Medical Research in England: New Director Seeks to Boost Morale

London. The Medical Research Council, the English counterpart of the National Institutes of Health, faces many of the same problems as the NIH but has developed an interestingly different approach. It aims to support the full range of biomedical research, yet with an annual budget of some $95 million—as much as the NIH spends simply on administering its research funds through the Division of Research Resources—the MRC has only a twentieth of the spending power.

Like the NIH, the Medical Research Council has been buffeted by public criticism of biomedical research as an elitist endeavor of doubtful practical advantage, and by demands from politicians for research that is "relevant." Until he became Foreign Secretary early this year, neurosurgeon David Owen was the MRC's political master: as Under Secretary for Health and Social Security he pressed the council to emphasize research into subjects such as low back pain and incontinence.

On top of demands for relevance, the MRC has shared with the noncancer part of the NIH a general slow-down of growth in research funds. In terms of real spending power, the MRC budget has remained essentially constant for the last 5 years. Perhaps the single most widely known achievement of the council is its support of the Laboratory of Molecular Biology at Cambridge, the workplace of biologists such as Frederick Sanger, Max Perutz, Sydney Brenner and, until recently, Francis Crick.

Poor Science a Discredit

Since April 1977 the council has had a new director whose ideas about biomedical research could hardly be more different from the policies which the NIH is constrained to follow. J. L. Gowans is a well-known immunologist and a member of the Royal Society, the English equivalent of the National Academy of Sciences. He is not a believer in the directability of research by bureaucrats. "The single most important thing for us to do is to support excellence. To do that, we must have a way of giving money which is independent of social and political pressures. Because in the end you discredit a subject by supporting bad work," Gowans declares.

Who should set the direction of biomedical research? "The choice," says Gowans, "is exercised by the scientific community themselves, not by bureaucrats, because bureaucrats can't decide what is a good experiment and what is a bad one. It is a fallacy to suppose that the headquarters office of the MRC can have ideas of its own." Administrators, he concedes, may occasionally have to "plug the gaps," but their principal function should be simply to "hold up a mirror" to the biomedical community, whereupon researchers, being as aware as anyone else of social relevance, will spontaneously pursue the most fruitful avenues of study.

It is hard to imagine the NIH's chief administrators espousing such a policy in public any more. That the director of the MRC can do so, even in a similar political climate for research, is probably the result of several factors. First, the MRC is much more autonomous than the NIH. Oversight and appropriations hearings by congressional committees, management review by the Office of Management and Budget, inquiries by the General Accounting Office, investigations by reporters, directions down a chain of command from the Secretary of HEW—all these are interventions of a type which the MRC knows only in pale imitation, if at all. In comparison with the NIH, its budget is heavily insulated from political manipulation. Instead of running the gauntlet through HEW, OMB, the White House, and Congress, the director of the MRC has only to defend the MRC's share of the total research budget in an arena where his adversaries are only the directors of other research councils. The total size of the research budget is set by the Cabinet, with apparently no interaction between the MRC and Treasury officials.

J. L. Gowans, Secretary of the Medical Research Council.

Another reason for the present director's confidence in espousing a scientist-oriented research policy relates to a recent episode of bureaucratic politics in which the MRC came up with a winning hand. In order to make the research councils more responsive to national needs, a proportion of their budgets was funneled through the government departments to which the work of each was most immediately relevant. The scheme, devised by Victor Rothschild, a former director of research for Royal Dutch-Shell and then head of a newly instituted Cabinet think-tank, meant for the MRC that 20 percent of its budget came under lien to ministry officials who could in principle spend it elsewhere if they believed the MRC would only use it to build ivory towers.

The Council cooperated with this potentially threatening scheme and seems to have turned it to advantage. Perhaps because the Ministry tended to seek advice from much the same people as did the MRC, officials found that they couldn't come up with any noticeably better or more relevant ways to spend the earmarked funds than those already chosen by the council. The Rothschild scheme, which has now been in effect for 5 years, has had the net effect of endorsing, not reordering, the MRC's priorities, and affording a pertinent defense against the still recurrent charges of elitism and irrelevance. Rothschild, one suspects, may have been a useful medicine with which to cure the low back pain and incontinence brought on by Owen.

Perhaps a third reason for Gowans' unequivocal stand is a desire to restore confidence among the MRC's clients in the research community. In an interview Gowans twice declined to answer directly questions about what new policies he was instituting, but the issue of morale

POINT OF VIEW

Press Decries "Technological Optimists"

Frank Press, the President's Science Adviser, has made a series of recent public appearances, often basing his remarks on a speech given at the Massachusetts Institute of Technology on 8 October. In it, Press decried scientists for being too optimistic about the role of technology in solving complex social problems. But then, Press became optimistic himself, and listed several areas—bioconversion, space, and the oceans—in which he believes that science-based invention could lift the world off its current "inventive plateau" by creating new, environmentally sound industries and more jobs.

