

"there is no scientific basis for specific legislation to regulate the use" of these organisms.

The council's recommendations, which have been forwarded to the governments of its 24 member states, are based on the conclusions of a 3-year study of the safety aspects of the applications of recombinant DNA techniques carried out by an ad hoc group of experts. The study is being published in Paris this week.*

The report's conclusions represent a compromise between some member states, particularly in Europe, which had been seeking common international guidelines to use as the basis of domestic legislation, and others, such as the United States, which had been seeking to minimize efforts to create a strict regulatory framework.

Negotiations over an almost completed draft were delayed for several months last year when representatives of the U.S. Food and Drug Administration asked for major revisions, reflecting their conviction that no special regulatory regime, beyond that already established for conventional microorganisms, is required for recombinant DNA research and applications.

The final draft now accepts that for industrial applications using organisms of intrinsically low risk, the level of control should be based on existing good industrial practices. The report says the "vast majority" of industrial applications to date have used low-risk organisms. But for release of recombinant organisms into the environment, "the final establishment of internationally agreed safety criteria may be some way off," according to the group's chairman, Roger Nourish of Britain's Health and Safety Executive. Further research may be needed, he says, before this can be achieved; "accordingly, we suggest a provisional approach incorporating independent case-by-case review of potential risks of such proposals prior to application."

The delay in publishing the report's conclusions has already prompted two OECD member countries—Denmark and West Germany—to press ahead with their own legislation. What is being claimed as the "first national law" covering all applications of recombinant DNA techniques was passed by the Danish Parliament in June, and similar proposals covering the environmental release of genetically altered microorganisms were included in new guidelines published by the German federal government in Bonn.

In both cases, the environmental release of altered microorganisms is forbidden, but exemption from the ban can be obtained for specific applications.

Officials at the Commission of the European Economic Community in Brussels, which is trying to establish a single regulatory framework for all 12 member countries of the Common Market, say they are disappointed that the OECD report was not able to suggest how this could be achieved. ■

DAVID DICKSON

Dispute Over Earthquake Engineering Center Grant Aired on Capitol Hill

When the National Science Foundation selected a group of universities headed by the State University of New York at Buffalo to establish a national earthquake engineering center, scientists and engineers associated with a rival proposal under the aegis of the University of California at Berkeley took public exception to the choice (*Science*, 5 September, p. 1031). Recently, the two sides have found active protagonists in Congress and new charges have been made.

Senator Pete Wilson (R-CA) has stepped in on the California side. He released a letter from Caltech engineering and applied science division chairman Paul C. Jennings to NSF director Erich Bloch, asserting that parts of the SUNY Buffalo proposal had been copied from material written by him and by another Caltech faculty member. Wilson and Senator Alan Cranston (D-CA) have also now asked the General Accounting Office, the auditing arm of Congress, to carry out an investigation of the award. Linked to the GAO study is a threat by the senators to introduce legislation to block federal funding of the center, projected at up to \$25 million over 5 years.

SUNY Buffalo's cause has been taken up by Representative Jack F. Kemp (R-NY), congressman for the Buffalo district. Kemp issued a statement acknowledging that the copying charge is a serious one, but arguing that the portions of the proposal involved appear to be "boilerplate" language that does not affect the "heart of the proposal."

The Jennings letter invites Bloch to note the similarities between specific passages of the Buffalo proposal and a 1984 report of the Earthquake Engineering Research Institute, of which Jennings was principal author. He also points out that the first paragraph of the Buffalo proposal's section titled "description of research" is identical to a paragraph in "Proceedings of the U.S. National Workshop on Strong-Motion Earthquake Instrumentation," which was written by Caltech professor Wilfred D. Iwan. Jennings notes the irony that the paragraph "is

lifted verbatim and without attribution from the writings of one of the Principal Investigators of the opposing proposal."

In his response to the Jennings letter, which was also released by Wilson, Bloch says, "The issues you raise are serious, and we are actively reviewing the entire matter. Pending completion of the review, however, we have no basis for suspending or rescinding the agreement the Government has executed." NSF sent \$834,000 in "startup" funds to the New York group in late September under the budget for the fiscal year that ended on 30 September.

Kemp, for his part, has released a letter from SUNY Buffalo provost William R. Greiner to university president Steven B. Sample making a preliminary response to the Jennings allegations. The letter says that use of the language in question in the proposal occurred as part of the "cut and paste" process common in preparation of grant applications. He notes that the material in question amounts to less than 2% of the total text of the proposal, is not "original research, and it has no bearing on the substance of the proposal."

Bill Livingstone, Wilson's press secretary, says that the senator made the request for an investigation to GAO because of concern that the decision on the project was not made on its merits. Livingstone says there were "sufficient improprieties" that Wilson wanted to be sure that "both sides had received equal attention and consideration." Specifically, Wilson asked GAO to inquire whether peer review broke down. "This is not sour grapes," said Livingstone. If GAO says the decision was made on its merits, Wilson has indicated he will accept the finding. ■ JOHN WALSH

Counting the Homeless

Arguments continue to rage over just how many homeless people there are in the United States. Two recent surveys indicate that the numbers are considerably lower than the 2 to 3 million figure usually endorsed by advocates. Observers agree, however, that the numbers, especially of homeless families, are growing rapidly, and that economic recovery will not solve the problem.

