'Foresight' panel urges new priorities for life sciences

London. A new programme in the life sciences — with special emphasis on topics such as neuroscience and ageing — should be launched in the United Kingdom as a national "flagship" to stimulate a wider public interest in science. That is the recommendation of a panel set up by the British government to help decide its future research priorities.

The panel's report also urges the government to provide greater investment in the buildings and equipment needed by university research laboratories, arguing that this is essential if Britain is to maintain its position in the life sciences as second only to the United States in many disciplines.

But, despite the apparent hope of some government advisers, the panel — one of 15 in the 'technology foresight' programme set up by the Office of Science and Technology after the white paper on science in May 1993 — has refrained from suggesting research areas where support might be reduced, or even withdrawn completely.

Given the advantages of maintaining diversity during a period of rapid growth in the biological sciences, it says that reductions in funding can only be made "on a case-by-case basis". The panel adds that "the information needed to identify unimportant areas is in any case greater than we could acquire in the limited time available."

The report of the health and life sciences panel was one of five published last Monday (27 March) by the government as the first public fruits of the widely publicized technology foresight programme. The other four reports — each based largely on responses to a Delphi questionnaire sent to several hundred technical experts in the different fields — cover chemistry, construction, financial services, and transport.

When completed, all 15 reports are intended by the government to play a central role in 'informing' future decisions on the allocation of research resources by both government departments and agencies such as the Medical Research Council. "Perhaps nobody can predict the future for certain, but these experts will have come as close as anybody could," David Hunt, the Cabinet minister for science, said on Monday.

Mark Ferguson, dean of biological sciences at the University of Manchester, and chairman of the life and health science panel, acknowledges that the exercise has been viewed sceptically in some quarters — including parts of the academic community — as a doomed attempt at 'picking winners' and imposing a short-term agenda on university research groups.

But he responds by pointing out that the panel has emphasized the continuing importance of 'response-mode' research funding. "We are convinced that the life sciences will be the science of the next century, but that to remain strong in the field, we really need to think about ways of maintaining the country's research infrastructure," he says.

On the basis of the results from the Delphi questionnaire — themselves reflecting factors such as social and economic value, scientific and technical potential, and the relative strength of UK science and industry compared to that of its competitors — the panel has selected eight separate research areas on which it says action needs to be taken.

Ferguson: 'biology is science of the future'.

Top of the priority list are "integrative biology", which is described as "research integrating molecular biology and genetics with cell and tissue biology and whole organism studies", and neuroscience and the cognitive sciences.

The other six priority areas are ageing, genetics in risk evaluation and management, drug creation and delivery, recombinant technology, the diagnostic applications of molecular biology, immune-manipulation and medical information technology.

The panel makes various recommendations for improving the general position of the biomedical sciences in the UK. For example, it says there is a need to promote incentives to create research consortia linking different centres of excellence, arguing that Britain's efforts in academic life science research "are too finely divided to take full advantage of the opportunities emerging".

The report asks for a programme of capital investment at high quality research centres. And it also calls for the creation of a forum to review the funding of research by charities, describing as "a particularly worrying development" the increasing tendency of charities to demand intellectual property rights on research they fund in universities, even when they are not paying the full costs of research overheads.

Ferguson points out that in several prominent areas of life sciences research, such as genetics and molecular biology, the panel felt that "the current level of support is about right". It also draws attention to other fields, in particular tropical medicine and the uses of social science in medicine, which it says "should be a starting point for the next foresight exercise". **David Dickson**

UK academies urge need to monitor patenting pressures

London. Careful monitoring is needed of the extent to which the patent system impinges on basic scientific discovery, particularly where this system conflicts with traditional academic practice. So says a report published last week by a panel which was set up by the main academic bodies representing Britain's scientific, engineering and medical professions.

The report endorses provisions in the European Patent Convention excluding patents for inventions considered to conflict with public morality, and suggests that other industrial countries (by implication including the United States) follow the same practice. It also urges that a separate requirement of utility be introduced into the convention, in order to limit the scope of patents to subject matter with practical applications.

But it rejects suggestions that Britain should introduce the US practice of allowing a 'grace period' between the publication of scientific results and the application for a patent. At present, any prior publication precludes a subsequent patent; the panel suggests that research bodies should deal with any resulting problems primarily by streamlining their applications procedures.

It also warns the government against making excessive use of the patenting records of university departments in assessing their rights to future funding. "The activities of an institution must reflect a judgement of what is most worthwhile to do and that should not be tied too closely to success in commercial promotion," it says.

Intellectual Property and the Academic Community is the first report produced by the National Academies Policy Advisory Group (NAPAG), a body set up in 1992 by four organizations: the British Academy, the Conference of Medical Royal Colleges, the Royal Academy of Engineering and the Royal Society. The report was drawn up by a working party of academics, industrial researchers and patent experts.

"The issue of intellectual property rights is coming much closer to the work of academic scientists in the past, and our gravest concern is that there should be a new and proper balance between the pressure to commercialize research results and the fundamental values of science," says the panel's chairman, William Cornish, professor of intellectual property at the University of Cambridge.

Sir Michael Atiyah, the president of the Royal Society, says that the working group's conclusions do not necessarily have the formal approval of NAPAG's four sponsoring organizations. "But we hope that it is in general agreement with their views." □