

especially when compounded with environmental cofactors such as poverty, crowding, and insect infestation. Dr. Mark Whiteside of Miami, Florida, has compiled massive documentation of these effects in such areas as the famous Belle Glade.

In a preliminary study, the author and his collaborators investigated the dynamics of "repeated and multiple exposure tracks." This study involved modifying the model equations according to the simplified assumption, that the AIDS infection probability (per exposure) is significantly higher for those persons exposed repeatedly within a given fixed time period. It is easy to see, that repeated exposures are highly infrequent, as long as the density of infected persons remains low. But, for higher densities, the probability of multiple exposure increases rapidly, and the "repeated exposure track" may become even faster than the "fast-track" transmission in the so-called risk groups.

While cumulative effects of exposure to AIDS virus alone have not been sufficiently researched, there is considerable evidence that infection by certain viruses (particularly insect-borne viruses) increases susceptibility to infection by AIDS, and vice versa. The probabilities of *multiple exposure to different viruses*, and of *repeated exposure to a single virus*, increase in a similar fashion as a function of density. Hence, similar threshold effects will occur in both cases.

Preliminary computer runs confirm this threshold phenomenon: When the density of infected persons is low, the "multiple exposure track" is damped out by the slow death rate in the infectious pool. But, as soon as the infected density exceeds a certain limit, the rate of infection explodes, out of control, at a nonlinearly accelerating rate (see **Figure 9**). Unfortunately, this effect is destined to play a major role in the great population centers of the United States, unless we stop the AIDS epidemic in time.

## U.K., France seek joint action to stop AIDS

At her meeting with French government leaders in Paris Nov. 21, British Prime Minister Margaret Thatcher won an agreement to put AIDS on the agenda at the summit of European prime ministers in London on Dec. 5.

Emerging from a meeting with French President Francois Mitterrand, Mrs. Thatcher told the press that "we would be discussing AIDS" at the Dec. 5 meeting, since "you can't discuss drugs without AIDS," and drugs is a top agenda item for that meeting.

According to a Nov. 22 London *Daily Express* account, "Mrs. Thatcher convinced [Mitterrand] that AIDS is the greatest current threat to Western civilization," and insisted that AIDS be made the number-one agenda item for the prime ministers' meeting, the last under Britain's tenure as president of the 12-nation European Community.

On Nov. 20, British cabinet ministers received a terrifying appraisal of the AIDS crisis in the United Kingdom from experts, who told them that AIDS infection is doubling every 10 months in the United Kingdom.

On Nov. 21, the House of Commons held its first-ever debate on AIDS. The British government announced it will raise spending on AIDS from only £5 million, to at least £20 million over the next year. British Secretary of State for Social Services Norman Fowler said that the increased spending would be earmarked for: creation within the National Health Service of a Special Health Authority

to deal with AIDS, directly accountable to Parliament; more money for clinics treating sexually transmitted diseases; upgraded British involvement in international research efforts to combat AIDS and find a cure.

At a Paris press conference Nov. 27, French Health Minister Michele Barzach announced on behalf of the French government, a series of exceptional measures against the spread of AIDS. The daily *Le Figaro* headlined the next day: "Against AIDS, a planetary crusade." Interviewed on national television, Mrs. Barzach stated: "AIDS does not just concern 'risk groups.' Every day a baby is born infected with AIDS. Fifteen persons a day are contaminated by the disease. It is no longer a disease of marginal people. . . . This is why the government decided to declare AIDS 'a great national cause' like cancer or tuberculosis."

She added at her press conference: "Frenchmen must understand that we have reached a turning point in the spread of the disease. Among the new declared cases in the last quarter, 43% were heterosexuals."

The French government made a series of important decisions for the anti-AIDS campaign. A foundation will be created on the model proposed by Prof. Luc Montagnier of the Pasteur Institute in a recent interview to *Le Monde*. The foundation, to be "operational within two years," will bring together in one place treatment units and a research center. It will be financed by public and private funds. The government will help finance detection and prevention programs, picking up the full costs of the Elisa and Western Blott tests.

It is reported in France that Prime Minister Chirac and President Reagan recently exchanged letters on the subject of scientific cooperation against AIDS.