UK releases of engineered organisms to go ahead

London

THREE of four planned UK experiments involving the deliberate release of genetically manipulated organisms (see *Nature* **326,** 537; 1987) are set to go ahead in the coming weeks. All three had been revised in response to comments from the Advisory Committee on Genetic Manipulation (ACGM), which expressed itself happy with the revised plans at a meeting two weeks ago. Revised plans and preparations for the fourth experiment, which involves baculoviruses, have not yet been submitted to ACGM.

Two of the planned experiments involve potatoes, the third involves *Rhizobium,* the nitrogen-fixing bacterium that forms the root nodules of leguminous plants. The potatoes, to be planted in a carefully monitored field near Cambridge by scientists at the Plant Breeding Institute (PBI) of the Agricultural and Food Research Council (AFRC), have been genetically engineered to contain genes for two bacterial enzymes. Whereas neither gene 'improves' the plant, the experiment is a model for future improvements.

Following consultations with ACGM, the PBI scientists have designed the experiment to avoid any spread of the plants from the experimental plot. The plants will be deflowered, weeding and harvesting will be carried out only by hand, the potato tubers will be handled in isolation from others and the field will be kept fallow for a year.

Similar precautions will apply to the potato experiment at the AFRC Institute of Arable Crops Research at the Rothamsted Experimental Station in Harpenden, Hertfordshire. In this case, the plants derive from cell fusion between a domestic potato and a wild South American species that can resist the potato leaf roll virus. No recombinant DNA technology is involved.

The *Rhizobium* experiment, also at Rothamsted, is designed to test the extent to which genes can be transferred between rhizobial strains in soil. It is financed by a European Economic Community programme for risk assessment in biotechnology, as one of the conceivable hazards of deliberate release experiments is the unwanted transfer of genes between strains. The strain that will be released at Rothamsted contains a harmless marker gene whose transfer to natural strains in the soil will be monitored.

Although the last of these experiments would be expected to meet the approval of Jeremy Rifkin, who was last week exploring the European biotechnology scene, fresh from his defeat in preventing the US field test of ice-minus bacteria (see *Nature* **326,** 819; 1987), he was unwilling to be drawn on his views. After three days of pressing his case for a moratorium on all deliberate release experiments "until a proper science of risk assessment can be developed", Rifkin left for West Germany saying only that "It's up to the British" to decide whether to act against UK experiments but admitting that ACGM's deliberations were "distinctly more thoughtful" than in equivalent committees in the United States. **Peter Newmark**

Europe-only mobile telephone plan

London

FOUR European governments have signed an accord jointly to develop a digital telephone system, based on cellular radio, which can be used in all states and across national boundaries. The agreement, signed by Britain, West Germany, France and Italy in Bonn last week, is meant to ensure that European nations develop and commercially exploit their own systems to the exclusion of Japanese and US companies which now dominate the technology.

British Telecom (BT) and Racal, which operate a service in the United Kingdom based on related technology, but largely of US origin, also signed the Bonn agreement and have already begun to investigate how the technology can be developed for use across the continent.

The cellular radio system operates by using a range of frequencies. The mobile unit's transmitting and receiving frequencies are automatically changed as it crosses the perimeters of a geographical area or cell. If the system is developed properly, the entire continent would be divided into a honeycomb of cells.

In Britain, two major electronics groups, GEC and Plessey, have already joined forces with BT and Racal to create a prototype for Europe. The £1-million project, unveiled earlier this month, will comply with the standards set by the Conference of European Posts and Telecommunications, the European standards authority. The results of the project are expected by the end of the year.

Most of the European nations have already gained substantial experience in the use of the technology to be adopted in the system but the refinements to the standards need to be finalized by the end of the year, if products are to be the ready by the target date of 1991. Bill Johnstone

New protein database for Europe

Martinsreid

ON-LINE support for researchers using protein sequence data should soon be offered by the Max Planck Institute for Biochemistry at Martinsreid, just outside Munich, West Germany. A new database called MIPS (Martinsreid Institute for Protein Sequence data) will serve as the European partner to the Protein Identification Resource (PIR) offered by the National Biomedical Research Foundation (NBRF) in the United States.

The database will address a key problem of accessibility for European researchers, said project co-leader H. W. Mewes last week. "There is an extremely large demand" for such a service, he said, "but in West Germany, only the ten largest institutions subscribe to existing databases". A computer program offering a database and sequence analysis has proven popular among the scientists at Martinsreid, who have accessed it more than 10,000 times within the past year.

In addition to improving accessibility, the staff of MIPS will also push for speedier processing of protein sequences submitted for publication. The current lage time of 12–18 months between discovery of a sequence and its appearance in a database will be shortened, Mewes hopes, by three months or more.

MIPS has already received support from the European Economic Community (EEC) and is expected to receive a grant of DM 6.6 million within the next six months. Private companies such as Boehringer have also expressed an interest.

The establishment of MIPS should help relieve the pressure on NBRF, which, said Mewes, would have to increase its staff tenfold just to handle the current explosion of data. The MIPS databank will be housed in a minicomputer hooked up to two front-end processors. As with PIR, the data and software used will be released into the public domain without user fees.

Eventually, MIPS will offer several spinoffs from the main sequence databank, including listings of protein fragments and artificial and natural mutants. Both of these aims are already within reach. A long-term goal is to offer a database that reveals the known biological activity and function of a protein when given the structure.

The group at Martinsreid is not the only one interested in improving on the *status quo* in protein databases. Amos Bairoch at the Geneva University Medical Center has created a database called SWISSPROT which is an adaptation of the NBRF database. But Mewes believes that MIPS has shown itself to be the most extensive and promising database project on offer.

Steven Dickman