

Briefings

edited by CONSTANCE HOLDEN

Minorities Need More Nurture

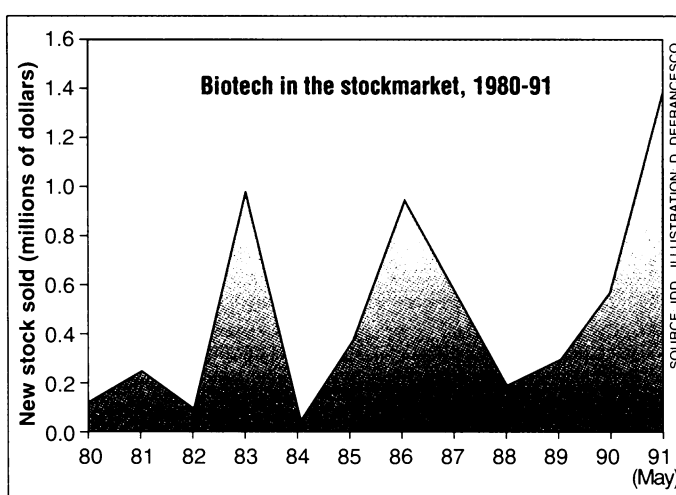
A new AAAS survey suggests that despite all the talk about getting more women and minorities into science and engineering, colleges and universities aren't trying very hard. The survey, described in the report "Investing in Human Potential,"* looked into programs designed to assist minorities, women, and people with disabilities by querying 276 institutions. The authors concluded that the results "paint a bleak picture."

For example, only 10% of the programs surveyed are directed at the recruitment and retention of women—and most of these charge fees for participation. Only half of the institutions surveyed calculate graduation rates for these groups of undergraduates, even though they are at higher risk for dropping out, said Marsha Matyas of the AAAS Directorate for Education and Human Resources, speaking at a 28 October press conference in Washington. Matyas added that about 30 campus officials called upon receipt of the questionnaire to ask what was meant by "attrition rate."

Data are particularly poor on students with physical disabilities, said Daryl Chubin of the Office of Technology Assessment, who noted that the passage last year of the Americans with Disabilities Act "will be putting a lot of pressure on universities."

And as for minorities, despite a multitude of special programs, blacks are still doing much better at historically black colleges and universities than elsewhere. Carol Fuller of the National Institute of Independent Colleges and Universities suggested that they have more options in such schools: "At [a predominantly black school] you can come in

*Copies of AAAS report #91-395 can be purchased for \$9.95, plus \$4 shipping, by calling 301-645-5643.



Biotech rollercoaster. Investors lost interest in biotech-related companies following the stock market crash in October 1987. But by early this year the market had hit record levels despite a sluggish economy, with more than \$2.5 billion worth of new stock sold between January and November. Now the market appears to be cooling again, according to a new report, "Biotechnology in a Global Economy,"* from the Office of Technology Assessment. The 283-page report discusses biotechnology in agriculture, the pharmaceutical and chemical industries, and environmental applications, as well as policy and regulatory issues. It says that although the development of pharmaceutical products is flourishing, cash problems are becoming more acute as start-up companies move toward development and marketing.

*Available for \$13 from the U.S. Printing Office, Washington, D.C. 20402-9325.

with no math at all and still be a science major."

The biggest problem for all three groups seems to be the absence of a "nurturing" environment—leading many students to feel that "nobody really cares whether you're there or not," said Shirley Malcom of AAAS. Jules Lapidus, president of the Council of Graduate Schools, added that this problem is especially striking at research universities, where the atmosphere is more one of "weeding" than of nurturing, and where faculty, preoccupied with grubbing for funds, have "almost no time for students any more."

As might be predicted, the survey found that the best programs "are also the most costly and staff-intensive." Other hallmarks of effective programs: using "hands-on" approaches; continuous, multi-year involvement with students; activities that include parents and teachers, and commitment to such programs on the part of departmental leadership.

Gloomy Words From Soviet Physicist

When Soviet physicist Sergei Kapitsa recently gave a public lecture in the Soviet Union about accelerators, he was attacked by a man brandishing an ax, who accused him not only of being an architect of the Chernobyl disaster, but an "enemy of the people" and a "Judeomasonic conspirator." To Kapitsa, who is a lab head at Moscow's Institute for Physical Problems, an expert on accelerator design, and head of the Soviet Physical Society, the attack was a symptom of the tide of irrationality sweeping the country.

