SCIENCESCOPE

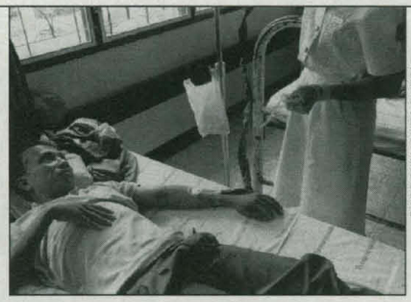
edited by JOCELYN KAISER

UNAIDS to Weigh Vaccine Ethics

The United Nations' AIDS program, UNAIDS, next week plans to hold a closed meeting in Geneva that will begin to sort out thorny new questions about the ethics of conducting HIV vaccine trials.

A similar ethical dilemma is also broached in this week's *New England Journal of Medicine (NEJM)*: whether anti-HIV drugs considered to be the standard of care in the developed world should be offered to people in developing countries who take part in clinical trials. In a main article, Peter Lurie and Sidney Wolfe of the advocacy organization Public Citizen's Health Research Group focus on several trials around the world comparing a placebo to various regimens of the anti-HIV drug AZT to reduce transmission of HIV from an infected, pregnant mother to her child. The trials aim to test regimens that would be more affordable in poor countries.

But Lurie and Wolfe—and *NEJM* editor Marcia Angell in an accompanying editorial—contend that because research has already proven that intensive treatment with AZT can reduce transmission by nearly 70%, these trials are unethical.



DARROW MONTGOMERY

Tough questions. AIDS patient in Thailand, one country slated for vaccine trials.

The issue is also critical to AIDS vaccine trials, because ethics require that people who become infected during a trial be offered the best available treatment. Yet if everyone in a vaccine trial who becomes infected is offered potent anti-HIV drugs, it makes it extremely difficult—if not impossible—to detect whether the vaccine can delay or prevent disease. The Albert Einstein College of Medicine's Barry Bloom, head of the UNAIDS vaccine subcommittee, made this point at a congressional hearing last spring. And some researchers argue that it is ethically acceptable to use placebos to test treatments in countries where the new HIV treatments are not available.

At the UNAIDS subcommittee meeting, set for 23 and 24 September, the panel will discuss "a framework to formulate these questions, and after a period of consultation try to come to some global consensus that protects everybody's rights," says Bloom. Public Citizen's Lurie maintains there should only be one standard of care, but says, "agreeably, it's a difficult situation." Bloom hopes UNAIDS will hold an open meeting on the issue next spring.

The Good, the Bad, and the Delayed

The space science business is so brisk at NASA (*Science*, 12 September, p. 1596) that you need a scorecard to tell whether the agency is having a good day. This week the tally ranges from one mission that hit its target, to one heading to oblivion, to one that just keeps on going.

Mars Surveyor glided smoothly into orbit around that planet last week and promises to reveal in coming days whether Mars has its own magnetic field before starting a mapping mission. Meanwhile, time is running out for the crippled, 4-week-old Lewis spacecraft, which is due to reenter Earth's atmosphere and burn up as early as 23 September. It spun out of control last month, and engineers have been unable to reestablish contact with the $71 million remote-sensing mission.

For Cassini, the huge spacecraft to study Saturn and its rings and moons, a problem with the Huygens Titan probe looks to be minor, and NASA hopes to launch by mid-October, a week or so later than originally planned. But Lunar Prospector, a low-cost mission to study the moon's surface, faces a 2-month delay because its launcher isn't ready for a 24 September takeoff.

Finally, the Mars Sojourner rover is turning out to be NASA's Energizer bunny. Designed to last a week, it's now into its third month of operation, with solar panels powering its wanderings.

FDA Reform Proposals Spare Research

The research activities of the Food and Drug Administration (FDA) would remain relatively intact under legislation moving rapidly through Congress to speed up drug and medical device reviews at the agency. But some observers say the victory is marred by an earlier FDA decision to trim research slots financed by the agency's user fees.

Last year the House had proposed limiting FDA to research related to its regulatory mission. But that wording is gone from a draft bill unveiled last week by the Commerce Committee and due for markup this week. In fact, proposals before both the House and the Senate—which was to vote on an FDA reform bill this week—are "very noncontroversial," says Marguerite Donoghue, a lobbyist for a coalition of biomedical interest groups.

This year's bills have dropped requirements that the agency contract out drug reviews unless it can meet tight deadlines. Instead, third-party reviews are required only for less risky devices. But the bills include drug company–backed provisions to provide fast-track reviews for lifesaving drugs, to allow as few as one clinical trial, and to encourage closer collaboration between companies and FDA on clinical trial design.

One reason FDA research may have been spared, observers say, is that it's already targeted in a portion of the bills to renew FDA's popular "user-fee" law, which expires 1 October. In talks with drug companies last winter, FDA agreed to use the fees only for reviewers, which means nearly 100 research positions may be cut at FDA's biologics center (*Science*, 14 February, p. 915). "I heard it was the price of peace," says Stanford pathologist David Korn, who chaired a panel earlier this year that found FDA needs a strong in-house research program. The cutback, he adds, "certainly is not going to be helpful."

Canada to Launch Nanotechnology Center

University of Toronto researchers are embarking on a new approach to making "nanodevices" as part of a privately funded center to be unveiled this month. It will be North America's first center devoted to making quantum-level microelectronic devices by moving single atoms with a probe, rather than by modifying sheets of atoms using lithography.

"It's a more challenging form, and it has potential to do things on a smaller scale than anything else that has been done," says Dustin Carr of Cornell University's nanofabrication facility, where earlier this year he created a silicon "nanoguitar" using lithographic techniques. Applications for the probe-based nanotechnology "haven't really been demonstrated yet," Carr adds.

The new facility is funded through a $5 million contribution from a Toronto-based research firm known as Energenius. The company and the University of Toronto will also contribute $1 million each to endow a chair in nanotechnology for Harry Ruda, head of the university's electronic materials group.

The center's research program will be developed by a joint university-industry advisory committee that will provide advice on how to integrate nanotechnology with conventional technology and potential applications in such areas as robotics and computing.