

## Drug Shows Promise Against Herpes

The family of herpesviruses have until recently been one of the body's most persistent antagonists. Nearly everyone harbors one of the five types of herpes in latent form, as the intractable residue of ailments ranging from cold sores to chicken pox, from mononucleosis to venereal disease. The viruses lodge in a variety of cells and when the body is weakened, they replicate and wreak their own peculiar havoc. Victims of herpes can experience painful blistering of the skin, lung damage leading to pneumonia, liver infections, blood clots, or encephalitis.

Cancer or transplant patients taking drugs that suppress natural immunity are at particularly high risk of herpes infection, which is painful for most and fatal in a few. Until recently, no effective treatment for herpes existed, but a promising new drug may appear on the market soon. Recently clinical trials of acyclovir, manufactured by the Burroughs Wellcome Co., indicate that it can eliminate active forms of herpesviruses for at least the duration of immunosuppressive therapy.

Results of several trials were reported in the 27 June *Lancet* and the 9 July *New England Journal of Medicine*. A trial conducted by Charles Mitchell and others at the University of Minnesota involved 11 recipients of heart or liver transplants and 13 victims of cancer or aplastic anemia, each of whom had an active form of herpes simplex virus (of the types associated with cold sores and venereal disease). Treatment with acyclovir significantly shortened the duration of pain and virus replication. Similar results were obtained in a study by Sunwen Chou and others at Stanford University, involving ten heart transplant patients, and in a study by Rein Saral and others at Johns Hopkins University, involving 20 recipients of bone marrow transplants, all of whom had active herpes simplex infections.

These are the first results of clinical trials with acyclovir to be reported and additional studies must be completed before it can be licensed. The drug, whose chemical name is acycloguanosine, was discovered at Burroughs Wellcome in 1974 during a search for analogs of guanine—a building block

of DNA—that would selectively stop DNA replication. There is no indication that the drug will eradicate the dormant (or nonreplicating) form of herpes, and indeed, in the three reported studies, the virus recurred in most patients after treatment with acyclovir ceased.

Still, the number of persons who would benefit from it is thought to number in the hundreds of thousands. About 70 million people annually get cold sores; about 20 million have contracted the herpes venereal disease, with 5 million new cases each year. The Food and Drug Administration may allow a topical ointment preparation of acyclovir on the market by the end of the year; injectable, oral, and ophthalmic preparations are also being considered.

At this early stage of its testing, one of the drug's major advantages appears to be its lack of toxicity. Vidarabine, an existing drug effective against several herpesviruses, has been licensed only for use in herpes simplex encephalitis cases, because of side effects and animal tests indicating it is a mutagen, carcinogen, and teratogen. No similar problems have yet appeared with acyclovir.

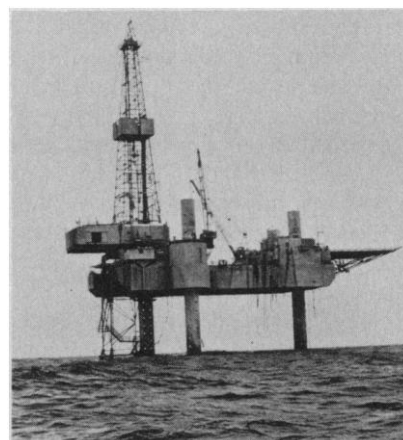
—R. Jeffrey Smith

## For Sale: A Billion Acres of Outer Continental Shelf

Speaking at a packed news conference on 15 July, Secretary of the Interior James Watt brushed aside the latest call for his dismissal, by the National Wildlife Federation, and then made several announcements. The most important of these was the release of a new 5-year plan for selling oil and gas rights on the outer continental shelf (OCS). Although several minor changes have been made, Watt said that the plan is essentially the same one that he proposed in April. Watt would like to open up the entire OCS at a rate of 200 million acres a year, so that by the end of 1986 prospectors will have had an opportunity to buy drilling rights virtually anywhere on the 1 billion acres of federally controlled ocean shelf.

According to the Department of the Interior, Watt is hoping to have eight massive lease sales each year. In

1982, for example, he would invite bids for two areas in the Gulf of Mexico, one in the North Atlantic, one off the coast of southern California, and two off the coast of Alaska. The Administration would like to put the entire OCS up for auction, Watt said, be-



*These may become a common sight on both coasts.*

cause "the precise quantities and locations of oil and gas in frontier areas are presently unknown," and he claims that the only way to take an inventory of these resources is to open them for exploitation. After allowing time for all the environmental impact statements to be filed, the Interior Department expects that the new leasing plan will win final approval early in 1982.

If Watt's present troubles are a guide to the future, the 5-year plan may not be approved easily. Watt has run into strong opposition already on a single sale of leases on the OCS off the coast of central and northern California. In lease sale 53, begun in May, the Interior Department hopes to auction drilling rights in five sedimentary basins: Port Arena, Bodega, Santa Cruz, Eel River, and Santa Maria. California and several environmental groups have sued the Department of the Interior and temporarily blocked the issuance of leases in the southernmost basin, Santa Maria. California argues that Watt has ignored the state's coastal zone management plan and overlooked the potential onshore air pollution that OCS drilling might create. Watt has delayed acting on the other four basins until the court rules on Santa Maria.