During a visit to the AAAS last week, on his way to the World Bank to offer advice on how to help the USSR join the world economy, Kapitsa explained that the disintegrating nation is facing a poisonous brew of antisience sentiments, superstition, and extremist political thinking. With the dissolution of traditional authority, he said, antiscientific ideas are rushing into the

vacuum. The ideological collapse is more profound in its consequences than the economic or military collapse, he added, causing "a loss of reference for hundreds of millions of people." The eruption of antiscientific trends has "become a very acute signal" of that crisis.

Kapitsa said that although the popular press and TV now have freedom, they have abnegated responsibility. "Magazines are contributing 10 times more space to astrology than to science." He added: "We have a whole horde of people propagating the idea of cold fusion in our corner of the world." Even top levels of government are not immune to the madness—Kapitsa said Boris Yeltsin, president of the Russian republic, has reportedly responded favorably to a group asking 20 million rubles for a method "to provide heat from rocks."

Kapitsa went on to predict that the situation for Soviet science is going to get a lot worse before it gets better. "I think we are heading toward a profound crisis....At huge institutions, thousands of people will be displaced." Comparing the collapse of the USSR with the loss of a major war, he said that if Germany's experience after World War II is any guide, it will be decades before science is re-established on a firm footing. German science "is only now coming back" as world science, he said. "Science recovers twice as slowly from a major national catastrophe as the economy."

New Canadian Medical Head

The Medical Research Council (MRC) of Canada has a new president: Henry Friesen, head of physiology and professor of medicine at the University of Manitoba, who was appointed on 20 October by the minister of National Health and Welfare. The MRC, whose 21 members serve without remuneration, is one of three federal agencies supporting research,

the other two being the National Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council.

Friesen, discoverer of the hormone prolactin, has called for a partnership between MRC and all other provincial and national research-supporting bodies, both public and private, in order to get a bigger bang for the research buck.

MRC supports more than 1200 researchers in universities, hospitals, and industry with an annual budget that currently stands at about 240 million Canadian dollars.

Eccentric Science

The current trend in some circles toward developing "Afrocentric" curricula has very disturbing implications for the teaching of science, according to an anthropologist at Wayne State University.

Bernard Ortiz de Montellano describes a leading example of the problem, in the Portland, Oregon, school system, in the fall 1991 issue of the *Skeptical Inquirer*. It seems that in 1987, the school district published a series of "African-American Baseline Essays," including a science essay called "African and African-American contributions to Science and Technology," that all grade school teachers are expected to incorporate into their classes. The essay was written by Hunter Haviland Adams, who claimed to be a researcher at Argonne National Laboratory, but who is, in fact, an environmental technician. Ortiz de Montellano says Adams is also a member of a group called the "Melanin Scholars," who propose that whites have a defect in their melanin-producing systems, and whose most famous member is Leonard Jeffries of the City University of New York—the man who calls whites "ice people."

The essay, a hodgepodge of myth, religion, folk medicine, and psi phenomena, "is a classical example of pseudoscience,

but because of the current pressure on school districts to incorporate multicultural material into the classroom...it has been widely distributed," writes Ortiz de Montellano. The baseline essays "have been adopted or seriously considered" by a number of school districts, including Detroit, Ft. Lauderdale, Atlanta, Chicago, and Washington, D.C. Indeed, says the author, Adams was a featured speaker at a conference last April for Detroit grade school science teachers where he presented fantastic material—such as the notion that the ancient Egyptians used gliders—that was accepted by the audience "without a murmur of dissent."

Ortiz de Montellano told *Science* that he and a few others have been fighting a lonely battle against the excesses of Afrocentric curricula. He compares the movement to creationism, adding that the difference is that "this curriculum will be adopted in big cities." The anthropologist, a longtime advocate of "culturally relevant science" for minorities, believes that most scientists, being uninvolved in pre-college education, are unaware of what's going on. But "when it finally

hits the fan, as it surely will," he fears legitimate efforts "will be wiped out too." He is organizing a symposium on the subject at the AAAS annual meeting to be held in Chicago in February.

