

Institute for Cancer Research

Slimmed down but healthy

WITH the opening last week of a new £500,000 drug development laboratory at Sutton, in Surrey, the Institute for Cancer Research (ICR) has taken a magic step towards the radical restructuring initiated three years ago by its then-new director, Dr Robin Weiss.

As a result of an 18 per cent cut in funding in 1977, Weiss inherited a £1 million deficit which is being made good by a programme of staff reductions and "retrenchment". A research station at Pollards Wood, in Buckinghamshire, will be closed next year, leaving the institute's activities concentrated at its Sutton site and at the Chester Beatty Research Laboratories in Chelsea, London.

The new laboratory, directed by Professor A.B. Foster, is named after the Cancer Research Campaign, which made capital grants of £900,000 for the building and for improvements to the laboratories at Chelsea. It will house ICR's Drug Development Section, which was formerly split between Sutton and Chelsea, and enable closer collaboration with the Sutton branch of the Royal Marsden Hospital. ICR's Chemical Carcinogenesis Section, headed by Dr Peter Brookes, will move to Sutton from Pollards Wood next year and Dr Julian Peto of the Imperial Cancer Research Fund's epidemiology unit in Oxford will head the ICR epidemiology unit at Sutton from October. The animal breeding centre at Pollards Wood will be run down, and arrangements for the supply of experimental animals have been made with the Medical Research Council.

Weiss's main innovation at ICR has been to expand basic research in cell and molecular biology, which was poorly represented before 1980 and is the subject of important recent developments. With newly-refurbished laboratories, the Cell and Molecular Biology Section is studying human oncogenes and tumour viruses.

Plans are well advanced to supplement those studies with a major new unit devoted to the study of human leukaemia and wholly supported by the Leukaemia Research Fund. Dr Mel Greaves, head of the membrane immunology laboratory at the Imperial Cancer Research Fund, is expected to direct the new unit.

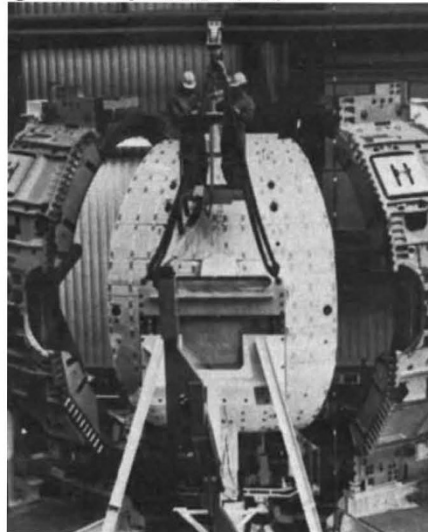
The main casualties of Weiss's restructuring have been tumour immunology, which will continue but on a reduced scale, and radiobiology. Fundamental research in this area has been discontinued, and many of the staff have moved with Professor G.E. Adams to the Medical Research Council's radiobiology unit at Harwell. The teaching role of the institute, as part of the British Postgraduate Medical Federation, has been strengthened with the appointment of Professor G. Westbury to the newly-established chair of surgery. The Cancer Research Campaign has appointed

Dr Tim McElwain to its chair of medical oncology at ICR, and the Medical Research Council has increased its support for this area.

Weiss feels the new slimmed-down ICR, which now has a total staff of 410 compared with 470 three years ago, will maintain its pre-eminent position in those areas where it is best known. New funding arrangements mean ICR now has to compete for research grants from a joint committee of its main sources of support, the Cancer Research Campaign and the Medical Research Council.

Weiss says the new system has provided stability which had been lacking. He points out that the Drug Development Section of the institute has probably introduced more anticancer drugs than any other unit in the world. Two drugs in particular are causing excitement at present: one, known as CB3717, is an enzyme inhibitor which although only in phase I of clinical trials is showing potential for use against cancers of the breast and ovary and could in time become a less toxic alternative to methotrexate. The other, CBDCA, is a non-toxic platinum derivative now in phase II of clinical trials. The section is also continuing its pioneering work on antibody-toxin conjugate therapy, using monoclonal antibodies to target the α subunit of chlorambucil, a widely used antitumour drug, onto *in vitro* bone marrow cells. **Tim Beardsley**

