

which it will only become resistant in turn. Such is the nature of antibiotic resistance, which can be infectious among bacteria just as bacteria can be infectious among human beings.

For several years, drug companies have invested considerable energy trying to find new drugs to replace those that fall by the wayside as bugs learn to outwit antibiotics, and it is at least theoretically possible that they can keep up with, if not ahead of, the challenge. Clearly, they are working on ways around the problem of penicillin resistance, although most companies are reluctant to talk too specifically about what they are doing, not only to the press, but also to academic researchers. Nevertheless, it is possible to establish what kinds of approaches are being taken. One that seems promising to some researchers lies in the development of an agent that itself is a penicillinase inhibitor. Were it to work, it could be given before or along with penicillin, restoring penicillin's usefulness by binding the bacterial enzyme that destroys it. Investigators at Beecham Laboratories' British plant are working along these lines, as, most probably, are other scientists.

The National Institutes of Health (NIH), through the National Institute of Allergy and Infectious Diseases (NIAID), spends about \$3.5 million a year to study "sexually transmitted diseases," or STD. (It should be pointed out that at the London meeting a year and a half ago, scientists agreed to stop talking about VD and refer to STD instead. The May 1975 issue of *World Health*, the magazine of the World Health Organization (WHO), explains why: "Ignorance and feelings of guilt are in fact the two staunchest allies of a whole group of infections hitherto known as 'venereal diseases.' In the hope of making patients feel guilty, scientists from all over the world recently agreed to give them another name and

chose the term 'sexually transmitted disease'" So it comes to this—only a couple of years after a major national campaign to make VD a term you could use in the living room.

The NIAID research, all of which is "extramural," is coordinated by Milton Puziss. Puziss says he hopes to have new money to fund grant and contract research on the new resistant organism in particular but that, at present, research is directed at understanding the gonorrhea bug in general. One thing that distinguishes gonorrhea, and other VDs or STDs, from other infectious diseases, is that people do not develop any effective natural immunity to the disease after they have had it once. No one is certain why this is so, but there are several hypotheses. One has it that people may be reinfected with an antigenically different strain of the organism, so that when they get gonorrhea a second time around it is not precisely the same condition, although the symptoms are the same. Another bet is that there would be immunity were the bugs not eradicated so swiftly with penicillin; in other words, there has not been time for an immune reaction to take place. (A rash of untreatable disease could provide an unfortunate test of that hypothesis.) A third possibility is that there is no permanent, systemic immune response because the antibody-antigen reaction that is known to take place is limited to mucosal tissues at the site of infection and does not involve the bloodstream.

Puziss observes that one way to get around the immune problem as well as the matter of drug resistance would be to develop a vaccine to prevent people from getting gonorrhea at all. Research toward this end is under way, grounded in part in studies of the relationship between gonococci and the immune system, although Puziss cautions that development of a vaccine is not exactly imminent.

But suppose there were a vaccine. What then? The problems of testing it without stigmatizing individuals and invading privacy would be enormous. The problems of distributing it to the population at large would be horrendous. Imagine, for instance, the reaction of church leaders and parents groups to a recommendation from the Secretary of Health, Education, and Welfare that all high school freshmen be vaccinated against the clap!

Lacking a satisfactory medical solution to the problem of a potential epidemic of resistant gonorrhea, health officials are trying to decide what is the best thing to do. There is debate, for example, over whether the CDC-recommended therapeutic regimen should be altered. Wiesner says that for now, CDC is recommending treatment as usual, with resort to spectinomycin only after a patient has proved resistant to penicillin (there is no simple way to test a patient in advance of therapy to find out inexpensively and quickly whether the resistant strain is present). The reasoning is that broad-scale switch to spectinomycin would only hasten evolution of spectinomycin-resistant bugs. But others believe penicillin has already outlived its usefulness. Says epidemiologist King Holmes of the STD center at the University of Washington, "I think penicillin is no longer the drug of choice, even though I developed the drug regimen that CDC now recommends."

