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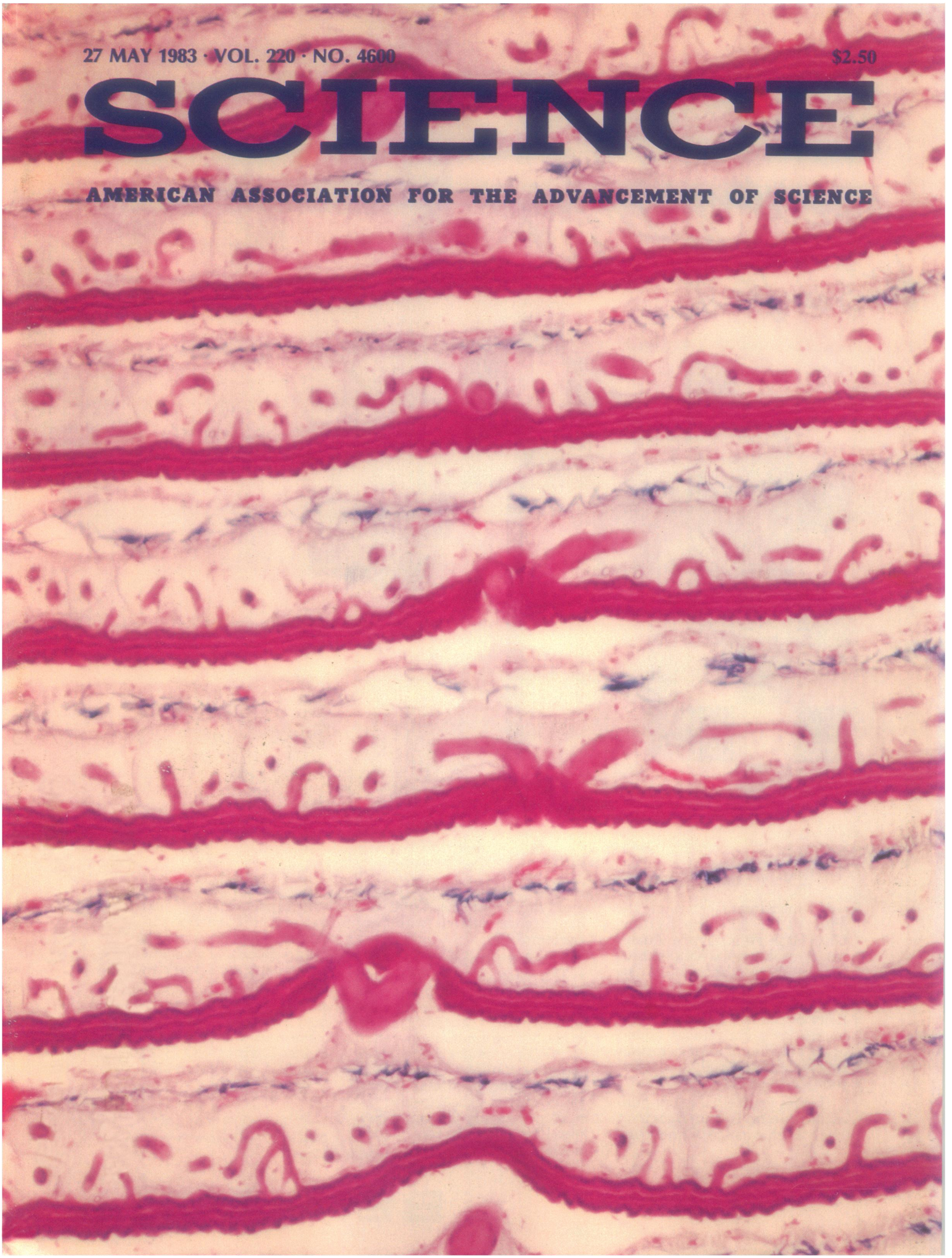

