Briefings

edited by CONSTANCE HOLDEN

Treating AIDS With Worts

The first clinical trial of a new anti-AIDS drug derived from the plant genus *Hypericum* (better known as Saint-John's Wort) has been started by Fred T. Valentine and Howard Hochster, researchers at New York University Medical Center. The trial will involve about two dozen patients, and is designed to test the safety of the drug. Laboratory tests suggest it will be a useful adjunct to available therapies.

Preclinical research at NYU has shown that the drug, hypericin, can prevent uninfected T-cells from being infected with the AIDS virus in cell culture (*Science*, 21 April 1989, p. 287). Hypericin is a virucidal agent, meaning it can precisely target new virus particles and prevent them from infecting other cells. The only two drugs currently approved for treating HIV infection—AZT and ddI—work by interfering with the key viral enzyme, reverse transcriptase. Since hypericin does not appear to affect reverse transcriptase, and animal tests show that it has low toxicity at therapeutic doses, researchers hope it will not only work on its own, but also have a synergistic effect when taken with either of those drugs.

Hypericin was originally synthesized at the Weizmann Institute of Science in Rehovot, Israel. It is being manufactured by VIMRx Pharmaceuticals, Inc. of Stamford, Connecticut.

Genetic Bill Vetoed

California won't be getting the nation's most far-reaching law prohibiting genetic discrimination after all: Although the state legislature passed the measure by a large margin, Governor Pete Wilson vetoed it on 14 October.

The bill would have amended existing civil rights laws to outlaw discrimination on the basis of "genetic characteristics" (*Science*, 27 September 1991, p. 1484). It would also have imposed an 8-year moratorium on the use of genetic test results by health insurers and limit the use of such information in life and disability insurance.

Wilson, a Republican, said he supported the insurance provisions, as they would encourage people to take genetic tests needed to make important personal decisions. But he balked at expanding the civil rights laws, essentially because doing so would increase the cost of doing business. Wilson told the legislature that the bill represented "a remedy for a problem whose nature and magnitude are not yet sufficiently defined. Employers fearful of exorbitant health care costs should not be regarded as bigots to be prosecuted." An aide to the bill's sponsor, Lloyd Connelly, says Connelly will probably introduce a new version of the bill that addresses just the insurance issue.

Fish Research Stock in Jeopardy

Is it yet another case of Small Science being driven out by Big? The Small Science in question is not only quite small but also fishy: swordtails and platyfish, which provide models for research into tumor formation and sexual behaviors. For half a century the New York Aquarium has maintained a stock center for these fish, which are of the genus *Xiphopherous*. The center, which currently has 10,000 fish and 62 strains, is the main source of *Xiphopherous* specimens for U.S. researchers.

But earlier this year, the aquarium announced that it was closing down the center at the end of the year. The aquarium, run by the New York Zoological Society, has been retrenching on its research activities for some years for budgetary reasons. Now, the fish may go to another institution or be dispersed to labs around the country. If the latter occurs, says geneticist Don Morizot of the University of Texas Cancer Research Center in Smithville, it will spell "the demise of the system in the long term."

Morizot says that although the facility is "the Jackson Lab of *Xiphopherous*," it's hard these days to find support for such colonies "if they aren't rats or mice." Perpetuation of small, specialized stocks is chancy in the absence of a "major institutional commitment." The stock center is indeed small: It has been run by 63-year-old fish geneticist Klauss Kallman with the aid of a single technician. Kallman, who has been forced to retire, has been supplying about 26 labs a year with platyfish and swordtails, which are among the small handful of fish species that are major sources of biomedical models. The fish, which Kallman says are the "best investigated" vertebrates after mice and men, are used for the study of the evolution of sexual behavior as well as genetically controlled tumors and aging.

