Seventh AIDS Conference: Mostly "Fine Tuning"

There were small advances, particularly in vaccines, but few blockbusters at the annual gathering of AIDS researchers

FLORENCE, ITALY—"SCIENCE CHALLENGING AIDS" was the slogan of the Seventh International Conference on AIDS held here from 16 to 21 June, but judging from the papers presented to the 9000 attendees, the meeting should have been billed with the less upbeat—but more realistic—slogan "AIDS Challenging Science."

In the first plenary session, the World Health Organization's (WHO) chief epidemiologist said the rate of HIV-infection in the United States and Western Europe probably peaked in the mid-1980s. That's good news. In the developing world, however, which is far less equipped to cope with the epidemic, HIV threatens to sabotage expected improvements in infant mortality and life expectancy, WHO's James Chin warned.

And nothing offered at the meeting's scientific sessions suggested science has any immediate way of reversing those threatening trends. Indeed, the message from the basic science at the meeting was that research is still "fine-tuning" its picture of how HIV works—through small but significant advances in key areas.

One area of such fine-tuning is the question of which cells are HIV's favorite targets. Cecilia Graziosi of the National Institute of Allergy and Infectious Diseases presented evidence that the tissues of the lymphatic system may be a "major reservoir" of HIV. In seven patients, Graziosi found that more CD4 cells (one of the main types of white blood cell infected by HIV) were infected in lymphoid tissue than in the blood. The finding might help explain why people with little HIV in cells circulating in the blood can still have profoundly compromised immune systems.

Another significant reservoir of HIV may be the rare white blood cells called dendritic cells, said Erik Langhoff of Boston's Dana-Farber Cancer Institute. Langhoff's data show that dendritic cells are at least tenfold more sensitive to infection by HIV than CD4 cells or macrophages (a second immune system cell that is one of HIV's preferred targets).

Fine tuning also is proceeding in vaccine development. Perhaps the most impressive vaccine news presented at Florence was offered by Shiu-Lok Hu of Oncogen/Bristol-Myers Squibb. Hu immunized four monkeys with live vaccinia virus genetically engineered to express the envelope protein gp160 from SIV, the simian relative of HIV. After the initial immunization, Hu "boosted" the monkeys with recombinant gp160 mixed with an additive called an adjuvant. The vaccine completely protected the immunized monkeys from infection, while the controls all became infected—the most striking success a genetically engineered SIV vaccine has ever had. Vanderbilt University's Barney Graham reported encouraging results in a phase I human trial using two HIV vaccines in a similar protocol.

AP/Wide World

Besieged by the press. *Daniel Zagury*

Far more controversial among the vaccine presenters was Daniel Zagury. Even as the meeting was in progress, it was announced that the French government had ordered Zagury, of the Pierre and Marie Curie University, to stop tests on a vaccinia virus-based HIV vaccine after three patients with AIDS who had been added to the trial on a "compassionate care" basis had died (see *Science*, 21 June, p. 1608). But Zagury appeared sanguine about the flap, saying he had already stopped trials of that vaccine. Instead, in Florence he described a new vaccine he has been testing in six HIV-infected people for the past year. In a brief talk, Zagury claimed that since receiving the vaccine therapy, the patients all had a rise in crucial CD4 cells (one patient's count rose from 476 to 1020) and showed some restored cell-mediated immunity.

The oddest component of Zagury's new vaccine is alpha interferon. Zagury believes HIV-infected people have too many "cytostatic" factors, such as alpha interferon, that signal the body to stop producing new immune system cells, a process that occurs naturally after an infectious agent is defeated. By giving biologically inactivated—but still immunogenic—alpha interferon along with more traditional vaccine components, Zagury hopes to keep the cytostatic system in check. His talk was greeted with skepticism, not merely because of the alpha interferon theory but because his experiment does not include a group of untreated controls.

New drug development was an area that aroused far less controversy in Florence—partly because precious few new drugs were described. There was, however, one intriguing presentation concerning a derivative of the drug known as TIBO. The derivative, R 82913, which inhibits the reverse transcriptase enzyme that HIV needs to replicate, was developed by Belgium's Erik DeClerq with the Janssen Pharmaceutical Co.; it is showing promise in a small human study conducted by London's Kobler Institute.

Do such slender reeds justify a huge annual gathering of AIDS researchers? Many AIDS researchers have long thought the answer is no. And in Florence it was announced that the annual meeting is on the way out—to be replaced by a biannual conference. But, at least for next year, such questions could be moot if the U.S. government doesn't change its immigration policy.

Organizers of the 1992 conference, scheduled for Boston, have said that the ban on HIV-infected people immigrating to or even traveling in the United States must be retracted before 3 August or they will cancel next year's meeting. At this year's meeting, Max Essex, who will chair the conference next year, was caught in a crossfire. Activists were angered when Essex seemed to hold out the possibility that the Boston meeting could be held if the travel restrictions were lifted but the immigration ban remained.

At the closing ceremonies, however, Essex agreed to cancel the meeting unless both the immigration and travel parts of the policy were changed. Essex said he and his staff would "work tirelessly during the next month and a half to bring our government to its senses." But, he added, he was "not hopeful that there will be a conference" in 1992.

If not, the next get-together will be in 1993 in Berlin. The 1994 gathering would be held in Japan, and after that the International AIDS Society, which cosponsors the event, has decided the conferences will take place only every other year. ■ JON COHEN

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