Museums

Expenditure cut to the bone

AS EVERY London schoolchild knows, dinosaurs, whales and even computer games are to be sampled for free at the Natural History Museum in South Kensington. But if BM(NH) — the British Museum (Natural History), which comprises the Natural History Museum, the Geological Museum also in South Kensington and the Zoological Museum in Tring — cannot gain considerably more funds from government or by patronage, free admission to its museums is likely to be abolished, scientific services charged for and scientific staff reduced by at least 10 per cent. Such is the conclusion of BM(NH)'s first corporate plan, announced this week.

In formulating its corporate plan, BM(NH) has estimated that the gap between its predicted expenditure and income is likely to rise from £1.2 million next year to £2.7 million by the end of the decade. Cutting running expenses and operating a policy of not replacing all retiring staff will meet a quarter of this. By spending more on marketing, a net gain is forecast in income from publications, catering and sponsorship. And a little further income will come from introducing charges for scientific advice, loans and the use of the museum's collections. Even so, there remains a considerable gap which will need to be met by staff cuts, admission charges or both.

In one budget-balancing forecast, in which admission charges are introduced in 1987–88 and yield £1.6 million by 1990–91, the staff of the museum are reduced by 35 to 805 in the same period, with the brunt of the cuts falling on the scientific staff. They numbered 361 in 1983–84, will be 335 this year and are forecast to be 300 in 1990–91. "The redundancy of expert staff ... will be implemented only if totally unavoidable", states the plan.

Asked why it should be the scientific staff that suffer disproportionately, R. Saunders, secretary of BM(NH), said that is only the exhibition side of the museum that can expect to attract sponsorship so its staff must be maintained. Only the government and its agencies can maintain the level of scientific staff.

If admission charges are introduced, it is not clear whether they will be compulsory or voluntary, as at the Metropolitan Museum in New York and the Victoria and Albert Museum in London. The latter is already finding a considerable decrease in visitors despite the non-compulsory charges; how London's schoolchildren and the Natural History Museum will come to terms with charges and their effects is unclear.

Peter Newmark

US universities

New medical school planned

Washington

THE Howard Hughes Medical Institute (HHMI) and Yale School of Medicine last week announced plans to build a joint centre for molecular medicine worth at least \$25 million on the medical school's campus. The facility may provide a model for future medical schools by crossing departmental boundaries, which many researchers find increasingly cumbersome and artificial. Its select research contingent may also have to grapple with the jealousy and elitism that have plagued some of Hughes's 22 academic collaborations in the past. But such shadows are not dimming the expectations of the centre's planners, or of the few investigators who have already won places in the facility in 1989, when its doors will be opened.

The partnership venture is an extension of a relationship with Hughes that Yale has enjoyed since 1977, and follows close on the heels of the \$5,000 million sale of Hughes Aircraft Company that made HHMI the wealthiest philanthropy in the United States (*Nature* 315, 531; 1985).

Construction of the 110,000-sq. ft building will commence within 17 months with \$15 million from Hughes and with Yale making up the difference. Each of the centre's four floors will be devoted to a particular programme of study and three have already been chosen. Hughes will underwrite the molecular neurosciences and molecular genetics divisions, while Yale will manage a molecular oncology programme and the fourth programme, for which neurobiology, immunology and receptor biology are among the main contenders.

The centre will also house four or five "core facility" laboratories that will provide services such as protein sequencing, peptide and oligonucleotide synthesis and monoclonal antibody production for the centre staff and all the medical school's laboratories.

Joint Yale/HHMI search committees will recruit between 25 and 30 investigators to fill the facility. Yale hopes the centre will draw expertise in areas such as oncology in which its own faculty is a little lean. But some Yale researchers are concerned that collaboration might rank among the "monopolies of excellence" which have been accused of draining talent and recognition from less conspicuous, but equally deserving, universities. And while the scenario of Hughes investigators and Yale faculty working side by side seems at first idyllic, some anticipate personal friction of the kind that frequently attends cooperation between more and less generously endowed teams. The geneticists and neuroscientists working on Hughes floors will be afforded the luxury

of long-term goals and spending flexibility, while Yale researchers will continue to toil in traditional competition for funds.

