Nuclear winter

ICSU project hunts for data

AN urgent call for information on the consequences of large ground-based fires for the atmosphere of the Earth has gone out from the workshop held in Leningrad between 14 and 16 May on the climatic and biological consequences of nuclear war. The meeting is part of the programme by which the Scientific Committee on Problems of the Environment (SCOPE) of the International Committee of Scientific Unions (ICSU) proposes to produce a comprehensive report on the subject by September 1985.

Participants at the Leningrad meeting explain that one of the obdurate uncertainties of the prediction of sharply reduced and even sub-zero temperatures on the surface of the Earth after a nuclear war, called the nuclear winter, concerns the likely behaviour and effects of the large amounts of smoke from fires that would be carried into the atmosphere. The aggregation of smoke particles is, in particular, not taken into account in the models of the effect so far published.

At the Leningrad meeting, Soviet scientists suggested that data bearing on this question might be gathered from studies of large Siberian forest fires, to which end a meeting on the subject is to be convened in the Soviet Union, followed by another in West Germany.

The possibility was also canvassed of collecting data from the forest fire that has been raging during the past two years in Indonesia. One difficulty appears to be that the resolution of satellite data, both spatially and in time, may not be sufficient for the model builders. The SCOPE office responsible for the project thinks it would be valuable to have the services of an aircraft to make observations of major fires occurring in the next twelve months, but is not hopeful that it can find the resources.

On the design of climatic models, the Leningrad meeting emphasized the importance of full three-dimensional models of the general circulation taking account of the "scavenging" of particles from the atmosphere. One of the particular difficulties to be surmounted, according to a statement after the Leningrad meeting, is that of accommodating mesoscale (intermediate scale) atmospheric turbulence in the general circulation models.

The reactions of participants at the Leningrad meeting to the general question whether nuclear winter is a probable consequence of a major nuclear exchange appear to be mixed. Some stress the need for more data and better model studies. One Western participant said, however, that he had been impressed that "the nuclear winter is becoming more real all the time". Some claimed to have detected a difference between what they called the Moscow school (represented at Leningrad by V.V. Aleksandrov), and the Leningrad school (K. Ya. Kondrat'ev), with the former being more certain than the latter that a nuclear winter would follow a nuclear war.

The next workshop within the SCOPE project will be held in Paris in October. Drafting of the final report is due to begin at a meeting in Colorado next January, but the final version of the report will be completed only at a meeting of the project team arranged for next June at the University of Essex in the United Kingdom

Part of the problem that lies ahead is financial. Most of the support for the SCOPE project, launched at the Cambridge meeting of ICSU two years ago, consists of a grant of $75,000 from the Rockefeller Brothers' Trust, but other possible sources are being approached. □

AIDS development

NIH to license HTLV

Washington

THE companies selected by the US federal government to manufacture a blood test for acquired immune deficiency syndrome (AIDS) are expected to be announced this week. A scientific panel has already met to review the 20 or so proposals received in response to an announcement in the *Federal Register* on 3 May, and recommendations have been forwarded to Assistant Secretary for Health Edward Brandt.

The selected companies will be provided with Dr Robert Gallo's method for mass-producing human T-cell leukaemia virus III (HTLV-III) in return for a royalty payment to the government that is expected to be 5 per cent. The *Federal Register* announcement specified that applicants should have experience with retroviruses, virus production and the manufacture and distribution of radioimmunoassay kits, and have access to a P-3 containment facility. Although skill in recombinant DNA techniques was also mentioned, members of the scientific panel that reviewed the applications said they gave far greater emphasis to ability to manufacture the product quickly and in large quantity. Millions of test kits will be required each year to screen blood products. It is expected that the initial production will rely exclusively upon existing technology — growing the viruses in bulk to produce enzyme-linked immunoabsorbent antibody (ELISA) tests to detect the virus. This widely used technique provides a sensitive and simple means of assaying serum antigens. Eventually, recombinant DNA techniques may be used to produce virus antigen for the tests.

Abbot, DuPont and Roche are said to have submitted strong proposals. More than one company is expected to be chosen.

Genentech has submitted a proposal through its joint venture with Travenol, Genentech-Travenol Diagnostics. Genentech is also known to be seeking a basic research collaboration with Gallo and perhaps also with the French group at the Pasteur Institute. Gallo is said to be in something of a dilemma over the possibility of collaborating directly with a private company; on the one hand he needs the expertise in gene expression that the private companies have, but he is also concerned about giving preference to one company outside the context of the licensing agreement. **Stephen Budiansky**

Nature index of biotechnology stocks

12-Month high	12-Month low	Company	Close previous month	Close 31 May	Change
14	8	**Biogen (Switzerland)**	11¾	9	-2¾
2	1⅜	**Bio-Logicals (Canada)**	1¾	1½	-½
14⅜	8	**Bio-Response (USA)**	13⅛	8⅞	-4¼
14	10	**Cetus (USA)**	12¼	10¼	-2
10⅜	5	**Collaborative Research (USA)**	7	5⅜	-1⅝
19⅞	11½	**Damon (USA)**	15⅞	11⅞	-4
26¼	12¼	**Enzo-Biochem (USA)**	16	14	-2
10⅛	5¼	**Flow General (USA)**	7	6⅛	-⅞
42¼	28¾	**Genentech (USA)**	35½	29½	-6
10¾	5⅝	**Genetic Systems (USA)**	6⅝	5¾	-⅞
17¼	8¼	**Genex (USA)**	12½	9⅛	-3⅜
23	12¼	**Hybritech (USA)**	17½	12⅛	-4¾
16¼	8¾	**Molecular Genetics (USA)**	11½	9½	-2
15½	10	**Monoclonal Antibodies (USA)**	14	10¼	-3¾
60⅞	43	**Novo Industri A/S (Denmark)**	51⅜	43½	-8⅛
22¾	14½	**Pharmacia (Sweden)**	17⅛	14½	-2⅝

Closing prices are for the last Friday of the month. For over-the-counter stocks, bid price is quoted; for stocks on the American and New York exchanges, the transaction price. *Nature*'s weighted index of biotechnology stocks stood at **135** on 31 May, compared with **164** a month earlier. Data from E.F. Hutton, Inc.