

adequate for the scientific community should be adequate for the private sector. Why should you treat the private sector differently?" Dr Sheldon Krinsky, acting director of the programme in Urban, Social and Environmental Policy at Tufts Medical School and a member of the RAC, asked the committee last week.

The committee voted nine to six to support mandatory compliance by non-NIH institutions with the NIH guidelines covering recombinant DNA research. Six members of the committee abstained—NIH Director Dr Donald Frederickson, when appointing individuals to the committee, had made it clear that he expected them to abstain from votes where they might have a conflict of interest (for example, where a scientist was a consultant or a stockholder in a company that might be affected by a RAC decision).

The committee also decided to set up a working party to study containment requirements and related issues for large-scale experiments which would involve both committee members and outside consultants, possibly including trade union representatives. Mr Peter Libassi, General Counsel at the Department of Health, Education and Welfare, met public interest and industry representatives last week to discuss new proposals which the NIH has put forward on how the RAC could guarantee the confidentiality of information which companies would be required to provide in seeking approval for certain types of experiment.

Mr Libassi told both groups that the DHEW will shortly publish in the *Federal Register* the details of the ways in which NIH will register companies on the basis of voluntary compliance with the guidelines. Industry is keen to support such a procedure as an alternative to the regulation of research by the Food and Drug Administration.

However, the public interest groups



"I'm trying to evolve some guidelines that are as weak as we hope our bacteria are!"

at the meeting made it clear that, given the experience of voluntary requirements in other fields such as toxic waste disposal, they felt it unlikely that voluntary compliance would work adequately. Mr Libassi was told that these groups supported legally-backed requirements as recommended by the RAC.

Meanwhile in California, where a number of small companies are now moving rapidly towards large-scale experiments of possible industrial applications of recombinant DNA research, various state legislators, environmentalists and labour representatives have expressed concern over the possible health hazards to workers. The Chairman of the San Mateo Central Labour Council has written to members of the RAC claiming that current federal efforts that rely on voluntary compliance by industry "are no longer adequate to protect the health and safety of recombinant DNA laboratory workers and other Bay Area cities."

Similarly state senator Barry Keene has urged the RAC to deal directly with the "major policy issues posed by increasing industrial development of this new technology". He wants the state to set up a panel of scientists and lay people to study the issue in California.

David Dickson

Northern hemisphere observatory agreement signed in Canary Islands

LAST weekend, Sweden, Denmark and the UK finally signed an inter-governmental agreement with Spain to cooperate over the building of a major observatory at La Palma in the Canary Islands. When it is fully operational (in 1984 at the earliest), the observatory will provide British astronomers with facilities for observing the northern sky equivalent to those at the Anglo-Australian telescope in the southern hemisphere. According to Professor F. Graham Smith, director of the Royal Greenwich Observatory, telescopes at the new observatory could compete in terms of image quality with larger telescopes in the US and Soviet Union, because of the particularly fine seeing conditions at the site.

The UK has been planning to build a 'northern hemisphere observatory' for some years. The Canary Island site was decided on, but progress has been slow because of the long time taken by the Spanish Council of Ministers to put its signature to the intergovernmental agreement. The agreement allows for cooperation in astrophysics and states that Spain will provide the site and facilities in return for some of the telescopes' time and training for Spanish astronomers.

Of the four participating countries, the UK is making the biggest contribution. It is building a new 1m diameter telescope and is planning to move the 2.5m Isaac Newton telescope (INT) from the RGO to the Canaries site. The latter has already been dismantled so that it can be refurbished before shipment next year. The UK Science Research Council, the body involved in the setting up and funding of the observatory, hopes to place a contract for building the domes to house the telescopes this summer.

The UK also has plans for a 4.2m diameter telescope, the largest likely to be built on the site. Although this is only in the design phase and has not yet received the official go-ahead, an order for its mirror blank has already been placed in the US. Even if approval and funds for the whole telescope were given now, however, it would be at least 1984 before it could come into operation. The total cost of the new observatory to the UK, according to Professor Smith, could be about £2.5 million for the 1m telescope, £8 million for moving and refurbishing the INT and in excess of £10 million for the 4.2m telescope.

Sweden's and Denmark's contributions will not be so great. Sweden is planning on transferring, almost immediately, a 16m-high solar tower and a 60cm diameter stellar Cassegrain telescope

Industry spends more on research

Private companies in the US are expecting the total amount of money spent on research and development to be about 13% higher in 1979 than in 1978, according to a survey published last week in New York by McGraw-Hill Publications. Replies from over 500 companies indicated that the total expenditure on R and D would reach \$40,000 million, \$4,600 million more than 1978. Allowing for inflation, this means a real increase of 4.6%.

However the amount of money spent on R and D has declined as a proportion of manufacturing sales, from a peak of 3% in the early 1960s to just over 2%. Over a fifth of research was

directly involved with energy and pollution.

Meanwhile, the National Science Foundation has issued figures showing that the proportion of R and D funding financed by the federal government has fallen below 50% of the total national R and D budget for the first time since full statistics were collected in 1953. The survey suggests this is partly because of cuts in research spending on space and defence and an increased emphasis on civilian R and D programmes. The survey also says that job prospects for scientists and engineers are expected to expand in 1980, particularly in industry. □