Artificial fertilization

US Congress plans to act

Washington

A NATIONAL commission to monitor the use of *in vitro* fertilization and related techniques in the United States moved a little closer last week. A House of Representatives subcommittee heard arguments for guidelines governing the practice from a wide range of legal, medical and ethical authorities, and the subcommittee's chairman, Representative Albert Gore (Democrat, Tennessee), has indicated that he will push for such a commission to be established under the National Institutes of Health (NIH) authorization bill.

Many of the witnesses at last week's hearings, held by the oversight and investigations subcommittee of the House Committee on Science and Technology, drew attention to the present chaotic state of laws impinging on *in vitro* fertilization (IVF). As IVF techniques are new enough to be considered still experimental, there could be legal challenges to some aspects of IVF in almost half of the states. Many states also have (inconsistent) laws that could affect embryo transfer, embryo freezing or commercial transactions involving gametes or embryos.

The House of Representatives NIH authorization bill, sponsored by Gore, includes a provision to establish a presidential commission on human genetic engineering. The Senate version of the NIH bill includes instead a provision to authorize Congress's Office of Technology Assessment to carry out studies in bioethics. Gore now believes that the scope of the proposed genetic engineering commission should be broadened to include matters related to new reproductive technologies, because the questions raised by the techniques are likely to be similar. This change of heart will make it easier for a compromise with the Senate version to be reached.

Aides are however anxious to point out that there remain substantial differences between the two versions. The House wants to see a very "visible" commission that would have lay and scientific representation, hold public meetings and publish annual reports. The Senate proposal for bioethics studies, in contrast, would leave the work very much under congressional control.

The two days of public hearings last week were enlivened by the unexpected appearance of a group of mothers of children conceived through *in vitro* fertilization, some accompanied by their offspring. One of the mothers, Mrs Barbara Brooks, supported the calls for a presidential commission, arguing that it would in time make IVF techniques more widely available.

Expert witnesses were almost unanimous in believing that the United States has

fallen behind in its thinking on IVF. A report on the subject prepared in 1979 by the Ethics Advisory Board of the Department of Health and Human Services has been left to gather dust, while the board itself has been disbanded. Federal funds cannot now be used to support research involving IVF because research proposals have to be approved by the board to qualify for support. Researchers appearing before Gore's subcommittee last week argued strongly that a mechanism to allow federal funds to be used in IVF research should be reinstated.

None of the witnesses called last week argued against IVF itself, although many had reservations about the related freezing of embryos for future implantation or research. The questions of the rights that attach to an embryo, and whether an embryo can be owned, were seen by many as central to the debate. At one extreme,

Professor John Robertson of the University of Texas argued that any restrictions on commercial transactions involving embryos or gametes could violate what he saw as the constitutional rights of a couple to reproduce. At this Representative Gore appeared momentarily to forget his role as investigator, and started arguing the point.

On Thursday, attention turned to the technique for embryo transfer known as lavage, in which a fertilized egg is transferred from the uterus of a donor mother to the recipient. The practice was discouraged by the Warnock committee but is being practised in the United States by Professor John Buster, professor of obstetrics and gynaecology at Harbor UCLA Medical Center. The main controversy with lavage is however because Buster's commercial sponsors have applied for patent protection not only for the equipment and materials used, but also for the lavage procedure itself. A number of questions were asked last week about the propriety of patenting a reproductive technique.

Tim Beardsley

US plutonium

Japan enjoys inside track

Washington

THE Reagan Administration has approved the transfer of 189 kilograms of plutonium from France to Japan, ignoring protests from 15 senators and congressmen that the proposed shipment by sea is too dangerous and sets a bad precedent.

The plutonium, in the form of plutonium oxide, was reprocessed in France from spent fuel earlier shipped from Japanese reactors. The material is subject to US control because it is derived from uranium supplied to Japan by the United States.

The transfer is the first to be approved since the enactment of the Nuclear Non-proliferation Act in 1978. The act lays down strict conditions on all nuclear transactions between the United States and other countries; in the case of so-called "retransfers" of nuclear material originally supplied by the United States, the Secretary of Energy must determine that it is provided with adequate physical security and safeguards and that it is not a proliferation risk. The secretary's decision is not subject to congressional approval in the case of retransfers.

The United States has already approved the reprocessing of spent fuel containing 14,000 kg of plutonium, so the present Japanese request is expected to be just the first of many.

Senator William Proxmire (Democrat, Wisconsin) and Representative William Ottinger (Democrat, New York), who led the protest, said they were particularly concerned that it had been approved without consideration of Japan's actual need for the fuel. According to an analysis prepared by the Federation of American Scientists

(FAS), Japan has so far obtained 2,540 kg of separated plutonium, half from its own reprocessing plant at Tokai-Mura and half from Sellafield in Britain. FAS estimates that at most 1,630 kg of that has been placed into Japan's experimental breeder facilities and its prototype low-enrichment plutonium reactor (Fugen, a plant of roughly 160 MW), leaving at least 900 kg, a four-year supply for current programmes. Proxmire said that it was a dangerous precedent not to consider need, a situation that could lead to the accumulation of large reserves of unneeded plutonium.

The approved shipment contains enough plutonium to produce about 30 nuclear weapons. Japan has already contracted with France and Britain for the reprocessing of spent fuel containing 35,000 kg of plutonium, according to David Albright of FAS; that would mean 140 shipments of the size of the present one, at a rate of roughly one per month.

Another concern of Proxmire and the others is the safety of sea shipment. The US military is to escort the cargo vessel "in designated areas", according to the Department of Energy; further details, including the shipping date, are classified. Proxmire said that a level of protection at least equal to that accorded nuclear weapons should be provided instead.

Proxmire and the other legislators aired their concern in a letter to President Reagan. Last week, they received an unusual rebuff when the White House Deputy Press Secretary, Larry Speakes, speaking from California where the President is on vacation, said the President would not consider the issues that they had raised.

Stephen Budiansky