

RESEARCH FUNDING

UK BIOTECH SPENDING SPREE, OF A SORT

LONDON—United Kingdom universities and research institutes will receive an extra \$100 million of public funds for biotechnology-related research in 1989-1992. The money will provide major new support for programs in plant molecular biology, transgenic animals, protein engineering, biosensors, biotransformation, the human genome, and acquired immunodeficiency syndrome (AIDS).

The extra funds, to be allocated according to the recommendations of the Advisory Board for the Research Councils, are part of a 13-percent increase in the total U.K. science budget. While welcoming the increase, which it has long lobbied for, the Board points out that, accounting for inflation, the government's planning figures imply a probable three percent reduction in spending—in real terms—over 1990-1992.

Among the nine new Interdisciplinary Research Centers (IRCs) funded by the increase will be two—in Edinburgh and Cambridge—that will relate directly to biotechnology. IRCs are the latest attempt to make the most of a declining U.K. biotechnology research effort. Like most others, the Cambridge and Edinburgh facilities will build on their respective existing local research base, providing extra funds to participants in order to establish a well-managed and coherent research program. About \$9 million will be channeled through each IRC over three years.

The Edinburgh IRC will focus on animal genome research—especially producing transgenic animals. It will link research already underway at Edinburgh University and in local Agricultural and Food Research Council (AFRC) laboratories, e.g. the already-successful program to develop transgenic sheep that secrete into their milk human proteins.

Protein engineering in macromolecular interactions will be the main focus at Cambridge. In particular, the Cambridge IRC will bring together and support the work of the Medical Research Council's (MRC) Laboratory of Molecular Biology (with its emphasis on engineering antibodies) and the enzyme engineering research of Cambridge University's department of chemistry. Part of the center's initial funds likely will be spent on a pilot plant for producing monoclonal antibodies, to assist research into their potential therapeutic uses. IRCs to be set up in London will also emphasize, to some extent, biotechnology-related research in cell biology and population biology.

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An extra \$25 million has been given to the AFRC for plant molecular biology. Half of this will be spent on a

FUNDING FOR DELIBERATE RELEASE

The UK Department of Trade and Industry and a number of companies with biotechnology interests—only some of them British—will fund experiments designed to assess the risks of releasing genetically manipulated organisms. The department will match industrial support for the experiments.

One of the first three-year experiments under the PRO-SAMO (Planned Release of Selected and Manipulated Organisms) research program will assess the likelihood and consequences of the gene transfer from transgenic plants to other plants. The work will be carried out at the Institute of Plant Science Research in Cambridge, which has a group already working on gene dispersal from transgenic plants. Other experiments are likely to be carried out at Imperial College (London) and the Institute of Virology in Oxford.

coordinated program of research on *Arabidopsis thaliana*, a weed whose small genome and ease of growth has attracted the attention of plant scientists. The council's Institute of Plant

Science Research will produce a library of overlapping clones covering the whole *Arabidopsis* genome; work in universities will concentrate on the development of vectors, transposon tagging systems, and both protoplast and tissue culture techniques.

The other portion of the AFRC's extra funds will be spent more freely. In theory, money is available for any aspect of plant molecular biology research; in practice, there are priority areas, including gene isolation and transfer, regulating metabolism, development, and reproduction, releasing genetically manipulated organisms, and studies of plant genome organization.

Human genome research will receive about \$20 million through the MRC. About half will be spent on a program of directed research in the council's institutes and in universities. The other half will allow the creation of a resource center in London that will store and provide access to sequences, DNA clones, and mapping data, as well as contribute directly to the production of ordered libraries of human DNA clones and developing associated techniques. The MRC will also get close to \$50 million for AIDS research.

Finally, the Science and Engineering Research Council will receive approximately \$11 million to expand its support of biotechnology research. Half of this money will be allocated by the Biotechnology Directorate—particularly for biotransformations—and half will be funneled through the council's Molecular Recognition Initiative for work in biosensors.

—Peter Newmark

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U.K. BIOTECH DIRECTORATE LIVES

LONDON—Acting promptly on the recommendation of a review panel (see *BiolTechnology* 7:117, Feb. '89), the Science and Engineering Research Council has prolonged the life of its Biotechnology Directorate for another six years and has formed a joint advisory board for biotechnology with the Department of Trade and Industry. The way is now open for the council to recruit a successor to Geoff Potter, founding head of the directorate, who has become Director of Industrial Development at Warwick University.

The new board will deal with matters of common interest to the council and the department, ranging from training and research to regulations

and technology transfer, and will further strengthen the collaboration growing between the council's Biotechnology Directorate and the department's Biotechnology Unit.

Both parties say the board will help increase the transfer of research into the marketplace. "There will be further benefit if the Agricultural and Food Research Council and Medical Research Council (MRC) come alongside," says Ron Coleman, chief engineer and scientist at the department. Although they will be "represented in the new advisory structure," it is unlikely that this will amount to much, at least in the case of the MRC, which still hopes to gain more control over U.K. biotechnology spending. —PN