New concepts and technologies fulfill and create expectations almost simultaneously. These in turn generate new instabilities and dissatisfactions demanding further change. That change calls not only for new technologies but also for new social and economic concepts and institutions. . . .

It is really only in relatively recent years that all this complexity and its implications have dawned on us. . . . And yet it is surprising how many people (some scientists included) cling to the hope of simplistic solutions. For example, we still hear echoes of solutions to the energy problem based on back-of-the-envelope calculations. . . . Such wisdom would seem to indicate that there is no energy crisis, merely a few technological problems and restrictions on the free market, between us and the energy millennium. [But] there are no ultimate or singular technological fixes. . . .

[S]cience and technology . . . drive each other. As new technologies are devised and operate on the basis of the current state of the art, they expose gaps in knowledge. . . . At the same time, advances in basic research—some made possible only through the help of new instrumentation—move science to points where it is able to discover hitherto unsuspected problems with a technology or its effects as well as solutions. . . . They are both handmaidens and adversaries.

Such science and technology policy issues can be particularly painful—and political. They bring up the matter that cost, benefits, and risks are not equally distributed throughout society. They also involve us in assessments leading to essentially Faustian bargains. . . . There are also those situations where we must make a judgment and possibly a commitment, on incomplete or inconclusive knowledge. . . . While these decisions may not be irreversible, they can involve such large commitments of resources, money, manpower, and facilities, that to drop them and change course appears economically catastrophic. . . . .

We know that science and technology have been among the principal forces responsible for this country's economic growth. . . . I think we are just beginning an era of new growth based on such innovation. And most likely it will be based this time on advances in the biological sciences. These will allow us to use the tremendous capacity of microbes to produce and transform substances. And along with many other innovations using bioconversion processes, they will allow us to move from a largely petrochemically based economy to one based principally on the use of carbohydrates generated by solar energy. Such a transformation . . . will also have definite environmental advantages, as it will be producing mainly biodegradable materials by processes which are essentially nonpolluting.

Could one reason why we need such broad innovative leaps be that in many respects, the economic problems of our time are due to the fact that we are on an inventive plateau? And could that in part explain why we have a global situation, in which several nations are competing to sell each other the same or similar products—automobiles, steel, television sets. . . .—It may also be a reason why so many countries are facing a situation of continuing high unemployment—because few new industries and social innovations are being created which can absorb our . . . youth. We badly need some new directions, and science and technology could play a role in providing them.

seems much on his mind. He expresses dismay that medical research, once publicly regarded as an indubitable public good, is now the subject of stories about drug reactions, disasters, and the soaring costs of biomedical technology. He believes strongly in the merit of what the council has done: "The MRC has a splendid track record in supporting biomedical research and the way it has spent money is the envy of people elsewhere." He is anxious to "relieve the gloom slightly" about funding; there has been a small but genuine easing in the MRC's budget which he hopes will encourage more people to apply for grants. Even now, he says, there is not a lot of good work going unsupported through lack of funds, although that would change with any further cuts.

Perhaps the key to Gowans' outlook is his statement that "I very much want this organization to be seen to be on the side of the scientists. Our interests should be seen as scientific, not bureaucratic. If you have the confidence of the scientists, you get the best work out of them."

Competing with the United States

How can European countries such as England hope to offer significant competition in their support of biomedical research to the NIH juggernaut? "The answer is that we are rather good at it," is Gowans' reply. There is no doubt that the United States is the "Mecca of biomedical research." "But real advances are made by relatively few people, even in the States. You can't buy advances with money. You need resources up to a certain point, but the limiting factor is talent."

Gowans has lectured widely in the United States, has close ties with Yale, and at least an informal acquaintance with NIH affairs through his friendship with former NIH director Robert Marston. The two started work at the same time, in 1947, in Howard Florey's laboratory at Oxford, where Marston was a Rhodes scholar. Marston, now president of the University of Florida, describes Gowans as a leader in his field (the study of lymphocytes) who as Secretary of the MRC "will accurately portray the needs of science and of scientists." "As one who has felt close to the MRC for many years, I feel that it is in good hands," Marston says.

In reaching out to rebuild scientists' confidence, Gowans' problem will be to make sure he still retains that of his political and bureaucratic masters, but he seems determined to do both.

—NICHOLAS WADE