RANDOM SAMPLES

edited by RICHARD STONE

Top AIDS Researcher To Do Time

One of the citation stars of AIDS research was jailed in France last week, after a panel of three judges upheld his conviction for failing to prevent the distribution of HIV-infected blood-clotting factors to hemophiliacs in 1985 (*Science*, 30 October 1992, p. 735).

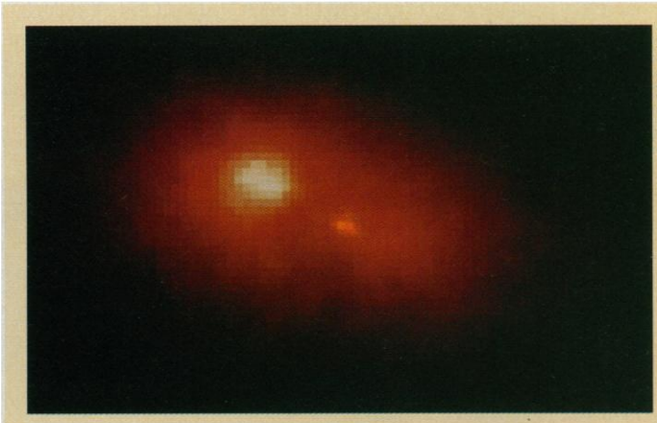
Jean-Pierre Allain, formerly head of plasma products research at the French National Center for Blood Transfusion (CNTS) and now a medical professor at Cambridge University, had been convicted last fall, along with two other French government physicians.* Allain had been out on bail until last week, when he began serving a 4-year sentence, with 2 years suspended.

Allain's imprisonment deprives the AIDS research community of one of its most-cited members. In an analysis of the "heavy hitters in AIDS, 1988-1992," carried out by the Institute for Scientific Information, Allain ranked fourth in the world in citations per paper (*Science*, 28 May, p. 1262). His work has centered on HIV serology and transmission and clinical trials of AIDS drugs.

Some of Allain's Cambridge colleagues say they're outraged by the prison sentence. "[We] will be fighting for him," says Robin Carrell, who heads Cambridge's hematology department. Carrell asserts that Allain is being made a scapegoat for widespread failings in the French health system. To support this, Carrell points to a report issued last month by an independent panel of inquiry chaired by ethicist Mary Warnock, which concluded that Allain's actions in 1985 "were consistent with medical ethics." In any event, Carrell expressed confidence that Allain's academic appointment is secure.

Allain has one last chance for a reprieve: Next month the French Supreme Court will decide whether to hear an appeal.

*Michel Garetta, former CNTS director; Jacques Roux, former director-general for health.



T.R. LAUER (NOAO), NASA

Seeing double. Despite its blurred vision, the Hubble Space Telescope was able to discern two nuclei, perhaps two black holes, at the center of the Andromeda galaxy.

Andromeda Leads a Double Life

For decades, astronomers have viewed the Andromeda galaxy as a mirror image of our own Milky Way—a star-packed nucleus with spiralling arms. But that view of Andromeda has just received a jolt. Images from the Hubble Space Telescope reveal that the galaxy's core is composed of not one but two distinct nuclei. Andromeda's core "looks like a barbell with two lobes, one brighter than the other," says University of Maryland astronomer Edward Shaya, who, with Tod Lauer of National Optical Astronomy Observatories, Sandra Faber of the University of California, Santa Cruz, and colleagues, reports the observation in a paper to appear in *Astronomical Journal*.

Astronomers have found double nuclei before, which presumably are a sign that what looked like one galaxy is actually made up of two galaxies in the process of merging. Andromeda, however, was thought to be quiescent. That thinking now has changed: the best guess is that a small galaxy recently tumbled into Andromeda, Shaya says.

The drama may not be over, he adds. A massive black hole is believed to lurk at the heart of Andromeda, and the fact that the nucleus of the smaller galaxy survived its passage suggests that it too might contain a black hole. If that's true, Shaya says, the two black holes may someday merge and release a burst of gravity waves large enough to be picked up on Earth by a future gravity wave detector.

