

In this situation, Israeli scientists find themselves fighting two battles at the same time. On the one hand, they are trying to convince their overseas colleagues that the common judgement of Israeli policies is too harsh. On the other hand, most of them are trying to convince their fellow citizens of the need to change many of these policies.

Prominent scientists — including Professor Ephraim Urbach, president of the Israel Academy of Sciences and Humanities, and Professor Ephraim Katzir, former President of the State of Israel — played a prominent part in the successful attempt to force the appointment of a commission of judicial inquiry to probe the massacre of

Palestinian refugees in Beirut. Many of these same scientists actively oppose the don't-give-back-an-inch views of the Begin government.

Even they however, are split over the question of a separate Palestinian state. Some think the emergence of such a state inevitable (or even desirable), while others would agree with what Shalheveth Freier said at the Pugwash meeting in Warsaw, where he declared: "If the general atmosphere in the Middle East continues to be uncompromisingly hostile to Israel, I suppose I should feel compelled to resist the creation of another hostile state. If, however, peace were to descend on this area, I believe that all honourable options would be open." **Nechemia Meyers**

US defence research

Computer plan

Washington

The US Department of Defense (DoD) is adding to its existing investment in computer research several new programmes designed to counter possible Japanese domination of the field. The budget for fiscal year 1984, which is now under negotiation behind closed doors, is likely to include hundreds of millions of additional dollars for special programmes in super-computer research and software. DoD is already supporting research in Very Large Integrated Circuits, the technology of gallium arsenide as a replacement for silicon, and other computer-related programmes.

In a speech to a professional meeting in Orlando, Florida, Robert S. Cooper, director of the Defense Advanced Projects Research Agency (DARPA) announced that he would counter the Japanese computer effort with a research programme aimed at achieving the extraordinary speed of 10,000 million floating point operations per second by 1990. Present "supercom-



puters" such as the Cray III and Control Data's Cyber 205 attain speeds of 100 megaflops, while the Japanese programmes aims at achieving 1,000 megaflops. DARPA's programme is rumoured to have initial costs of \$150 million.

DARPA supports basic research and exploratory development for the Directorate of Defense Research and Engineering and would not, therefore, be involved in applications. Possible defence applications include warhead delivery systems capable of "deciding" for themselves which targets to attack, and thus not dependent on vulnerable telemetry systems.

There is also to be a substantial new programme in the development of software to be managed by a new office to be established within the Defense Research and Engineering Directorate. According to a report from the office of Dr Edith Martin, the deputy under-secretary at the Pentagon with responsibility for research and engineering, it is planned to spend an extra \$30 million on software development in the financial year beginning on 1 October 1983, to provide further funds in succeeding years and to establish a military software institute. It is estimated that between \$5,000 million and \$6,000 million worth of software is already "embedded" in defence systems, and that the amount will rise to \$32,000 million by 1990.

Increased funds are also likely to be

Academic consultancy

Mass. General placates Hoechst

Washington

Massachusetts General Hospital (MGH) is going to unusual lengths to ensure that faculty consulting with outside firms does not conflict with the terms of its 10-year \$50-million agreement with Hoechst AG, the German chemical company.

In the case of one faculty member just appointed to the department funded by Hoechst, MGH is demanding that his consulting with other firms be on a non-confidential basis, a condition apparently not required of other MGH faculty.

The 1981 agreement between Hoechst and MGH represents the largest joint venture so far between industry and an academic institution. Hoechst agreed to provide the money for a new department of molecular biology in exchange for an exclusive licence to any patents that result from the department's research. The agreement also requires any faculty collaboration or consultation with for-profit firms to be cleared with Hoechst.

MGH has now apparently taken it upon itself to negotiate the particulars of consulting contracts that molecular biology faculty members have with outside firms to ensure that they are acceptable to Hoechst. In the case of Dr Brian Seed, the newly-appointed faculty member, MGH has engaged the services of a prominent Boston law firm, Ropes and Gray, to negotiate changes in his consulting arrangement with Genetics Institute. Genetics Institute, the spin-off from Harvard University's short-lived plan to form its own profit-making genetics engineering company, is negotiating through its own prominent Boston law firm, Hill and Dorr.

The MGH lawyers are demanding that since Seed is free to pass on information from his Hoechst-supported work at MGH to Genetics Institute, he should similarly be free to pass on to Hoechst any information gleaned through his consultations with Genetics Institute. Seed, who says he has heard nothing about the current status of the negotiations, says the basis of MGH's

position is Hoechst's concern over its ability freely to exercise its patent rights under the agreement: "Hoechst is worried that as a result of my consulting for another company I might take up in my lab some work based on proprietary information". Thus Hoechst might end up supporting some research that it could not patent.

MGH officials deny that their actions reflect any special policy towards the department of molecular biology or Hoechst. "We want to make sure that their consulting activity is consistent with the hospital's policy", says Dr Ronald Lamont-Havers, deputy general director for research. "Any consultative agreement needs to be cleared with the hospital to ensure that there is no conflict of interest."

But Lamont-Havers did acknowledge that while the hospital has advised other faculty members that their consulting contracts need to be changed, it has only actively negotiated those changes in the case of department of molecular biology faculty. And he appeared surprised to learn of the non-confidentiality requirement that MGH's own lawyers are demanding in Seed's case. "Usually, in our consulting agreements, we expect that they would receive proprietary information and would not be free to discuss proprietary information", he said.

Dr Howard Goodman, director of the department of molecular biology, denies that anyone in his department has been required to give up any consulting or that appointments have been made contingent upon modifications in an appointee's consulting contracts. And Seed seems confident that an accommodation will be reached in his case. "I doubt that my relationship with Genetics Institute will be severed", he says. But the lingering question is whether the conditions being demanded by MGH — and which Genetics Institute reportedly considers unacceptable — will make it impossible for at least some faculty consulting arrangements to continue. **Stephen Budiansky**