

## Not so 'nuclear free'

### Washington

UNTIL last week, the city of Oakland, California, was off limits to nuclear weapons, materials and reactors. City officials were banned from doing business with companies that participated in nuclear-weapons production, a list that included IBM, General Electric and Monsanto. Known as a nuclear-free zone, Oakland's ordinance was considered the strongest of the similar laws in 169 other US cities. But last week a California judge ruled that Oakland had gone too far. In a legal setback to the growing nuclear-free movement, the court ruled that the city's ordinance is unconstitutional.

City officials say they will appeal the decision, opening the way for a possible precedent-setting ruling by a higher court.

Federal agencies have joined the fray as well. Oakland is on a major supply route for the Lawrence Livermore National Laboratory, the main Department of Energy (DOE) nuclear weapons research facility. Several military bases located in the city also have the capability of housing nuclear weapons.

The case made headlines last year when the US Justice Department submitted an unsolicited opinion on the matter, finding that the law violated the US constitution. Local communities cannot restrict the government's ability to provide for the national defence and regulate nuclear energy, the US lawyers said.

Anti-nuclear activists charged that the administration had given in to a concerted lobbying campaign by the nation's defence contractors. In March they released leaked documents that showed that, before the justice department opinion, the Aerospace Industries Association, a Washington-based trade group, had met with the secretary of defence to urge opposition to the nuclear-free initiatives.

The association defends the meeting as its "legitimate right to meet with officials from the federal government at any time they are willing to see us". But David Birman, of the Lawyers' Committee on Nuclear Policy, feels that it is "politically very questionable" that the administration would take its first action on a nuclear-free zone (Oakland is just one of many) only after it had been lobbied by industry.

A major legal question in the case, Birman says, is whether federal law can pre-empt local law on nuclear matters. If it cannot, nuclear-free zones stand. But if federal law does take precedence, then by the same argument, international law — which bans nuclear weapons — should take even greater precedence, he says.

Next month Alameda County, which includes Lawrence Livermore Laboratory and Oakland, will vote on "Measure A", a

wide-ranging initiative that would create a government body to rid the county of all nuclear materials and research. Supporters collected 38,000 signatures last year to put the initiative on the ballot; chances are seen as good that it will pass in June. Over half of the county's residents already live in areas that voted themselves nuclear-free.

Chief target is Lawrence Livermore laboratory, which would be "converted" to purely non-nuclear work such as environmental and health research. Livermore scientists say such a move would effectively close the \$1,000 million laboratory. A third of the laboratory's current research is related to nuclear weapons, and another third has some nuclear aspect. The removal of nuclear work would be phased over a five-year period, but DOE would almost certainly sue to stop the county from tampering with the laboratory.

Defence contractors and private citizens have assembled a coalition to fight the initiative. Called the Citizens for Fiscal and Economic Responsibility, the group has already raised over a quarter of a million dollars. Last week's court decision on the Oakland ban is not expected significantly to affect the vote. But if the case goes to the Supreme Court, as some now predict it will, the Alameda initiative, as well as nuclear-free zones throughout the United States, may hang in the balance.

G. Christopher Anderson

### GENOME PROJECT

## Howard Hughes gets HUGO off the ground

### Washington

Two years after it was founded, the Human Genome Organization (HUGO) has finally garnered its first funding of note. The Howard Hughes Medical Institute (HHMI) last week announced a \$1 million grant, spread over four years, to support HUGO's efforts to promote and coordinate international collaboration in mapping and sequencing the human genome.

A matching grant is expected to be announced soon by Burroughs Wellcome. With over \$500,000 a year at its disposal, HUGO's first step will be to set up permanent offices (in Bethesda, Maryland, in London and in Osaka), and begin the work of helping to organize the 15-year \$2,000–\$3,000 million genome initiative.

Without major funding, HUGO has so far been more concept than reality. But genome researchers hope that new grants will finally allow HUGO to take an active role in coordinating the exchange of data, samples and technology.

