

## Medical News

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### **From the Ninth International AIDS Conference. Berlin, Germany, June 6-11, 1993**

#### ***New Findings***

The discovery that cells infected with human herpesvirus type 7 (HHV-7) may block infection with HIV was announced by Dr. Robert Gallo of the U.S. National Cancer Institute (NCI) during his invited address at a special session of the Ninth International Conference on AIDS held in Berlin, Germany, June 6-11, 1993. HHV-7 apparently is a harmless virus that enters cells by the same route as HIV attaching to a molecule or receptor on the cell surface known as CD4. Gallo and his colleagues at NCI are trying to find the HHV-7 protein that blocks HIV infection. Once identified, it may be possible to use recombinant genetic techniques to mass produce enough of the protein for safety studies in animals.

Gallo also described research that he is conducting with French scientist Dr. Daniel Zagury in which they have shown that HIV not only infects activated T lymphocytes, but also infects resting cells, which may be the primary target for HIV. They also have found that HIV can remain in resting cells only in the presence of a cellular enzyme known as ribonucleotide reductase. Hydroxyurea, a drug used to treat some forms of chronic leukemia, partially inhibits this enzyme and may become an important AIDS treatment.

Gallo also reported that he and his coworkers have evidence that Kaposi's sarcoma (KS) is caused not by immune deficiency, but by an HIV-induced cell protein called basic fibroblast growth factor (bFGF). Identification of this factor in the blood of people with HIV infection may help predict the onset of KS and the development of new drugs that block bFGF could result in a cure for KS.

#### ***Results of Study on AZT for Asymptomatic HIV Infection***

The results of the "Concorde study" conducted by researchers from Britain and France indicates that AZT (zidovudine) is of little clinical benefit to HIV infected people without symptoms. This study followed 1,800 asymptomatic individuals with HIV infection for three years. The effects of AZT were evaluated according to clinical symptoms rather than by rates of progression to AIDS, which was the basis of the major U.S. clinical trial conducted by the National Institute of Allergy and Infectious Disease (NIAID). The U.S. trial was stopped after about one year when preliminary results showed a benefit for patients receiving the drug compared to those receiving a placebo. The Concorde study showed an initial slowing of the decline in CD4 levels in patients receiving zidovudine, but the slowing of the decline in CD4 cells was not related to a clinical benefit and lasted only a year.

U.S. critics of the study charge that a change in the study design after a year into the clinical trial may have affected the results. The European investigators considered it unethical to withhold treatment for those who wanted to take it, and one third of the Concorde participants originally scheduled to take the placebo switched to taking the drug. The design of the Concorde study nevertheless evaluated them as if they had received the placebo. Concorde researchers argued that the change in the study design did not invalidate their findings.

At an American Medical Association (AMA) symposium on early HIV intervention, which preceded the Ninth International Conference on AIDS, physicians debated the clinical implications of the new data. Dr. Paul Volberding, director of the AIDS program at San Francisco General Hospital and principal investigator of a large trial of early AZT treatment, said, "The rationale behind early treatment includes lower toxicity rates, less chance of developing resistant virus, and

longer duration of benefits from the antiviral treatment. It is hoped that additional drugs or combinations of drugs will extend the benefits even further."

### **DDI and DDC Effective Therapy for HIV**

Didanosine (ddI) and zalcitabine (ddC) were found to be similar in their safety and effectiveness for patients who have side effects or who do not benefit from zidovudine (AZT). This study, reported by Dr. Donald Abrams of the University of California, San Francisco, was conducted at 78 sites affiliated with the U.S. National Institute of Allergy and Infectious Disease (NIAID). The 467 participants in the study were randomly assigned, 230 to receive ddI and 237 to receive ddC, in an "open label" study; that is, both the researchers and the patients knew which drug the patients were receiving.

There was no significant difference in progression of HIV or mortality between the patients receiving ddI and ddC. Two thirds of the patients receiving either drug had significant side effects. The major side effect in patients receiving ddC was an increase in neurological pain in the legs; patients receiving ddI reported an increase in diarrhea, pancreatitis, and abdominal pain.

When this study began in December 1990, ddI was the only antiretroviral drug approved by the U.S. Food and Drug Administration to be used by patients with AIDS who were unable to take zidovudine, and ddC has only been approved for use in combination with zidovudine, not as a single therapy. Dr. Abrams said that this study suggests that ddC alone is as good as ddI and both should be available as single-agent therapies.

### **Homeless Advocates Sue State for Failure to Control TB**

Efforts to halt the spread of tuberculosis among Chicago's homeless population have been inadequate according to a class-action suit filed against state, city, and county health officials by a group of homeless and other persons at high risk for being exposed to tuberculosis (TB). According to Laurene Heybach, the supervising attorney of Legal Assistance Foundations homeless project, who is representing the class members, "TB has reached epidemic proportions in Chicago's poorest neighborhoods because there are no effective programs to screen, report, and treat individuals who have contracted the disease. The homeless population are at an increased risk of TB because they often live in cramped shelters." The complaint charges that the city has conducted only limited diagnosis projects for homeless and intravenous drug users and that, for children at risk for

developing TB, screening has been nonexistent.

In a written statement, Chicago Commissioner of Health Sheila Lyne said that the city was battling TB on several fronts, with more than \$2 million in new federal funds earmarked to expand ongoing intervention programs for TB control. The programs include a computerized information system to link local TB service providers, a program to closely monitor patients' treatment, and a new shelter for homeless TB patients. The Chicago Department of Health already provides TB screening and treatment in a dozen homeless shelters and trains shelter managers to recognize TB symptoms, administer skin tests and make appropriate treatment referrals.

FROM: Moore v. Illinois Department of Public Health. Illinois Circuit Court, 93CH4312, May 10, 1993.

### **Courts Support Firing of Nurse Who Refused to Treat AIDS Patient**

The U.S. District Court in Alabama recently ruled that a pregnant nurse who refused to treat an AIDS patient is not protected by the Civil Rights Act because the hospital treated pregnant and nonpregnant employees equally. The pregnant nurse was employed by the homecare division of a hospital in Alabama to visit and treat patients in their homes. The nurse informed her supervisor that she should not treat one of her patients with AIDS because she was pregnant and concerned about opportunistic infections common in AIDS patients. The hospital policy allowed no exceptions to treating AIDS patients and did not allow reassignment of AIDS patients to other nurses. After the nurse refused to care for the patient and was fired, she then filed a suit with the Equal Employment Opportunity Commission, seeking damages for loss of employment and insurance coverage.

The court ruled that since the hospital's policy was clearly applied to nonpregnant nurses as well as pregnant nurses, it was nondiscriminatory. To accept the nurse's argument that this situation should require an employer to make reasonable accommodations to the pregnant nurse is to require the employer to relinquish "virtually all control over employees once they become pregnant," the court found.

FROM: Armstrong v. Flowers Hospital Inc. DCM Ala, S Div., CV-92-1-101-S, Feb. 9, 1993.

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Additional Medical News items in this issue: *Drinking Water a Source of Mycobacterium avium Complex Infection (page 472)*, *Two New Videotapes on Tuberculosis Prevention (page 475)*, *Increased Use of Vancomycin Related to Indwelling Vascular Devices in Hematology-Oncology Patients (page 478)*, and *New AIDS Definition Increases AIDS Cases by 205% (page 490)*.

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