Environmental agency responds to its critics

Washington. After coming under fire for lack of rigour and focus in its research programmes, the US Environmental Protection Agency (EPA) is carrying out a top-to-bottom review of the way it conducts and evaluates research.

Several internal studies will assess virtually every aspect of EPA science, from the fate of the agency's laboratories to its policies on peer-review and outside scientific advice. The aim is to reinforce the claim of its director, Carol Browner, that "science is the backbone of everything we do".

In recent years, the agency's critics have included Congress, independent study groups and even its own administrators. A particular target has been its activities in critical areas such as risk assessment.

To improve its image, Browner has taken a number of steps, including the creation of a Science Policy Council of senior agency managers to coordinate research activities scattered among half-a-dozen different programme offices.

One priority for the council is to standardize the rules governing outside peer-review of EPA research before publication. The new rules, which are expected to be in place by September, will be sufficiently flexible to allow different levels of review depending on the type of publication, Sylvia Lowrance, an associate deputy administrator told the agency's Science Advisory Board (SAB) last month.

At the request of Congress, the agency has also commissioned the Mitre Corporation to carry out a study of its field laboratories. There are 12 environmental research laboratories under the direction of the Office of Research and Development (ORD), and about 30 smaller facilities, whose missions range from technical support of programme offices to vehicle emission testing.

Mitre's report will be presented to EPA at the end of this month, and a decision on the fate of the laboratories is expected in early June. The options range from leaving them as they are to consolidating them into four 'mega-laboratories' based on their missions, as recommended in a 1992 Carnegie Commission study.

But even if Congress does allow EPA to close down major laboratories in an election year — which itself is doubtful — many observers say this kind of deck-shuffling misses the point of what is really wrong with the way EPA research is structured.

Terry Yosie, a former SAB chairman, calls efforts to consolidate the laboratories "very ill-conceived", and says that the agency has always preferred to focus on "fixing" them rather than addressing other issues, such as the top-heavy management at ORD headquarters, an issue which the SAB has raised repeatedly.

His criticism is echoed by a current member of the board, who says that EPA "needs to step back and ask what do all those people do in Washington". But such remarks point to another problem, namely that the agency has tended to ignore the advice of its own science advisory board.

Perhaps the most public of the many problems plaguing EPA's scientific efforts has been the struggle to attract a prominent scientist to lead its office of research. That may soon be resolved by the expected appointment of Robert Huggett of the Virginia Institute of Marine Sciences.

But critics claim that, without a clear mandate from the top for long-term basic research, as well as consistent funding, EPA will remain a regulatory agency at heart, with little aptitude for scientific work.

At last month's SAB meeting, the members of the executive committee expressed disappointment that research was not given greater weight in the Clinton administration's proposed 1995 budget.

Roger McLellan of the Chemical Industry Institute of Toxicology, who chairs the board's Research Strategies Advisory Committee, said the 1995 budget continued a pattern of "constant erosion" of both dollars and people for ORD since the 1980s. In all that time, he said, "we haven't put anything into the science base."

Tony Reichhardt

MRC to fund mouse genome centre?

London. **Britain's Medical Research Council (MRC) is due to give its verdict within the next few months on an application to create at Hinxton Hall near Cambridge what could eventually become a European centre dedicated to the genetic and physical mapping of the mouse genome.**

Last month, a group of leading British geneticists warned in a report commissioned by the Office of Science and Technology (OST) that more support for mouse genetics was needed to prevent the country from losing ground against major US research programmes.

No final decision has been taken either on funding the mouse genome centre or on where it would be built. But facilities owned by the Wellcome Trust at Hinxton Hall, Cambridge — already the site of the Sanger Centre and the European Bioinformatics Institute, with the MRC Human Genome Mapping Project Resource Centre arriving in June — would, say MRC officials, be "a very attractive possibility".

According to Stephen Brown of St Mary's Hospital Medical School in London, a key figure in the submission to the MRC, the close similarity between the genomic sequences of mice and humans means that mouse models can provide important help in cloning human genes.

Brown has been closely involved in a joint project between the Institut Pasteur in Paris and the MRC Resource Centre to create the European backcross, a family of 1,000 mice obtained by crossing two different species. The backcross has rapidly gained an international reputation as its sheer size allows genetic mapping at a much higher resolution than any other family of mice so far created.

According to the OST report, however, there is now a danger that groups with greater resources — such as Eric Lander's team at the Whitehead Institute in Cambridge, Massachusetts — could reap the fruits of Europe's labour.

Brown says the proposal would neither compete with Lander's work nor duplicate it, and that their approaches to mapping are "entirely complementary". Indeed, the Whitehead Institute has recently started a collaborative programme with Britain to put 6,000 genetic markers on the European backcross map, a preliminary to the physical mapping — and eventual positional cloning — of genes.

But Lander has already placed 4,200 markers on his own genetic map stemming from a much smaller family of mice, although with much coarser results than the European backcross could offer. He intends to pepper the genome with a total of 6,000 markers by the end of the year — long before the British effort is likely to be up to speed.

Some supporters of the British mouse genome centre argue that the need facing Britain is not to catch up with the United States but to consolidate its present lead.

But others argue that, at least in the near future, Lander is likely to play the leading role in sequencing the mouse genome, and that the need facing Europe is "to decide how it can be a real partner, rather than having to pick up scraps off the floor".

Even if only battling for second place, the new centre, surrounded by a community of genome workers at Hinxton Hall, could develop into the hub of mouse genetics research in Europe. Brown plays down such ambitions. But others say that a British centre in such a location stands a good chance of eventually becoming a European centre, given in particular the potential for comparative studies of the human genome offered by the proximity of the Sanger Centre. James Younger