

UK research councils

Astronomers' future undecided

CONTROVERSIAL recommendations are expected from the Manpower and Site Review Panel of the UK Science and Engineering Research Council (SERC), whose proposals have now been sent to SERC's Astronomy Space and Radio (ASR) board for discussion at its meeting later this month. The panel was instructed to find ways of saving more than £1.5 million from the ASR board's budget for the next financial year (1984-85). Whether this has been done by recommending radical changes or by piecemeal cuts, the board will face some painful decisions.

The panel, under the chairmanship of Professor A.P. Willmore, was asked to review the need for each of three establishments — the Rutherford Appleton Laboratory, the Royal Greenwich Observatory (RGO) and the Royal Observatory in Edinburgh (ROE) — taking into account the fact that much of the

United Kingdom's ground-based astronomy will in future be carried out by remote control at facilities in Hawaii (Mauna Kea) in the Canaries (La Palma).

The terms of reference were given considerable sting by the added injunction that the ASR board must save £1.5 million or so. (The board spent about £6.5 million in grants in 1982-83.) RGO had already taken a battering last year in a review of SERC's institutions by a cost-cutting unit of the British Government under Sir Derek Rayner. That report, hotly disputed by RGO staff, recommended that Herstmonceux Castle — a major part of the RGO site — should be sold off (see *Nature* 304, 5; 1983) and that a merger of RGO and ROE should be considered.

When the Willmore panel was set up, it was widely thought by the UK astronomical community that SERC was indeed intending to merge RGO and ROE. The

matter is variously seen as a battle between satellite and ground-based astronomers over the distribution of funds, between SERC's head office and its institutions, or between SERC establishments and universities. Still others fear that the geophysical research supported by the ASR board (mainly concerned with the upper atmosphere and the magnetosphere) will be sacrificed to preserve major astronomical projects such as the millimetre-wave telescope on Mauna Kea and ROSAT, an X-ray satellite supported mainly by West Germany but with UK participation.

Not surprisingly, SERC is keeping its cards close to its chest. Indeed, the proceedings of the Willmore panel have been so secret that its members have not been allowed to remove documents from SERC's offices. The committee's members hold strong and divergent views and it is unlikely that they will make a unanimous radical recommendation. But whatever the panel has decided, the ASR board may choose to ignore it, or instruct the panel to think again. **Philip Campbell**

Biotechnology

Gamma interferon race begins

Boston, Massachusetts

GENENTECH has won the race to begin US clinical trials of gamma interferon synthesized in recombinant bacteria. The trials of the drug produced by the California biotechnology company began last month under the direction of a pioneer in clinical interferon research, Dr Jordan Gutterman, a haematologist at the M.D. Anderson Hospital and Tumor Institute in Houston, Texas, one of the largest cancer centres in the United States.

Several biotechnology and pharmaceutical companies have a big stake in the success of gamma interferon, which they hope will be an anticancer drug. The competition is fierce and close: Biogen has been carrying out clinical trials of gamma interferon in Europe and Japan since September 1983. As well as demonstrating gamma interferon's antiviral action, pre-clinical trials by several companies have demonstrated significant antitumour activity, and greater stimulation of the immune system than by other interferons. So gamma interferon could make a good partner for other immunosuppressive chemotherapy drugs.

Gutterman has been treating patients with natural alpha interferon for the past six years, and began trials with cloned alpha interferon three years ago. He and his co-workers reported last week in the *New England Journal of Medicine* (310, 15; 1984) that each of seven patients suffering from hairy cell leukaemia — a slow-growing B cell neoplasm for which there is no consistently effective treatment — were brought into complete or partial remission by injections of natural alpha interferon; Gutterman's group has recently

begun extending these experiments with cloned alpha.

The Texans are looking forward to rapid progress with their tests of gamma interferon; their experience over the past year with the scarce and expensive natural product is expected to help them rapidly to determine the best way to administer the drug — an important point, because intramuscular injections of natural gamma interferon have been found to be cleared rapidly from the body. Gutterman's group has laboriously had to determine the

proper procedure for administering the drug by a prolonged intravenous infusion.

Gutterman is very excited about the possibility that gamma interferon may potentiate the effects of alpha. Despite his success with hairy cell leukaemia, he has found that only a quarter of the patients with melanoma or breast cancer respond to alpha interferon treatment. Substantial *in vitro* and *in vivo* data using mouse and human interferons have shown synergistic antiviral and antitumour effects, and Gutterman hopes that human malignancies may respond similarly. Combined trials may begin in a year or so, once the pharmacology of gamma interferon is worked out. **Christopher Earl**

Nature index of biotechnology stocks

12-Month high	12-Month low	Company	Close previous month	Close 30 Dec.	Change
23¼	9¾	Biogen (Switzerland)	12	10¾	-1¼
6¼	1⅞	Bio-Logicals (Canada)	2	1⅞	-¾
16⅞	7¼	Bio-Response (USA)	11¾	10	-1¾
19	10½	Cetus (USA)	12¾	10¾	-1½
15½	6½	Collaborative Research (USA)	8	6¾	-1¼
39⅞	15	Damon (USA)	17⅞	15⅞	-2¼
34¼	16⅞	Enzo-Biochem (USA)	24¼	25	+¾
18⅞	8⅞	Flow General (USA)	11¼	9½	-1¾
49¾	25⅞	Genentech (USA)	36½	34½	-2
17¾	7⅞	Genetic Systems (USA)	10⅞	8⅞	-1¾
23¼	12½	Genex (USA)	15	13	-2
31	18¾	Hybritech (USA)	22½	18¾	-3¾
22¼	10⅞	Molecular Genetics (USA)	12⅞	12	-⅞
23¼	10½	Monoclonal Antibodies (USA)	14¾	12	-2¾
73½	42	Novo Industri A/S (Denmark)	65	56	-9
30¼	13⅞	Pharmacia (Sweden)	21	19⅞	-1⅞

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 175 on 30 December, compared with 196 a month earlier. Data from E.F. Hutton, Inc.