Healy Stokes Fire Over Minority Hiring

Just when you thought it was safe to go back to Cleveland.... A congressional committee hauled private citizen, Ohio resident, and former NIH director Bernadine Healy back to Washington last week to respond to allegations of racial discrimination at the National Institutes of Health (NIH). Healy presided over NIH when many of the complaints about unfair hiring and promotion practices were aired, but standard procedure would have Congress lighting a fire under somebody who can do something about the problem—acting NIH director Ruth Kirschstein, for example. Healy's last day on the job was 30 June, 2 weeks before the hearing was held.

So why did the House Post Office and Civil Service Committee decide to pay Healy's round-trip expenses from her Cleveland home? And why did it ignore Kirschstein, the longtime director of the National Institute of General Medical Sciences, who sat silently next to her former boss at the witness table? A committee staffer explained that the hearing was originally scheduled for 28 June, when Healy would still have been on the job, and that the committee chairman, Representative William Clay (D–MO), felt that Healy was most knowledgeable on the subject. Indeed, 2 months ago Healy appointed an NIH-wide Task Force on Fairness in Employment Practices to investigate how NIH handles cases of alleged discrimination, nepotism, and favoritism, to recommend improvements, and to monitor changes in these areas.

The former director quickly put her old Bethesda haunts on the hot spot, saying that she was "shocked" when she first heard the allegations and that "NIH must hold itself to the highest standard in our treatment of all human lives, including our own employees." That suited Clay, who wanted the record to show clearly that a problem exists. The hearing also gives him a springboard for discussions with the next NIH director, presumably Harold Varmus, on what corrective actions he plans to take.

New AIDS Drug Leaps Over the Counter

The latest experimental anti-HIV drug isn't shrouded by a code name like 3TC, sCD4, or d4T. Nor is it a fugitive in the AIDS underground, the network of "buyers' clubs" that offer unproven remedies to infected people. It's plain old aspirin.

Next month, a double-blind trial in 46 HIV-infected people will begin to assess aspirin's ability to reduce the amount of HIV in the blood. Sponsored by New York's Community Research Initiative on AIDS, the study is being conducted by AIDS researcher Donald Kotler of St. Luke's-Roosevelt Hospital Center in New York City. Kotler has already shown that a cousin of aspirin can slow HIV replication in vitro.

How might this over-the-

counter pain reliever fight HIV? Perhaps, Kotler speculates, its anti-inflammatory properties are the key. During the body's normal inflammatory response to cellular injury, immune system cells are "activated," a process that kicks them into gear. If these activated cells are infected with HIV, the virus will make copies of itself. Aspirin may prevent HIV replication by blocking the action of endogenous chemicals (such as arachidonic acid) that activate these cells in the first place.

WHOI Report Deep Sixes Ocean Dumping

Environmentalists have long argued that dumping raw sewage onto the ocean floor simply isn't good for sea life. The scientific jury, in fact, is still out on this issue, but a new report* from the Woods Hole Oceanographic Institution (WHOI) offers another argument against it: deep-sea ocean dumping would be a waste, so to speak, of money.

Marine scientists (including some at WHOI) had originally contended that ocean dumping might not be a bad idea, arguing that a congressional ban on ocean dumping in 1988 was "premature" in light of scant scientific data on dumping's ill effects. To explore this thesis, WHOI in 1991 proposed an experiment to dump a million tons of sewage sludge onto the deep-sea floor in the Atlantic Ocean and monitor the site for untoward environmental affects. This scheme not surprisingly raised the hackles of Greenpeace, the Environmental Defense Fund, and other environmental groups, which questioned whether ocean dumping was either imperative or economically sensible.

Agreeing that economic issues were poorly understood, WHOI's Marine Policy Center decided to perform a waste-management analysis. Its conclusion: deep-sea ocean dumping could cost a pretty penny, mostly in costs associated with transporting, dumping, and monitoring the material far off shore. Add the unknown risk of environmental damage and potential costs of litigation, and the final price for ocean dumping might offer no advantage over options such as landfills, incineration, and composting, the report states.

The analysis suggests that future waste disposal needs could be met by coupling current disposal options with waste reduction and recycling. As a result, the WHOI report backs off from recommending a test dump and concludes: "There is no great urgency in developing deep ocean options for the future."

