Scientists develop vaccine strategy for peanut allergy

Scott Gottlieb, *New York*

Researchers believe that they may be close to developing a new strategy to combat anaphylactic allergies—such as the increasingly common allergy to peanuts—in which doctors induce tolerance using an oral formulation containing a gene from the offending allergen.

Many established allergies have been traditionally treated by immunotherapy, in which subcutaneous injections of progressively increasing doses of purified allergen are given; a strategy that is effective only in some circumstances. Dr Kam Leong, professor of biomedical engineering at the Johns Hopkins School of Medicine in Baltimore, and his colleagues are developing a new strategy for the induction of tolerance to allergens, in which a gene from the main allergen, in this case peanuts, is cloned into a synthetic vector and administered orally (*Nature Medicine* 1999;5: 380, 387-91).

The new strategy is based on protecting the allergen's DNA from digestion by forming a

complex with particles of chitosan, a naturally occurring polysaccharide that is an effective vector for the controlled intestinal delivery of many pharmaceutical agents. After ingestion, the polysaccharide adheres to the intestinal walls and can be taken in by cells of the gastrointestinal tract. In the latest study, when the DNA from peanut allergens was administered orally to mice, the severity of anaphylaxis was blunted considerably when the mice subsequently underwent a protocol for sensitisation and induction of anaphylaxis using the peanut allergen.

The findings are still a long way from being used in clinical applications. For example, the authors have not yet studied the efficacy of gene administration in mice that are not already sensi-

tised to a particular allergen, which is likely to be the case in humans who would require treatment. "The immune system of mice is also quite different from that of man," said Dr Leong. Although peanut allergy is an increasingly important public health problem, its only proved treatment at the moment consists of educating patients to avoid all possible sources of peanuts. However, many accidental exposures occur because of the ubiquitous use of peanut protein in a variety of food products. "One can envision that this model would be an interesting approach to generate mucosal immunity for a variety of antigens," Dr Leong said. Asthma is one potential application he said, as well as additional food allergies—for example, to milk. □

New vaccines may overcome the need for avoidance in peanut allergy

Australian hunger strike doctors urged to stop

Georgina Kenyon, *Sydney*

A leading Australian doctors' organisation has called on a group of doctors to quit their hunger strike. But the five men, who have gone without food for more than one month while protesting outside the gates of the New South Wales state parliament, say that they have a moral obligation to continue.

Their action is an appeal to the federal government to recognise the skills of overseas doctors without their having to pass the Australian Medical Council (AMC) examination. The Doctors Reform Society (DRS) believes that there is no reason for or benefit in continuing the strike as the Australian public is now aware of their cause. The society became interested in the strike because of concern about the worsening health of the striking doctors.

The strikers are now Australian citizens and complain that when they were temporary foreign resident doctors they had previously been allowed to practise in the Australian health system. They claim that the AMC examination includes ridiculous questions and is a sham, saying that Australian born doctors of their own age group would also fail.

A democrat senator and former general practitioner, Dr Arthur Evans, warned that the protesters are becoming critically ill. He believes that the current Liberal government is avoiding addressing the issue.

The strike followed the launch of an investigation by the Australian Competition and Consumer Commission into complaints by surgeons trained overseas that the accreditation of surgeons in Australia is racist. The surgeons' complaint was supported by a report from the New South Wales Ethnic Affairs Committee, the Anti Discrimination Board and the Equal Opportunity in Public Employment organisation. The strikers have now appealed to international authorities, including Unesco and the World Health Organisation. □

UK government announces sex health strategy

Vicki Madden, *London*

The UK Government has announced a radical policy to combat widespread ignorance on sexual and reproductive health.

Britain has one of the highest rates of teenage pregnancies in Europe and around one fifth of pregnancies end in abortion. Speaking at the annual conference of the Family Planning Association last week, Tessa Jowell, the minister for public health, said that over the next 12 months the government will develop a framework to improve the links between health services, schools, and families. "The sexual health strategy will cover all high risk groups, but will also set out a national strategy to

reduce the growing problem of teenage pregnancies highlighted by the Downing Street Social Exclusion Unit."

There will also be a programme of action on sexual and reproductive health for all health authorities and local authorities, which will be linked with current government initiatives on HIV/AIDS, chlamydia, and the teenage pregnancy programme.

Latest figures from the Office for National Statistics present a worrying picture of sexual health in Britain today. In 1979 there were 7.5 per 1000 pregnancies in girls under 16 years of age. By 1997, this figure had risen to 8.9 per 1000. In the 16-19 year old

age group there were 62 pregnancies per 1000 women, and in 1997 there were 62.3 per 1000. Chlamydial infection is increasing rapidly, especially among young women, and in 1996 there were 450 000 cases of sexually transmitted diseases diagnosed in genitourinary medicine clinics, an overall increase of 5% from 1995.

While it is difficult to compare these figures with others in Europe—France, for example, does not collect statistics on abortion—the fact that the figures are rising gives cause for concern, according to the chief executive of the Family Planning Association, Anne Weyman. "Sexual health tends to be seen as a private matter and primarily a concern of the specialist services," she said. "Little attention has previously been paid to the integration of sexual health into general health and social policies." □