At the same time, the House Appropriations Committee has approved an amendment to the 1982 Interior De-

partment budget that forbids drilling off the coast of northern California. The sponsor of the amendment, Representative Les AuCoin (D-Ore.), claims that the amendment will pass the House without difficulty. Lease sale 53 has become so controversial that the decision on how to proceed is being made at the White House. Watt insisted at the press conference that he has not surrendered any authority in this case, and that it is standard procedure to consult with the White House on major decisions. He would not predict when the Administration would act on lease sale 53, but a department press officer thought it would not be before August.

Meanwhile, spokesmen for some of the oil companies interested in the OCS have been trying to dispel the notion that they do not like the fast-paced leasing plan. Exxon, Atlantic-Richfield, and Sohio, which had expressed doubts about the industry's ability to keep up with Watt's leasing schedule, now claim that they prefer a too fast pace over a too slow one. Exxon's vice president for exploration, J. D. Langston, issued a statement saying that Watt's leasing plan "represents a substantial challenge to industry in both timing and scope," and he said that Exxon "fully supports" the objective.—**Elliot Marshall**

## UC Regents Extend Weapons Lab Agreement

University of California (UC) management of the Livermore and Los Alamos nuclear weapons laboratories has been extended for another 5-year term. Contracts with the Department of Energy (DOE), which owns the laboratories, were approved by the UC Board of Regents on 18 June.

UC management of the weapons laboratories has been the subject of a continuing controversy about university involvement in weapons work (*Science*, 12 December 1980, p. 1280). The motion to extend the contracts passed easily, although disruption of the board meeting by protesters compelled the regents to move to another room for the vote. The vote was 11 to 4 with 2 abstentions.

Observers regarded the outcome as a foregone conclusion, since the

regents last September had voted to proceed with negotiations by a decisive margin, and no major issue arose with DOE during negotiations. Current contracts do not expire until 30 September 1982, and the new term extends to 30 September 1987.

The debate over whether the university should be involved in nuclear weapons design seems to have stimulated proposals to get UC engaged more directly in efforts to prevent the use of such weapons. At an arms control symposium at Livermore on 29 May, UC president David S. Saxon said that he had appointed a faculty committee to plan a conference in 1982 on international security and arms control. The faculty committee will also advise Saxon on ways to organize the talent and knowledge available in the university for a long-term effort on these issues.

California Governor Jerry Brown, an ex officio member of the board of regents, has a more specific proposal with a similar purpose. In June Brown, who opposes UC involvement in weapons work, called for creation of a UC Center for Global Security and Cooperation at one of the UC campuses, with staff of 25 growing to 50 to 100. Brown suggests that the initial budget of \$1.5 to \$2 million a year be paid from the fee for managing the labs that UC receives from DOE.

—**John Walsh**

## Chilean Physicians Released

Two of the three Chilean physicians whose case was taken up by the AAAS have now been released, with all charges against them dismissed. They are Manuel Almeyda and Pedro Castillo. A third physician, Patricio Arroyo, has been released on bail while a court studies a charge of "illicit association" against him.

The reasons for the release are not known, but a letter from House Foreign Affairs Committee chairman Clement Zablocki to the foreign minister of Chile is said to have been helpful. Zablocki sent the letter after having heard the report of a fact-finding mission sponsored by the AAAS and four other organizations (*Science*, 24 July, p. 421).—**Nicholas Wade**

## Science Board Cautiously Supports Social Research

The National Science Board, which oversees the National Science Foundation (NSF), this spring reviewed the foundation's support of social research to see what should be done in response to the Reagan Administration's budgetary attacks on the social and behavioral sciences. The result is a tepid statement issued after the board's June meeting.

Basically, the board expressed approval of NSF's role in supporting the social sciences, noting in particular the need for continuing collection of social data for the national statistical base, and for research to assess the impacts of new technology on society.

The Administration's leery attitude toward social and behavioral research is well known. Board Chairman Lewis Branscomb told *Science* it is important for NSF to be cautious about "more casual kinds of research." An example of this, he said, was opinion research, which is not regarded as crucial for policy-making.

Social and behavioral scientists are not happy with what they perceive to be NSF's half-hearted attempts to defend social and behavioral research. Clarence Martin of the Association for the Advancement of Psychology says that the research community would be able to accept reduced support if decisions were arrived at as they have been in the past, through cooperation among the executive and legislative branches and the scientific community. The administration has "violated this partnership by making unilateral decisions as to how the pie should be divided."—**Constance Holden**

## Iraq to Rebuild Reactor

Following the promise of credit from Saudi Arabia, Iraq has decided to ask France to rebuild the Tamuz nuclear reactor bombed by the Israelis. Iraqi vice-premier Tariq Aziz will visit France soon to negotiate terms, according to *Le Monde* (17 July). What remains to be seen is whether Mitterand's government will insist on stricter controls than did its predecessor.

—**Nicholas Wade**