

Engineered organisms

Confusion over European rules

THE announcement this week of a new and supposedly safe vaccine against rabies (see pages 304 and 373) may bring to a head a simmering conflict in Europe over whether to permit the release of genetically engineered organisms.

The new vaccine is a version of the vaccinia virus, which is related to smallpox but much less dangerous, engineered to express a protein from the coat of the rabies virus, and thus create immunity in any creature inoculated with the vaccine. Target populations are foxes in Europe and raccoons on the east coast of the United States. Both, in principle, could be fed the vaccine in infected bait.

Developed by the French genetic engineering company Transgène in Strasbourg, the vaccine will be commercialized by Mérieux of Lyons, where chief scientist Philippe Desmettre said last week that there are no immediate plans for field trials. French regulations require approval of such trials by the ministries of health and agriculture, but Mérieux has not so far applied for permission. The company has supplied vaccine for tests by the Wistar Institute in Philadelphia, but use of the vaccine in the wild is likely to take place in Europe first, said Desmettre.

In Europe, there is no general agreement on how to regulate field trials. Denmark has jumped the gun and already imposed controls; in West Germany and

in the European Parliament, the Green Party is pressing for action to prevent the release of genetically engineered organisms, but in Britain, France, the Netherlands and elsewhere there seems little concern. In the midst of this confusion, the European Commission is attempting to create a little order rather than see yet another European market divided by multifarious regulations. But the Commission itself is a house divided, with those representing scientific, industrial and agricultural interests in conflict with the environment directorate.

Nevertheless, Commission officials said last week that a paper on the problem is now circulating and is likely to be presented to the European Council of Ministers towards the end of this month. This, however, would merely alert ministers that there is an issue to be discussed and it is not even clear at what council the issue would be thrashed out. The European Parliament, whose irritant value — if not real power — is steadily increasing in the European pantheon, will debate a hard-hitting report on the same issues by Dutch socialist Phil Viethoff, later this year. Not only will Viethoff present her report, but six other committees covering biotechnology and the environment will also table positions, leading to what could be an acrimonious debate.

The Commission itself is aiming to sub-

mit joint safety proposals to Council by April next year — Denmark's "banning" of the release of engineered organisms, hailed as a success by Europe's greens, is not a major obstacle, for trials are not truly "banned" although they must be referred to the government for approval.

In the next few weeks, a major report should appear by the Organisation for Economic Cooperation and Development (OECD) in Paris on "safety considerations in the use of recombinant DNA". It is said by those who have seen it to be a "very reassuring report", arguing that risks are small. Britain is expected to base its own guidelines on the OECD recommendations. **Robert Walgate**

Chinese science

Back to your work units

CHINA is to introduce new rules on foreign study. Although the number of people sent abroad to study at government expense is to remain at its present level, the mix will be different. There will be more emphasis on those applied disciplines necessary for China's modernization programme, and less opportunity for students to go abroad immediately after completing their first degrees. On the other hand, the number of people with masters' degrees who go abroad to work for a doctorate will be increased. Students who go abroad at their own expense (mainly the children of top officials, plus the lucky few who have wealthy relatives abroad) will be given greater "guidance" to ensure that their chosen studies also conform with the state plan.

The changes are meant to ensure a sufficient supply of trained personnel to satisfy the demands of "work units" throughout the country. "Poaching" of graduates from their assigned jobs is now a problem in China. Understaffed enterprises frequently offer substantial and fringe benefits to well-trained recruits; they even advertise in newsletters which flourish in spite of official disapproval. The new rules should frustrate the "poachers". From this year onward, most of the quotas for government-sponsored students will be assigned to enterprises and work units in need of trained staff; the latter will then select who is to go abroad.

Foreign study, it is stressed, is not meant to be simply a means of self-betterment. Those who obtain a doctoral degree abroad will not now be permitted to stay on just to acquire a still higher qualification. Instead, they will have to return to an appropriate job in China for several years, before being sent abroad again. This, it is explained, will better help them coordinate their studies with China's needs. **Vera Rich**

Space antiques hedge against inflation

Washington

"MUSEUM piece" is an apt term for a satellite the US Air Force plans to launch next October. Although it is now called the Polar Beacon Experiment and Auroral Research (Polar BEAR) satellite, for eight years it hung in the Smithsonian Institution's National Air and Space Museum in Washington as a Transit 5A, an example of an early navigational satellite.

The satellite's transformation came at the hands of the Johns Hopkins University Applied Physics Laboratory (APL) in Laurel, Maryland. APL, the contractor for Polar BEAR, realized that the satellite shared many components with the Transit 5A and Oscar satellites it had built in the 1960s and early 1970s for the Air Force. In 1975, the Smithsonian was looking for an example of an early navigational satellite to hang in its new museum. APL offered an Oscar 17, with flight-tested components, that was made to look like the earlier Transit 5A. To get its Oscar satellite back, APL offered the Air and Space Museum an untested back-up Transit 5A satellite that had been on display at APL. By using the older parts, a saving of about \$2 million was

achieved on the \$15 million bill for the satellite. Much of the saving came from the solar panels. All but one of the thousands of solar cells on the panels worked perfectly when APL tested them.

A Scout launch vehicle will carry the Polar BEAR satellite into a circular polar orbit from Vandenberg Air Force Base in California. The Air Force will use the satellite for experiments to improve communications over the poles. In addition, an Auroral Imaging Remote Sensor will study the aurora borealis.

This is not the first time that the Air and Space Museum has transferred an exhibition piece to active duty. The University of Iowa borrowed part of the attitude control system on the museum's Applications Technology Satellite for its Plasma Diagnostic Package that flew aboard Spacelab 2 on the shuttle last summer. A foot restraint system, once used on Skylab and donated by the National Aeronautics and Space Administration (NASA) to the museum was used by shuttle astronauts. NASA also borrowed Skylab's shower, but only for developmental studies for the manned Space Station. **Joseph Palca**