Finally, the notion of interdisciplinary programmes, however appealing, may create havoc in the planning stages. What Dean Leon Rosenberg calls "a melting pot of faculty" could turn into a pressure cooker if departmental loyalties prove not so superfluous.

None of these reservations, however, are likely to prompt rejection letters from those invited to join the centre's group. For biomedical research, says one Yale professor, the bottom line on the centre for molecular medicine is "wonderful".

Karen Wright

Biotechnology

Will Pharmacia

Washington

SURPRISING revelations about Refaat El-Sayed, president of Swedish biotechnology company Fermenta AB, have slashed the company's share prices and put on ice its plans to buy into two pharmaceutical concerns. The man who increased Fermenta's earnings by SKr 1,500 million in three years resigned last week following his confession on 13 February to having lied about his academic credentials. Then El-Sayed capped the controversy with a disclosure that he had bought 4 million Fermenta shares shortly before releasing 1985 profit and loss figures, a move that may violate laws set down by the Stockholm stock exchange.

El-Sayed claims he bought the shares in connection with a tentative agreement with Volvo announced early in January, by which Fermenta would acquire the Swedish conglomerate Sonesson and Volvo's 40 per cent stake in Pharmacia, the second largest pharmaceuticals company in Sweden.

A tender offer was set stipulating a Fermenta share price of SKr 220. Shares soared over SKr 300 after the announcement, but plunged to about SKr 150 when El-Sayed's credibility was called into question. Now Volvo and Fermenta are renegotiating the deal; meanwhile, Volvo is denying any involvement in El-Sayed's purchase.

Pharmacia, the coveted object of the transaction, is preserving a "business as usual" attitude until a bargain is finally struck — or dissolved — between the two companies. Although Pharmacia will be listed independently on the Stockholm stock exchange regardless of the outcome of the negotiations, analysts say its executives were facing the acquisition with some

Plant breeding

The seeds of commerce

ANOTHER firm step has been taken by the UK government towards privatizing the National Seed and Development Organisation (NSDO), which produces and markets seeds of new plants that emerge from government-supported research, and the major source of NSDO's new plants, the Plant Breeding Institute (PBI) of the Agricultural and Food Research Council (AFRC). Within hours of last week's announcement that the government is to seek financial advice on how best to proceed with the sale of NSDO and the plant breeding, as opposed to the plant science, programme of research at PBI, one company was singing its own praises as the best possible buyer.

NSDO has been a candidate for priva-

tization for nearly two years because it is a profitable business. Last year it recorded a profit of about £7 million, of which £4.65 million was returned to the Treasury, while only about £2.5 million was spent by the council on plant breeding research at PBI, from which nearly all of NSDO's new varieties have come.

But the plan to make the sale more attractive by including half of PBI is more recent and has been opposed by the institute, which fears that the remaining plant science research will suffer as a result. Reacting to the decision the institute's director, Professor Peter Day, said that the institute has always prided itself on covering the spectrum from molecular biology to the production of finished new varieties of plants and the challenge now will be to maintain the status of the science programme on its own. In any case, the institute will now have to develop a new strategy of research, probably concentrating more on alternative crops than on the mainstays of NSDO and almost certainly acquiring some breeding facilities.

Because financial cuts have made it impossible to maintain the *status quo* at PBI, and because the case for supporting research there by the profits of NSDO has failed to win the day with a government set on privatization, Day will now have to work out a new strategy for the remaining half of the institute. The worst outcome, he said, would be if the science and breeding activities were altogether separated as might happen if the remaining scientists are moved elsewhere. The best that can be hoped for, says Day, is that business will continue much as now except for the inevitable differences necessitated by the terms of any formal relationships between the remaining scientists and the new employers of its plant breeders, or at least those that are lucky enough to gain such employment.