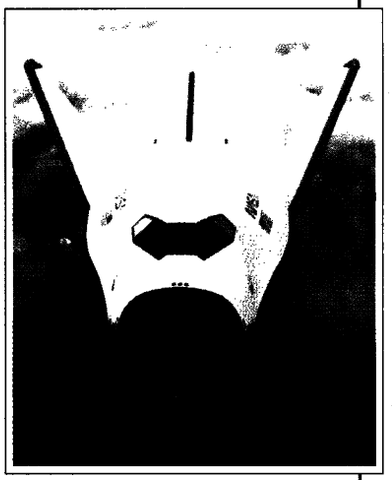
Although the facility lost NIH support in 1987 because it didn't have enough customers (NIH required at least 50), Kallman says research on *Xiphopherous* is a "very, very active field"—witness the fact that the Germans plan to put fish on the space shuttle so they can study their endocrinology and bone formation.

Selling Shares in the SSC?

U.S. science officials have tried many different ways of inducing the Japanese to kick in big bucks for the Superconducting Super Collider (SSC). For the past couple of weeks, White House and Department of Energy (DOE) science types have been in Tokyo to offer the Japanese a new inducement: a management role in the supercollider. In essence, they told the government that if it antes up $1 billion toward the SSC, it will get a substantial role in managing the $8.25-billion accelerator.

But it's far from clear exactly what the Japanese are actually being offered. Last month, presidential science adviser D. Allan Bromley told the newsletter *Science and Government Report* that the U.S. would offer Japan an "equity stake" in the SSC—something akin to selling shares of stock in the

Commuter Shuttle



Although NASA pours nearly $3 billion a year into space shuttle operations, its temperamental fleet has a poor record for reaching orbit on schedule. Scrambling for more time in space per buck, NASA thinks it's found an answer: a Yugo-sized shuttle called the Personnel Launch System. About a quarter of the size of the space shuttle, it would transport 10 people (but not much more luggage than their toothbrushes) to and from low earth orbit. The wee shuttle's main tasks would be to rotate space station crews, service orbiting satellites, and make emergency rescues. The Lockheed Advanced Development Company in Burbank, California, has received $1.67 million from NASA to conduct a feasibility study. "This could be the people-moving part of the new National Launch System NASA and the Air Force are planning," says program manager Dave Urie of Lockheed. But don't pack your toothbrush yet: Congress cut nearly all money for the advanced launch system earlier this month.

laboratory enterprise. Bromley added that under this arrangement the Japanese would also be responsible for some of the SSC's operating costs.

But William Happer Jr., the new director of DOE's Office of Energy Research, gave *Science* a different version of the proposal before he left for Japan. He said any management control ceded to Japan would "not be like equity ownership in a corporation." Rather, he said, DOE wanted to follow the model of Europe's nuclear laboratory CERN, which is jointly owned by its 16 member states. But that's not the end of the matter, either, since SSC director Roy Schwitters rejects Happer's version, noting that the United States would still hold sole title to the SSC. Japan would merely gain several seats on its board of directors.

All these competing models may turn out to be beside the point if Japan decides instead to contribute to an SSC rival, the Large Hadron Collider (LHC) at CERN. There have been informal discussions of that idea between CERN and Japan, and last summer a Japanese newspaper quoted a Ministry of Education official as saying that Japan has "no reason" to contribute to the SSC when the LHC represents a satisfactory compromise.

Packard Fellowships

Almost everything in life is subject to fads, and private foundation support for science is no exception: Many foundations these days are targeting young investigators (see *Science*, 13 September, p. 1200). In one of the latest and largest examples of foundation largesse, 20 young scientists and engineers have been named as recipients of the half-million-dollar Packard Awards from the David and Lucille Packard Foundation of Los Altos, California. That program, begun in 1988, is billed as the nation's largest program of unrestricted grants to young university researchers.

The recipients, from 20 different schools, range in age from 25 to 36. Their fellowships provide 5 years of research support, at $100,000 a year. The awards are concentrated in the physical sciences and engineering, with only three in biology. Somewhat surprisingly, in this age of affirmative action, only two of the 20 are women: Brenda L. Bass, biochemist at the University of Utah, and chemical engineer T. Kyle Vanderlick, of the University of Pennsylvania.

