

able to devise a way for their bacteria to produce growth hormone without an extra methionine at one end of the molecule. This amino acid, say some hormone biochemists such as Dr Philip Lowry of St Bartholomew's Hospital, is a prime target for recognition by antibodies. He therefore predicts that when used in long-term therapy, bacterially-derived human growth hormone will provoke an antibody response that will preclude its clinical use.

It is too soon to know whether Dr Lowry's predictions are right. If not, Kabi Vitrum bacterial growth hormone should be available to plug the gap in Britain's traditional supplies before dosage has to be too seriously reduced. The reduction already planned is considered not to be disastrous; one expert reckons that at worst the children so treated would end up no more than three centimetres short of their maximal height.

Because there is a world shortage of the hormone there is little hope that DHSS will find alternative supplies. And even if it could, the cost would probably be prohibitive. One estimate is that 3 years ago, the cost was £1.25 per 5-unit ampoule whereas an equivalent ampoule purchased by DHSS from Kabi Vitrum now costs £15.

Peter Newmark

UK medical research

To those that hath . . .

British university departments asking the Medical Research Council (MRC) for research grants will now need an assurance of financial support from their universities. MRC's chief concern is that universities, in adjusting to their own reduced budgets, may starve individual departments of funds, with the result that its research grants are "rendered ineffective".

In a letter to universities this month, the council reaffirms its belief in the dual support system, under which British university departments winning grants from research councils are supposed to be maintained as "well-found laboratories" out of the general subvention from the University Grants Committee. It acknowledges, however, that there may be temporary difficulties, as when universities decide to freeze vacant posts.

The move is MRC's attempt to force the universities' hands. Like the Science and Engineering Research Council, it is concerned that the quality of university research will be irreparably damaged if universities spread their dwindling resources too thinly. Hence it will support the objective of the University Grants Committee (UGC) that universities should concentrate their own resources on good departments considered worthy of support. Applicants for new grants from institutions not favoured by UGC may be in for a raw deal.

The MRC, nevertheless, offers some help to universities. Researchers who lose

their jobs, for example, will be eligible for small personal grants, which, while not paying their salaries, will help them complete projects already started. Universities are also invited to nominate exceptionally promising researchers who may be eligible for help. MRC is willing to expand its senior fellowship scheme which provides support for up to ten years for promising young researchers unable to find tenured posts. Demand for the scheme, which has been running for four years, is already heavier this year than in the past. MRC is also willing to increase the number of awards it makes under existing schemes which free academics from teaching and administrative tasks to allow them to spend a few years on full-time research.

The release of the MRC letter to the universities last week coincided with publication of its annual report for the year ending March 1981 (HMSO £4.00). According to the report, the council has resolved its long-standing dispute over the terms of employment of researchers on short-term contracts. The council has agreed that 70–80 per cent of its posts will carry tenure, compared with 67 per cent previously. Short-term appointments will now be almost exclusively for three years and open competition will be invited for tenured positions. The new scheme will not cost the council more, according to Dr James Gowans, Secretary of MRC, chiefly because it does away with appointments of intermediate term.

During 1980–81, the council spent nearly £93 million, about £15 million of which was transferred to its budget from the Department of Health after the collapse of the Rothschild customer-contractor principle. Under the principle, first introduced in 1974, money was transferred from the council's annual budget to government departments for spending on research commissioned through the council. The new policy, however, has made little difference to the council's work, according to Dr Gowans, because the health department chose to commission long-term research which the council will continue to support. In the deal struck with the health department, the council has agreed to increase support for health service research to £2 million by 1985–86.

The year to March 1981 was not easy — the council had to supplement its government grant with £500,000 of its own money and was not able to provide all the support for top quality research for which it was asked. But Dr. Gowans's chief concern is for the future. In particular, he fears that the government may renege on its earlier promise to maintain the real value of the science vote to be announced in December. The implications of a real budget cut for MRC, which in any one year has more than 90 per cent of its budget tied up in on-going commitments, could be far-reaching, involving a reduction in the amount of research it supports in universities.