JET takes off



EUROPE'S £175 million attempt to create the conditions for the thermonuclear fusion of deuterium and tritium, the Joint European Torus or JET, circulated its first plasma (of normal hydrogen) on Saturday 25 July. JET, a tokamak, is pictured above towards the end of its five-year construction, which was completed on time and "within a few per cent" of costs envisaged in 1975, the JET team says. □

Lawrence Berkeley Laboratory

Uncertain times for revival

Berkeley, California

ALTHOUGH the Lawrence Berkeley Laboratory's (LBL's) proposal to be the home for a new National Center for Advanced Materials (NCAM) continues to take a beating, it remains the heart of the laboratory's hopes for holding its own in staff and funds. For the latest of a series of studies of the national laboratories, soon to be released by the White House Science Council, is expected once again to call on the laboratories to focus on a more defined mission, more attuned to national needs—a criticism that NCAM is planned to meet.

The recent history of LBL leaves no doubts why NCAM is so important for the laboratory. While many of the other national laboratories were able to cushion the blow of reduced base funding by having single, large projects that could not be abandoned, LBL's diversity left it vulnerable. Over the past two years, LBL has lost 19 per cent of its staff. Ironically, the close association with the University of California's Berkeley campus that has made LBL perhaps the most scientifically solid of the national laboratories (LBL director David Shirley points with pride to the 30 National Academy of Sciences members on his staff) is also responsible for the diversity.

NCAM, when fully operational, would bring the staff and budget of LBL's basic energy sciences division up to a full one-third of the total laboratory. The laboratory employs 4,000 people (2,500 full-time equivalents) with an operating budget of \$110 million. "If we get the support for NCAM," Shirley said in an interview here last week, "we can at best hold the line." The problem is that the plan for NCAM has come under attack. First, materials scientists complained that the proposal was spirited into the President's 1984 budget without sufficient peer review. More recently, the House of Representatives voted to kill all appropriations for the project.

Shirley presses his case for NCAM not only as a salvation for LBL, but also as a model of "serious" efforts to respond to the criticisms of the national laboratories' lack of focus and inattention to national needs. "There is a tendency to lose sight of the necessary coupling between support of research by the federal government and the requirement that research address national needs. NCAM is meant to address these problems—I was not aiming to get a piece of an existing pie, I was aiming to get a bigger pie", he said.

He added that critics of NCAM who claim that it was not peer-reviewed "don't understand the process by which research is supported". He asked a rhetorical question of those critics: "Where were you when we were laying off 19 per cent of our

work force? — that, by the way, was not the result of peer review". And he made no attempt to hide his distaste for "members of the scientific community going after money with all the grace of hogs going after truffles".

The final congressional decision on NCAM is still up in the air. The House of Representatives, after manoeuvring that first took \$5 million away from NCAM for a laboratory at Catholic University (see *Nature* 26 May, p.272), voted to delete all funds for construction from the 1984 appropriations. The Senate has voted to appropriate \$3 million, and the most likely outcome of the House-Senate conference — expected to take place this week — is some compromise between the two figures.

Another large project for which LBL has high hopes is the Tevalac, a proposed relativistic heavy-ion accelerator. LBL's reputation was early staked to its excellence in nuclear physics. But over the years, as the forefront of basic physics has passed to particle, or high-energy, physics, LBL has been left on the sidelines because it has never had one of the large high-energy accelerators.

The Tevalac would recapture for nuclear physics a piece of the action. As conceived in a plan drawn up late last year, it would extend the Bevalac concept — LBL's Bevalac last year became the first machine to accelerate uranium nuclei — to energies of 10 GeV per nucleon at uranium. At these energies, the nuclear physics experiment of colliding nuclei yields a particle-physics payoff: a plasma of quarks and gluons

would be created, which, said Lee Schroeder, one of the Tevalac's developers, could be studied to learn the "thermodynamics" of quarks. This examination of bulk effects of quarks would complement the "microscopic", single quark view that a proposed electron accelerator will offer (see *Nature* 2 June, p.368).

The Tevalac's proponents are hoping for an endorsement by the Nuclear Science Advisory Committee (NSAC) when it meets on July 11–16 to draw up a five-year plan for nuclear physics. NSAC makes recommendations to the Department of Energy and the National Science Foundation on priorities in the field. The Tevalac will be vying with a proposal from Los Alamos National Laboratory to upgrade its LAMF accelerator (the Los Alamos Meson Facility) from 800 MeV to 16 GeV in order to study rare decay modes of certain particles. Brookhaven, CERN and the Gesellschaft für Schwerionenforschung in West Germany are also considering construction of relativistic heavy-ion machines.