The best bet for keeping the lid on the new gonorrhea is to turn to familiar public health measures: early identification of patients, perhaps aided by an educational campaign to get people to seek treatment; and identification and treatment of "contacts," though it can be hellishly difficult to get VD patients to tell whom they've had sex with. This is not an ideal or sure path to success. But for now, that is all there is.

—BARBARA J. CULLITON

Repression in Argentina: Scientists Caught Up in Tide of Terror

The scientific community in Argentina is under severe stress as a result of the present state of civil unrest. Hundreds of scientists have been fired from jobs in government research institutes and uni-

versities, many have been arrested without being charged with any offense, and others have chosen to leave the country.

Scientists do not seem to be a particular target of repression, but along with

other professionals have been caught up in the violent tides of terror and counter-terror that now prevail in Argentina. More than a thousand people are thought to have died this year in political assassinations, whether by the rightist vigilante groups that seem to have the unofficial support of the government or by the urban guerillas who include the Montoneros and the leftist wing of the Peronist movement. Since 24 March this year, when the government of Juan Peron's widow was toppled by the seventh military coup in 21 years, there has been a further deterioration in all forms of hu-

man rights. Political expression is outlawed, arbitrary arrests are commonplace, and there are frequent reports of torture in the government's prisons. Both sides use political assassination as a routine device. "The basic human rights situation in Argentina is probably worse than in any country in the world. Just when it got that bad is hard to pin down, but this regime has accelerated the downward trend that had already begun under Isabel Peron," says Eldon Kenworthy of Cornell, a political scientist who specializes in Argentinian affairs.

The military junta, led by General Jorge Videla, has put the country under a form of martial law known as a "state of siege." The junta has also passed the *ley de prescindibilidad* or law of not needed persons, under which people may be dismissed without explanation from government jobs, and are forbidden from holding any other government job for 5 years. The law is particularly harsh on those such as physicists for whom nongovernment jobs are scarce.

Hundreds of scientists have been fired under this law, for reasons that can only be guessed at. Scientists are not more politically active than any other group, although Argentina is such a politicized society that most intellectuals have taken a stand of some kind one way or the other. It seems that almost any kind of political activity during the Peron administration, even such as signing a petition, can be the grounds for dismissal. Moreover, a number of private scores seem to be being settled at the same time. According to a letter sent to General Videla by a group of Mexican scientists and intellectuals, nearly a hundred research scientists supported by Argentina's Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET) have been fired, and more than 600 have been fired from other government research institutions such as the National Research Institute for Agriculture and Cattle Breeding, the National Institute for Industrial Technology, the National Physics and Technology Institute at San Miguel, and the National Atomic Energy Committee. The letter also states that one fourth of the members of the Argentine Physical Association have lost their jobs.

Though these figures are hard to verify, they seem to be at least approximately correct. One Argentine scientist told *Science* that 92 scientists have been fired from CONICET and that of his own personal knowledge about 200 more have been dismissed from other government research institutes. A document now avail-

able in the United States lists by name and institution 58 physicist members of the Argentine Physical Association who are said to have lost their government jobs since 24 March.

Presumably because of the international links of its members, the situation at the National Atomic Energy Commission has caused particular concern among scientists in Europe and the United States. Between 1 and 19 April, at least eight scientists were arrested, of whom seven have now been released, although they have been dismissed from their jobs. At least one of these, Maximo Victoria, has now emigrated to take up a job in Holland. Victoria's brother, an ophthalmologist working in Belgium, visited him while he was still in prison and reported that he and other scientists, physicians, and psychiatrists were being held in the Villa Devoto prison in Buenos Aires, five to a one-bedded cell with dimensions 3 by 2.4 meters. They had no legal representation and no charges had been brought against them. Maximo Victoria, his brother is quoted as saying in *Nature*, "has been beaten up and he has lost teeth. The situation is worse than in a novel of Kafka."

