IMAGE UNAVAILABLE FOR COPYRIGHT REASONS

Sellafield nuclear plant in Cumbria, England. Owners of the plant, British Nuclear Fuels, plan to fund a gene bank of newborns to determine whether activities at the plant are putting the local population at risk.

the health questionnaires kept on a separate database at Newcastle University. It will be possible to anonymously link an individual sample to parental occupation or place of residence. Burn says that the only time a DNA sample will be identified is if it is discovered that an individual carries a life-threatening gene, and even then this link would only be made with the approval of the ethics committee.

There is some disquiet that the gene bank should be funded by the nuclear industry, with local protesters claiming that any research findings that show British Nuclear's operations are having a bad effect on the health of the local population could be stifled. Burn refutes this assertion because British Nuclear will have no control over the research carried out using the gene bank, and because the university has the right to publish any of the research findings.

He believes the safeguards over the confidentiality of information and the uses to which the gene bank may be put have reassured local people. Indeed, only 37 people turned up for two consultation meetings arranged by the local area health authority, held to inform the public and to test the level of public concern before the project was given the 'green light'.

Burn expects that the gene bank will be an important international resource for geneticists. "The primary aim is to begin to establish a resource which will come into its own as we identify hundreds, then thousands, of genes which affect health." Although the Westlakes gene bank may not be representative of the population as a whole, Burn says it should improve on existing collections of DNA samples.

"The 8,000–10,000 anonymous samples will be set up so we can rapidly establish the background frequency of any gene," he says. Such population studies will be important in health economics because they will help set priorities for genetic screening. At a later stage, it will be possible to link the gene bank to medical records and to see if children with particular health problems are more or less likely to carry a particular gene. This will only be done anonymously, for example, to see if asthmatics have a particular genotype.

The health issue that has caused the most concern locally is the cluster of childhood leukaemia cases in the village of Seascale, located about two miles south of the Sellafield plant, which were first identified in 1982. Studies of the cluster by the late Martin Gardner of Southampton University led to his theory of 'paternal preconception irradiation', which was published in the *British Medical Journal* in February 1990. Gardner concluded that the risk of childhood leukaemia increases in relation to a father's exposure to radiation before conception. No other researchers have been able to replicate his findings.

In August last year, the UK Health and Safety Executive, the government body responsible for occupational health, concluded on the basis of further studies that the theory was not valid.

In the meantime, British Nuclear has fought and won two claims for damages over cases of cancer near Sellafield, brought on the basis of Gardner's theory. Burn says that in future the gene bank will make it possible to prove or disprove such theories, "and it will be a lot cheaper than lawyers."

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Howard Hughes institute offers new grants

The Howard Hughes Medical Institute has unexpectedly stepped into the crisis over health care in the United States with a plan to offer medical schools grants to replace money lost to changes in the health-care system. As a consequence of the move to what is in the United States called 'managed care' the nation's large teaching hospitals, which take care of a large proportion of the poorest and sickest patients, will receive fewer dollars per patient than in the past. Hughes will spend $80 million in all to maintain critical research programs that are in jeopardy because academic medical centers are losing money for taking care of patients.

"The way we pay for research and training in our medical schools is clearly undergoing a profound change," says Hughes president Purnell W. Choppin. For years, a certain portion of federal payments for care of the indigent, as well as a sort of 'charity/education tax' on patients with medical insurance, kept academic medical centers financially alive. Changes are eliminating that revenue stream. To ease the burden, Hughes is offering $80 million in four-year grants to schools that make a compelling case for support. The deadline for applications from US medical schools is 2 May 1995.

Purnell Choppin, $80 million assist.

Last year the leaders of academic medicine persuaded nearly everyone in Congress to include provisions for special funding of university hospitals in the plethora of bills that were being drafted. Thus, had almost any version of health-care reform become law, the major research and teaching hospitals in the country would have been protected.

Meanwhile, market forces are streamlining the competition. The Howard Hughes institute, which supports 275 biomedical research investigators at 64 academic medical centers and universities, expects that the grant awards under this new program will be in the range of $2–$4 million a year for each winning proposal.

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