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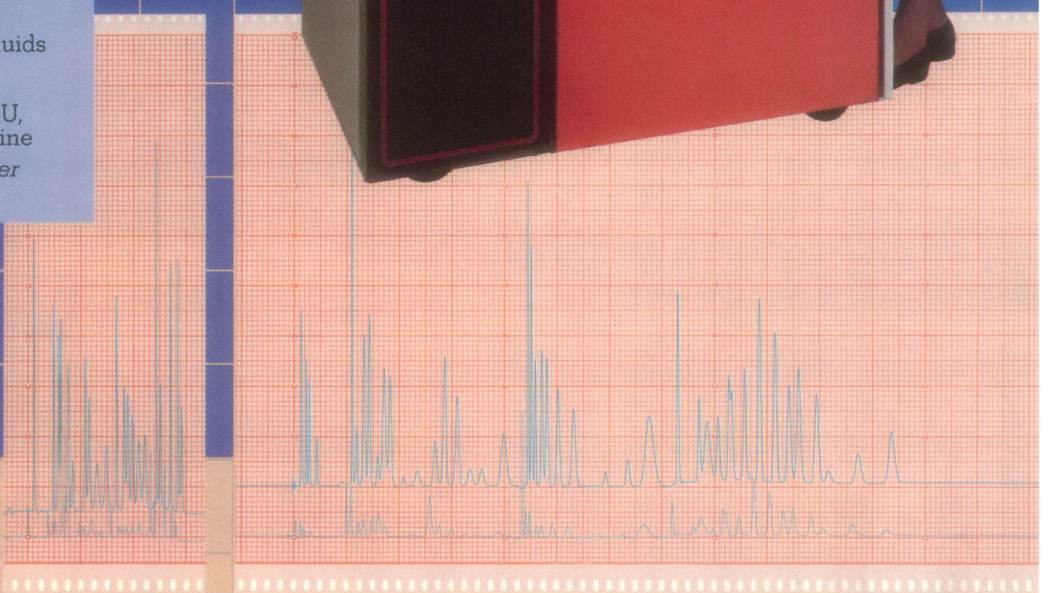

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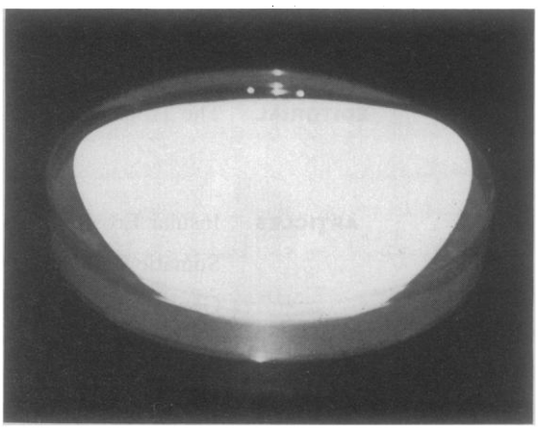

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REPORTS

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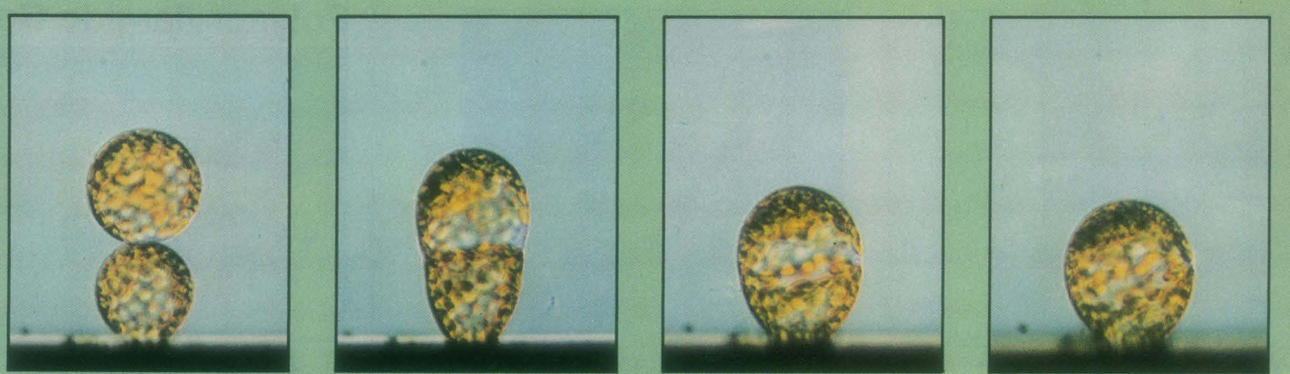

