

stringency earned him the nickname "Cap the Knife". He was later promoted to Secretary of the then-named Department of Health, Education and Welfare at a period when biomedical research was becoming dominated by a congressional "disease of the month" approach.

Various names are being discussed for the position of Under-Secretary of Defense for Research and Technology, responsible for the Pentagon's massive research budget. They include Mr William van Cleave, at present head of Mr Reagan's defence transition team, and Mr Benjamin T. Plymale of the Boeing Corporation, who was the source of controversy last year when his security clearance was temporarily revoked.

No clear candidate has yet emerged to head the Department of Energy. One suggestion, Mr Michel Halbouty, a Houston oilman and geologist who was Reagan's chief energy strategist during the campaign, is being opposed by some influential Republicans because of his lack of government experience. Others have opposed the nomination of Mr Frank Zarb, a top energy official in the Nixon and Ford administrations, because of his involvement in setting up the present system of price controls on crude oil and gasoline. Two possible contenders are Dr John Sununu, professor of engineering at Tufts University, Massachusetts, and Representative Clarence Brown of Ohio.

Appointments at a lower level, including the heads of independent agencies such as the National Aeronautics and Space Administration, are not likely to be announced until the main cabinet posts have been filled.

In the science field, these appointments will also depend on the report of the science and technology transition team under Dr Simon Ramo of TRW and Dr Art Bueche of General Electric.

Dr William A. Nierenberg, director of the Scripps Institute of Oceanography, is widely mentioned as possible director of the Office of Science and Technology Policy (OSTP), as is Dr Guyford Stever, ex-director of the National Science Foundation, who held the OSTP job for a few months at the end of the Ford administration.

At the National Science Foundation (NSF) itself, the Reagan administration seems unlikely to overturn the appointment of Dr John Slaughter as director. Dr Slaughter was sworn in two weeks ago, and that the emphasis that he is keen to put on the development of engineering and applied research should match Republican goals for science.

Finally, the appointment of Dr Frank Press, the present director of OSTP and President Carter's Science Advisor, was assured as the next president of the National Academy of Sciences when nominations for the post closed last Monday without any other names having been put forward.

**David Dickson**

## Soviet plans

### Science on tap

Soviet science is to be geared even more closely to the needs of the economy, according to the guidelines for the 11th Five Year Plan, published last week. The plan calls for a substantial reduction in the time taken to disseminate research results, strengthening of the links between research and production, better coordination between scientific establishments and an improved basis for scientific planning.

Individual research priorities specified by the guidelines range from the immediately practical (the improvement of computer technology and software) to the long-term (creation of the bases for thermonuclear power engineering), and from the further conquest of space to greater environmental protection and economic utilization of the biosphere. Biotechnology to produce new compounds with tailor-made properties, particle physics and immunology all receive special mention.

At this stage of planning, however, no specific targets are mentioned, nor is the financing of science discussed. The emphasis on closer links between science and industry, however, and the statement that ministries and departments are to bear increased responsibility for industrial research may have some financial implications. Their responsibility will presumably also include the planning of research in institutes under their control. One of the main complaints of Soviet scientists in recent years has been the inflexibility of research plans once approved. The new guidelines, however, urge that the direction of research and development should be "determined in good time . . . and changed to meet the demands of the scientific-technological revolution".

All this, however, depends on an overall increase of labour productivity. In industry, this increase is specified as 23–25 per cent, which is to account for more than 90 per cent of the increase in output. For the scientists no such target is set, perhaps because the recent "press debate" in *Literaturnaya Gazeta* has revealed only too clearly how much scientists resent having their intellectual performance monitored.

**Vera Rich**

## DNA guidelines

### Bowing out

The US National Institutes of Health (NIH) are facing a virtual revolt from local Institutional Biosafety Committees (IBCs) over whether there is still a need for strict surveillance of research using recombinant DNA techniques.

