

Antiviral drug strikes again

The antiviral drug amantadine was approved by the Food and Drug Administration in 1966 to prevent a type A flu known as Asian flu. Even with this approval, though, the medical community has been skeptical about whether amantadine can really prevent type A flu and whether it is free from serious side effects. The reason is that antiviral drugs are still largely frontier medicine (SN: 3/20/76, p. 186; 11/4/78, p. 309).

When a type A flu called Russian flu struck the University of Michigan at Ann Arbor in January 1978, Arnold S. Monto and his colleagues at the university took advantage of the outbreak to see whether amantadine could indeed prevent type A flu and do so without serious side effects. Approximately 300 subjects took either amantadine or a placebo twice daily for seven weeks — as long as the Russian flu epidemic lasted in the university community. The researchers report in the March 9 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* that 5.9 percent of 136 subjects given amantadine came down with Russian flu compared with 20.1 percent of 139 subjects given a placebo. This was a highly significant difference, showing that amantadine's ability to prevent Russian flu was 70.7 percent. Also, amantadine's side effects were mild and stopped when subjects ceased taking it. Monto and co-workers conclude that amantadine can indeed prevent type A flu and do so without serious side effects.

Modern smokers: Less cancer risk?

The tar and nicotine content of U.S. cigarettes has fallen off dramatically during the past 25 years, and epidemiological studies indicate that death rates from lung cancer are lowest among men who smoke low tar and nicotine cigarettes. Oscar Auerbach of the Veterans Administration Medical Center in East Orange, N.J., and his colleagues now have found that today's smokers do have fewer precancerous lung changes than did smokers of a few years ago. Their report in the Feb. 22 *NEW ENGLAND JOURNAL OF MEDICINE* further substantiates low tar and nicotine cigarettes' ability to reduce the risk of lung cancer. Auerbach and his co-workers even believe that their findings "presage a decline in the death rates of cigarette smokers from lung cancer at some future date."

Tumors: The heat's on

The greatest successes in treating cancer during the 20th century have come from combining an ever-increasing array of therapies — surgery, radiation, drugs and immunotherapy. Still another modality may soon join the armamentarium — hyperthermia (heat).

Because tumor cells are more sensitive to heat than normal cells are, the idea of using heat as a cancer therapy has been building for a decade now. Between 1967 and 1976, for instance, researchers found that heat could kill leukemia cells, that heat-perfused blood could make sarcomas, melanomas and bladder tumors regress and that heat could reduce tumors while sparing healthy tissues (SN: 5/22/76, p. 326). And now Joan A. Bull of the National Cancer Institute and her colleagues report, in the March *ANNALS OF INTERNAL MEDICINE*, that 14 advanced cancer patients had their entire bodies heated repeatedly, and only one experienced serious side effects as a result. This finding, the scientists write, indicates that "with carefully monitored conditions, whole body hyperthermia is feasible."

Bull and her co-workers will next give cancer patients whole body heat therapy along with cancer drugs in hopes that the former will intensify the effects of the latter. Test-tube studies have shown that heat and certain cancer drugs act synergistically to increase cell kill.

SOS to Moscow: 'We won't cooperate'

More than 2,400 U.S. scientists have pledged to cold-shoulder the Soviets until dissidents Anatoly Shcharansky and Yuri Orlov (SN: 9/2/78, p. 165), who were sentenced last summer to years of hard labor, are released. An informal amalgam of protestors, Scientists for Orlov and Shcharansky (sos), includes 12 Nobel laureates, 18 past or present directors of major scientific laboratories, 20 past or present presidents of major national scientific organizations and more than 10 percent of the National Academy of Sciences' 1,100 members.

One petition, signed by 1,744 scientists, pledges that each will "withhold all personal cooperation with the Soviet Union until Orlov and Shcharansky are released." The 664 signers of a second petition will continue to participate in existing exchange programs but vow they will boycott international science meetings in the Soviet Union, will oppose expansion of current science-exchange programs and will campaign against transfer of high technology to the Soviets.

The U.S. protest focuses on Orlov and Shcharansky because they symbolize the repression and atmosphere of reprisals under which Soviet scientists live. Under such conditions, "effective international scientific cooperation is impossible," said Nobelist Paul J. Flory of Stanford University. "Indeed, science itself cannot flourish in such an atmosphere."

Physics group remains tax exempt

The American Institute of Physics, a federation of nine physics societies, retains its tax-exempt status as a result of a ruling by the national office of the Internal Revenue Service last month. This was the second appeal to a threatened reversal in the tax status of the Institute, founded in 1931 (SN: 8/12/78, p. 103).

Death index for epidemiologists

One of the biggest headaches for epidemiologists trying to follow a study population over a span of years is finding out when and where individuals die. Knowing that is essential to tracking down the official cause of death on state death certificates. A National Death Index being developed by the National Center for Health Statistics should make future searches much easier.

Probably available by late 1980 with 1979 deaths (none earlier) from at least 40 states, it will require nothing more than a name and birthdate or name and social security number to spit out the state in which death occurred and death certificate number. Eventually, 1979 data from all states and U.S. possessions will be available and updated annually.

Tracking down deaths now requires contacting separately each state, U.S. possession and special registry — some 56 in all. The Social Security Administration can sometimes locate state of residence at death for individuals who had social security numbers, but won't give death certificate numbers, says NCHS's Drusilla Burnham, so state requests are still necessary.

It is planned that the system will list name; sex; race; marital status; state of residence; place, date and age at death; death-certificate number; and state-file number. But the system will never supply information the user did not already have. For example, if a user requests a check on Ted Amis with social security number 332-31-1234 and the file shows the number belongs to Susan Jerome, the user printout will only note that it has a match for 332-31-1234 and give the corresponding state and death certificate number.

The service is for epidemiologists and statisticians only, although a committee screening all requests will have final say as to who uses the data.