

## INTERNATIONAL PROGRAM

**EEC TARGETS BIOTECHNOLOGY 'CONCERTATION'**

DELFT, The Netherlands—The Council of Ministers of the member states of the European Economic Community (EEC) has agreed on a four-year research action program in biotechnology for 1985–1989. The price tag, \$35 million, is a bit more than half what the EEC committee asked for in its six-point, April 1984 proposal. The money covers just two projects: an action program for research and training, and a “concertation” of policies and actions. It is not yet clear how the funding reduction will affect the plan.

The proposal's four other points, not yet approved:

- a plea for new regimes on agricultural outputs for industrial use;
- an agreement on regulation;
- a program to achieve agreement on intellectual property rights (harmonization of patent law); and
- a program to start demonstration projects.

The new research action program follows a 1982–1986 initiative on biomolecular engineering, which emphasized research on enzyme technology and plant genetic engineering. The recent program has a wider scope: in addition to research projects, it aims to promote transnational cooperation among the members of the EEC and the transfer of technology from universities to industry and agriculture.

Fernand van Hoeck, director of the program, says the EEC fears that if it does not stimulate cooperation in biotech, Europe will soon lag further behind the United States and Japan. “In the analysis of the [U.S.] Office of Technology Assessment,” he says, “the U.S.A. sees Japan as its main competitor in this field. Europe isn't seen as a serious player in the biotech-

nology game.” According to van Hoeck, the problem is that the efforts of individual EEC member states are fragmented. “You can't compete,” he says, “if your home market is as small as most home markets of the member states are.”

The official document underlying the Council of Ministers' decision states that a conjugate European home market is needed for the EEC to be competitive. The report leans heavily on U.S. Office of Science and Technology Policy and OTA strategic information to describe Europe's position.

Under the program, the staff will monitor developments in biotechnology and related fields like environmental affairs and Europe's cooperation with Third World countries. It will also assess the social dimensions of biotechnology—at a cost of about \$4 million over the next four years. “You find yourself talking to bishops and theologians,” Cantley says.

The research and training program is divided into two subprograms, called “contextual” and “basic.” The basic subprogram will get the main part of the money, \$27 million; the contextual subprogram gets \$4 million. Both have begun, following the official go-ahead in March. Some other program points (regulation, patent harmonization, and demonstration projects) have made a small start.

The basic subprogram is for a large part a continuation of the biomolecular engineering program. Later, attention (and money) will be paid to research and training in cell and tissue culture, and development of test methods and scientific assessment of the risks associated with certain modern biotechnologies.

The contextual subprogram is meant to build up a European infrastructure in bio-information (programs, data-bases) and culture collections. This infrastructure, partly based on already existing institutes, must be accessible to European industries and research institutes.

Apart from grants for research contracts, much of the funding will be put into long- and short-term training grants for scientists. Researchers will work for varying periods—a few weeks to a few years—in institutions outside their home countries. An aim is to keep young researchers from leaving for the U.S.

One of the main problem areas remains the new regime on agricultural products for industrial use. Europe sets the prices of agricultural commodities—higher than world levels. These products are then too expensive to serve as feedstocks for biotechnological industry. Proposals for new regimes for sugar and starch have met with resistance from growers. A European strategic forecasting group is studying this problem—whatever it recommends is bound to be met with heavy dispute.

As for the two approved points of the program, one question overshadows all others: Will \$35 million prove enough to strengthen the European Economic Community's position in world biotechnology? The general view is that Europe plays a good role in the scientific part of biotechnology, but that it lacks an infrastructure for commercialization and, historically, a mechanism for harmonization.

Cantley says the funding should be regarded as seed money. A relatively small amount, he argues, is enough to serve as a catalyst.

—Joost van Kasteren

## RESEARCH FUNDING

**ECONOMIC COMMUNITY ALSO TO BACK BIOMASS**

LONDON—Mindful of the 1989 target date for lead-free petrol in Europe and stricter emission controls starting in 1988, the European Economic Community is to extend its research into the most effective routes for generating ethyl alcohol from biomass.

The anticipated need for blended fuel meshes well with the increasingly embarrassing question of how the EEC should deal with its agricultural surpluses. Now gasohol will form a

major target of the Community's biomass policy, which has been allocated 20 million ECUs (European Currency Units) over the next four years. Speakers at a recent conference in Vienna estimated that 32 million tons of ethanol could be produced each year from the 9 million hectares of EEC land that currently generate surpluses.

EEC member countries also agreed recently on a four-year program of research and training in biotechnol-

gy. Some 55 million ECUs will be spent during the period up to 1989. As well as biomass studies on topics such as lignocellulose conversion, the program will embrace protein engineering, artificial enzymes, and industrial applications of gene transfer. But a reduction in the budget below the figures originally discussed means that investigations into the genetics of higher plants have been dropped from the program of research.

—Bernard Dixon