New science pressure group

Tokyo

In an unusual move, a powerful pressure group has been formed within Japan's ruling Liberal Democratic Party (LDP) to push for dramatic increases in government spending on research.

The pressure group, called the 'special committee to reinforce maintenance of the basic research base and international research cooperation activity', is chaired by Kishiro Nakamura, a former head of the Science and Technology Agency, and includes a broad range of LDP politicians with strong links to the key science-related ministries and agencies, as well as to the all-powerful Ministry of Finance. Among them are two former ministers of education, Takeo Nishioka and Kosuke Hori, and several 'old boys' from the Ministry of International Trade and Industry (MITI), including the committee secretary, Hitoshi Murai, who used to be deputy director of MITI's Agency of Industrial Science and Technology and is now a vice minister of the Ministry of Finance.

Similar committees have been formed in the past to promote, for example, development of space and energy and overseas development assistance (ODA), but this is the first time such a broad-based political group has been formed to back science. As one government official says, "science and technology policy has tended to be neglected by politicians because there is no money or votes in it." Another, from MITI, describes the formation of the committee as "epoch-making".

A number of factors have conspired to create the right environment for formation of the group. Conditions in Japan's run-down national universities have reached a state of crisis, and powerful academics — in particular, Akito Arima, president of Tokyo University — have been calling for a massive injection of funds to rebuild, re-equip and re-staff the universities. Earlier this year, the Minister of Education, Science and Culture, LDP politician Yutaka Inuoe, visited Tokyo University to see what all the fuss was about and ended up apologizing to Arima for the appalling state of affairs he found.

But it is not just academics who are voicing their concern. Leaders in industry — in particular, the powerful Federation of Economic Organization (Keidanren) — are worried that Japan will soon run short of researchers to drive Japan's growing high-technology industry. In October, Gaishi Hiraiwa, chairman of Keidanren, sent a remarkably frank letter to Jiro Kondo, president of the Science Council of Japan, expressing the federation's concern about the government research system. In the letter, he says that the deteriorating research and education environ-

ment in Japan's universities and national laboratories is causing young people to turn their backs on science and engineering. Japan's goal of building a country based on science and technology is "collapsing at the foundations", the letter concludes. Keidanren calls on the government to double its spending on research to 1 per cent of gross national product (GNP) over the next five years to attract young people back to science.

A third factor is the emergence of 'big science' on the international political scene. Each time the Japanese prime minister meets with President George Bush, he is asked for a contribution to the US Superconducting Super Collider. Problems with the global environment have also helped to make science an international political issue.

The new LDP committee held its first hearing on 6 November with a presentation from Keidanren. This was followed on 12 November with a hearing from Akito Arima and Jun-ichi Nishizawa, president of Tohoku University. On 19 November, six young government researchers explained to the committee the problems they face in Japan's fund-starved government research laboratories. And last week (26 November) it was the turn of representatives of private universities.

Next on the committee's agenda is a hearing early this month on a soon-to-be-released report from the influential Council for Promotion of Administrative Reform. The council, which is composed of

top industrialists and academics, is a powerful advisory body to the prime minister. It has two committees, one of which, headed by Kazuo Inamori, president of Kyocera Corporation, and called the 'Japan within the World' committee, is charged with looking at ODA, the influx of foreign workers to Japan, the global environment problem, and, in another sign of the growing political importance of science, the internationalization of academic research.

The Inamori committee, like Keidanren, is keen to recommend that the government should double its spending on research to 1 per cent of GNP. The Ministry of Finance is opposed to such a recommendation, and there is a heated debate on the final contents of the report. Whatever the outcome, the Inamori report will provide powerful ammunition for the LDP committee. And later this month a committee of the Council of Science and Technology, Japan's top science policy-making body, will also release recommendations for the next five to ten years which are expected to focus attention on problems in the government research sector (*Nature* **350**, 544; 18 April 1991).

Armed with all of these reports, the LDP committee will push for removal of the strict ceilings on government spending on research, which have been in place for years. Government officials say the committee will probably make a move early next summer in combination with MITI, the Science and Technology Agency and the Ministry of Education, Science and Culture in time for fiscal 1993 budget requests.

David Swinbanks

SOVIET SCIENCE

Exodus likely to increase

Moscow

SOVIET intellectual life has virtually collapsed as a result of the political disintegration of the Soviet Union and the efforts to switch the economy to market principles at a time of galloping inflation and shortages.

On 20 November, the financing of nearly 80 government ministries and other central bodies was stopped. The central government and the republics have agreed to preserve — in modified form — the foreign ministry and the ministries of the interior, of culture, of railways and of power engineering as well as the independent atomic energy organization and the customs administration.

Many institutions of higher education and industrial research are so short of money that they are having to suspend research programmes and reduce personnel. As a result of the economic crisis and the severance of economic ties, industrial enterprises have no interest in financing projects that do not produce quick returns.

The country's largest research institute of metal-cutting lathes, for example, has an order-book for next year only 15 per cent of normal, and has to cut its staff, according to Pavel Solovyov, the institute's deputy director responsible for research projects.

Moscow State University, which has more than 8,000 professors, instructors and research fellows, almost 5,000 post-graduates and 25,000 students, is on the brink of financial collapse. On 20 November, the staff decided to ask the Russian government to take over the university as an autonomous and self-governing institution. But Viktor Sadovnic, the pro-rector, said that even then, "we shall need international help."

In an appeal to Boris Yeltsin, the Russian president, Moscow students warned that they would stage protest rallies if the Russian government did not take steps to improve social guarantees for students and raise stipends. Many other institutions of higher education had to borrow money

HONG KONG

last month to pay students their stipends, and they are unlikely to be able to repay this money without help.

