

Briefings

edited by DAVID P. HAMILTON

Science Misconduct Legalese Thickens

Now embroiled in a court battle over the way they investigate allegations of scientific misconduct (*Science*, 3 August 1990, p. 471), officials at the National Institutes of Health are putting together a legal defense that may go a long way toward answering critics who claim the agency's Office of Scientific Integrity (OSI) fails to treat the targets of its investigations fairly.

The present suit involves neurologist James Abbs of the University of Wisconsin, whose essential complaint is that OSI rules do not permit him either to confront his accusers or to appeal a judgment of misconduct, unless NIH debars him from receiving federal funding. Thus, his reputation could suffer "irreparable harm" in the absence of what he views as due process. Legally, the basis of Abbs' claim is that his stake in his good name is a "liberty interest" which must be afforded due process protection under the Fifth Amendment to the U.S. Constitution.

NIH attorneys deny that Abbs' reputation is a liberty interest, citing legal precedents in which only employment—not the more nebulous concept of reputation—is constitutionally protected. They add that neither Abbs' position with the University of Wisconsin nor his NIH funding have been threatened by the investigation's progress to date, and that in fact his research grant was recently renewed. Furthermore, these attorneys point out in court papers that Abbs' case is well known (he has publicly replied to two letters questioning his research in the journal *Neurology*), so his reputation could already have been damaged even if OSI was not investigating him.

As far as due process is concerned, NIH's defense team says that OSI procedures—in which suspects get no formal hearing but can provide testimony and evidence to OSI and respond in writing to OSI findings—are adequate. Based on precedent, "[a] hearing on written materials can be enough to satisfy the due process clause," the NIH legal brief states.

Perhaps most interesting, however, is NIH's claim that its sanctions "are not meant to and generally do not irreparably injure a scientist's ability to continue conducting research." For instance, NIH might impose oversight or supervision on a researcher's work that would permit the scientist to continue receiving federal funds while ensuring that such money is not abused, the court papers state.

New Director for Canadian Science

The Science Council of Canada has appointed as its new director Janet E. Halliwell, who is currently director for research grants at the National Sciences and Engineering Research Council.



Trading clout for "influence." Janet Halliwell, new Canadian science director.

Created in 1966, the council is an advisory agency on science and technology policy and serves as liaison among government, industry, and academia.

Halliwell has been responsible for the allocation of the bulk of basic research in Canadian universities, some \$240 million a year. Now she will be presiding over a budget that is tiny by comparison—\$3.3 million—and that has shrunk from \$5.2 million in the mid-1980s.

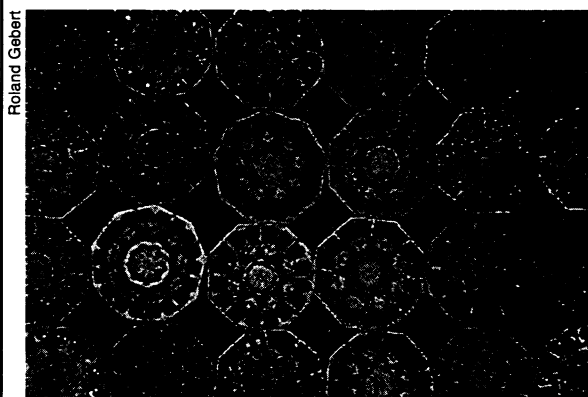
But Halliwell explains that her new position, in which she'll give public advice on science and technology issues to the government, is much more visible and influential. It includes membership on the National Advisory Board for Science and

Technology, which provides the government with confidential science advice. She will also be an associate member of the research council.

Biologists Madly Fax A Cool New Journal

Forget *Science*. Forget *Nature*. Definitely forget *Cell*. There's a new journal out there for folks who are in the know, and man, is it *Cool*.

Doubts about *Cool*'s admission to the ranks of first-rate life science journals are unwarranted. Its first issue features a cover on "How genes should work." Inside, one finds minireviews on "Cell-cell-cell-cell interactions in development: An astonishingly clever insight" and "Motifs as messages from our maker." Check out the articles "TFIID is not essential for transcription in any cell type," by a Big, Hot Lab, and "TFIID is essential for transcription in all cell types," by Their Rivals. And the Tübingen mafia's discovery of "*tushi*: A new gene expressed in *Drosophila* posterior segments" shouldn't be missed.



Roland Gebert



Eric Erbe

Universes in a grain of sand. Photomicrographs aren't just utilitarian records of the often ephemeral images appearing under researchers' microscopes—they're also sometimes strikingly beautiful images. This year, Polaroid's annual International Instant Photomicrography competition, in which entries are judged on both technical expertise and artistic merit, drew nearly 600 entries, two of which are reproduced here. On the left, the grand-prize winner—cross-sections of beechwood leaves at 16x magnification by Roland Gebert of ETH-Zentrum in Zurich, Switzerland. On the right, the first-prize winner in electron photomicrography—two entangled hair cells on the lower surface of a pinto bean leaf at 2000x magnification by Eric Erbe of the U.S. Agricultural Research Service in Beltsville, Maryland.

As if that weren't enough, the journal also presents four extremely hot papers on life promoting factor (LPF), in which the substance is isolated; proven to be expressed in all living things; found necessary for transcription, translation, and retrograde transport from Golgi to ER; and then identified. Research just doesn't get any cooler than this.

Cool will only publish articles deemed "astonishingly cool beyond belief." Authors are advised to include "a very cool model, whether or not the data support it," and to organize articles with the "informative stuff" left for the fine print at the end, "so that no one has to feel guilty not reading it."

