

Japanese science stands out as recession squeezes budget

Tokyo. Japan's science-related ministries and agencies have managed to receive comparatively healthy budgets for 1993 despite a clampdown on government spending because of the recession. But some of the most ambitious proposals, in particular from the

Sunshine Project, which covers research on alternative energy, energy conservation and 'environment friendly' technology. The Industrial Scientific Technology programme, covering the ministry's 'large-scale' (*ogata*) and 'next-generation' (*jiseidai*) projects and attracting foreign as well as Japanese companies (see *Nature* **360**, 500; 1992), received an increase of 7.2 per cent. But at the same time, the Human Frontier Science Program, which is funded jointly with the Science and Technology Agency (STA) and which supports international research on the brain and molecular biology, was held practically constant, at ¥3.9 billion.

The Ministry of Education, Science and Culture (MESC) received most of its request for a 16 per cent increase in the budget for research grants for university researchers. Its 14 per cent increase, the largest in more than a decade, will raise its budget to ¥73.6 billion.

The Ministry of Health and Welfare (MHW) also succeeded in getting a significant increase in its budget to fight AIDS through research, screening, counselling, local government subsidies and public education. But even with a fivefold increase,

to just over ¥10 billion (US\$80 million), its budget is tiny compared with those in the West.

STA also will receive 20 per cent more for its 'Special Promotion Funds' to provide grants for government researchers. But its budget of ¥13.3 billion is still small compared with that of MESC.

The agency's space budget continues to rise rapidly because of Japan's commitment to the US Space Station Freedom while nuclear energy, which consumes over half of the STA's budget, has been given an increase of only 2.7 per cent. However, within this outlay the budget for the International Thermonuclear Experimental Reactor (ITER) project will increase by nearly 30 per cent as Japan begins the engineering design phase of ITER at Naka in Ibaraki Prefecture (see *Nature* **360**, 615; 1992). The agency's small (¥1.6 billion) budget for the human genome project will increase by 45 per cent, with most of the extra money going towards a computer link with the database at John Hopkins University in Baltimore.

David Swinbanks

US report finds NIH's Gallo guilty of misstatement

Washington. In a new twist to the case of Robert C. Gallo and the AIDS virus, a high-level review body of the US Department of Health and Human Services (HHS) has partially overturned an earlier report that vindicated the National Institutes of Health (NIH) researcher of scientific misconduct in a long-running dispute with scientists from the Pasteur Institute in Paris. Specifically, the HHS's Office of Research Integrity (ORI) says in a report issued last week that Gallo lied when he wrote in a 1984 paper that a putative AIDS virus (then called LAV) developed by Luc Montagnier of the Pasteur had not been transmitted to a permanent cell line.

The dispute centres on the fact that LAV and HTLV-IIIb are structurally nearly identical, even though in the early stages of AIDS research they seemed to be biologically different — one grew in culture and one did not. The confusion was cleared up more than a year ago when unpublished data from Montagnier's laboratory revealed that both research groups had actually been working with a virus designated LAI that contaminated the LAV sample at Pasteur before it was sent to Gallo.

In May 1992, NIH cleared Gallo of charges of scientific misconduct for allegedly "misappropriating" an AIDS virus from French collaborators. But it found his colleague, Mikulas Popovic, guilty of misconduct on minor counts regarding the way in which data were reported in a paper published in May 1984 in *Science* (see *Nature* **357**, 3; 1992).

These conclusions came from NIH's Office of Scientific Integrity and were approved by NIH director Bernadine Healy, who forwarded the NIH report to the newly formed Office of Research Integrity in NIH's parent Department of Health and Human Services. Reviewing the case herself, Healy found no evidence of fraud and said so. But her position plainly angered US Representative John Dingell (Democrat-Michigan), who accused Healy of conducting a white-wash and who called the NIH report a "deeply flawed" document.

This posed a dilemma for ORI. If it rejected Healy's endorsement of the report, ORI would be criticizing her judgement and that of other NIH officials who also stood behind Gallo. But if it supported Healy, it would have to explain itself to Dingell.

