

tion from an HIV seropositive mother to her child; to assess factors such as mode of delivery, breast-feeding, and the mother's clinical status during pregnancy that might influence transmission; to elucidate the natural history of HIV infection and to identify precursors of AIDS onset in infected children.

The Edinburgh Hemophiliac Cohort: In Edinburgh a unique group of hemophiliacs became infected with HIV in the spring of 1984, by transfusion of a single batch of Factor VIII concentrate. Of the 32 patients only 18 developed antibodies to HIV. While all 14 anti-HIV-negative individuals are well, 10 of the 18 positive patients have progressed to Group IV (according to the Center for Disease Control grading system) disease in five years. This cohort provides a unique opportunity to investigate host factors that determine both the risk of seroconversion for HIV and the rate of progression to symptomatic disease after infection with HIV. The study has shown that the risk of seroconversion is related to the amount of the contaminated batch of Factor VIII used, but there is no clear-cut association with age, HLA type, severity of hemophilia or pre-exposure to circulating T cell subset numbers.

Studies of HIV infection in The Gambia: The most prevalent retrovirus in man in much of West Africa is HIV-2. Since cases of HIV-2 AIDS were shown to occur in The Gambia in 1986, a multidisciplinary and multinational team at the MRC Laboratories at Fajara has studied several aspects of HIV infection. The overall prevalence of HIV-2 seropositivity in the adult population was found to be 1.6% and that of HIV-1 0.1%, with both sexes being similarly affected. Studies of the clinical and immunological consequences of HIV-2 infection are be-

ing carried out. It is becoming apparent that the clinical features of AIDS due to HIV-2 and HIV-1 are similar.

Biological properties of HIV: This particular programme is designed to gain a clearer understanding of how HIV causes disease, varies in its biological and immunological properties, and interacts with cell surface receptors in early stages of infection. HIV-2, about which much less is known than about HIV-1, is being characterized. As with HIV-1, the ease of isolation and laboratory propagation of the seven HIV-2 isolates obtained from infected Gambians correlates broadly with the clinical status of the person from whom the virus was isolated. Those with AIDS yielded fast growing HIV strains that replicate to high titre in T cell lines, whereas those from asymptomatic individuals propagate slowly and only in fresh white blood cell lines.

The cell-mediated immune response to human immunodeficiency virus: HIV infects cells that carry the virus receptor, the CD4 glycoprotein, on their cell surface. CD4 is expressed on helper T lymphocytes and the antigen presenting cells of the monocyte series. Cells of the other major subset of T lymphocytes, which carry the CD8 glycoprotein instead of CD4, are not infected. In HIV-infected individuals who are still healthy, the CD8 T cells make a vigorous immune response.

Magnetic Resonance Imaging of brain and spinal cord in HIV infection: The MRC has recently agreed to provide Magnetic Resonance Imaging facilities for research of HIV infection both in London and Edinburgh. For the London team, the Council will provide support for a five-year research programme, whilst in Edinburgh the funds for research are being raised through an appeal.

Announcement

Ruzicka-Prize 1991

Every year, a prize from the Ruzicka-Prize Fund is awarded to a young research worker for an outstanding work in the field of general chemistry that has already been published and achieved in Switzerland or by a Swiss national abroad. Proposals for candidates (under

40 years) may be submitted before 31 March 1991 at the latest to the President of the Board of the Swiss Federal Institutes of Technology, ETH-Zentrum, CH-8092 Zürich.