IN BRIEF

Science budget breakdown

The Department of Education and Science (DES) was unable to comment this week on a report in *THES* detailing the breakdown of the Science Budget for 1977–78. The figures have yet to be agreed formally with the Treasury and passed by the House of Commons.

The Science Research Council's budget is believed to break down as follows: nuclear physics, including the CERN subscription, £43.3 million; astronomy, space and radio, £27.6 million; science, £23.3 million; engineering, £14.5 million. Figures for the other research councils are reported to be as follows: MRC, £42.3 million; NERC, £29.5 million; ARC, £20.4 million; SSRC, £14.5 million. The size of the overall budget was foreshadowed in the recent expenditure White Paper.

NASA change

James C. Fletcher, who has been head of the National Aeronautics and Space Administration (NASA) for the past six years, is being replaced, another casualty of the Carter Administration. He announced last week that he will leave on 1 May. The post is a Presidential appointment and Fletcher consequently submitted a pro-forma resignation to President Carter along with other holdovers from the Ford Administration, but it was no secret that he wanted to be kept on. No reason has been given for accepting his resignation and no replacement has been announced.

UN conference opens

Experts from some 150 countries were Argentina, this week for the opening of the two-week UN Water Conference. The major item for discussion highlighted last year's Habitat conference in Vancouver: providing clean and safe water supplies to residents in urban and rural areas as soon as possible. Also on the agenda: pollution control, conservation of water resources, management of shared lake and river resources, water as a disease carrier.

Psychiatrist's death

The death has been recorded of Professor Daniil Lunts, head of the fourth section (political) of the Serbskii Institute of Forensic Psychiatry.

Last weekend a young paramedic, Aleksandr Podrabeinnik, who has collected details of over 200 cases of sane mental hospital internees in the Soviet Union, had his flat searched and papers confiscated.

Monster debate

THOMAS H. JUKES

THE debate on recombinant DNA is so far a tribute to the power of the human imagination rather than an acknowledgment of actual results obtained in laboratories. Most of the stronger statements seem to be made by people who are not trained in biology. However, some good ammunition has been provided by prominent scientists. For example, Robert Sinsheimer recently advanced the possibility that DNA from *Clostridium botulinum* might be used by a 'terrorist group' to transform *E. coli* into producing botulinus toxin. Obviously, such a group will not apply for a permit from the National Institutes of Health.

The environmentalist societies have reacted promptly and swiftly to the issue. The decision was easy, because in matters of science and technology, especially new ones, they are guided by the principle stated by Groucho Marx in the 1930s:

> I don't know what you're going to say
> It makes no difference anyway
> Whatever it is, I'm against it!

Some of the busiest recombinant DNA laboratories are in our own digestive tracts, where the transducing phages, episomes and Hfr strains have been switching DNA around ever since the days of early evolutionary history. Knowledge of this should (but won't) have a calming effect on those who believe that recombination is a recent invention of maniacal molecular biologists.

I am impressed above all by the fact that nature buries her countless numbers of mistakes. The two-headed calf does not survive. Nor does nature help us in our genetic manipulations. The most productive strains of our major crop plants would rapidly vanish without human protection and nurture. Maize would be the first to disappear. It is true that there are deadly pathogenic micro-organisms in our midst but the number of species of these is comparatively small. They are the product of millions of years of commensal evolution with their hosts. The thought that we could slap new ones together in the lab and that they would be viable enough to run riot seems faintly ridiculous.

Even such an apparently obvious advantage as antibiotic resistance does not easily persist. Some years ago I participated in launching an experiment that spread widely; the addition of antibiotics to the feed of domestic livestock. Although this has recently been criticised and scrutinised, the strange fact remains that it 'still works' when by all predictions the spread of resistant strains should long ago have made the procedure useless. This is especially so because resistance in enteric bacteria can spread by DNA recombination. I presume the wild, susceptible strains must tend to overgrow the resistant ones.

Public understanding of recombinant DNA is greatly aided by previous conditioning to science fiction. A long-time staple subject for cartoonists in popular magazines is typified by a picture showing 'mad scientists' in a laboratory where enormous rats are emerging from a flask, captioned 'Something Went Wrong'. This theme, almost to the letter, was used in a recent cartoon, and, to make the point absolutely clear, the scientists wore lab-coats labelled 'MIT'.

So far, the one predictable result of 'recombinant DNA research,' even the research that hasn't been done, is a bureaucratic explosion of paperwork. Any mention of DNA in a research grant proposal presses the alarm button, and a large package of questionnaires arrives in the mail. We can probably look forward to a new National Institute for Regulating Recombination, and even to its counterparts in state and local governments. Also, the term 'recombinant DNA' rolls trippingly from the tongue, and politicians know a vote-getting issue when they see one.