EUREKA MEETING

NEW EUROPEAN COLLABORATIONS IN BIOTECH

LONDON—A clutch of new industrial biotechnology projects has emerged from EUREKA, originally heralded as Europe's response to the U.S. Strategic Defense Initiative. Immunodiagnosics and immunotherapy, automation of molecular biology procedures, and improvement of corn and fruit crops all feature in the list of projects announced at the EUREKA ministerial meeting in Copenhagen in June.

LABIMAP—the project to research, develop, and market a series of compatible and automated instruments for molecular biology—is an Anglo-French collaboration. Two companies are involved in this effort: Amersham International (Amersham, Buckinghamshire), the U.K. radiochemical and medical research products group; and Bertin and Cie, a French technology consultancy company that ranges from project management to prototype plant testing. They are joined by two private research institutes, the Imperial Cancer Research Fund (ICRF) in London and the Centre d'Etude du Polymorphisme Humain (CEPH) in Paris.

LABIMAP's first phase—one of definition—should take about 20 months, to the tune of \$8 million. It is hoped that the U.K.'s Department of Trade and Industry and its French equivalent will pay about half this sum. The project will take four years to complete and will be funded at \$70 million if government contributions are forthcoming on the anticipated scale. Swiss and German companies have expressed an interest in joining in the later phases.

For Amersham, a company that has invested \$30 million in R&D and recorded a \$45-million profit last year, the LABIMAP project is a further move into the lucrative, but highly competitive, molecular biology service industry. Already a supplier of many of the requisite reagents, the company hopes that the EUREKA collaboration will produce automated systems for extracting, cloning, hybridizing, and sequencing DNA.

ICRF and CEPH are among the few European research institutes with a strong interest in human genome mapping and sequencing. Indeed, CEPH is devoted solely to such work. Established in 1983 by French Nobel laureate Jean Dausset, the center has attracted an international consortium of researchers. These scientists have constructed a restriction fragment length polymorphism (RFLP) map of the human genome, and are now

interested in pursuing large-scale DNA sequencing.

ICRF has begun a major effort to produce a physical map of the human genome, as well as to develop the associated software and instrumentation. "But we can contribute to the de-skilling of many areas of molecular biology," says Jonathan Gee of Imperial Cancer Research Technology Ltd., which is leading ICRF's involvement in LABIMAP. In addition to early access to new instruments, ICRF hopes to gain royalties from the

project if it can find an industrial partner.

One of the two crop plant projects involves genetically improved corn. The information gained from constructing an RFLP map of the corn genome will hasten the incorporation of beneficial genetic traits into the crop. The \$13-million project is a collaboration between the French Limagrain Group and Kleinwanzlebener Saatzzucht AG of the Federal Republic of Germany. A Dutch company, Van Der Have Seeds, and Ital-

sale of instruments developed as a result of the project.

Novo Industri (Bagsvaerd, Denmark) and the Middlesex Hospital in London are the initial partners in a five-year, \$8-million EUREKA project on autoantigens for autoimmune disease, including diabetes. This is a natural, if lateral, extension of Novo's business as a major manufacturer of insulin. The broad aim is to identify antigens that can serve as diagnostic or susceptibility markers of autoimmune disease, antigens that could become the basis of new vaccines. Novo research scientists have been involved in this area for the past few years; the EUREKA project should help them develop possible products. The Necker Hospital in Paris will join the pro-

ject, Portuguese, and Turkish companies may collaborate at a later stage.

Biotechnology features in another half-dozen of the 50 or so new EUREKA projects. Of the more than 200 EUREKA projects, some 13 percent have been in the area of biotechnology, with only robotics and information technology taking a larger share.

Since EUREKA's inception in November 1985, over \$3.5 billion has been spent to increase cooperation in the fields of high technology between European countries. Most projects are industry-led and market-driven, says Steve Elton, the U.K. EUREKA National Coordinator. They are R&D projects, "but typically nearer the D than the R," that are designed using "variable geometry." —Peter Newmark