The Misetich Case

A man who may be in an even more serious situation is Victoria's colleague Antonio Misetich, the only one of the atomic scientists who has not yet been released. Misetich took his Ph.D. at MIT and was a member of the faculty there. After he was arrested on 19 April this year, the director of the National Magnet Laboratory at MIT, Benjamin Lax, wrote to offer him a job. The Argentine Embassy in Washington wrote on 9 August confirming that Misetich had been arrested. "He is in good health," the letter stated, and "if his situation is clarified he will be set free." An altogether different response was obtained a month later by the American Embassy in Buenos Aires. According to the State Department, its embassy was advised by the Argentine Ministry of Foreign Affairs that Dr. Misetich was "not registered." "In other words," says a letter from a State Department official, "the Argentine government has no record of Dr. Misetich's whereabouts."

The response may mean that Misetich is dead. If so, he has died in the government's hands, without being publicly accused of any offense and without public trial.

Psychiatrists seem to have suffered even worse than physicists. The government is said to view Freud (along with Marx) as an ideological criminal. Wheth-

er or not for this reason, government support of psychiatric institutions has been cut and many doctors have been dismissed. According to Amnesty International, "progressive psychologists have been accused of subverting their patients and of giving 'ideological support' to the guerillas. The Argentinian Federation of Psychiatrists was recently suspended after it had voiced concern about the effects of detention on prisoners. The military also appears to associate psychiatry with subversion."

The letter from the group of Mexican intellectuals to General Videla states that "several hundreds" of physicians, psychiatrists, psychologists, and social workers who worked for hospitals and mental health centers have been dismissed. "The whole personnel of the Ministry of Education technical centers for helping retarded children, which included some 130 professional people, had been fired and the centers closed down," the letter states.

As for the situation in the universities, Amnesty International states that "Since the coup of 24 March there has been a systematic ideological purge of the academic community in Argentina." It is not certain that the purge has been systematic, in the sense of a deliberate government policy against universities, but academics, like other intellectuals, have been persecuted by the regime. Amnesty has issued a list of 41 academics who are being detained in Argentina, including Victor Benamo, former rector of the University of Bahia Blanca, and Claudio Berman, president of the Federation of Argentinian Psychologists. There are unconfirmed reports that some 2000 people, including teaching and non-teaching personnel, have been dismissed since the coup of 24 March. The reasons for the dismissals are generally unknown, although 17 economists were fired from the University of Bahia Blanca in August because of "ideological and socio-cultural infiltration." According to a report in *Le Monde*, one of the ways in which the professors had planned to corrupt their students was to offer them scholarships to study at foreign universities, such as the University of Colorado.

Science submitted to the Argentine Embassy in Washington a list of questions concerning the reported dismissals of scientists and academics, as well as the contradiction in the government's statements about Misetich. An embassy spokesman said that the questions had been referred back to Buenos Aires for comment, and that an answer might be expected in 2 to 3 weeks.

An Argentine source told *Science* however, that there was "nothing dramatically different" in the generals' treatment of the universities, which have been under attack for the past 5 or 6 years. "The standard of the universities has completely dropped to zero from 10 years ago, when it was quite good," he says.

Argentina's university system was once the best in Latin America. But the military regime that came to power in 1966 carried out a purge against leftists. When the Peronists returned to power in 1973, they in turn purged conservative and non-Peronist professors. Guerilla groups openly recruited on campus. Written examinations were abolished for many courses and an open admissions policy sent enrollment soaring. Now the boot is on the other foot again. The rector of the University of Buenos Aires, Alberto Ottalagano, is a self-declared fascist who sees the new repression as a religious crusade. "We Christians possess the truth and we do not share it. The rest do not have it and we shall treat them accordingly," he is quoted as saying in the *New York Times*. Antisemitism is again on the upswing.