G. Christopher Anderson

## DFG is first to move

### Frankfurt

THE West German grant agency, DFG (Deutsche Forschungsgemeinschaft) began laying out a common German research policy last week when it proposed supporting basic research in a unified Germany "from a single pot". The plan, which was unanimously approved by the DFG Senate, must still receive political approval from Bonn, East Berlin and *Länder* governments before it can take effect, probably not before 1991. DFG's constitution prevents it from providing research support for anyone outside West Germany except under special circumstances.

DFG is the first research organization in the West to announce its plans for East Germany, and if other organizations take a similar approach, the withering away of the East German Academy of Sciences is bound to follow.

DFG will stick to its principles of peer-reviewed and performance-based funding in supporting research in East Germany, according to spokeswoman Eva-Maria Streier. The consensus in the Senate, she reports, was "not to budge even half an inch" in applying the same high standards to East and West German research proposals.

Significantly, the DFG plan does not exclude applications from individual researchers in academy institutes. Although DFG generally declines grant applications from West Germans working at Max Planck institutes or GFEs (the Large Research Establishments) unless the project falls outside the normal scope of these institutes, DFG will give all applications from academy researchers a chance. But providing researchers' salaries or entire institute budgets is out of the question, she said.

The DFG plan addresses only indirectly the burning question about the fate of the academy, the largest and most important scientific institution in East Germany, whose budget of 1,000 million East German marks is due to run out at the end of this year.

Western observers estimate that between one-fourth and one-third of the academy's "research" belongs in industry or in applied research institutes similar to the West German Fraunhofer Institutes. But the fate of the other researchers — the cream of the crop in a country that has fallen far behind the West in the past ten years — is still entirely up in the air.

Dieter Simon, the chairman of the influential science advisory council Wissenschaftsrat and a permanent observer in the DFG Senate, warns that if the DFG plan is applied rigorously, "no one in East

Germany will receive anything" from DFG. University researchers, whose work has been neglected by East Germany's former Communist government, will not be able to present high-quality proposals. Without asking DFG to lower its standards, Simon calls for moderation in administering the DFG plan.

Simon urges that other organizations consider their steps carefully before acting on reunification. Recently, Research Minister Heinz Riesenhuber has come under fire from his own party for not moving faster to unify East and West German institutions. But a piecemeal approach in which the nuggets were selected by the West and the rest "dumped at the feet of the academy" would be the "worst possibility", Simon admonishes.

It would be best if the Max Planck Society and GFEs, both of which are administered by the ministry, were to wait at least until July before proceeding with reunification plans, says Simon.

Wissenschaftsrat set up a commission earlier this year to assess the potential of East German research and will consider the commission report before it makes recommendations on a new structure for West and East German science in July.

Giving East Germany more time — possibly well beyond July, says Simon — will allow it to evaluate its own research institutions and begin to rationalize them. This would create less resentment, he says, than if "Big Brother" were to come in from the West and tell East German institutions how many people they have to let go.

Another advantage to a Wissenschaftsrat evaluation of East German science is that it gets the *Länder* involved. Until now, the *Länder*, usually major players in university policy, have been nearly silent about East German science.

Some East German Academy members are talking about breaking down the academy into a 'Leibniz Society' and a 'Helmholtz Society' for basic and applied research, respectively. But no one has emerged to take control of the academy in this critical phase. The Academy Presidium recently asked nine people if they would like to run for president of the academy. Seven declined immediately and the other two declined the next day. Three new candidates could not be found in time for the planned election in late April, so the election has had to be postponed.

Steven Dickman

A Scientists' Union of the USSR has been formed, together with republic and regional unions, but they are still taking shape and their influence is as yet limited. Some hopes for radical change were linked with the academy elections last month and they, as required by the amended statutes of the academy, were indeed more democratic than previously.

