

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.

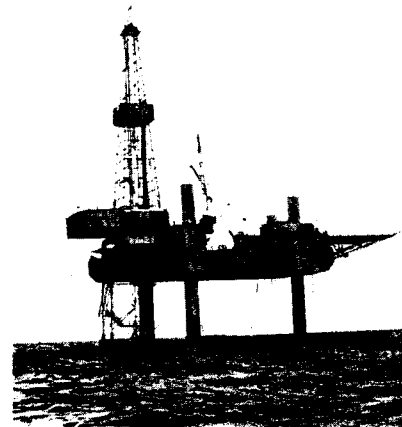
—R. Jeffrey Smith

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-