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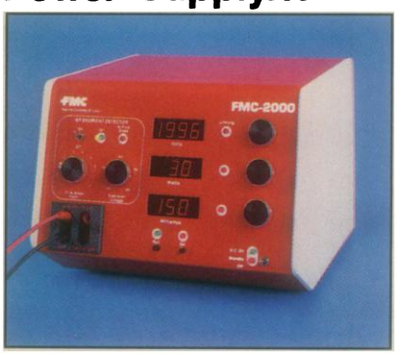

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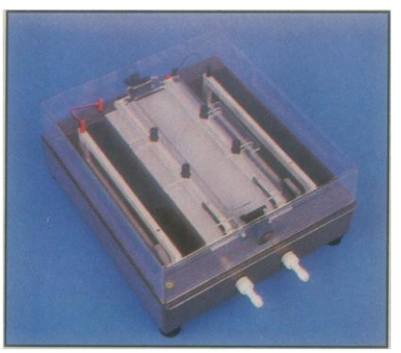

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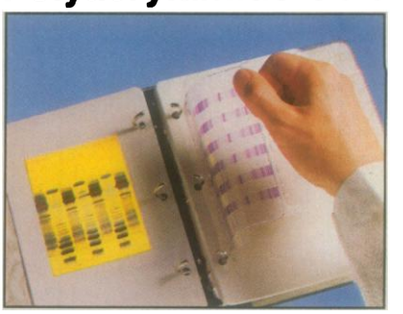

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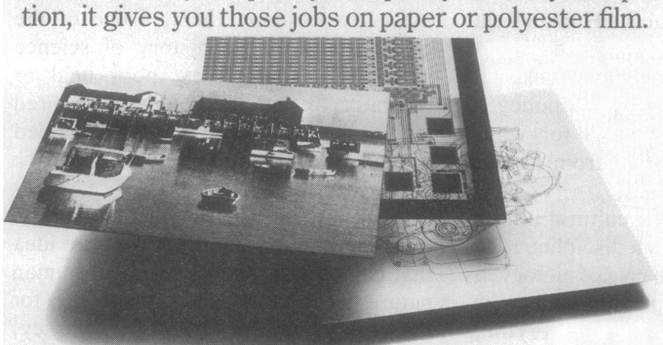

