

SAN FRANCISCO--The University of California, long at the forefront in the fight against Acquired Immune Deficiency Syndrome (AIDS), will continue to mobilize its research efforts to unravel the mysteries of the deadly disease, according to a report presented here today (Jan. 17) to the Board of Regents.

As the number of documented AIDS cases continues to rise, critical questions concern the circumstances under which the disease can be spread heterosexually as well as what risks, if any, health care workers face in dealing with AIDS patients, according to Dr. Merle Sande, chairman of a Systemwide Task Force on AIDS charged with conducting a coordinated program of AIDS research at UC.

Researchers also are concerned with developing models for clinical care that will ensure humane management of AIDS patients, said Sande, professor and vice chairman, Department of Medicine at UC San Francisco.

In the last two weeks, the Center for Disease Control in Atlanta has received reports on 120 new AIDS cases per week. And there is no evidence to suggest the epidemic is slowing down, Sande said.

"We are clearly in the midst of a major medical catastrophe, the potential impact of which is now only beginning to be realized, and the eventual magnitude of which could be absolutely enormous," Sande said.

"That there will be any early vaccine to prevent the spread of AIDS or a drug to cure the infection seems highly improbable at the present time. I'm deeply concerned that we are only now starting to appreciate the magnitude of this problem."

Sande said statistics show that the number of AIDS cases doubles every nine months to eleven months, with 8,000 cases identified to date in the United States. More than 800 of those cases have been identified in San Francisco, he said.

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Sande said the virus has infected large numbers of gay men in New York City, Los Angeles, San Francisco and Seattle. Estimates are that between 40-60 percent of the gay men in San Francisco have acquired the virus and are producing antibody to it, though, Sande emphasized, "We do not know what fraction of those infected will ultimately develop the full-blown disease."

Having the antibody does not mean that the full-blown syndrome will develop -- only that the body has mobilized to fight the virus. The incubation period may be up to five years, Sande explained. "Current scientific speculation is that 10-20 percent of those infected will eventually develop the full-blown syndrome, but these percentages could be much higher," he said.

The disease, believed to have originated in Central Africa in the mid-'70s, was first identified in the United States in 1980-81. The AIDS virus is found in the semen, blood and saliva and appears to be spread sexually as well as through the transfusion of AIDS-infected blood and the sharing of contaminated needles. Others at high risk, besides homosexual men, are hemophiliacs, blood transfusion recipients, intravenous drug abusers and the offspring of an AIDS mother, Sande said.

The predominant risk factor for gay men is multiple sexual partners, with rectal intercourse "a likely candidate" for transmission of the virus, Sande said. Of increasing concern is the spread of the disease through heterosexual activity. In the United States, heterosexual transmission has been suspected in intravenous drug abusers, and there have been several cases in San Francisco in which the virus appears to have been transmitted from man to woman through vaginal intercourse, Sande said.

Sex with multiple partners also appears to be a critical risk factor in the heterosexual cases, Sande said. Of groups tested in Central Africa, (where the cases of AIDS were equally distributed among men and women) female prostitutes had the highest prevalence

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of serum antibody to the virus as well as actual clinical disease.

Similar observations have been made in Haiti. And, Sande noted, in the United States, those males with AIDS who do not fall into a recognized high risk category also have a high incidence of promiscuous heterosexual activity.

"The African and Haitian experiences clearly point to the capacity for heterosexual spread of the virus, but the relative number of proven cases in the United States is minimal. This is an area where we are currently focusing our research attention," Sande said.

All research points to the fact the disease is "incredibly difficult" to transmit through casual contact, such as that occurring between an AIDS patient and a health care worker, Sande said.

Another major focus of research efforts will attempt to verify that observation. But a complicating factor in the studies is the long incubation period of the disease, Sande noted.

To date, there have been no cases of non-high risk health care workers in San Francisco contracting the disease, despite intensive exposure. In one case at San Francisco General Hospital, a health care worker stuck by a contaminated needle contracted hepatitis b, but the AIDS virus was not transmitted, Sande said.

Past research has enabled scientists to isolate the virus associated with AIDS. University researchers also were among the first to describe the syndrome and the malignancies associated with it; to identify a similar disease in monkeys; and to establish the first set of infection control guidelines for handling AIDS patients.

When the potential magnitude of the problem first was discerned, Assembly Speaker Willie Brown spearheaded efforts to obtain state funds to support basic AIDS research. In 1983-84, the state allocated \$2.9 million to the University to fund research efforts. This

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year, the University received \$3.1 million.

The money was distributed by the Systemwide AIDS Task Force, an eight-member group of faculty researchers appointed by UC President David P. Gardner to ensure the money is allocated on a scientifically sound basis.

Projects to date have involved research at all levels from the most basic biology of the virus to diagnostic tests and the cost of caring for AIDS patients.

Sande said clinical research centers have been set up at San Francisco and Los Angeles to coordinate AIDS research as well as to serve as central repositories for tissue and blood samples from AIDS patients.

Educational programs have been held at several UC campuses and UC faculty have appeared both on television and in the print media to answer basic questions about AIDS, Sande said. An important function of the task force, he emphasized, is to ensure that current, accurate information about AIDS is disseminated.

"The University of California has assumed a major leadership role by helping to focus the system's scientific and clinical resources on better understanding the disease, unraveling its mysteries, trying to predict its consequences, developing models for clinical care, and helping to formulate policy that will plan for the future care of its patients," Sande said.

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