For the first time, there were no instructions of which candidates were approved or 'recommended' by higher-ups. There were six nominees for the post of president — two scientist members of the presidential council, Stanislav Shatalin and Yuri Osipyan, together with Academicians Guri Marchuk, Nikolai Basov, Zhores Alferov and Andrei Gaponov-Grekhov. But all of them except Marchuk, who has held the post since 1985, withdrew. Of the 247 Academicians who were present at the meeting, 195 voted for Marchuk and 43 against.

By contrast, there was no choice in the elections of the vice-presidents and of the chief scientific secretary. (On the proposal of the president, Academician Igor Makarov holds on to that post.) The election of academicians as secretaries of the academy's departments, as well as of other members of the praesidium, evoked little debate.

All the vice-presidents in charge of particular fields of research have retained their posts. They are Academicians Vladimir Kudryavtsov (social sciences), Yuri Osipyan (physics-mathematical sciences), Yevgeny Velikhov (information science and energy), Konstantin Frolov (machine-building, mechanics and control processes), Oleg Nefedov (chemical sciences), Rem Petrov (biological sciences), Nikolai Laverov (Earth sciences, also chairman of the USSR State Committee for Science and Technology, and, in this capacity, vice-chairman of the USSR Council of Ministers) and rector of Moscow State University Anatoly Logunov (organization of research-training centres and publishing).

Three other vice-presidents represent the major regional academic organizations — chairman of the Siberian department Valentin Koptuyg; the Ural department Gennady Mesyatz; and the Leningrad Research Centre, Zhores Alferov. (The Leningrad Centre, which comprises over 30 research institutions, has been given this status for the first time.)

The post of vice-president for the Far Eastern department of the USSR Academy of Sciences, where neither Academician Viktor Ilyichev (the former head of the department) nor the other two contenders won a majority vote, remains vacant. This question was not considered at the April meeting for lack of recommended candidates, but the situation there is considered bad.

Yuri Kanin/Novosti

## SOVIET ACADEMY

# Election brings little change

### Moscow

THE leadership of the Soviet Academy of Sciences will remain substantially unchanged for the next five years following the elections of 27 April, when Dr Guri Marchuk was re-elected president.

This is at odds with the frequent criticism of the academy in the Soviet press and in the scientific community, demanding major changes in the organization and management of research.

It seems now generally recognized that soviet science, including academic science, is by and large in crisis. Poor equipment, insufficient funds for fundamental research, rigid centralization of resource distribution and research planning and the effects of monopolism and totalitarianism have put Soviet science at a serious disadvantage in many areas.

Yet there have been some improvements. For example, the budget of the academy has increased 2.3 times over the past four years. But as a percentage of the national income, even this does not compare with the investment in science by leading industrial countries.

The academy has begun the switch from the financing of institutes to that of specific research programmes and projects, while the introduction of a competitive grant system is under way, but has not yet taken shape.

By world standards, the social and material status of researchers is as low as

ever, restricting the influx of talented young people into science. And although Soviet scientists go abroad on business far more frequently — more than twice as often as in 1985 — there is an inadequate influx of foreign scientists into Soviet institutes and laboratories, whence present anxiety about the 'brain drain'.

In organization, structure and function, the Soviet academy differs substantially from those of Western countries. It is not an assembly of elite scientists, but a whole system of institutions, laboratories, experimental production units, publishing houses and even construction facilities. Every republic, except the Russian Federation, has an academy of its own.

The USSR Academy of Sciences unites them all, coordinating research in federal programmes and areas of research. The academy's praesidium, with its staff, is in essence, a ministry of science. At present, there are about 220,000 researchers at the academy's institutes and laboratories. Yet only Academicians (they number 306) and the Corresponding Members (567) are members of the academy. Only Academicians may be elected to the leadership, and only they have the right to vote in such elections. The proposal that this right be also given to the Corresponding Members was advanced at April's general meeting, but was not even put to the vote.

The academy's scientific public is nevertheless demanding radical change.