

Ocean drilling enters choppy waters as France and UK question strategy

Paris. France and the United Kingdom are considering withdrawing from the 20-year-old international Ocean Drilling Program (ODP). Critics in both countries claim that the scientific output of the programme no longer provides sufficient value for money, and that continued participation is difficult to justify, given the stiff competition for shrinking national research budgets.

The ODP studies the two-thirds of the Earth's crust that lies under water. Deep-ocean drilling — the ODP ship can drill cores in water up to 8.2 km deep — provides the means for carrying out research into the geological processes that create continents, for example, while the geological record also provides information on climate change.

The US National Science Foundation pays more than half of the \$45-million annual budget of ODP. The rest comes from its six other members: the United Kingdom, France, Germany and Japan, a consortium of smaller European countries organized through the European Science Foundation, and a joint membership of Canada and Russia.

France's participation is supervised by the marine research agency, IFREMER, and costs around FF40 million (US\$8.2 million) annually. Britain's involvement is run by the National Environmental Research Council (NERC), costing around £3 million (US\$4.6 million) a year. But both are now reviewing their continued participation in ODP beyond 1998, when the current agreement expires.

The French review, which has already been completed, recommends that France withdraw from the ODP. The panel of Earth scientists that carried out the review is particularly critical of the fact that most ODP results have been published as in-house 'grey' literature, claiming that only a few have given rise to papers in international peer-reviewed journals.

"The present scientific output does not justify the costs," says Vincent Courtillot, the rapporteur of the review, who is also head of the Laboratory of Palaeomagnetism and Geodynamics at the Institut de Physique du Globe de Paris. France's tight budget for Earth sciences could be spent better, he says, adding that ODP has run out of steam, and needs to be replaced by a new international programme with clearer scientific goals and strategies.

The scientific content of the ODP is coordinated through a body known as the Joint Oceanographic Institutions Deep

Earth Sampling (JOIDES). Half the subscriptions from members go towards paying for the operation of a converted oil exploration ship, the *JOIDES Resolution*. But the review claims that "ODP's [scientific] choices sometimes seem to have been aimed more at finding uses for [the ship], rather than addressing scientific problems at the lowest cost".

Scientific criteria have been sacrificed, claims the review, in doomed attempts by ODP to please two distinct groups of users with very different needs. Climatologists and

with domestic competition for funds from scientists not involved in ODP.

But echoes of some of the French criticisms are also being heard in the United Kingdom. NERC officials say that the questions are whether ODP has produced sufficient results for the money spent on it and whether it is continuing to produce results at the same rate as in its early years. "In these days of tight budgets we can't have a large 'ring-fenced' area in our budget that is immune from competition with other areas," says one.

The United Kingdom has traditionally been a strong supporter of ODP. Bids by its researchers have fared well within the programme, and the ODP's science planning office has been located at the University of Wales in Cardiff since 1993. But even some of the British scientists working in the programme agree that it needs to be focused more on major scientific problems.

The preliminary findings of the NERC review, chaired by Chris Hawksworth of the Open University, are expected to be known later this month. John Krebs, the chief executive of NERC, will then hold a meeting with Pierre David, the director general of IFREMER, to reach a common position. This meeting will be followed by one that includes Germany, traditionally a strong supporter of ODP.

Three options are likely to be on the table: continuing within the existing ODP, or withdrawing from ODP and either associating with a planned Japanese ocean drilling programme or establishing an autonomous European programme. Either of the last two possibilities might also be developed into a new global programme incorporating the US ship.

Indeed, Japan has already allocated funding to a feasibility study of a drilling ►

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REASONS

Uncharted course: British and French reviews may lead to changes for the Ocean Drilling Program.

palaeoclimatologists tend to be interested in sediments and to prefer short-duration stays at many sites. But geologists tend to be interested in the deeper crust, and to prefer visits of longer duration at fewer sites. The only solution, argues the review, is for each user group to have its own ship, tools and research strategy.

The conclusions of the review have been hotly contested by ODP officials, who claim in private that French dissatisfaction with the programme stems from a resentment at both the US leadership of the programme and at having won fewer bids than the scientists concerned would have liked, combined

New director for Cambridge biology laboratory

London. The UK Medical Research Council's Laboratory of Molecular Biology (LMB) in Cambridge is to have a new director. Richard Henderson, currently head of the laboratory's structural studies division, will take over from Sir Aaron Klug, who has recently become the new president of the Royal Society.

Henderson's appointment is being seen as a sign that the LMB is keen to maintain its pre-eminence in the study of molecular structures. The Louis-Jeantet Prize for

Medicine — which Henderson won in 1993 for his work on the structure of bacteriorhodopsin — has been awarded this year to his colleague Nigel Unwin, joint head of the division (see page 200).

Henderson is due to take over as director of the LMB at the beginning of October. The timing of his appointment coincides with the arrival of George Radda, currently head of the department of biochemistry at the University of Oxford, as the new chief executive of the research council. □

► ship that would cost \$300-400 million and be twice the size of the *JOIDES Resolution*. A decision on whether to build the ship is expected this year.

But according to one NERC official, Britain is unlikely to be keen on restricting its involvement to the planned Japanese effort alone. Japan's interest in earthquakes, he argues, means that the planned Japanese ship could be tied up for years studying plate tectonics in oceanic areas off the Japanese coast. At the same time, the official adds that a European solution — being promoted by France — "is difficult to imagine from a British point of view, at present".

This could change if the European Union (EU) were to back such a programme, he says. But such an outcome seems improbable. The European Commission recently turned down a ECU7-million (US\$9.1 million) proposal for a project, CORSAIRES, involving shallow drilling in sediments. Instead it approved an ECU500,000 feasibility study for the project.

