

Cloning technique under cloud

Geneva and Bar Harbor labs to check results

FOLLOWING allegations by members of Professor Karl Illmensee's laboratory and an internal inquiry, the University of Geneva has set up an external commission to examine his highly publicized experiments of the past five years. The Jackson Laboratory at Bar Harbor, Maine, is also appointing a committee, to investigate the work carried out by Professor Illmensee during his sabbatical visits there.

Illmensee's work has seldom been out of the news since he took up his present post in the department of animal biology at the University of Geneva in 1978. By experimental manipulation of mouse embryos, he has produced mice containing human or rat genetic material, mice without any genetic contribution from the sperm and also cloned mice. The fact that other laboratories have had difficulties in reproducing some of these experiments has usually been put down to Illmensee's unparalleled technical skill in the microsurgery of embryos.

Illmensee has always performed all the key experiments himself. Now, members of his laboratory have alleged certain irregularities in some of his most recent experiments. Inevitably, the external commission will have to consider not only those allegations but their implications for Illmensee's published claims.

Until the inquiries have been completed, the university will not say exactly what the allegations against Illmensee

amount to. It is, however, ominous that they have come from members of his own laboratory and that, after its own internal investigation, the University of Geneva has felt it necessary to mount an independent inquiry. Earlier this week, the membership of the external commission had not been finalized but, said Marcel Guenin, vice-rector of the university, the commission should start its work soon, will take as long as it needs and will publish its final report.

As to the results of the internal inquiry carried out by the dean of the Faculty of Science, Guenin would say only that it revealed "no evidence of systematic fraud" but had shown that the "standard rules of keeping experimental protocols had not been followed by Illmensee in 1982". Illmensee, he said, had admitted as much.

The Jackson Laboratory has set up its own inquiry, under Dr Dorothea Bennett of the Memorial Sloan-Kettering Cancer Center, because some of Illmensee's work was carried out there, in conjunction with Dr Peter Hoppe. Illmensee spent a few months at the Jackson Laboratory before taking up his post in Geneva and has spent two brief sabbaticals there since. Hoppe has also spent a sabbatical year in Geneva.

From that collaboration came the famous clutch of three cloned mice that graced the cover of *Cell* in January 1981. The mice were said to have developed from fertilized eggs which had had their own nuclei replaced by those of an embryonic

mouse cell. Other laboratories, particularly that of Davor Soltar at the Wistar Institute, have failed to get eggs of that kind to develop beyond the blastocyst stage.

Nor has anyone succeeded fully in reproducing the Hoppe and Illmensee work published in the December 1977 *Proceedings of the National Academy of Sciences*, which reported the birth of seven "uniparental" mice. These started life as a fertilized egg from which the male chromosomes had been removed and the female chromosomes artificially doubled. Similar eggs produced in other laboratories have never developed past mid-gestation.

Several people with first or second hand experience of trying to reproduce the techniques, spoke last week of the great skills involved. One emphasized that related techniques, pioneered in the laboratory of Beatrice Mintz at the Fox Chase Institute for Cancer Research, Philadelphia in the mid-1970s, while Illmensee was there, had initially been very hard to reproduce but were now standard. Another still saw no reason why the techniques should not work.

Last week Peter Hoppe had no comment and Karl Illmensee, a Swiss national with a 1971 PhD from the University of Munich, was said to be on holiday. **Peter Newmark**

Pressure to raise US science budget

Washington

A SERIES of amendments designed to add \$1,000 million to President Reagan's proposed science budget for fiscal year 1984 has been drawn up by a group of senators and will be inserted into the budgets of six agencies as their spending plans move through the Senate authorizing procedures in the next few weeks. The amendments would add \$535 million to the National Institutes of Health, \$187 million to the National Science Foundation, \$96 million to the Department of Energy, \$66 million to the National Aeronautics and Space Administration, \$95 million to the Department of Agriculture and £200 million to the Department of Defense.

The spending package was devised by two Missouri senators, Democrat Thomas Eagleton and Republican John Danforth, after detailed talks with the Association of American Universities, which represents the 50 leading research institutions in the United States. In a letter to colleagues, the two senators maintain that the 18 per cent research and development increase proposed by the White House is unevenly distributed. Areas which were given too little attention, they say, include the life sciences and training support of the National Institutes of Health; support for science and engineering postgraduate students; undergraduate science education and the rehabilitation of ageing instruments and laboratories. **Peter David**