Such might be the case if the Agricultural Genetics Company of Cambridge became the new owner, according to Roger Gilmour, its chief executive. The company was set up three years ago with the help of the government-owned British Technology Group and was given first rights to develop and market discoveries made by plant scientists at AFRC institutes. The rights are for five years in the first place and negotiations for their renewal are due this summer. At least as important to the company as the renewal of these rights is that it should continue to have access to a plant breeding facility and a seed marketing organization. The company's future seems bleak if it fails in its bid to buy NSDO and the part of PBI that will be for sale.

When the sale will be and exactly what

will be on offer is anyone's guess. It seems very likely, however, that the two places on offer will be sold together and to a single buyer.

The government is obliged to go through a procedure of appointing an independent financial adviser to report on the best way to go about the sale. Only when such an adviser has been chosen from applicants and has reported to the government is any further statement expected. It may then also become clear whether it is the Treasury or AFRC that will be the beneficiary of the sale.

Peter Newmark

Ariane satellites up

FRENCH — and Swedish — space scientists breathed sighs of relief last week as the mostly French-built European space launcher Ariane lifted two satellites safely into orbit. This was the first launch for some months, after the last was aborted when a third stage rocket motor failed. The present launch, which put up the first French Earth-observation satellite, SPOT1, and the Swedish research satellite Viking, had been delayed when a German-built cooling system was found to be leaking.

SPOT1 is following a near-polar orbit at an altitude of 822 km. It carries both vertical and sideways-looking cameras, so the same site can be pictured twice from different directions on successive orbits, as the Earth turns beneath the satellite's path, thus yielding three-dimensional images of the surface which will be useful for the mapping of remote areas. Some potential users in Africa, however, have complained that the technologies employed by SPOT1 will not be of much use for crop management and agricultural planning, but are much better tuned to monitoring defence installations and troop movements. As SPOT1 images will be available commercially, this could lead to some political difficulties.

Robert Walgate

Vera Rich adds: The Swedish Viking satellite will study the region of acceleration of incoming solar wind particles, which, when entering on the dark side of the Earth, become pumped in energy and in latitudes 65–75° interact with the atmosphere to produce the visible aurora. The Viking satellite has 40-m wire booms to trap the particles, and first results are expected in about two weeks.

The Swedes, however, are not totally committed to Ariane as a launch vehicle. The Swedish Space Corporation is considering production of a small (100kg) telecommunications satellite MAILSTAR, which will carry telex and telephone traffic to the third world. A tentative agreement has just been signed giving China first option as provider of launch facilities, should MAILSTAR materialize. □

Join Fermenta?

trepidation. Whereas Volvo has maintained a reputation as a "hands off" shareholder, El-Sayed is considered more likely to meddle. If the initial arrangement with Volvo were to be finalized, the Egyptian-born Swede would wind up with almost 50 per cent of Pharmacia's voting shares.

It is hard to say how closely El-Sayed's credibility is linked with shareholder confidence, but one analyst says that the man named 1985 Swede of the Year is now "lethal to his own company". El-Sayed owns more than 70 per cent of Fermenta.

The preliminary results presented last week, intended to restore investor optimism, contained profit figures of SKr 3,320 million that were augmented by minority interest from other Fermenta holdings, primarily the Italian pharmaceuticals company Peirell.

In the wake of these blemishes, says Fermenta, El-Sayed gave up his leading position in order to devote more time to the company's future, as director of long-range planning and acquisition. Others suggest that he acted on the insistence of Svenska Handelsbanken, Fermenta's parent bank, which had unwittingly proclaimed El-Sayed's credentials in a prospectus issued last summer for a SKr 210 million private offering in London.

Even if El-Sayed and Fermenta escape unscathed from the past week's turbulence, they are still in hot water with the Swedish environmentalist who incited it. Bjorn Gillberg at the environmental centre in Uppsala, who knew El-Sayed as an undergraduate at the town's university, first contested his claims to a master's and PhD degrees. But Gillberg's real concern is Lake Malaren which he believes is being polluted by a Fermenta fermentation plant.

Karen Wright