SCIENCESCOPE

edited by RICHARD STONE

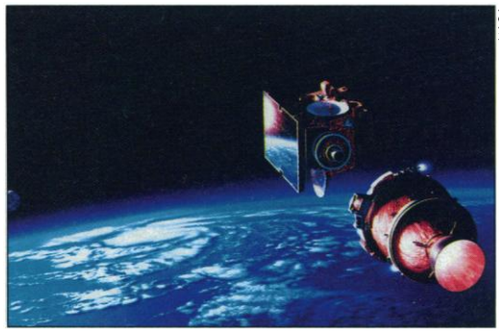
Mars Observer: Phone Home!

The potential loss of the Mars Observer, a $400 million spacecraft that was expected to begin orbiting Mars earlier this week when it lost contact with its keepers, could weaken the ability of the National Aeronautics and Space Administration (NASA) to woo funding from Congress and hamper a planned Russian mission to the red planet.

As of 5:00 P.M. (eastern daylight time) on 24 August, NASA had gone nearly 72 hours without hearing a peep from Observer. NASA lost contact with the spacecraft on 21 August, a day after ground control had sent commands that would allow it to enter orbit around Mars even if no further commands were sent. Observer did not reestablish contact after a planned temporary shutdown of its transmitter that evening.

That left scientists at the Martin Marietta plant that made Observer and those at NASA's Jet Propulsion Laboratory, which operates it, furiously running error simulations and peppering the spacecraft with commands to fix potential problems. At press time, however, their efforts apparently had been to no avail.

NASA's credibility could be damaged if it can't regain control of Observer. According to Steve Aftergood of the Federation of American Scientists, a failed mission may threaten Space Station Freedom, which the Senate must decide whether to fund after it returns from vacation next month. In addition, a Russian mission scheduled for launch in 1994, which would land instruments on Mars, had planned to use Observer as a data relay.



NASA

Mars Observer. No news is bad news for NASA.

Short-Term NIH Grants Face Uncertain Future

One issue incoming National Institutes of Health (NIH) Director Harold Varmus must resolve when he arrives on the campus this fall is the fate of a popular grant program, called the Shannon Awards, designed to give worthy but unfunded investigators a pittance to keep their labs going until they can reapply for a regular-sized grant.

Former NIH director Bernadine Healy launched the awards (named after former NIH director James Shannon) because large grants to established scientists, coupled with a slowly rising budget, were increasingly freezing out new investigators with bright ideas. In 3 years NIH has made nearly 1000 Shannon awards, which Healy designed as a stop-gap measure. But NIH's financial problems have lingered, and this fall NIH will have less money for Shannon awards even as an internal analysis of the program has determined it's doing exactly what Healy intended.

The report found that 65% of the Shannons' freshman class had received regular NIH grants within a year of receiving an award, compared with 38% of scientists who were nominated for (but failed to get) Shannons, and about 50% of those never considered for a grant. The report concludes "the Shannon Award concept...should be strongly endorsed and institutionalized in its current format or perhaps as a set-aside for innovative/risky applications."

The original grants came from a $30 million discretionary fund controlled by the NIH director. In 1994, however, no funds will be available for that purpose, says Wendy Baldwin, NIH's acting deputy director for extramural research, and individual institutes have budgeted only $10 million.

The True Cost of a Free AIDS Vaccine

Last week, MicroGeneSys announced it would donate its experimental therapeutic AIDS vaccine to the Department of Defense (DOD) for a large-scale clinical trial of the product. But a closer look shows the company wasn't much more amenable to the wishes of DOD than to the Department of Health and Human Services (HHS), which scuttled plans to run a trial that would test several potential vaccines.

The latest twist in the saga, which began last fall when Congress appropriated $20 million to DOD to test MicroGeneSys's vaccine, emerges from letters between HHS general counsel Harriet Rabb and DOD lawyers. According to a 20 August fax, Rabb writes, a DOD lawyer informed her the military has "reluctantly agreed to begin the proposed 3-year trial" even though it failed to persuade MicroGeneSys "to donate the amount of vaccine needed." Instead, the company's partner, Wyeth-Ayerst Laboratories, agreed to provide free vaccine for a year; a spokesman told *Science* DOD would "pursue a purchase" if 1-year results look "positive" and Wyeth-Ayerst fails to extend its donation.

As Rabb reminds DOD, HHS refused to conduct the trial because "MicroGeneSys was demanding $10 million" for its gp160 vaccine.

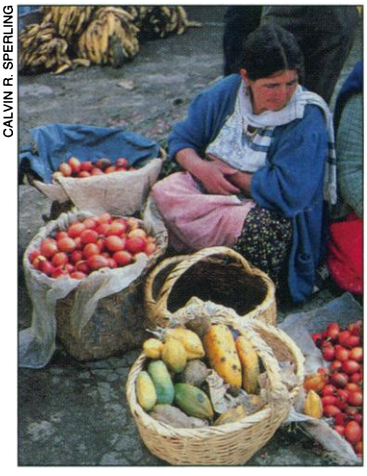
MicroGeneSys president Franklin Volvovitz says the push for a multi-product trial is "a smokescreen" that "would delay getting an answer" to the gp160 vaccine's efficacy. MicroGeneSys expects the single-product trial to begin in early 1994, but one HHS insider hints that the White House may soon renew the call for a multi-product trial.

Plant Genes: Must Firms Pay to Play?

A barley gene imported for free from Ethiopia protects the $160 million U.S. barley crop from the yellow dwarf virus. But now looms a potentially bigger blight on the economic health of barley and other crops: a proposal requiring countries to pay royalties for plant genetic materials (PGM) used to create commercial varieties.

International agriculture officials have struggled for a decade as to whether Western countries should pay royalties on PGMs, which germ plasm banks have provided for free. But developing countries have stepped up demands for such royalties, says Henry Shands, the U.S. Department of Agriculture's genetic resources director, in the wake of the Biodiversity Treaty, which mandates better protection—and remuneration—for biological resources. Canadian officials are expected to broach the matter when delegates meet in Geneva in October to discuss how to implement the treaty.

Shands and others worry that PGM royalties could curtail creation of new crop varieties. For example, Shands says, seed companies often combine traits to create a cultivar. If each trait's country of origin were to charge a 5% royalty, Shands argues, "you can get to the point where the sum is greater than the whole."



CALVIN R. SPERLING

Ecuadorian exotica. Should countries charge for plant genes?