The new report finds Gallo guilty of one count of scientific misconduct for allegedly falsifying part (but not all) of a sentence in the *Science* paper. Gallo wrote that the apparent differences between his virus (then called HTLV-IIIb) and Montagnier's might be "due to insufficient characterization of

What Japan will spend on science in 1993

(in billion yen; 125 yen = US\$1)

MITI	Amount	Change
Overall R&D	281.9	+ 8.7%
Industrial technology	25.3	+ 7.2
New Sunshine Project	53.9	+ 7.2
Human Frontier Program	3.9*	>+ 1.0
* shared with Science and Technology Agency		
STA		
Overall R&D	581.5	+ 5.4%
Special Promotion Funds	13.3	+ 20.9
Space	157.0	+ 8.5
Nuclear Energy	323.6	+ 2.7
ITER	6.9	+ 27.8
Ocean Research	12.0	+ 7.1
ERATO	6.9	+ 9.5
Human Genome	1.6	+ 45.5
MESC		
Grants-in-aid of research	73.6	+ 13.9
AIDS	10.1	+ 480.0

Ministry of International Trade and Industry (MITI), have been quite severely trimmed, and the date for achieving the goal of doubling the government budget for science and technology is receding far into the future.

The total budget for fiscal year 1993, which starts on 1 April, was set last week by the cabinet at just over ¥72,000 billion (US\$580 billion), an increase of only 0.2 per cent from 1992 and the smallest in six years. Proposals for science and technology were treated favourably, however, in line with a commitment last year to double the government budget for science and technology "as soon as possible". The budget must be approved by the Diet in the next few months, but funding for science and technology is unlikely to change.

Despite the favoured status of science, MITI received only slightly more than half (8.7 per cent) of its request for an increase of 16 per cent in research and development, to more than ¥300 billion (US\$2.4 billion). Nevertheless, MITI has succeeded in giving a large boost to its New

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LAV because the virus has not been transmitted to a permanently growing cell line for true isolation...".

Popovic, who in 1983 and 1984 was the first anywhere to get an AIDS virus to grow in sufficient quantity to develop a test to detect the virus in the blood supply, had actually transmitted LAV to a cell line, although it did not grow well or for long and the Gallo group did not attempt to characterize it. Gallo says the sentence is intended to refer only to the fact that the French had not grown LAV in a permanent cell line (which they had not). The May NIH/OSI report decided that the reference was ambiguous but found no evidence to refute Gallo's explanation.

But ORI concluded instead that "Gallo falsely reported the status of LAV research" in the paper and is therefore guilty of scientific misconduct. In an odd twist, the ORI report simultaneously concurs with the NIH/OSI finding that Popovic is guilty while also coming very close to saying it does not matter. "The confirmed scientific misconduct on the part of Dr Popovic is relatively minor", it states, "does not invalidate the findings of his breakthrough research and should not preclude his employment as a scientist." (Popovic has been out of work for nearly two years.)

Gallo, who says that he will appeal, calls ORI's interpretation of the controversial sentence "utterly unwarranted" and the investigators "incompetent". Popovic is also expected to appeal. "There is no evidentiary basis for any finding of scientific misconduct", says his attorney, Barbara F. Mishkin.

And so the case goes on, with energy on both sides of the Atlantic being diverted from the fight against AIDS.

Barbara J. Culliton

EC increases Framework budget

London. Research ministers from the 12 member states of the European Communities (EC), under pressure to reach a decision by the end of the year, agreed two days before Christmas to spend more on the final two years of the Third Framework Programme, through which the EC Commission supports its joint research projects.

The ministers agreed to provide an extra ECU900 million (US\$1.2 billion), spread over 1993 and 1994. The new money will mean an increase of 13.3 per cent for most of the 15 programmes under the Framework umbrella. However, fusion energy (which is on a different budget cycle) will receive an additional 24 per cent and non-nuclear energies will get 38 per cent more.

The final figure is a compromise between an increase of ECU750 million that the British government wanted and as much as ECU1.5 billion sought by the European Commission.