But beyond this, the commission has no interest in deep ocean drilling, according to one official from the Marine Science and Technology programme (MAST). The costs of establishing an ocean drilling programme would require greatly increased funding for the MAST programme, which currently has a budget of ECU228 million.

Moreover, the political will to support deep ocean drilling is lacking both within the top ranks of the commission and among most member states, according to the official.

One possible outcome of the tripartite meeting could be an agreement to continue with ODP until 2003 on the understanding that a new international programme would then be established that would include the Japanese ship. This option is said to be favoured by Germany, although one NERC official says that the prospect of the United Kingdom and France simply withdrawing from ODP "cannot be ruled out".

But such threats are interpreted by some as simply a tactic aimed by the United Kingdom and France at helping to achieve a reduction in their subscriptions to the programme. Scope for such reductions, they point out, might come from the expected enlargement of ODP to include several new minor contributors, such as China, Korea and Brazil.

Others point out that ODP's new Long Range Plan, which is under discussion, goes some way to addressing French and British concerns. Under the new plan, for example, the ship would spend longer periods at single sites than previously.

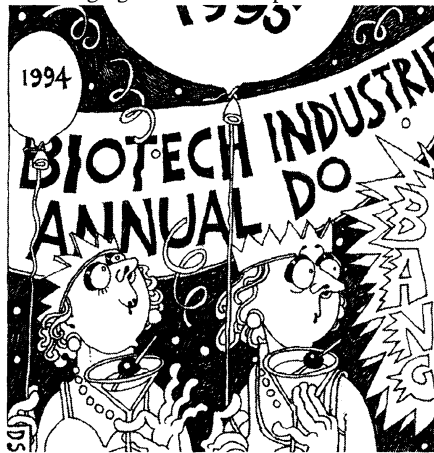
ODP is putting a brave face on the possibility that Britain and France might withdraw. "The French have rattled their sabre before", says Timothy Francis, the deputy director of ODP, arguing that the high costs of ocean drilling means that no one country or geographical bloc could realistically consider doing it alone. **Declan Butler**

A good year for US biotech, but caution is still advised

San Francisco. After the disappointing performance of biotechnology shares in the first half of last year, the US stock market has been cheered by an impressive recovery in the second half, contributing to an overall gain in stock value of 68.4 per cent over the whole year. But there remains a nagging sense inside and outside the industry that the good times may not last.

"If this is sustained, it'll be good for the industry," Costa Sevastopoulos, chairman of Metra Biosystems in Mountain View, California, said in San Francisco last week at the annual healthcare meeting organized by the investment company Hambrecht & Quist. But he warned that disappointment may be looming: too many areas of research, such as gene therapy and genomics, have overstepped their near-term potential value.

A depressed mood in the industry lifted last year in mid-June, when, after a string of poor results from clinical trials, the Philadelphia-based company Cephalon reported encouraging data from a phase II trial of



Myotrophin, its treatment for amyotrophic lateral sclerosis (ALS), better known as Lou Gehrig disease.

A rash of positive developments followed. Biochem Pharma of Montreal, began selling 3TC for AIDS; Gilead of Foster City in California filed for approval to market a broad-spectrum antiviral drug; and US Bioscience of Pennsylvania prepared to launch its treatment for advanced ovarian cancer patients.

Industry fortunes subsequently climbed. By the end of 1995, biotechnology companies had raised nearly \$2.2 billion from the public markets, compared to a little over \$1 billion in the previous 12 months. New collaborations with pharmaceutical companies increased in value to \$3 billion from about \$1.9 billion in 1994.

According to Dennis Purcell, managing director for life sciences at Hambrecht & Quist, advances in the industry have resulted

from the efforts of managers who learned some hard lessons the year earlier. Both the selection of drug targets and the design of clinical trials has become more careful, he said, while companies have cut overhead costs and learned to collaborate.

In all, more than 150 biotechnology products are undergoing phase III clinical trials, according to the investment company. "We're really taking the industry to a new stage," said Purcell. He added that the good news is likely to bring more. Many companies are flush with cash after negotiating link-ups with large drug developers, making them more attractive to investors.

In private, however, many industry leaders have doubts about the solidity of the basis for the market's enthusiasm. They warn that a new crop of young stock analysts and investors from other sectors may lack a sufficiently critical eye. Some of the drugs under development may not bring a significant improvement over existing treatments, they say, or may be too expensive for a cost-capped healthcare environment.

A recent merger between two biotechnology companies in south San Francisco, Arris Pharmaceutical Corporation and Khepri Pharmaceuticals, which broadened Arris' technology base and gave Khepri a way of gaining critical mass without going public, may provide a model for mid-size companies that want a hedge against an uncertain future.

Observers of the US biotechnology industry say that up to 40 similar companies could benefit from such relationships with others in their therapeutic area. Diminishing egos, resulting from the recent financial losses, and more financially demanding executive boards, are spurring on the consolidation.

Sevastopoulos sees a new pragmatism in the industry, with seasoned investors and quick-return venture capitalists replacing the early idealists. As a result, start-up companies are finding it harder to attract money, and new ideas are staying longer at the university level, or finding their way into existing companies.

But the second-generation managers, seasoned in the industry and experienced at making deals with major pharmaceutical companies, may contribute to improved sustainability, according to Sevastopoulos. "The arrogance of the past has dissipated," he says. **Sally Lehrman**

INRA — Bernard Chevassus. The director of INRA is Bernard Chevassus, and not Roger Cassini, who recently resigned as the French representative to the European Commission's programme of agricultural research, FAIR (see *Nature* 378, 328; 1995).