BSC's decision will delay expansion of this specific trial, in no way does it reflect a diminished interest in or lesson the importance of this field of research.

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Biosphere 2: A New Kind of Science

The 19 March News & Comment article by Traci Watson about Biosphere 2 (p. 1688) indicates to me that the mission of this venture is not generally understood by the scientific community. The experiment is not traditional, reductionist, discipline-oriented science, but a new, more holistic level of ecosystem science that has been called "biospherics." Biosphere 2 is as much a human experiment as a scientific one.