One of the surveys, conducted by economist Richard B. Freeman of Harvard University, was based on interviews with 500 homeless people in shelters, welfare hotels, and on the streets of New York City during the summer of 1985. Using statistical extrapolations, Freeman estimated that there

*"Recombinant DNA Safety Considerations," O.E.C.D., Paris, 1986. 60 francs/\$12.00.

are roughly 350,000 homeless nationwide, which corresponds to much-criticized estimates from the Department of Housing and Urban Development.

The other survey, the Chicago Homeless Study, puts the number of homeless in Chicago at between 2000 and 3000 on any given night, or about 15% of widely quoted estimates.

The Chicago study, directed by Peter A. Rossi of the University of Massachusetts at Amherst, is billed as the first attempt to get a detailed count of a homeless population based on statistical samples. Investigators interviewed people staying in shelters and scoured several hundred selected blocks in the dead of night, often waking up people to interview them.

What emerged was an unusually detailed picture of Chicago's homeless, characterized by extreme poverty and isolation and high rates of dysfunction. Four out of five had been institutionalized in jails, mental hospitals, or for drug detoxification. The typical homeless person was a 40-year-old never-married black male. Young women with children made up 12% of the group.

Although interviews were conducted in fall and winter, the investigators found that shelter occupancy rates were only 60% to 70%. The researchers concluded that "the homeless problem is not so vast that extensive programs for the homeless will swamp available resources."

Researchers and advocates for the homeless continue to be in conflict over both the extent and the severity of the homelessness problem. For example, Freeman's study found the ratio of street people to shelter people to be 2.2 to 1. Freeman's research assistant Brian Hall says researchers have been calling to say that ratio is too high, while advocates have been claiming it is much too low. The advocates portray homelessness as very widespread and in large part amenable to economic solutions such as subsidized housing, whereas research tends to indicate that the homeless are a small population but with a multitude of often intractable problems. ■

CONSTANCE HOLDEN

Comings and Goings

Ezra D. Heitowit has become vice president of the Universities Research Association, which manages the Fermi National Accelerator Laboratory and the central design group for the proposed Superconducting Super Collider. Heitowit served for 8 years on the House Science & Technology Committee—most recently as director of the research and technology subcommittee.

Orlov Hopes to Continue Scientific, Human Rights Work in His Life Here

Soviet physicist and human rights activist Yuri F. Orlov, who reached the United States on 6 October, gives first place in making a life here to resuming his scientific work, but also says he will continue his human rights activities.

Orlov says he intends to make no major decisions about his future in the United States for at least a few weeks, but he has a standing offer from Cornell University to take up what amounts to a visiting professorship there. And on 30 September he was named cowinner of a \$100,000 international human rights award from the Jimmy



Orlov in New York. Yuri and Irina Orlov talk to press after arrival at Kennedy Airport on flight from Moscow.

Carter Presidential Center. A Guatemalan organization shared the award.

Orlov was permitted to come to the United States as part of the U.S.-Soviet bargain that led to the release of American journalist Nicholas S. Daniloff. Orlov reached New York after a journey that started a week before in the Siberian village where he was exiled. He and his wife, Irina L. Valitova, were met at Kennedy airport by Valentin Turchin, a friend from university days and fellow human rights activist, who is now a professor at City College of City University of New York, along with representatives of Helsinki Watch, the U.S. counterpart of the organization with which Orlov was associated at the time of his arrest.

The Cornell appointment is for a research professorship, a 1-year joint appointment in the Laboratory of Nuclear Studies and the Center for Radio Physics and Space Research. The initiative for the Cornell appointment apparently came from Scientists for Sakharov, Orlov and Shcharansky, an

organization of university scientists formed to promote the human rights of scientists. However, the offer had strong general support among scientists at Cornell since Orlov's scientific reputation probably ranks second only to physicist Andrei Sakharov among Soviet scientists at odds with the government.

Orlov achieved international notice in the mid-1970's for his activities as a leader and spokesman of the Moscow group that sought to monitor Soviet compliance with the civil liberties guarantees in the Helsinki accords. After his group publicly documented Soviet violations, Orlov was arrested, tried under laws prohibiting anti-Soviet propaganda, and sentenced to 7 years in prisons and work camps and an additional 5 years of internal exile. Since early 1984 he has been living in the village of Kobay in the Yakutsk region in Siberia. His term was due to end in 1988. Against the odds, he is reported to have struggled to keep up his scientific work and even submitted papers to the Soviet academy.

Orlov has a reputation for indomitability in both his scientific work and human rights causes. He is an ethnic Russian and his wife is half Russian, half Tatar. Neither ever sought to emigrate and Orlov is said to have hoped to be released to resume life as an ordinary Soviet citizen.

Although he became known internationally because of his activities with the Helsinki Watch committee, Orlov emerged as a dissenter a decade earlier. After the Khrushchev speech denouncing Stalin in 1956, Orlov, then a member of the Communist party, asked in a party meeting that those responsible for excesses in the Stalin era be punished. He was expelled from the party and fired from his post at the prestigious Moscow Institute of Theoretical and Experimental Physics.

Orlov found work in Yerevan in Soviet Armenia. He completed his doctorate in physics in 1963 and earned recognition for his work in particle physics. After returning to Moscow in 1972 he incurred official displeasure by writing to Soviet leader Leonid I. Brezhnev in support of Sakharov, who was then under growing government criticism. Orlov again lost his post.

In the early 1980's, word that Orlov was in poor health circulated and reports that he had suffered head injuries from a beating in a labor camp caused particular concern. He was also said to have been the object of harassment in the village to which he was restricted during the term of internal exile. At his press conference he described his health as "not bad" and said that his living conditions improved after he began his Siberian exile. ■ JOHN WALSH