Rogers suggests interim legislation on DNA research

THE draft of a new bill covering both public and private research on recombinant DNA has been produced by Representative Paul G. Rogers in an attempt to break the deadlock on congressional legislation that developed late last autumn.

According to the provisions of the proposed bill, interim legislation would come into effect for a period of two years under which all such research would be required to be covered by guidelines laid down by the National Institutes of Health.

In addition, a commission for the study of research and technology would be set up charged with conducting a study of federal policy regarding activities involving the genetic modification of organisms and viruses. The commission would make a report within two years containing recommendations regarding federal action to be taken to promote, regulate or review such activities.

Mr Rogers is chairman of the subcommittee on health and the environment of the House Committee on Interstate and Foreign Commerce. Discussion on an earlier bill supported by the sub-committee was not completed by the full committee in the last legislative session, and the delay meant that the bill did not reach the floor of the house.

Under the provisions of the new bill, all those in the process of carrying out experiments involving recombinant DNA or proposing to do so would be required to provide an assurance to the secretary of the Department of Health, Education and Welfare that the work was being carried out in accordance with the NIH guidelines (the present guidelines, which were introduced in 1976, are currently being revised).

Those found to be ignoring the guidelines would be liable to a civil penalty (a fine) and the possible suspension of research funds.

Supporters of the new bill are hoping that by avoiding some of the more controversial aspects of the present debate—such as the problem of the 'prior disclosure' of research results, or the legal protection of employees who provide evidence of infringements—it will bring together house, senate and administration thinking, and have a higher chance of success than last autumn's attempt.

A further controversial issue is whether the federal government should be allowed to pre-empt local legislation. The bill's final position on this is likely to be the outcome of lengthy discussion with members of Congress and the administration.

But even if this approach fails to break the current deadlock, there is still a chance that the administration could develop a regulatory framework for both publicly and privately funded recombinant DNA research through existing legislation, namely section 361 of the Public Health Act.

Although the government had previously stated, following a petition from the Environmental Protection Fund in 1976, that it felt this legislation did not cover DNA research, recent re-examination of previous issues to which the act has been applied has indicated that this may indeed be possible.

Speaking at hearings held in Washington last November by Senator Adlai Stevenson, Dr Gilbert Omenn of the President's Office of Science and Technology Policy said that the administration had rejected section 361 as being neither appropriate nor sufficient for recombinant DNA research.

However after looking at some of the previous applications more closely, the administration is beginning to have second thoughts, and is now looking closely at ways in which, if congress fails to come up with the appropriate legislation, regulations covering research with recombinant DNA could be implemented under section 361.

David Dickson

Tsiolkovskii's dream

THE link-up of Salyut-6 and Soyuz-26 and 27 marks a further step towards Tsiolkovskii's dream of a permanent orbital space station. Yet, rather strangely, the link-up was not used to effect a change of personnel, but merely to simulate one; the second crew—Vladimir Dzhanibekov and Oleg Makarov—returning to earth only five days after launch, and leaving the veterans—Yurii Romanenko and Georgii Grechko—still in orbit.

Salyut-6, with its two docking bays, represents a new generation of Soviet spacecraft. The docking bays are interchangeable, so that when Soyuz-25 failed to dock and it was suspected that there was some fault in the docking equipment, Soyuz-26, as back-up mission, docked in the second bay. Only after Romanenko and Grechko had checked out the first bay was this used for the linkup of Soyuz-27. Although there was no actual change of crew, the returning cosmonauts did change spacecraft, returning to earth aboard Soyuz-26. The launch of the second crew one month to the day after the first may be some indication of the shift-length planned for a fully operational space station; such a station, it is stressed, could save considerably on the time at present spent in warming up and mothballing the station at the beginning and end of singleton missions.

In addition to comforts for the "resident" crew—books, mail, newspapers—and the cherry juice required for the ritual toast—the "relieving" Soyuz-27 carried two temperature-stable "Bioterm-8" containers containing, respectively, the paramecium and proteus cultures for the Franco-Soviet "Cytos" experiment, which studies the effect of space-flight on cell-division. The "visiting" crew also carried out a study of blood circulation, data from which, it is hoped, can be used to develop prophylactic measures to help cosmonauts adapt to weightlessness. Dzhaniberkov, an expert on radioelectronics, checked out the various on-board systems, and all four took part in the mechanical "resonance" experiment to determine the exact strength characteristic of the compound structure.

With mail delivered again to orbit (the first time since the Soyuz 4/5 linkup of 1969), a radiorepair man on call, and (according to veteran cosmonaut Valerii Kubasov) plans for refuelling the correction engines already under discussion, Tsiolkovskii's vision seems perceptibly nearer. Yet in one respect, Salyut-6 would seem to represent a retrograde step. Although, according to Grechko, the work aboard Salyut-6 is more interesting than his previous mission on Salyut-4, since the cosmonauts can now go for spacewalks, nevertheless he misses the "oasis, where we grow plants and peas" of the earlier craft.

Vera Rich

US industry attacks Ames test

SHORT-TERM bacterial tests for potential carcinogens, such as that developed by Dr Bruce Ames at the University of California, do not predict similar responses in humans, according to the American Industrial Health Council, a New York based lobby group for the US chemical industry.

In comments on legislation covering the industrial use of potential and known carcinogens proposed by the Occupational Safety and Health Administration, the council, whose members include representatives of the

major US chemical companies, says that while such tests have value as screening tools, they are too unreliable as predictors of human responses to be sufficient to warrant regulatory action.