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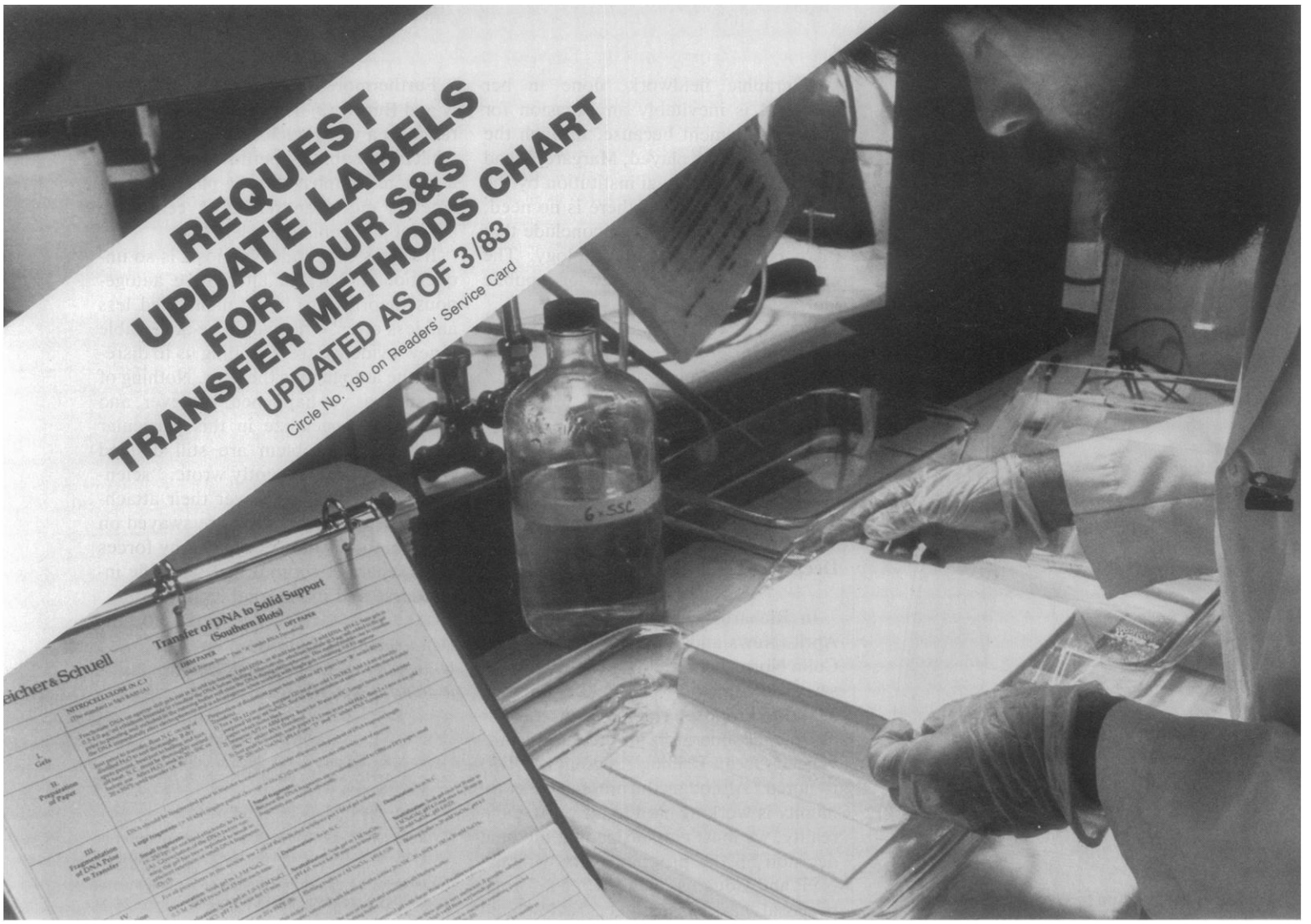

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Photographed at the Institute of Cancer Research, Columbia University, Dr. Philip Feigelson's laboratory.

ethnographic fieldwork, done in her youth. It is inevitably an occasion for public excitement because, through the inspiring role she played, Margaret Mead had become a national institution by the end of her career. But there is no need, therefore, for scientists to conclude that there is a crisis in anthropology. The crisis is in the public's view of a public idol.

WARD GOODENOUGH
Department of Anthropology, University of Hawaii at Manoa, Honolulu 96822

Reference

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Deep-Sea Drilling

In Richard A. Kerr's Briefing of 15 April (News and Comment, p. 287) and Colin Norman's article "Accelerating research at Texas A & M" (22 Apr., p. 392), the proposed role of Texas A & M as science operator of the future Advanced Ocean Drilling Program (AODP) is noted. Although the interested community is working hard to make AODP a reality, we must emphasize that the final decision on the program rests with the NSF and Congress. Only after a formal proposal has passed peer review and been approved by the National Science Board, and only if fiscal year 1984 funds are appropriated by Congress, will Texas A & M actually be able to move ahead with the scientific program.

D. JAMES BAKER, JR.
G. ROSS HEATH
Joint Oceanographic Institutions, Inc., 2100 Pennsylvania Avenue, NW, Washington, D.C. 20037

Endosymbiosis and Autogeny

Roger Lewin's article (Research News, 4 Feb., p. 478) about gene transfer between the genomes of organelles and the nucleus is introduced in the framework of the endosymbiotic hypothesis for the origin of eukaryotic cells. The possibility that such transfers occur is probably good news for partisans of that hypothesis but is not a compelling argument for or against it. It is more logical to see in those transfers evidence for a similarity between the three genomes, similarity stressed by the possession of split genes, which is much more in line with the alternative autogenous hypothesis (*1*).

Furthermore, the cited work of Farrelly and Butow (*2*) demonstrating incorporation in a yeast nuclear chromosome of what is probably a "petite" mitochondrial genome emphasizes the plasmid character of mitochondrial DNA central to several autogenous models (*3*).