* Optimal Strategies for Waste Management: The Ocean Option, WHOI, July 1993.

Crimson Alchemy

According to *Science Watch*, a publication of the Institute for Scientific Information (ISI), chemistry papers from Harvard get cited more often, on average, than any other institution in the world. ISI examined 393,898 journal articles appearing between 1988 and 1992; all told, the articles racked up 1,007,624 citations, for an average of 2.56 citations per paper. Perhaps the biggest surprise is Boston's Northeastern University, weighing in at number seven with 7.19 citations per paper. Much of Northeastern's success can be attributed to three papers on molecular/organic ferromagnets. The papers, coauthored by Northeastern's William Reiff, Dupont's Joel Miller, and Ohio State's Arthur Epstein, racked up a total of 380 citations. The highest ranking non-U.S. institution on ISI's list, Tel Aviv University, weighed in at number 22 with 6.4 citations per paper.

Top* U.S. Institutions in Chemistry

Rank	Name	Papers	Citations	cites/ paper
1.	Harvard University	937	8465	9.03
2.	Caltech	821	6817	8.30
3.	Yale University	749	5953	7.95
4.	Univ. of Chicago	713	5606	7.86
5.	Rice University	404	3014	7.46
6.	AT&T Bell Labs	1091	8088	7.41
7.	Northeastern Univ.	256	1840	7.19
8.	UC Santa Barbara	808	5776	7.15
9.	UC Los Angeles	894	6165	6.90
10.	Stanford University	1105	7578	6.86
11.	Univ. of Colorado, Boulder	737	5008	6.80
12.	MIT	1486	10,076	6.78
13.	Lawrence Berkeley National Lab	890	6021	6.77
14.	UC Berkeley	1680	11,310	6.73
15.	Argonne National Lab	885	5818	6.57

*by Citation Impact, 1988 to 1992.

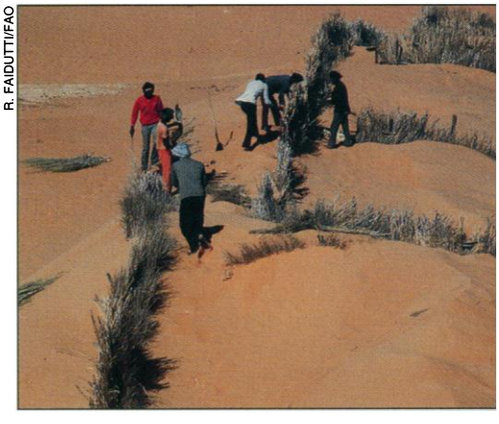
FAO Sounds Soil-Loss Siren

The great Dust Bowl, created when much of the topsoil in the Midwestern United States farm belt blew away in the 1930s, taught American farmers hard lessons about crop rotation and other protective agricultural practices. But that lesson didn't take worldwide. According to a report released this month by the United Nations' Food and Agriculture Organization (FAO), unless farmers worldwide adopt better farming practices, quality soil will disappear from some 345 million acres (equal to the area of Alaska) in 20 years, making the Dust Bowl look like a sandbox in comparison.

Practices that increase soil loss include overgrazing, deforestation, and too little or too much water and fertilizer. Each year, for every acre of land made arable, the FAO estimates that the world loses an acre to soil erosion and degradation. Of course, many farmers feel they have little choice in these practices—expanding populations mean more intensive agriculture and overgrazing and overfertilizing, while droughts and floods cause many of the water problems.

Still, the FAO insists that steps can be taken to diminish the problem, which affects mainly Africa and Asia. The report suggests that farmers build barriers to prevent silt run-off, or plant vetiver or other grasses that withstand winds and keep soil in place. The FAO is deploying scientific advisers to various countries to help put these words into action.

But FAO expects the seeds of change to take root slowly. "It won't take just a quick year or two to go into a country and solve its problems," predicts Robert Brinkman, chief of FAO's Soil Resources, Management, and Conservation Service. He estimates the advisory program should last at least 5 years.



R. FAIDUTTI/FAO

Shifting priorities. Mauritanians attempting to reclaim arable land from sand dunes.