Last week, Yeltsin signed another decree, under which Russia has taken control of the Soviet Academy of Sciences, together with all its institutes and structures on Russian territory. Unlike the former academy, whose members constituted an elite, the Russian Academy will be a more democratic institution. At the same time, the administrative staff and its institutes and laboratories will be trimmed.

Although Yeltsin said in a special decree that social guarantees should be provided for the employees of academic institutions to cushion the effects of the transition to a market-orientated economy, the scientific community is worried about its future. The Russian budget is limited and proposals for the creation of special funds to finance fundamental research exist only on paper.

There is reason to believe that Soviet scientists may soon begin to leave the country in large numbers. According to Igor Makarov, chief secretary of the former Soviet Academy of Sciences, 564 research fellows of academic institutions have left the Soviet Union this year. Some of them have signed long-term contracts and many may never return. Although this is not a large number by Soviet standards, it is more than double that in 1989. Makarov also said that no foreign scientists are coming to work at Soviet institutions.

Another Soviet academic, Eduard Mirsky, said at a recent press conference that working abroad is now the only way to preserve scientists for science. In any case, the Russian leaders are said to have approved a programme for temporary employment (for terms ranging from 12 months to six years) of Soviet intellectuals at US universities, research centres and corporations on a special visa.

For some time now, Soviet scientists have been going abroad to work at the invitation of developing countries wanting to develop advanced technologies that will allow them to break into world markets. Such invitations have come from Greece, Australia, Egypt and Brazil, but many of them are personal, so the extent of this emigration is unknown, although there is reason to believe that it is growing.

A university in São Paulo, Brazil, is currently negotiating two-year contracts with a group of Soviet scientists. According to José Antonio Pacheco, head of the commission selecting potential candidates, the university is looking for specialists in high technology, particularly superconductivity. And although it has been officially denied that Soviet nuclear scientists have been invited by Iraq and Iran, Academician Alexander Fokin says that a brain-drain in these and other fields connected with military purposes may pose a great threat.

Yuri Kanin

Looking for livers, kidneys

Hong Kong

A SERIOUS shortage of organs for transplants is causing Hong Kong patients to go abroad, some of them to receive organs from executed convicts in China. In response, some Hong Kong doctors are calling for a system in which authorities can remove organs from anyone who dies unless that person had signed a form stating he did not wish to donate his organs.

Tradition among the Chinese who make up 98 per cent of Hong Kong's population demands that bodies be interred whole, and although there are signs that younger, better-educated residents are increasingly willing to pledge their own organs and to

give permission to remove kidneys and other organs from next-of-kin who die suddenly, the general opposition to organ removal has left patients needing transplants with little hope.

Last year in government hospitals, only 55 patients out of more than 1,000 undergoing kidney dialysis received transplants; about 600 patients a year die of kidney failure in Hong Kong. Last month, a team at the University of Hong Kong performed the territory's first two liver transplants, but that success only emphasized the organ shortage: ten patients had died in the two months before the operations because no livers suitable for transplant had become available.

The lack of organs has forced many kidney patients to travel overseas for transplants. The more prosperous head for Australia, North America and Europe, but the less well off frequently opt for China — often with the encouragement of Hong Kong renal specialists.

Doctors in the public medical establishment frown on that option for several reasons, one being that the Chinese transplanted organs are often obtained from executed convicts. Furthermore, Chinese hospitals do little of the tissue typing regarded as essential to reduce the risks of

rejection of transplanted organs, and medical management of patients returning to Hong Kong is complicated by the fact that they often do not bring their complete medical records back with them. Worst of all in the eyes of local doctors and health administrators is the danger that transplant organs will be bought and sold.

Already agents have started to entice local doctors to send transplant patients to a few specific hospitals in China. Earlier this year, a Hong Kong businessman sent a letter to local specialists offering kidney transplants for HK\$100,000 (\$13,000) at the Eastern China Military Region Main Hospital in Nanjing.

That type of commercialization has drawn nearly universal condemnation in Hong Kong. "It's appalling that these things can be allowed to happen," said M. K. Chan, a kidney specialist who has sent patients directly to Chinese hospitals in the past. "It's exactly the situation we don't want to see because you have a middleman charging commission. When we refer patients to China for transplants, the money goes to the hospitals."

The Hong Kong medical community has responded by calling on the government to change its rules on voluntary donations of organs. The territory now has an 'opt-in system', in which individuals who wish to donate their organs in the case of sudden death must obtain and sign a card. Few residents know how to obtain the cards, however, and even when they sign it, under existing legislation the card is not a legal document, and the next-of-kin decides what is done with the body.

Leong Che-hung, a local physician and legislator, and several of his colleagues are calling for an 'opt-out system' similar to that in Singapore, in which authorities would assume that an individual wants to donate his organs unless he signs a form stating otherwise. The government is resisting such an approach, citing its unpopularity with Hong Kong citizens and arguing that medical authorities already approach the next-of-kin of all potential organ donors whether they signed a donor card or not.

Instead of the opt-out system, the government is looking at a number of less drastic options to deal with the organ shortage. It is drafting legislation, which should take effect in a few months, that will prohibit commercial organ trading, and the Health and Welfare Branch is exploring ways of publicizing its donor card scheme and of improving distribution of the cards. Recently, public utilities denied a request to include donor cards with their bills, and now government officials are looking into the legality of distributing the cards with government documents such as water bills.

Peter Gwynne