Treatment of scientists and others has become a matter of increasing disquiet in the United States. The AAAS committee on scientific freedom and responsibility recently wrote to the Inter-American Commission on Human Rights expressing concern that the arrests and dismissals "are seriously affecting the value and quality of the Argentine science community, particularly in the areas of physics, psychology and psychiatry." A New York based group known as the Solidarity Committee with the Argentine People has taken up the cases of Misetich and two other physicists, J. C. Gallardo and Gabriela Carabelli. Carabelli is said to have been abducted by the military from her house shortly after the coup, but the committee recently learned of an official report that she has been found dead.

It is open to question whether action by the United States government can improve the human rights situation in other countries, but Congress is determined to try, and the Carter administration will probably attach greater importance to the issue than its predecessor. Under an amendment introduced by Representative Tom Harkin (D-Iowa), the

government must now vote against loans by the Inter-American Development Bank to countries in which there is found to be a systematic violation of human rights. Last summer the U.S. director of the bank voted against a loan to Chile on these grounds.

"The Videla regime has been much more subtle than the Pinochet regime in the way it represses dissent. One thing we can do as private citizens is to encourage Congress to probe into this and to realize that there is no difference at all between Argentina and Chile on this issue," says Eldon Kenworthy. Argentina gets no economic aid from the United States but last year received loans of \$34 million for the purchase of military equipment. No agreement has yet been signed for this year's loan, but the law under which it is authorized now has a tight human rights clause written into it.

Reduction of aid to Argentina may or may not persuade the military rulers to cease their abuses, but it would at least serve to ventilate the issue. Silence is the one reaction that certainly won't help those whose rights are now being violated.—NICHOLAS WADE

The Handicapped: HEW Moving on Civil Rights in Higher Education

The bandwagon is finally beginning to roll on civil rights for handicapped people, 3 years after the passage of the Rehabilitation Act of 1973 which is supposed to do for the mentally and physically handicapped what Title IX of the Education Act Amendments did for women and the Civil Rights Act did for minorities.

The law affects all employers and institutions that accept federal financial assistance, and it has a particularly marked impact on colleges and universities, virtually all of which get federal money in some form or other. The financial repercussions for some may be severe, because in order not to discriminate against the handicapped an institution must not only open its doors but make sure everybody can get through them.

The law is still not being enforced, because it has taken the government so

long to come out with the necessary regulations. The final regulations for section 503 (requiring affirmative action employment practices by federal contractors) came out this year; and the final ones for 504 (which mandates non-discrimination by all recipients of federal financial assistance) are due out within the next month or so.*

The requirements for affirmative action in employment by federal contractors (overseen by the Department of Labor) do not seem to have caused all that

*The first draft of the rules were issued last May, and revised proposals in July. What made HEW speed up was a visit last spring to HEW secretary David Mathews of a delegation headed by Eunice Fiorito, president of the American Coalition of Citizens with Disabilities. The department had no firm timetable for publication of revised proposals says Fiorito, so she descended on Mathews and told him if he didn't act fast the matter would be taken to the press and the Republicans would find themselves embarrassed by demonstrations at their convention in August. According to Fiorito (who is blind), Mathews "was so scared he came out with the regulations in a month."

much trouble for higher education. But, according to a lawyer for the American Council on Education (ACE), a "major stir" has been generated by HEW's sweeping interpretation of section 504, which reads, simply: "No otherwise qualified handicapped individual in the United States . . . shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Many colleges and universities are in a dither over what they perceive to be the intolerable expenditures called for and also the unwarranted federal intrusion in academic policies.

The proposed regulations require action on several fronts: barriers to mobility must be removed so handicapped people have access to the same activities and facilities the nonhandicapped do. Admissions tests must be altered where they discriminate against disabilities—such as blindness or lack of motor skills—that are not related to academic ability. Counselors must not steer handicapped students away from curriculum choices on the basis of preconceptions about their capacities. Auxiliary aids, such as tapes for the blind, interpreters for the deaf, and various basic con-