Mt. Wilson Staves off Interference

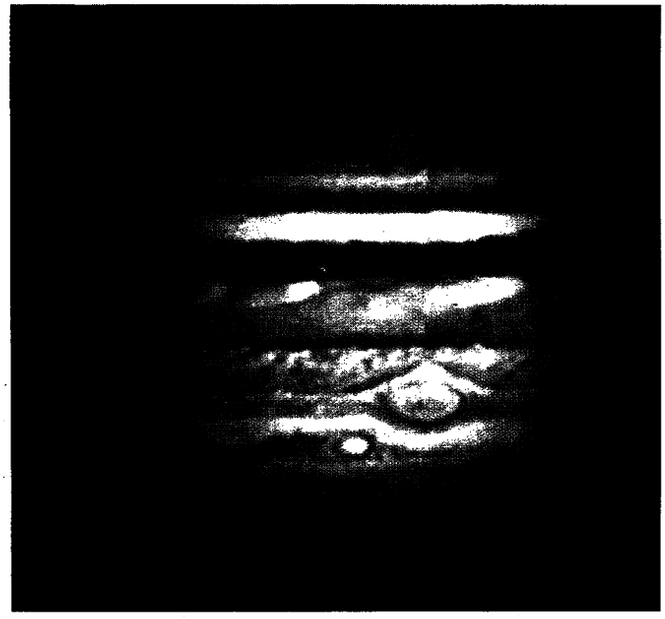
Astronomers at Mount Wilson Observatory in Pasadena, California are breathing a little easier these days. For 2 years they have lived in fear that signals from the stars would soon be drowned out by radio and TV broadcasts pouring from transmission towers under construction half a mile from the observatory. As planned, the broadcasts would have been powerful enough to interfere with instruments that measure cosmic electromagnetic radiation. The consequences were not trivial: Most research at the observatory would have been crippled, if not terminated, says Sallie Baliunas, chair of Mt. Wilson Institute's science advisory council.

But the skies are clearing as the result of some quick legal footwork. The Southern California Site Facilities, Inc. (SCSF), owners of the broadcast towers, have agreed to limit the power of signals aimed toward Mt. Wilson to less than 300,000 watts, and to shield tower lights from the observatory. "We could have sought an injunction if we had to," says lawyer Patricia Ostiller, whose firm negotiated for free for the scientists. But no litigation was necessary.

When Mt. Wilson officials signed the compromise agreement on 28 August, they joined a handful of other astronomers who have succeeded in protecting their telescopes' radio space from earthly interference (see *Science*, 15 March, p. 1316). The research done on Mt. Wilson could have been performed elsewhere, says Robert Jastrow, director of Mt. Wilson Institute; but with many observatories already booked years in advance and little money available for new telescope construction, the loss of Mt. Wilson, with its $50 million worth of specialized equipment, would have been "devastating," he says.

By Jove, It Works

Just to show that the Hubble Space Telescope can take striking pictures of planets as well as stars and galaxies, NASA has released this image, snapped last May, of the solar system's largest planet. The Voyager spacecraft took far more detailed images of Jupiter, but couldn't stick around to decipher why winds marked by different chemical compounds arrange themselves in belts and in vortices such as the Great Red Spot. The spot appears in yellow in the lower right quadrant of the picture.



NASA AND ESA

Microbiologists Look at Biowarfare

For 25 years, the American Society for Microbiology has adopted an ostrich-like posture toward biological warfare. It disbanded an advisory committee on the subject in the early 1960s because violent disagreements over whether and how microbiologists should cooperate with the government's biological weapons program persuaded researchers the subject was too hot to handle. Since then, nary a session has been devoted to the topic at the society's mammoth annual meetings.

But thanks to Iraq's Saddam Hussein, that has changed. This month, at the society's annual meeting in Chicago, a 3-hour symposium on biological warfare drew a crowd of more than 1000, and the society now intends to take a role in discussions of the subject. Saddam "jolted the society back to reality," said James A. Poupard of SmithKline Beecham Pharmaceuticals in King of Prussia, Pennsylvania. "Biological warfare was the single most devastating threat of the [Gulf] war."

The society plans to include coverage of biological warfare in its newsletter; presentations on the topic at future meetings will be welcomed, and the Public and Scientific Affairs Committee may address whether the Department of Defense's biological warfare program—now entirely oriented to defenses against biological agents—should be transferred to the Department of Health and Human Services.