It seems that endosymbiosis is so unquestioned that the alternative autogenous theories are being mentioned less and less often. This would be acceptable if new evidence were leading us to disregard the autogenous theories. Nothing of the sort has yet happened, however, and those who specialize in this particular phylogenetic problem are still divided (*4*). As Dixon (*5*) recently wrote: "scientists themselves, whatever their attachment to stern objectivity, are swayed on occasion by fashions triggered by forces quite separate from normal scientific intercourse and its internal logic."

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Department of Botany, University of Liège (Sart Tilman), B-4000 Liège, Belgium

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4. C. W. Burky, *Science* **215**, 495 (1982); A. B. Fulton, *Cell* **28**, 673 (1982).
5. B. Dixon, *Sciences (N.Y. Acad. Sci.)* **23**, 44 (1983).

Texas Telescope

I appreciate the spirit of Colin Norman's friendly comments (News and Comment, 22 Apr., p. 390) regarding the University of Texas (UT) McDonald Observatory plans to build a 300-inch telescope but would like to clarify some of his points. We are currently seeking (but do not yet have) about $17 million from the private sector in order to build the telescope (not just the primary mirror). We had indeed hoped for (although it now seems jeopardized) a $5-million special kickoff appropriation from the legislature. It would markedly speed up the project, but the project does not depend on this appropriation. We do hope the UT regents may soon approve the use of university construction funds for at least part of the project, but we do not have any formal commitment to that effect.

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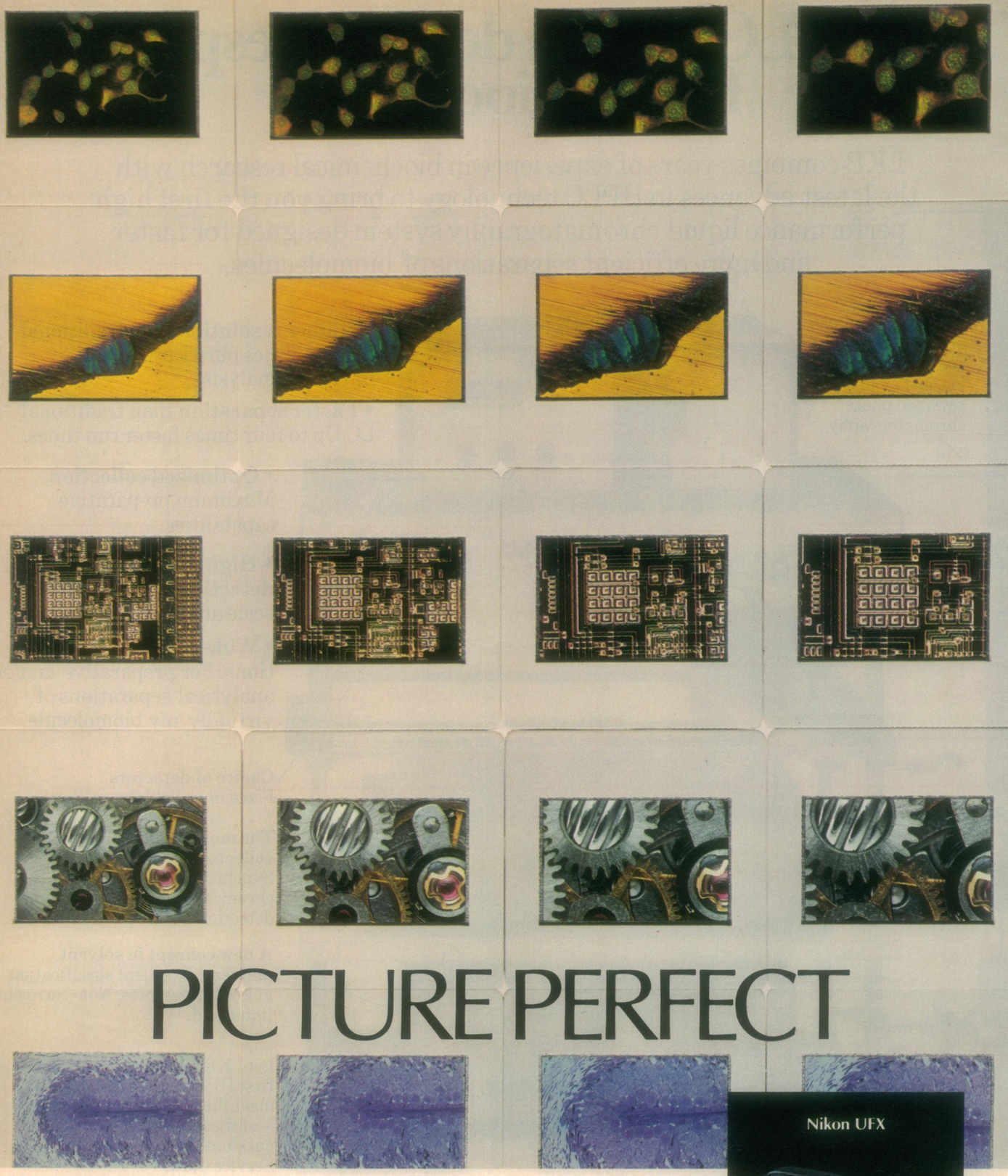