At a meeting in Washington organized by the National Institute of Allergy and Infectious Diseases, the predominant view

of the chairpersons and representatives from more than 150 IBCs throughout the country was that the prime role of the IBCs has become largely a public relations exercise.

Few of those attending the meeting were prepared to accept that recombinant DNA research presented any greater health or environmental hazard than work with unaltered organisms not covered by the NIH guidelines.

Many complained of the amount of paperwork they are required to carry out, particularly in the light of recent revisions of the guidelines, which have shifted most of the responsibility for reviewing research protocols from the NIH's Office of Recombinant DNA Activities to the local level.

The Washington meeting had originally been called for IBC chairpersons to discuss how their committees were operating. But the main focus of the two-day meeting rapidly became whether the IBCs — or even specific regulations covering recombinant DNA research — were any longer needed in their present form.

According to one NIH official, the mood of the meeting was that the amount of time that IBCs put into DNA issues was out of proportion to all sorts of other bio-hazards.

One recommendation being forwarded to next month's meeting of the NIH's Recombinant DNA Advisory Committee is that all experiments using the disabled K12 strain of the bacterium *Escherichia coli*, or the yeast *Saccharomyces cerevisiae*, as host-vector systems should be totally exempt from the guidelines.

In the case of *E. coli*, the same suggestion was made last year, but the advisory committee then recommended — and NIH director Dr Donald Fredrickson agreed — that although prior approval was no longer necessary for such experiments, the requirement that the experiments be carried out under P1 physical containment conditions should remain.

Members of biosafety committees also complained about the additional paperwork resulting from NIH's requirement that, although details of all approved experiments no longer have to be registered, they must keep detailed records of all recombinant DNA work carried out in their institutions.

The latter requirement was partly the result of a survey at Stanford University in California which showed a discrepancy between the rate at which different committees required experiments to be reclassified, possibly indicating that some were interpreting the guidelines more strictly than others.

But the IBC members balked at yet more paperwork.

A straw vote taken during the final plenary session of the meeting revealed little support for the proposal that NIH should keep a record of all recombinant DNA research carried out under the guide-

lines, a small majority for recording research carried out under P2 containment conditions and above, and a larger majority for keeping a record merely of all research in P3 and P4 containment conditions, the two strictest categories.

Reflecting their general belief that recombinant DNA research no longer represents a greater hazard than ordinary research with microorganisms, many committee members were sceptical about the value of a broad study of the effectiveness of IBCs which NIH is now preparing.

If the committees had any value, it was felt, it had been in calming public fears about the health implications of such research. Mr Ray Thornton, for example, recently appointed chairman of the advisory committee, said that the careful supervision of experiments had been largely responsible for the general development of public confidence.

Other speakers suggested that, even if no extra hazards had been identified, the public discussion raised by initial fears had helped to generate a consciousness about the need to watch for biohazards in general. **David Dickson**

## Yugoslavia now

### Supek's worry

Yugoslavia could shortly face economic collapse if the planners fail to make proper use of the country's scientific personnel. This is the opinion of Dr Ivan Supek, the Yugoslav physicist and philosopher, in London this week for a Pugwash meeting.

Yugoslav scientific and academic life, says Dr Supek, has almost completely lost the impetus of 20 years ago. The financing of basic research is hampered by a bureaucratic system which allegedly subordinates research to consumer control. But reliance on foreign licences (usually purchased when already obsolescent) means that the technological base required by Yugoslav industry and agriculture is either inappropriate or altogether absent.

The chief factor in the decline, according to Dr Supek, is excessive party and state control over science. After the hardliners' coup of 1971, the universities lost much of their autonomy, including the right to elect their own deputies to parliament. (Dr Dupek himself was a non-party deputy from 1963 to 1967.)

At the same time, the university structure was decentralized. The University of Croatia, for example, was divided into four separate universities (Zagreb, Split, Rijeka and Osijek) and the individual faculties, rather than the university as a whole, became the basis of planning and financing. Frequently, said Dr Supek, decision-making fell into the hands of party members with no particular academic background.