David Dickson

Nature takes a look into its crystal ball at prospects over the next 12 months in several important areas relating to research and the scientific community.

Eastern Europe

Three years after the fall of the German Democratic Republic triggered a domino collapse of communist states in Central and Eastern Europe, celebrations of the new year have lost their sparkle. The arrival of

struggling to establish a science base in their new democracies.

Money is in short supply everywhere, but science reform and restructuring (usually a euphemism for redundancies) have proceeded very gradually because of social resistance. Most Central and Eastern European countries had followed the communist model, itself based on the French model, of separating research from higher education. Reestablishing links between universities and research and breaking down the political powers in scientific research has been more difficult than first thought.

Furthest along the track are Poland and Hungary, where universities and academies had managed to maintain their distance from the communist party. Furthest behind are Romania and Bulgaria. Romania is the only former communist country that has not tried to evaluate its research activities because of the extensive damage done by the Ceausescu regime. Bulgaria, in a similar but less severe situation, planned an evaluation last October but failed to reach a consensus on how to proceed.

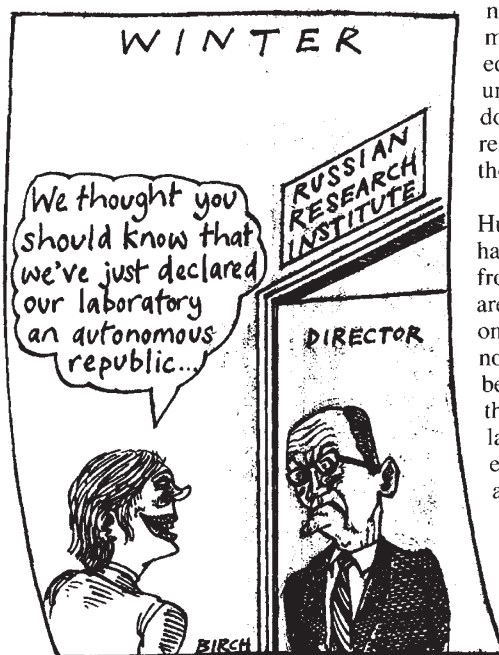
Between the extremes lies the former Czechoslovakia, whose decision to divide delayed the reform process on both sides. Czech research is relatively strong but academic restructuring has hardly begun. By contrast, Slovak research is weaker but its academic system has always been more liberal. The Czech Republic starts the new year with a new, government-directed research plan; Slovakia hopes to institute a science policy by April.

Science in the former Soviet Union probably faces a prolonged economic crisis. Many fear the disintegration of an infrastructure that once provided pockets of world-class research.

Central and Eastern European countries continue to call for foreign aid as short-term measures to help stem the flow of scientists to the West. The European Commission has recently allocated ECU55 million to fund cooperative projects during 1993. Individual institutes — and some individuals — in the East have offered help of various sorts, and the solidarity within certain close-knit international communities, such as astrophysics, has also meant practical support for some projects.

But these initiatives are dwarfed by an economic depression on a scale not seen for decades in Western Europe. In such circumstances, science and research will remain low on any government's list of priorities in 1993.

Alison Abbott



1990 was greeted with unsurpassed optimism; by contrast, the mood in 1993 could hardly be more different.

Holding up the best is the former East Germany itself. Universities and research centres, restructured along Western lines with formidable speed and determination, were relaunched on 1 January this year on the same legal basis as those in western Germany. In the past three years, the German Academy of Sciences and its institutes have been dismantled, but two new national research centres and two Max Planck Institutes (plus eight departments) have been founded. Nineteen applied research Fraunhofer Institutes set up in 1991 must meet their goals by the end of this year or face closing.

Although the stage is now set for a bright long-term future, it has not been an easy three years. Academic pay is still only 80 per cent of that in the west, and no-one knows the fate of the tens of thousands of scientists dismissed from overstuffed institutes during the ruthlessly enforced renewal process.

Although the methods have caused pain and resentment, the worst is now over. More intractable problems face other countries