

## NEW WORLD

# NASA-Style Plan For Cancer Research

by our Washington Correspondent

PART of the much delayed and highly controversial National Cancer Program plan has at last seen the light of day. A blueprint for cancer research in the United States for the next five years, the plan was ceremonially handed over to President Nixon last week along with two other reports on progress in the much publicized crusade against cancer. It is a remarkable document in many respects, not least of which is that it represents a unique approach to the planning of scientific research, and it is sure to add fresh impetus to the growing debate about whether centrally directed, NASA-style management of cancer research is either timely or productive.

The fruit of some forty planning sessions involving 250 scientists which took place between October 1971 and March 1972, the plan was ultimately put together by officials of the National Cancer Institute (NCI). For some six months it has been bogged down in reviews chiefly by the Office of Management and Budget. The portion released last week, called the Strategic Plan, is a systems analysis approach to the management and organization of cancer research, setting out objectives, major courses of action and estimates of the resources that will be required for the cancer crusade in the next five years. The second part of the plan, the so-called Operating Plan, will be rather more interesting, for it will set out specific programmes to be funded and alternative ways of allocating the resources. But the operating plan will not be ready for another year and even then it will be distributed only to those responsible for managing the Cancer Program!

The strategic plan describes itself as a disease-orientated approach to the administration of cancer research. To achieve the ultimate goal of developing "the means to reduce the incidence, morbidity and mortality of cancer in humans". The plan sets out seven major objectives ranging from prevention to rehabilitation. The objectives are then defined in terms of "approaches"—for example, "reduce development of cancer by altering immunological capability of individuals" — and these are further broken down into "approach elements" and "project areas", which is where actual research projects fit into the picture. The plan, simplified into a diagram with the goal at the centre and the objectives radiating from it like spokes of a wheel, has been hanging on some

laboratory walls at the NIH campus in Bethesda for several months where it has been treated with various degrees of respect and has even been found to make a good dart board.

While it is no small feat to assess the staggering amount of research bearing on cancer and to set out an overall set of goals and strategies, the tricky and more controversial questions of how much money should be devoted to individual projects or different approaches, is not spelled out in the strategic plan unveiled last week—those questions will be tackled in the operating plan, which is one reason why it is not yet ready. But the Strategic Plan does give estimates of the total resources that will be required for the cancer crusade in the next five years.

By 1978, the plan would require some \$1,200 million to be spent on cancer research in the United States, of which about \$850 million would be provided by the National Cancer Institute. (The rest would come from other Institutes of the National Institutes of Health, State and Local Governments and volunteer organizations.) That total compares with about \$512 million spent in 1971. As for the NCI itself, the plan suggests that its budget for the 1974 fiscal year (which started on July 1) should be \$500 million, in other words, the same amount as the Administration

has already requested, and that it should increase steadily over the next five years by an average of about \$65 million a year. By 1982, the plan envisages that the total cancer crusade will be consuming some \$1,700 million a year.

As far as manpower is concerned, the plan warns that "the unavailability of required scientific manpower may constrain achievement of the program target operating level". Some 9,300 scientists will be required in 1978 for the portion of the cancer programme operated by the NCI alone, while only about 5,000 scientists are now involved in NCI-supported cancer research. Can present training programmes meet the demand? Those who drew up the plan believe not, for they suggest that a "deficiency in the number of scientists continue to increase as the program expands". It should be pointed out, however, that the plan was drawn up before the recent announcement that at least part of the NIH training programme is to be saved from the budgetary axe (see *Nature*, 244, 128; 1973).

The plan is sure to generate some criticism about its specific conclusions and recommendations, but it has already sparked considerable controversy over the more fundamental issue of whether or not cancer research is amenable to the systems analysis approach that the plan takes. In particular, is the move towards tighter central planning likely to stifle creativity? And is the increasing emphasis on cancer likely to take funds away from equally deserving areas of biomedical research?

Those questions have been raised increasingly in the past few years particularly in regard to the growing use of contracts as opposed to grants to fund biomedical research. Many of these were set out in a review of the strategic cancer plan carried out last year by the Institute of Medicine, part of the National Academy of Sciences. The institute's review, which has not been made public but which has been extensively leaked, raised objections to some specific points in the plan but criticized it chiefly for leaving the impression that all shots can be called from a central headquarters, that all, or nearly all, of the really important ideas are already at hand, and that given the right kind of administration and organization the hard problems can be solved.

The institute suggested that a centrally planned, accelerated research programme may be applicable to a small number of cancers for which therapeutic technology is relatively effective and

## Cancer Panel

PRESIDENT NIXON announced last week that he has appointed Dr Ray D. Owen, Professor of Biology at California Institute of Technology, to be a member of the President's Cancer Panel. A three-member board charged with monitoring the development and execution of the National Cancer Plan, the panel report directly to the President on any blockages or delays in carrying out the programme. It is thus an influential body. It was also announced that Mr Benno C. Schmidt, managing partner of J. H. Whitney and Co, has been re-appointed chairman of the panel for a second term of one year. Dr Owen replaced Dr Robert A. Good, whose term of office expired on February 22. The third member of the panel is Dr R. Lee Clark, director of the M. D. Anderson Hospital and Tumor Institute in Houston.