Japanese public health

New campaign launched against hepatitis B

Tokyo

JAPAN'S Ministry of Health and Welfare launched the world's first public hepatitis-B immunization campaign on 1 January. Funds have been provided to immunize 10,000 babies each year identified as being at risk by the presence of hepatitis Be (HBe) antigens in their mothers.

The go-ahead for the programme follows by a few weeks the commercial release of hepatitis-B vaccines from two domestic manufacturers, the Kitasato Research Institute and Green Cross. A third manufacturer, the Chemo-thero Therapeutic Institute, will have a similar product available in May. Licences to produce the vaccines were granted in April after clinical trials were completed. The vaccines are derived from the plasma of hepatitis-B virus carriers inactivated by heat and formalin treatment and are essentially the same as those licensed in the United States in 1982.

Carrying out the programme is very expensive. Each of the three injections required costs around 5,000 yen (US\$25) and this is added on to the high cost of identifying mothers whose babies are at risk. One thousand million yen (\$5 million) has been allocated by the government for the first year of the campaign. Hepatitis B is a major public health problem in Japan not only because of the seriousness of hepatitis itself but also because it can lead to cirrhosis and cancer of the liver. Hepatitis-B virus infection has been linked to more than 80 per cent of all cases of primary hepatocellular cancer: the immunization campaign may thus fairly claim to be the first that might wipe out one form of cancer. Mother-to-child transmission of hepatitis B is the most important route of production of hepatitis B carriers; 85–90 per cent of babies borne to HBe-antigen-positive mothers will have become carriers by the time they are three months old. Clinical trials of the immunization method on 3,000 babies in Japan have already shown that transmission can be virtually wiped out.

Japan's selective immunization campaign is not, however, likely to serve immediately as a model for other countries. First, Japan is one of the few affected nations wealthy enough to bear the costs of immunization and with the expensive procedures for testing for HBe antigen established as routine at health centres. Again, although the overall frequency of hepatitis-B carriers is, at 2.6 per cent (rising to 5 per cent in some areas of Kyushu), quite high compared to Europe and North

America, it is still sufficiently low that identifying those at risk is cheaper than a mass immunization campaign.

In the developing countries of Asia, the problems are of a different magnitude. In both Taiwan and Korea, around 15 per cent of the population are carriers and in

mainland China around 10 per cent. Chinese officials say that the cost of vaccine would have to fall by one to two orders of magnitude before any mass immunization campaign could be contemplated.

Hopes for a fall in costs lie with the genetically engineered vaccines now just coming onto the market. The vaccines, produced by the Pasteur Institute and Genentech in mammalian cells and by Merck in yeasts, are still very expensive. But the potential market is huge and Japanese companies are in the race to produce cheap vaccines. **Alun Anderson**

Australian science

Radical shakeup planned

THE Australian Science and Technology Council (ASTEC), the world's most prolific source of recommendations on the management of publicly supported research, has advocated radical changes in the organization of the Commonwealth Scientific and Industrial Research Organization (CSIRO). The recommendations are put forward by a subcommittee of ASTEC under its chairman, Professor R.O. Slatyer of the Australian National University, Canberra.

In a report* to the federal prime minister published at the end of last year, ASTEC advocated the replacement of the present top management of the organization, called the "executive" and consisting of three full-time and two part-time members, by a board of seven part-timers and a single full-time official, which would be the source of research policy for the organization. The most startling aspect of this proposal is that the full-time official, to be called the Chief Executive, would be appointed by the board (rather than by the government) and would be liable to dismissal by the board.

According to the report, the chief purpose of the proposed changes would be to ensure that the lines of responsibility for research policy and for management within CSIRO are unambiguous. The Slatyer committee has considered but rejected arguments that CSIRO should be split up into separate organizations responsible for research in different fields, on the grounds that Australia needs a strong central (and flexible) research organization but the committee urges that CSIRO's strategy should be more closely directed towards the needs of existing and emerging industries, saying that CSIRO programmes exclusively concerned with basic research should be hived off to other institutions, most probably universities, "perhaps in conjunction with a scheme to identify national centres for research in which a number of universities might participate".

The starting point for many of the Slatyer

committee's proposals is a sense of regret that the last reform of CSIRO eight years ago has not produced the benefits expected of it. The report says that CSIRO's advisory council has not been able to influence policy as intended (and that it should be abolished), and that the same conclusions apply to the state and territory committees that at present formally have a role in guiding research policy. The Slatyer committee is especially regretful that the 1977 reform that grouped CSIRO research laboratories (called divisions) into three institutions, each with a separate director, has blunted rather than strengthened the links between top management and the divisions.

Although the Slatyer report does not say so explicitly, its recommendations reflect the evolution of Australian research institutions and in particular the increasing strength of the universities in research. But the sustained emphasis in the Slatyer report on the need that CSIRO should concentrate its efforts and resources on providing assistance for industry (including the traditional industries of agriculture and mining) will, if accepted, bring about a considerable change both in the pattern of research at many of the well-established research divisions and in the ethos of CSIRO as Australia's chief employer of those bent on a career in research.

On the last point, the report says that CSIRO should give up its now common practice of employing most of its new recruits on indefinite contracts (there is also at present a one-year probationary contract) and that it should instead switch to a system in which an initial period of employment on a short-term contract would be the general rule, with an understanding that only a proportion of those thus hired would win permanent appointment. The committee says this pattern would, among other things, serve to provide opportunities for postdoctoral scientists, especially those returning from abroad. □

*Future directions for CSIRO. Australian Government Printing Office, Canberra.