Judy Redfearn

European Science Foundation

Signs of solidity

Strasbourg

The European Science Foundation (ESF) — Europe's fledgling international academy — appears to have come of age. Last week the foundation, representing 47 research councils in 18 countries, made its first direct approach to governments with a letter to research ministers requesting them to take up the idea of a "European Synchrotron Radiation Source", a £30 million third-generation source of X-rays for Europe.

The new source is considered necessary by most European X-ray users if Europe is to keep abreast of American competence in the field. But the foundation's request is significant not only for its content but as an example of the foundation's new confidence in the practical role it can play in Europe.

The foundation has previously been cautious of its role *vis à vis* its member research councils, but there seems to be such agreement among the various councils over the synchrotron source, such a need to cooperate financially in the present recession and such growing confidence in the foundation's offices that the members are willing to let the corporate ESF approach go ahead.

Professor Hubert Curien, the French president of the foundation, makes it clear in his letter to the ministers that ESF — as a non-governmental organization — cannot handle political questions such as the site for the source or the national contributions to its cost, but requests governments to set up a committee of representatives to do just that. The governmental committee would then work at arm's length from the foundation, "seeded", as it were, by the foundation's earlier enthusiasm, hard work and the now-detailed specification of the X-ray machine.

How governments will respond is yet to be seen, but already several countries and organizations have made unofficial offers of sites, the most detailed of which has come from Italy (for Trieste). The ESF committee has also made a careful study of the possible use of a tunnel at the European Centre for Nuclear Physics (CERN) near Geneva, which now holds the intersecting storage rings, a ten-year-old device likely to be closed within a few years to save money for the large electron-positron collider (LEP). If the new X-ray source were built at CERN it would, however, come outside the CERN budget.

According to the foundation's optimum timetable, the intergovernmental committee would meet early in 1982; governments would take a decision in principle in early 1983; and the source would be in operation by 1988–89.

The foundation also agreed last week — at its annual assembly in Strasbourg — on a serious study of what may be its next big project — a "geotraverse" of Europe. This

would entail a detailed geological survey down to the mantle, using every available technique, of a band 2 to 20 kilometres wide stretching from the North Cape in Norway to North Africa, across the many major ancient geological boundaries of Europe.

The exercise would be a continental parallel to the International Deep Sea Drilling project and would cost around £3 million over seven years, 2–3 years of which would be used to gather data. The Swiss national research council will pay for a pilot study.

On a smaller scale, the foundation has decided to set up a new fellowship scheme — this for toxicologists — similar to its existing European Training Programme in Brain and Behaviour Research. Each year £70,000 will be made available by council in nine countries (Denmark, Finland, Ireland, Italy, The Netherlands, Norway, Sweden and the United Kingdom) for short-term and long-term fellowships in toxicology. The object is to stimulate research on the toxicology of environmental chemicals — and to help increase the number of experts in Europe who could advise governments and industry. The first fellowships will be advertised next spring to be available in autumn 1982.

Robert Walgate

EEC Research Council Broader future

Brussels

EEC's ten research ministers have finally approved the first stage of a biomolecular engineering programme and the 4-year programme on microelectronics (worth \$40 million). This agreement, reached at a meeting on 9 November, reflects the future attitude of the Community to research and development.

The European Commissioner for industry and now research, Etienne Davignon, sees research and development as being one of the prime vehicles by which Europe's flagging industrial competitiveness compared with the United States and Japan can be revived. That his ideas are being taken seriously by member states is demonstrated by the council's decision to go ahead with biomolecular engineering and microelectronics programmes.

Only the first stage of the 4-year programme (indirect action) on molecular engineering has been agreed. The original six comprehensive projects proposed by the commission still stand, but the whole programme will now be focused on agriculture and on safety and environmental questions. So for two years and with about \$8 million to spend on 50 per cent support, the commission will fund research on, say, the synthesis of vaccines and pesticides of importance to European agriculture; on the biotransformation of agricultural surpluses and wastes; and on plant molecular genetics and gene transfer. The safety work — accounting for 20 per

cent of the grant — will cover the detection of contaminants in industrial microbial strains and the extension of risk assessment procedures.

