

search minister.

Mitterrand has also approved the creation of a new "superministry" covering education, science, and sport which, with its own Secretary of State, is being grouped with the ministries of economics, housing, and foreign affairs at the top of the hierarchy of government departments. Mitterrand's choice as head of the new ministry is Lionel Josepin, former secretary-general of the Socialist Party.

The 64-year-old Curien occupied the post of minister for research during the last 2 years of the previous socialist government, which was defeated in the legislative elections of 1986. Prior to that, he had held at one time or another many of the top posts in France's scientific administration, including director-general of the National Center for Scientific Research (CNRS) from 1969 to 1973, and he had been president of the National Center for Space Studies from 1976 to 1984.

Ironically, Curien started his scientific career (as a crystallographer) at the prestigious Ecole Normale Supérieure in Paris under the guidance of the physicist Yves Rocard, the father of the new Prime Minister.

During the election campaign itself, each of the three leading candidates—Mitterrand and the conservatives Jacques Chirac and Raymond Barre—spoke out in favor of the need for greater efforts to boost France's scientific activity.

Chirac's promises, however, were met with skepticism in many parts of the scientific community. It was pointed out that claims he had made that the government's support for research had increased significantly over the past 2 years were true only if defense research were taken into account; the budget for civilian research programs has, in fact, declined.

Mitterrand made no specific promises on research financing during the election campaign. However, he did say that "the duty of the next government will be correct the budget trends" of Chirac's government, that laboratories and research institutes should be given "greater help and encouragement," and that major research organizations such as the CNRS and the National Institute for Health and Medical Research "should be in the front ranks" of those seeking a rebirth of the French economy.

No announcement has yet been made about whether the same government team will be retained in the event of the Socialist Party winning the legislative elections announced by President Mitterrand on 15 May. However it is widely expected that, if this happens, the change in Cabinet appointments will be relatively minor. ■

D.D.

Biological Defense Defended

The Department of Defense in early May defended its controversial program aimed at developing defenses against potential biological warfare agents as being both militarily necessary and conducted with adequate safeguards to protect public health. The occasion was a congressional hearing called by three House subcommittees, followed 10 days later by the release of a draft report on the potential hazards that may conceivably arise from the biological defense effort.

The program has attracted increasing public attention recently as the Army's plans to build a new biological test facility in the Utah desert have ignited local opposition (*Science*, 8 April, p. 135), and as funding for the entire program has mushroomed from \$16 million in 1980 to about \$75 million this year.

The program is limited by the 1972 Biological Weapons Convention to research designed to develop defenses against microorganisms and toxins. Even before the convention was negotiated, President Richard Nixon unilaterally renounced all offensive biological warfare activities in the United States and scrapped U.S. stockpiles of biological warfare agents. The program is therefore directed toward the development of vaccines against exotic disease agents, the development and testing of protective clothing and filters, and efforts to produce detectors capable of signaling the presence of specific biological warfare agents. "We have renounced the sword in this area, the most we can do is to promote the shield," Thomas J. Welch, a Pentagon official in charge of the program, told the congressional hearing.

Welch produced a chart at the hearing indicating that U.S. intelligence agencies suspect ten countries of working on biological weapons, but he declined to name them or give any details, on the grounds that the information is classified. He did, however, repeat controversial accusations that the Soviet Union has maintained an offensive biological weapons capability in violation of the 1972 convention.

The U.S. program is carried out primarily at an Army research facility at Fort Detrick, Maryland, about 50 miles north of Washington, D.C. The facility has a maximum containment, or BL-4, laboratory capable of handling the most dangerous pathogens. The Army wants to build a second BL-4 facility at its Dugway Proving Ground in Utah in order to generate aerosols of pathogenic agents as part of a program to test protective devices and detectors. In addition, according to documents released along with the report on the potential hazards associated with the program, some 100 contractors, including almost 50 universities, are conducting research under the program.

Critics of the program have argued that the recent expansion of the effort—especially the plan for the Dugway facility—is, as Representative Wayne Owens (D-UT) put it at the hearings, "blurring the line between defensive and offensive research." The argument is that, in order to test defenses against biological agents, the agents themselves must be produced.

Welch responded that "there is a clear distinction between offense and defense," and asked "would we deny Walter Reed the right to do research [on yellow fever] because we were concerned about the offensive potential of his work?"

The Army's report on the potential environmental hazards of the program, which was produced as a result of a lawsuit filed by the Foundation on Economic Trends, concludes that safety measures in force are adequate to guard against exposing the public to disease agents and to prevent the escape of infected animals and insects from research facilities.

The day before the report was released, however, a highly critical report by the Democratic staff of the Senate subcommittee on oversight of government management, charged that there are "serious failings" in the Defense Department's oversight of the safety of the program, including "inadequate regulations, lax safety enforcement, and documented safety lapses." As a result, Senator Carl Levin (D-MI), the subcommittee chairman, announced that he is planning hearings later this summer on the safety of the program.

In addition, Jeremy Rifkin, the president of the Foundation on Economic Trends, announced at the House hearings that he is planning a campaign of demonstrations at facilities conducting research under the program, including universities, this fall. The program's political troubles are clearly far from over. ■

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