Toxic Waste Program Lacks Science Base

The National Research Council came out last month with a blistering review of government policy on hazardous waste site management. Its message, delivered in a report* from a seven-member panel chaired by epidemiologist Anthony Miller of the University of Toronto, is that the Superfund law has created a huge but mindless engineering project in which priorities haven't been sorted out, and no effort has been made to determine whether public health will benefit.

The discovery of buried toxic waste dumps in New York's Love Canal and in Woburn, Massachusetts, led to a big campaign in the 1980s to identify and clean up all such sites in the United

States. Since 1980, says the report, the nation has spent about \$4.2 billion a year on hazardous waste sites. Yet scarcely anything has been spent to find out whether the management of such dumps is endangering citizens' health, or which of the sites slated for remediation are the most dangerous. The report says there is still "no comprehensive national inventory" of sites, "no site discovery program, no minimum data set on potential human exposure, no adequate system for the early identification of sites for which immediate action to protect public health could be necessary, and no validation...of the site assessment process."

The report goes on to make a strong pitch for investing in better research on exposure to toxic agents in the environment, and contains recommendations for improving understanding of toxic dangers and targeting the remedial work more effectively. There is "sufficient evidence that hazardous wastes have produced serious health effects in some populations" already, warns the report, adding that since chemical contamination is still spreading in groundwater systems, the risks could be greater in the future.

*"Environmental Epidemiology," available from the National Academy Press, 2101 Constitution Avenue NW, Washington DC 20418.

Relief for Cat Persons?

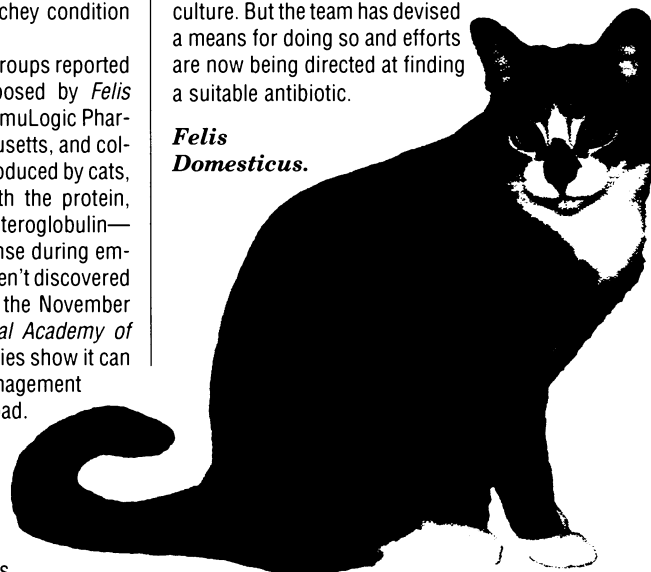
As the term "cat person" suggests, many people find cats irresistible. But along with feline charms come some irritating—even dangerous—forms of pathology, including allergic responses and the sweaty, achey condition known as "cat scratch fever."

But last month two separate research groups reported advances that may reduce the perils posed by *Felis domesticus*. Jay P. Morgenstern of the ImmuLogic Pharmaceutical Corp. in Cambridge, Massachusetts, and colleagues have cloned the major allergen produced by cats, called Fel d1. Cats' skins are coated with the protein, which bears some resemblance to rabbit uteroglobulin—believed to limit maternal immune response during embryo implantation. So far, researchers haven't discovered the allergen's biological function. But in the November issue of the *Proceedings of the National Academy of Sciences*, they suggest that if further studies show it can modulate immune processes, better management of cat-allergic patients may be down the road.

Meanwhile a team at the Centers for Disease Control in Atlanta has, for the first time, characterized the bacterium that causes cat scratch fever. The malady, which strikes about 6000 people a year, causes fever, swollen lymph glands,

anorexia, and general malaise, and can last as long as a couple of months. The organism, *Afpia felis*, is a resistant one, and has been difficult to keep in laboratory culture. But the team has devised a means for doing so and efforts are now being directed at finding a suitable antibiotic.

Felis Domesticus.



JEAN MARX