After two years, the programme will be re-assessed and if successful continued — probably with a further injection of cash. The commission hopes to call for tenders around the end of this year, and the programme will start in earnest on 1 April 1982.

The commission's 4-year action programme in microelectronic technology is the second arm of the strategy to stimulate European research into telematics and informatics. A programme has been under way since September 1979 on data processing and a third programme on telecommunications is expected to be proposed before the end of 1981. The agreed budget is for \$40 million, \$12 million less than was originally asked for.

This programme is also important because member countries have agreed to coordinate their activities and keep each other informed of new developments to ensure that a microchip production industry is soon established in Europe.

Figures from a report being prepared on the competitiveness of European industry illustrate the struggle facing Europe. Jobs created in Europe between 1970 and 1980 numbered 2 million compared with 19 million in the United States and 5 million in Japan. Japan spends globally half as much money on research as EEC, but Japanese researchers register four times as many patents.

In the field of microprocessors, EEC is calculated to have spent \$470 million developing chips compared with Japanese expenditure of \$240 million. But Japan and the United States each supply 40 per cent of the world microprocessor market, while European production accounts for less than 10 per cent.

The commission's desire to coordinate research efforts carried out at national levels would involve holding regular twice-yearly meetings to plan and exchange information and analyse national spending. By discussing programmes at the early stages, overlapping and duplication could be avoided and lead to an efficient dissemination of research results both among the member states and between universities and industry. Using Euronet as an industrial data base and the planned INSIS integrated numerical network, the gap between research and industrial application would be narrowed.

For the Community's joint research centres, Davignon foresees the scope of the research being widened — a move that might involve the opening of the centres to agricultural research for the African, Caribbean and Pacific countries linked to EEC by the Lomé convention. The concept of promoting "centres of excellence" is also being discussed.

Agriculture research will also be boosted. Only 1.1 per cent of EEC's

research budget is devoted to this field despite the vital role the Common Agricultural Policy plays in EEC affairs.

Although the commission seems to be backing the argument that increased research and development is a means of solving current economic problems, a belief supported by European industrialists, ministers were non-committal on Davignon's request to double between now and 1986 the amount of money from the Community budget actually devoted to research and development.

Jasper Buker

Netherlands universities

Misery ahead

Ending several weeks of uncertainty the Netherlands government announced on Monday the latest forward plan for the universities. Briefly, the Ministry of Education and Science is looking for a 2 per cent cut in university salary budgets in the years 1984 and 1985, together with a 3 per cent cut in other expenditure. Although the percentage reductions of the university budget (expected to save a total of 75 million Dutch guilders (£16.5 million) a year) are not at first sight large, coming as they do after several years in each of which university budgets have been reduced by 3 per cent, the consequences could be serious.

In the two years ahead, the ministry has also decreed that there should be a freeze on academic vacancies. During that period, the ministry also hopes that there will be a rationalization of the structure of university departments, with resources concentrated in the stronger departments. The Academic Council, which advises the ministry, has already begun to put individual departments in order of merit. It is possible that if the universities concerned do not take the initiative in reorganizing themselves, the minister will provide an incentive by adjusting the grants they are offered in the years ahead, either up or down.

One curious feature of this week's proposals is that the government expects the universities collectively to pay their bills less promptly. The result may be that the drain on the government's cash resources is reduced by up to 40 million guilders in 1982. The reactions of the universities' creditors are not yet known.

On the face of things, there will be no immediate need of redundancies among academic staffs, although the ministry has set up a central register of vacancies. Even during the two years ahead, universities will be free to apply for a dispensation to fill vacant posts considered essential to their academic or research programmes. There is, however, a possibility that some universities will prefer to reduce their staffs than to stomach for a further two years the acute shortage of disposable income from which they have been suffering.

The next step will be for the parliament