

European molecular biology

Computing facilities for EMBL

Brussels

PLANS to expand databank services, increase in-house and collaborative research and improve access by researchers to software and data at the European Molecular Biology Laboratory (EMBL) in Heidelberg have been given a first airing.

The idea for a European biocomputing facility, which would give the laboratory a greater coordinating role in Europe, was proposed by its director, Lennart Philipson, and was welcomed by scientists and science policy advisers, not only from Europe but also from the United States and Japan at a meeting to discuss developments in biosequencing in Italy last month.

EMBL's biocomputing programme involves the development and application of computing methods and a large-scale public nucleotide sequence databank, set up in 1981, which exchanges information regularly with the Los Alamos databank in the United States. The preliminary proposal outlined by Philipson would mean an overall expansion of computer operations and the setting up of a software library to enable remote users from all over Europe to screen data at EMBL, and to download them, together with the software, for local analysis. A data library is also envisaged which would collaborate with other databanks to supply protein, microbiological and gene-mapping data. The aim is not,

however, to centralize all remote user computation but to act as a source of data and portable software for remote users. Computation would be mainly on a query and search basis, with EMBL providing a package of utility programmes for data screening, searching and manipulation. A software and data link-up with large national centres could also occur.

The facility would also carry out sequence analysis, developing methods and algorithms to interpret nucleic acid and protein sequences, basic research in the field of protein folding and engineering, modelling of proteins, protein-nucleic acid interactions and other more complex structures, biological graphics, image analysis and the development and maintenance of a user-oriented system and database for the analysis of two-dimensional electrophoresis. Finally, the facility could constitute a forum both for research and for the elaboration of software policy.

The expansion would require EMBL to increase staff and invest in more high-level hardware. The laboratory already has plans to install a VAX 8600 cluster core by the end of this year to which further VAX computers could easily be added. The added functions would, says Philipson, require an extension of hardware. Preliminary estimated costing of the proposal puts capital expenditure at DM 7.3 million and annual

operating expenses at DM 3.2 million.

According to Philipson, the needs could be covered by a 10 per cent increase in the current budget. At present the 12 to 14 countries participating in the laboratory (including non-EEC countries such as Sweden, Finland and Israel) contribute a total of DM 38 million to EMBL's annual budget of DM 45 million.

Extra funds for space and hardware increases could be found in two ways: by contracts involving some of the interested countries or from the European Community, says Philipson. While some countries need and welcome European cooperation in this field, others, such as the United Kingdom, have been less keen to contribute in the past, preferring to build up activities on a national level. Whether the venture will be taken up in the laboratory's second scientific programme, which will run from 1987, will depend very much on several meetings that have been planned by EMBL's Scientific Advisory Committee and, ultimately, the EMBL Council. The next meeting of the advisory committee is scheduled for three weeks' time.

Anna Lubinska

US research support

Defence money no panacea

Los Angeles

UNIVERSITIES in the United States are in for a disappointment if they expect to reap a windfall from a new Department of Defense (DoD) initiative to support academic research. The "University Research Initiative" proposed in this year's Pentagon budget is, in fact, largely a symbolic step even in the eyes of Pentagon research chief Leo Young; Young's predecessor, George Gamota of the University of Michigan, speaking at the meeting of the American Association for the Advancement of Science, noted that when DoD began a similar programme to support university instrumentation three years ago, expectations ran so high that the \$30 million a year programmes received \$600 million worth of proposals.

Young said that the new initiative would help to overcome a "perception" problem dating from the passage of the so-called Mansfield amendment in the late 1960s. This rider on the defence appropriations bill requires all DoD to research support the mission of the agency, and has often been blamed for dwindling DoD support of basic research in the 1960s and 1970s and for continuing to prevent DoD from entering into a closer partnership with univer-

sities. Gamota, however, believes that the amendment has been used as an excuse within the Pentagon for not increasing basic research funds — particularly by those who wish to see other programmes funded.

The new initiative would provide \$25 million, evenly divided between the Army, Air Force and Navy research offices and the Defense Advanced Research Projects Agency, for graduate fellowships, instrument purchase and young investigator awards. The House Armed Services Committee has recommended increasing that figure to \$200 million, but the Senate has approved the lower figure. The Pentagon is proposing a total basic research budget for next year of \$971 million. Historically, about one-half to two-thirds of that money goes to universities.

Existing programmes that support some 300 graduate fellowships, as well as the \$30 million a year instrumentation programme, would continue even without the new initiative — and despite the Mansfield amendment. Young noted that the current version of the amendment provides a wide loophole by allowing research with a "potential" for supporting the Pentagon's mission "in the opinion of the Secretary of Defense".

Stephen Budiansky

Soviet pay rises

SOVIET scientists, designers and production engineers will from next year receive higher wages and more generous bonuses. But the resolution of the Community Party Central Committee, the USSR Council of Ministers and the All-Union Trade Union Confederation, which established the new pay scales in mid-May, made it clear that the purpose of the reform is to reduce the time spent in research and development, and in the implementation of new technologies, the endemic bottle-neck of Soviet civil industry.

Under the new scheme, managers of enterprises and organizations will be empowered to pay supplementary salaries and bonuses to persons responsible for "creative contributions" to new technology. Bonuses will be more closely linked to the "economic benefit" produced by the new technologies, and several measures have been proposed to improve the system of granting "author's certificates" (the Soviet equivalent of patents) and of making the attendant payments to scientists and technologists. Proposals to establish two new honorific titles: "Meritorious Designer" and "Meritorious Production Engineer", were also approved.

Although the new pay system seems to be aimed initially at applied scientists and technologists, it will almost certainly produce some spin-off for those working in basic research. During the past decade, there has been increasing emphasis on the need to strengthen links between academic research and production, and on the coordinating role of the Academy of Sciences in ensuring that research results are quickly implemented.

Vera Rich