All the rage among molecular biologists, *Cool* is edited by Head Cheese Ben and European Cheese Peter, along with 62 familiar-sounding Cool Dudes—Richard, Welcome, James, Jeremy, and so forth. *Cool* is not available on newsstands or from Cell Press; it's possibly the world's first fax journal. Get a biologist to zap you a copy today. We're not making this stuff up, you know.

University Bars Pioneer Grants

Buffeted by a perceived increase in racial tensions over the last several years, some U.S. universities have banned racially offensive speech in an attempt to improve the academic climate for minority students. In April, the University of Delaware took that logic one step further and announced that it "will neither seek nor accept further financial support" from the Pioneer Fund, a private New York foundation, because the university feels Pioneer supports research that could undermine affirmative action programs.

The unusual action is the culmination of a campus furor that erupted last November after William Frawley, a linguistics professor, demanded an investigation of Pioneer grants

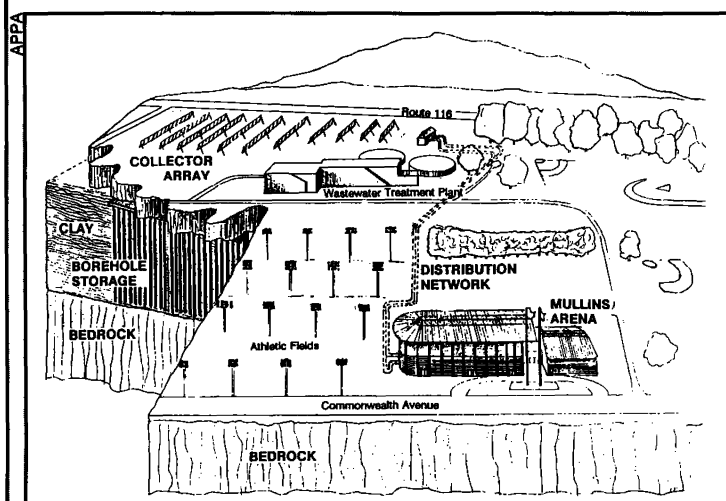
The first major U.S. "solar seasonal storage system" is currently being planned by engineers at the University of Massachusetts in Amherst. Six acres of solar collectors will heat water that is then pumped through a network of pipes buried in a 100-foot-deep clay deposit near the campus. In the summer, the clay does nothing more than absorb excess heat: the piped water will supply all the

heating and hot water needs for a new sports arena and gym to be constructed in 1992. But throughout the winter, the clay will remain hot enough to maintain the water at 140° F.

Solar storage systems, which can also store heat in bedrock or bodies of water, can be as much as 85% efficient, according to University of Massachusetts engineer J. Edward Sunderland. About

30 have already been built in Europe, where they serve large installations such as residential complexes. But in the United States, says Sunderland, "The federal government has a very backward program in alternative energy systems."

Now, however, thanks to an amendment to its appropriations bill introduced by Representative Sylvio Conte (R-MA), the Department of Energy may kick in \$400,000 toward the \$3-million project. The university also hopes to get utility companies interested in participating in the project and in building their own systems.



Let the sun shine in. Solar storage will heat UM sports arena.

totaling \$174,000 to Delaware education professor Linda S. Gottfredson. Gottfredson, who does research on ability testing, contends that genetic factors may help explain differences in achievement between blacks and whites.

After a 5-month investigation, a faculty committee recommended that the university refuse further Pioneer grants, concluding that whether or not the fund actually supports racist research, that is how it is "perceived" by many faculty, staff, and students.

The university said the ban is in effect as long as the fund remains committed to "a pattern of activities incompatible with the university's mission." Contending that its decision has nothing to do with free speech, the university says it "has a right to set its own priorities for support of scholarly activity." Gottfredson has countered that the action will have a "chilling effect" on scholarship. "My fear is that the drive for cultural diversity will actually enforce

intellectual orthodoxy."

Will other universities take Delaware's action as a precedent? "We hear that several universities are thinking of enacting similar regulations," says Michael Greve, executive director of the Center for Individual Rights, which is representing Gottfredson in binding arbitration with the university.

Another Temperature Record...Rises

Less than 2 months after setting a world record for critical temperature in an organic superconductor (*Science*, 27 July, p. 365), a team led by chemist Jack Williams of the Argonne National Laboratory has done it again. His laboratory's latest compound, $\kappa\text{-(ET)}_2\text{Cu}[\text{N}(\text{CN})_2]\text{Cl}$, loses its electrical resistance at 12.8 K—more than a full degree higher than the old record.

Researchers working with organic superconductors have previously used pressures of up

to 12,000 atmospheres to suppress a low-temperature magnetic effect that increases the material's resistance. But Williams' team—which includes Aravinda Kini, Hau Wang, K. Douglas Carlson, Urs Geiser, and W. K. Kwok of Argonne, J. E. Schirber of Sandia National Laboratories, and Myung-Hwan Whangbo of North Carolina State University—achieved its latest result at the comparatively low pressure of around 300 atmospheres. How is this possible? "That's what we're trying to figure out," says Williams.

The pressure puzzle isn't the only mystery Williams and his colleagues have to unravel. As discussed in the 5 September issue of *Inorganic Chemistry*, their previous record was based on a nearly identical compound. The only difference: a bromine atom in place of the chlorine atom. But previous models predict that substituting a chlorine atom would lower the material's critical temperature, not increase it.