

details of the study were disclosed last week in the *Washington Post*, however, they have raised some doubts about the ethics of undertaking this type of research.

Total body radiation therapy has been used at the University of Cincinnati for the past fifteen or sixteen years, according to Dr Edward Gall, one of the Cincinnati team, but the investigative part funded by the Department of Defense has a history of eleven years. Dr Gall claims that the Pentagon became interested in the radiation therapy when some of the results were first described, and although the programme has been expanded the therapy has not been altered. In effect, he claims that the Department of Defense is simply interested in results derived from normal therapy at the hospital.

The therapy involves exposing patients suffering from cancer that has progressed beyond surgery to total body radiation of between 100 and 300 rads, or occasionally to partial body doses of 50–100 rads. The Department of Defense is interested in monitoring the doses of radiation that produce nausea and vomiting and other effects that might impair the performance of troops on the battleground. Patients are told that the results of the treatment may be helpful in case people are exposed to large doses of radiation, but they are not told that the study is being funded by the Department of Defense.

So far, 81 people have been given the total radiation treatment at the University of Cincinnati, but 108 have been approached—27 were excluded either because they were found to be unsuitable for treatment or because they had indicated that they did not want to take part. They included patients suffering from cancer of the colon and lung and Ewing's tumour, and all had already been given treatment at the University of Cincinnati hospital. They are told that the therapy may relieve some of their pain but that it will not necessarily lengthen their lives. But they are not told that they may suffer nausea from the treatment, since that may bias the results.

The treatment is approved each year by the Committee on Human Research at the university. Some other cancer therapists have expressed doubts about both the ethics of the research and the efficacy of the therapy, however. In particular, it has been suggested that total body radiation is not used as a therapy elsewhere, and the Department of Defense says that it is not funding any similar research. The Cincinnati team, although unwilling to claim substantive evidence of success from its therapy, points out that out of four children treated for Ewing's tumour, three have survived for three and a half years.

DDT

Borlaug's Warning

by our Washington Correspondent

AN impassioned plea on behalf of DDT was delivered in Washington last week by Norman E. Borlaug, recipient of the 1970 Nobel Peace Prize for his work on high yield wheat strains. Borlaug, who testified in a public hearing on the cancellation order imposed on the pesticide by the Environmental Protection Agency, said at a press conference later:

"Environmentalists today seek a simple solution to very complex problems. The pollution of the environment is the result of every human activity as well as the whims of nature. It is a tragic error to believe that agricultural chemicals are a prime factor in the deterioration of our environment.

"The indiscriminate cancellation, suspension, or outright banning of such pesticides as DDT is a game of dominoes we will live to regret.

"DDT, because it is a name popularly known to most segments of the public, has been the first target. Once that is accomplished, the so-called ecologists will work on hydrocarbons, then organophosphates, carbamates, weed killers, and, perhaps, even fertilizers will come under the assault of their barrage of misinformation.

"If this happens—and I predict it will if most DDT uses are cancelled—I have wasted my life's work. I have dedicated myself to finding better methods of feeding the world's starving populations. Without DDT and other important agricultural chemicals, our goals are simply unattainable.

"Perhaps more than any other single factor in the world today DDT has a unique contribution to the relief of human suffering. I need not reiterate its vital importance in malaria control.

"DDT critics will say, of course, that only domestic uses of the chemical are being reviewed in the hearings at which I appeared today. But I have spent my life working in the nations of the world to help them feed themselves. I know how they will react if we terminate uses of DDT in this country and, in effect, label it 'poison'. If it is not good enough for your purposes, they will reason, then it shouldn't be used in our countries. The impact will be catastrophic."

DRUG ADDICTION

Fort Worth Deleted

by our Washington Correspondent

PLANS to transfer a drug addiction research and rehabilitation centre from the National Institute of Mental Health to the Bureau of Prisons seems to be going ahead in spite of stiff opposition from powerful members of Con-

gress. The centre, situated at Fort Worth in Texas, was due to be transferred to the Bureau of Prisons this month (see *Nature*, 232, 597; 1971), but in July the House of Representatives blocked the move with a resolution designed to keep open all Public Health Service hospitals and outpatient clinics pending the findings of a thorough review of their functions. The resolution has, however, reportedly been emasculated in a conference committee appointed to iron out differences in the versions of the resolution passed by the House and by the Senate, and all references to the two research centres at Fort Worth and at Lexington in Kentucky have been deleted.

Opponents of the plan, led by Paul G. Rogers, chairman of the House Subcommittee on Public Health and Environment, argued that transfer of the Fort Worth centre to the Bureau of Prisons would in effect close down badly needed facilities for the treatment of drug addicts. NIMH officials have, however, countered that the loss of facilities will be offset by a sharp increase in the number of community health centres offering rehabilitation treatment and that, in any case, an addict is more likely to be rehabilitated if he is treated in his own community and not an isolated hospital.

While discussions about the future of the Fort Worth centre were taking place in Washington, however, many of the hospital's staff left, giving rise to serious doubts about the ability of the hospital to carry on operating in its present role, even if Congress did grant a stay of execution.

If, as now seems likely, the Fort Worth centre is transferred to the Bureau of Prisons for use as a medium security geriatric, alcohol and drug addiction hospital for prisoners, the move would underline the failure of the Narcotic Addict Rehabilitation Act of 1966. That act gave the courts the power to commit drug addicts for treatment instead of for prosecution for certain non-violent crimes such as mail theft, stealing cars and forging cheques.

Addicts committed under the terms of the Narcotic Addict Rehabilitation Act are sent to the Lexington and Fort Worth clinical research centres for detoxification and are then usually sent to aftercare centres in their local communities. In the first three full years of operation of the act, however, between July 1967 and June 1970, only 179 addicts were committed for treatment, and only 509 were committed after trial.

Congress had expected that about 900 addicts a year would be committed before trial alone, and that Lexington and Fort Worth would be bursting at the seams. Instead, the hospitals are running at half strength and seem destined for other things.