RANDOM SAMPLES

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Administration Drops Indirect Cost Cuts

A full-court press by university administrators panicked over President Bill Clinton's proposal to slash indirect cost reimbursement rates (*Science*, 12 March, p. 1527) has apparently paid off—the White House has dropped the proposal, Administration officials say. But don't celebrate too soon; the cuts are still there—they just won't come specifically from government reimbursements for research overhead. Instead, the equivalent amounts will simply be deleted from the overall agency budget requests, effectively transferring much of the pain from university administrators to the researchers themselves.

At the National Science Foundation (NSF), this means a $60 million bottom-line cut to its request; at the National Institutes of Health, it's some $230 million. And to make matters worse, Congress is considering further cuts—and may even try to reinstate an indirect cost cap.

For the moment, however, university groups are breathing a sigh of relief. For the past month they've been in limbo, first trying to find out what the Clinton Administration had up its sleeve, then doing everything they could to kill the proposed caps. Finally, they got help from White House science adviser Jack Gibbons and Health and Human Services Secretary Donna Shalala, who both lobbied Office of Management and Budget Director Leon Panetta to reconsider the caps, which at one point were rumored to be as low as 44% of total indirect costs. Now, says NSF legislative affairs director Ray Bye, the Administration's caps "are dead."

Cuts, however, aren't. The congressional committees that set the NSF's budget are now planning to slash as much as 6% from the budgets of the programs, science and otherwise, under their jurisdiction, to help in deficit reduction. In the House, for example, that works out to $830 million in cuts. As Bye sees it, Congress has two ways to achieve the savings: kill the space station, whose $2.5 million 1994 request would more than make up the balance, or "spread the pain" to all the programs, including NSF. No points for guessing which option NSF prefers.

As for indirect costs, stay tuned. Earlier this month the Senate budget committee attempted, but failed, to legislate a 50% cap on total indirect costs. As the money crunch gets worse later in the appropriations process this summer, legislators are expected to try again. Universities, Bye predicts, "aren't out of the woods yet."

New light. European Synchrotron Radiation Facility is up and running.

Europe First With New X-Ray Source

A new era of high-luminosity synchrotron radiation has arrived in Europe—years before competing U.S. and Japanese machines are due to start up. Researchers at the European Synchrotron Radiation Facility (ESRF) in Grenoble have recently begun experiments using their machine's initial four beamlines, which now harbor some of the world's brightest x-rays. Preliminary results promise a rich scientific bounty for ESRF and two counterpart machines now under construction: The Advanced Photon Source (APS), due to begin operating in 1995 at the Argonne National Laboratory in Illinois; and Japan's SPring-8, which should be ready by 1998.

What distinguishes this "third generation" of synchrotron sources is the intensity of their x-rays—some two orders of magnitude brighter than previous machines could muster (*Science*, 8 November 1991, p. 794). Researchers have also produced the first ultra high-luminosity x-ray beams with wavelengths shorter than 0.5 angstroms. ESRF scientists have been quick to exploit this brilliance to carry out diffraction studies to determine the structures of compounds too complex for the resolving power of earlier machines. The researchers are also collaborating with Russian lithographers who have produced a Bragg-Fresnel optical device that can focus a high-intensity x-ray beam onto an area only one micrometer across—allowing the ultrastructure of fibers such as those in muscle to be probed with unparalleled resolution.

Massimo Altarelli, one of ESRF's two research directors, predicts eight beamlines will open to outside users in the second half of 1994. That's good news for the expectant European research community. But the leaders of ESRF's competitor projects are similarly relieved about the success of ESRF's preliminary tests, since they provide the first demonstration that the technology underlying the new generation of synchrotrons actually works. "It's one thing to know that on paper," says David Moncton, who oversees the APS project at Argonne, "but it's another to be there and see it happen."

A New Look at Racehorse Genetics

Three hundred years of racehorse breeding may have spawned some speedy lines, but it's also painted thoroughbred horses into a genetic corner. Researchers estimate that the average modern thoroughbred is more inbred than the equivalent of a brother/half-sister mating, resulting in genetic diseases and weaknesses that cause two-thirds of conceived foals never to make it to the racetrack. Worse yet, there has been little research on horse genetics, and researchers know almost nothing about the genetic underpinnings of racehorse success—or failure. But that may be about to change.

The Massachusetts Thoroughbred Breeders Association has awarded a $10,000 grant for a project focusing on a genetic trait close to a breeder's heart: performance. The grant will support work by Tufts veterinary researcher Acacia Alcivar-Warren, who is investigating equine mitochondrial DNA (mtDNA)—the genes of cells' energy-producing components. She intends to construct mtDNA database libraries of Thoroughbred, Arabian, and Belgian horse breeds, on the hypothesis that mtDNA polymorphisms within these breeds may correlate to their performance on the track. If her hunch is right, the research may shake up the racehorse community. Mitochondria are passed down only by the mother, yet breeders have for centuries focused on stallions and often do not even bother recording the lineage of mares.

The funding may seem tiny, but it is a big turnaround for the breeding community, notes Tufts horse researcher Robert Cook. He says breeders have been reluctant to support equine genetics research and admit that their sires are passing along serious genetic diseases. Plans for an equine genome project, for example, fell apart last year when researchers from Tufts, MIT, and Harvard were unable to get funding for their work.