Under these arrangements, "censorship by budget" was made easier. Among the

victims of this process was the *Encyclopedia Moderna*, a philosophy of science journal edited by Dr Supek himself.

Dr Supek stresses that it is not the "self-management" process — Yugoslavia's special contribution to socialism — which is at fault. If the current trend towards bureaucratic centralism could be reversed, he said, and "self-management" restored to scientists, both basic and applied research would benefit. At present, however, self-management is simply a slogan.

Such official duplicity, said Dr Supek, is nothing new in Yugoslav science. In 1956, when Yugoslavia began a nuclear research programme, Dr Supek, as director of the prestigious Rudjer Boskovic Physics Research Institute, found himself *ex officio* on the country's atomic energy commission. Although the programme had, officially, a purely scientific and peaceful orientation, its members included the Minister of Defence Ivan Gosrjak and



Supek (right) and defence minister, 1956

Minister of Internal Affairs Alexander Rankovic. Their presence made Dr Supek extremely sceptical of the true aim of the programme, and made him a fervent opponent not only of nuclear weapons but of all applications of nuclear energy.

The duplicity, which, in Dr Supek's words, is allowing self-management to be killed in the name of self-management, will be a major obstacle to any move by the scientists to regain their pre-1971 position. The recent ban of the proposed cultural and sociological journal *Javnost* was justified by the Belgrade authorities on the grounds that the journal was meant to be a front for a would-be cultural elite. Dr Supek, however, is strongly opposed to elitism, and would claim for science only that right of self-government which is constitutionally guaranteed to all Yugoslav workers. The Party hardliners, however, are not prepared to yield without a struggle. Recently agronomists working on the forthcoming five year plan proposed that, for modern farming methods to be introduced, the maximum peasant holding should be increased from 10 to 50 hectares. But in spite of the deteriorating state of Yugoslav agriculture, the proposal was rejected as liable to cause class conflict.

**Vera Rich**

## Agricultural research

### Ministry at top

An impending change in the relationship between the Agricultural Research Council and the Ministry of Agriculture, Fisheries and Food (MAFF) now seems likely. Most probably, the council will in future be more directly subject to the ministry. In this respect, it is likely to be worse off than the Medical Research Council, which in October reached an arrangement with its chief sponsoring department of government, the Department of Health and Social Security, that some £12 million of "Rothschild money" should be transferred back to its own annual budget.

Change has been in the air since the publication of a report of the Public Accounts Committee in July 1979 which suggested that the government should consider transferring a further slice of the ARC budget to the agriculture ministry. The underlying principle is that put forward in 1971 by Lord Rothschild, who advocated giving control of research budgets to the chief users of the results of research — the ministerial "customers". At present, some 40 per cent of the research council's spending derives from the ministry, and the Public Accounts Committee was asking why the balance should not be shifted further.

For the past year, a committee under the chairmanship of Sir Brian Hayes, permanent secretary at the ministry, has been trying to decide what should be done. The alternative to a further transfer of funds is a more direct influence by the ministry on the policy of the council. Although a decision has not yet been reached, the second course is the more likely. Either way, the council is unlikely to be overjoyed.

Like many government-supported institutions, the council (ARC) has been hard-pressed to operate within its cash limits during the financial year 1979-80. Nevertheless, by the end of that year, says its annual report published last week, it had managed to plan a reasonable research programme for 1980 and beyond by concentrating its efforts on high priority research.

The council's choice of priorities was effectively made by MAFF which has cut the amount of research it is prepared to buy in some of the ARC's research institutes while increasing it in others. MAFF currently pays for about half of the work conducted in ARC institutes under the Rothschild customer-contractor principle.

MAFF is particularly keen to encourage food research, interest which has proved lucky for the ARC's Meat Research Institute whose grant of £370,000 from the Meat and Livestock Commission was cut last September. MAFF has stepped in to make up some of the loss. It has also increased its contribution to the budget of the Food Research Institute in Norwich,