LBL planners say the Tevalac would not require additional staff, as savings in personnel would be realized by combining the operation centres of the present Superhilac and Bevalac. The total cost of the Tevalac is put at some \$30 million in research and development expenses and \$100 million in construction. Schroeder said that the most optimistic scenario would have construction begin in fiscal year 1986 and operation in 1990.

Stephen Budiansky

Clinch River fast breeder

The final blow?

Washington

THE roller-coaster fortunes of the Clinch River fast breeder reactor in Tennessee hit a new low last week when the Senate decided to follow the example of the House of Representatives and exclude money for the project from its 1984 energy and water appropriations bill. Jubilant opponents of Clinch River claim that this will finally kill the project unless the nuclear industry offers to pay a much bigger share of the reactor's cost.

Construction of the power plant is expected to cost \$3,500 million, compared with an original estimate of around \$700 million. The industry contribution to the project has remained steady at about \$250 million despite the escalating costs. Congress is expected to renew funding for the programme only if the private sector is willing to raise its contribution to some 40 per cent of the overall costs and shoulder some of the financial risk entailed.

Although the Department of Energy (DOE) was last week considering a new financing proposal from the private sector, officials said the nuclear industry was unlikely to offer much more than the \$800 million proposed in a plan submitted to

Congress in March. And the private sector will probably continue to insist that the government safeguard the industry's investment by promising to repay it through the sale of electricity generated by the plant.

By cutting off money for Clinch River at the end of the year, Congress is flying in the face of the Reagan Administration's policy of continuing work under the existing financial arrangements. The administration had requested \$270 million for work on the reactor in 1984.

Just what will happen at the reactor site if there is no agreement between Congress and the industry remains unclear. Senator Mark Hatfield (Republican, Oregon) said last week that the Senate's intention was to bring all work on the site — including basic preparation of the ground — to a complete halt. But he warned that DOE might be able to continue work if Congress was once again forced to operate under a continuing resolution.

A spokesman for DOE confirmed that the legal status of Clinch River is likely to be ambiguous. Technically, the project remains authorized and there is no specific language in the appropriations bill declaring it suspended. If the project were indeed allowed to die, he added, Congress would have to appropriate some money in 1984 to meet close-down costs.

Peter David

Koestler's last laugh

ARTHUR Koestler and his wife Cynthia, who committed suicide together last March, must have relished the prospect that their bequest to establish the first chair in parapsychology at a British university would set a cat among the academic pigeons. By last week, when news of the £500,000 bequest became known, no university had grasped the nettle, but discussions were in progress with several.

Koestler's last years were marked by an increasing fascination with parapsychology, leading to two books on the subject. He wrote in his suicide note of his "timid hopes of a depersonalized afterlife". Now it is up to Dr John Beloff, senior lecturer in psychology at the University of Edinburgh



and the executor handling the Koestler bequest, to persuade a university to take up the offer. Beloff is negotiating with several universities, including those at Edinburgh and Cambridge, but admits there have been difficulties. The terms of the bequest make it clear that it should fund research into parapsychology itself, rather than, for example, the factors affecting belief in such phenomena. Koestler left no instructions about how the money should be used if early research fails to produce evidence of paranormal forces, and many universities may be reluctant to accept the bequest if it is tied to this field in perpetuity. If it proves impossible to set up a chair, the terms of the bequest allow a number of research fellowships to be established instead.

Mr I Bloomfield of the KIB Foundation, a charity that Koestler helped to set up to fund research beyond scientific orthodoxy, has pledged to put the interest from a sum equivalent to the Koestler bequest towards the research of the proposed professor of parapsychology. Together with the Koestler bequest, this sum would enable a university to set up a unit of perhaps five or six workers. Dr Beloff will also be seeking research funds from the Parapsychology Foundation in New York. No firm decisions have been taken on what facilities would be needed for the new unit, but Beloff is looking for the offer of a laboratory and shared secretarial services, perhaps within an existing psychology department. Disinterested academics may be invited to advise on the provision of equipment. Dr Beloff hopes the chair will be established by October 1984.

Tim Beardsley