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27 May 1983, Volume 220, Number 4600 **SCIENCE**

The Troglodyte Frieze

Chiseled into the frieze around the Great Court at Massachusetts Institute of Technology are the names of Lavoisier, Kepler, Pasteur, and other great figures in the history of science. In MIT's dark subbasement, I wonder, would we find the names of those who have retarded science? Whose names might appear on such a troglodyte frieze? Looking into history, there are candidates galore: the persecutors of Galileo, the faker of the Piltdown man, the supporters of Lysenkoism. But what about recent times?

Identification of villains on a personal level is not constructive. However, science and engineering are playing a dominating role in the nation's life. So they attract the attention of those in positions of public influence. Among these people, there is sometimes outright bias against science and technology. More insidious are actions with unintentional yet damaging fallout for science or with harmful effects that are deliberately ignored or shrugged off. A troglodyte frieze might encourage action-oriented individuals—be they politicians, judges, lawyers, economists, or paladins—to think more carefully about the impact of their actions on science and engineering.

There is no paucity of modern candidates for the troglodyte frieze. Among them are the framers and supporters of the so-called Mansfield Amendment. It was passed in the late 1960's as a rider to a military appropriations bill and imposed a standard of supposed relevance on Department of Defense research funding in academic institutions. The amendment was effective only for one year and applied only to DOD, but federal administrators' taste for fundamental research has never recovered.

Then there is the fuss over academics' accountability in the use of federal funds. Accountability is an accepted principle. The controversy is over time and effort reporting requirements laid out in the now well-known Office of Management and Budget Circular A-21. Certain federal auditors have stated that the primary aim of government research funding is not scientific progress but comprehensive accounting. This diversion of purpose can be laid at the door of those in public life who gave legitimacy to these attitudes.

Or we might point to people outside the Bell System responsible for cutting off the primary sources of funding for fundamental and exploratory research at Bell Laboratories. Regardless of other features of the recent antitrust settlement, its effect on Bell Labs was foretold by someone there who remarked: "Oh well, no more transistors." Today, when the nation values innovative technology for countering international competition and creating jobs, this episode provides names aplenty for the troglodyte frieze.

Then there are those who capitalize on the fallibilities of our community for their own purposes. For example, the electorate appreciates that science and technology can promote economic growth and cure disease. Thus, some public figures uncritically champion more of everything from "giant science" to high frontier technology. Despite the questionable value of many such schemes, they find some support from the enthusiasts among us. Past damages to science include the fragmentation of government-funded health research into disease-specific programs, weakening the sounder policy of a balanced, fundamental assault on disease. The fashion for energy research in the 1970's has pushed some of our national laboratories toward being job shops rather than purposeful institutions. The abortive initiative to mastermind automotive technology in the late 1970's sprang from an opportunistic proposal to "reinvent the automobile." People making such appeals ought to recognize that with the inevitable disillusionment may come a nomination for the troglodyte frieze.

Yes, there are candidates galore for the troglodyte frieze. But the nation does not really need to censure individuals. What we do need is for the movers and shakers in our society not only to say they value science and technology highly but also to act accordingly.—EDWARD E. DAVID, JR., *President, Exxon Research and Engineering Company, Florham Park, New Jersey 07932*

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