The council recommends that emphasis should be placed both on data from animals exposed to low levels of potential carcinogens over normal lifespans, and where prior worker exposure has occurred, on human epidemiological data. It rejects the notion that it is realistic to impose a "no risk" approach to potential carcinogens, and suggests rather the development of dose-risk data, using risk/benefit analysis to determine acceptable-risk levels of exposure.

The council also suggests that the National Academy of Sciences should set up a classification panel to examine the hazards of potential and known carcinogens, which would be responsible both for proper category assignments and for the modification of categories as relevant advances in science dictate.

AIHC believes that setting up such a panel would provide some degree of insulation from a wide variety of "political and other pressures" to which regulatory agencies are subject, requiring such agencies to make politically-acceptable decisions and to pay "somewhat less attention" to their scientific basis.

"The classification of carcinogens is a scientific, not a regulatory question, and would be much better handled by an independent group of scientific people than by a regulatory agency" according to Dr Ellwood P. Blanchard of the Dupont Company, a member of the AIHC steering committee.

David Dickson

Dioxin meeting recommends cancer study

SINCE the release of dioxin (the isomer 2, 3, 7, 8 tetrochloro dibenzo-p-dioxin) over a populated area at Seveso in Italy on 10 July 1976, there has been fear that the chemical is a carcinogen. Few data have been available, but it is beginning to seem that the fear is justified; hence the meeting in Lyons last week hosted by the International Agency for Research in Cancer (IARC) and the US National Institute of Environmental Health Sciences. The conclusion of the meeting was that a major epidemiological survey should be established.

It is now known that there have been at least 14 incidents in different chemical plants throughout the world where workers have been exposed to chlorinated dibenzo dioxin. In two cases the public has been exposed: at Seveso and in the herbicide spraying programme in Vietnam. In the latter cases large populations were exposed to low levels of dioxin; but while these populations must be monitored to assess the public health risk associated with low level exposure, at Lyons the opinion was that little could be learned from them. If dioxin exposure was to be unambiguously related to clinical and pathological findings, the meeting argued, the chemical plant workers were the group to monitor.

Three of the industrial accidents discussed in Lyons occurred between 20 and 30 years ago. Evidence is available from one of these accidents to suggest that in recent years there has been a marked increase in certain types of carcinoma in workers exposed to dioxins.

However the importance of this finding is marred by the small numbers of workers monitored. The meeting considered that it was therefore an urgent matter for a larger population to be studied to detect trends in carcinoma incidence which would be statistically significant. It urged the chemical companies concerned to make their records available for scrutiny. And the meeting stated in no uncertain terms that all the workers exposed to dioxin—whether they are still employed by companies or employed elsewhere—must be located. Mortality trends for this population must be collected.

Two groups reported animal studies to test the carcinogenicity of dioxin: the first directed by Dr James Allen at the University of Wisconsin, and the second by the Doll Chemical Company. Both research teams identified the dioxin as a carcinogen. But the Wisconsin team claims that the chemical is carcinogenic at a concentration 700 times lower than the level that produce tumours in Doll's study. Reasons for the discrepancy are still not clear, but it was pointed out at the meeting that the Wisconsin study is based on an extremely low number of animals.

Some of the companies involved in dioxin accidents fear further independent investigation, not wishing to run the risk of vast compensation claims. And the meeting felt that, if companies made it a condition that their participation in a dioxin workers' survey were to be treated in confidence, this wish must be respected. The view was that, wherever the blame lies, the most important task at the moment is the compilation of information; and this the IARC is willing to undertake. Dr Rodolfo Saracci of the Unit of Immunology and Bio-Statistics agreed to direct some of this work.

The IARC will act as a clearing house for data on chlorinated dibenzo dioxin—with the help of a permanent secretariat co-opted from participants at the meeting. One of its first tasks will be the production of a list of recommended clinical procedures for examining people exposed to dioxin. It will be stressed that where possible the clinical findings should be related to body dioxin levels—the 'body burden'. This information together with the mortality data should leave the IARC better able to assess the danger to health caused by exposure to dioxins; cancer may be only one of the possible risks.

Alistair Hay

NASA chooses its space lab candidates

FOLLOWING a similar announcement from the European Space Agency (*Nature*, January 5), the US National Aeronautics and Space Administration has announced the six American scientists from whom one will be selected as a payload specialist on the first flight of Spacelab, due to be flown in NASA's Space Shuttle in 1980.

The names of the finalists are:

Dr Craig L. Fischer (40), of the Palm Desert Medical Group Inc, California; Dr Michael L. Lampton (36), of the University of California, Berkeley; Byron K. Lichtenberg (29), Massachusetts Institute of Technology; Dr Robert T. Menzies (34), NASA Jet Propulsion Laboratory, Pasadena, California; Ann F. Whittaker (38), NASA, Marshall Space Flight Center, Huntsville; and Dr Richard J. Terrile (26), California Institute of Technology, Pasadena.

Five of the ten candidates that have now been named by NASA and ESA will undergo extensive training following a final selection in early spring. Of these, two will go into space, while the other three will perform support and advisory roles in the control centre on earth. □

Government accuses nuclear industry of using propaganda

THE US Government has accused its industrial partner in its fast breeder reactor development project at Clinch River, Tennessee, of producing pam-