UK immigration authorities may use DNA fingerprinting

London

IMMIGRATION authorities in Britain are considering the introduction of the DNA fingerprinting test devised by Dr A. J. Jeffreys of the University of Leicester (see *Nature* 317, 818; 1985) as a routine procedure to establish paternity, depending on the results of a trial now in progress. But immigrants' associations are concerned at the social implications if the test becomes compulsory.

Britain's Home Office received 12,000 immigration applications last year from the wives and children of Bangladeshi and Pakistani men resident in the United Kingdom. The burden of proof to establish the family relationship is on the applicant, but this can be difficult because documentary evidence is often sketchy,

and at least one-quarter of the applicants are turned down. Blood tests can also be inconclusive, but DNA fingerprinting results are accepted as proof of paternity by the Home Office.

Immigration authorities are carrying out a trial of the genetic technique on 35 families from Bangladesh and Pakistan. A Home Office spokesman says the trial is designed to test the logistics as much as anything else, including the potential problems involved in obtaining blood samples abroad and sending them to Britain for the DNA fingerprinting. Results of the six-month trial are expected by the end of September.

The House of Commons select committee on immigration from the Indian subcontinent has recommended the

general introduction of DNA fingerprinting. The government's reply to the recommendation, published last week, states that the decision will be made once the results of the trial are assessed.

Although they welcome the potential of DNA fingerprinting to resolve individual disputed cases, immigrants' representatives are worried about the possibility that the technique will become routine procedure. In addition to questions about civil liberties, the representatives say there are also serious social implications for marriages in the highly conservative Asian

It's a serious matter, Sir, smuggling DNA fingerprinting kits...

societies if the fingerprinting proves non-paternity.

British immigration law requires the family relationship to be proved "on balance of probability", not beyond reasonable doubt, and immigrants' spokesmen say that documentary evidence can meet that requirement. They argue that DNA fingerprinting should be used as a last resort, rather than as a routine procedure, and they say the Bangladesh government has already objected to the principle of compulsory tests.

The genetic technique has already been used successfully by hundreds of immigrants in the past two years, through Dr Jeffreys.

Recently, Cellmark Diagnostics, a subsidiary of Imperial Chemical Industries (ICI), has taken over the testing work, under exclusive licence. Royalties from the fee of £105 per person go to the Lister Institute for Medical Research.

Cellmark's director, Philip Webb, says the laboratory could cope with increased demand from the Home Office at a negotiated price. The Home Office says that if the fingerprinting did become "a department tool", the costs would be met by the government.

Jeffreys did not foresee the potential use of DNA fingerprinting for immigrants, but with Britain actively considering its introduction, and Canada also interested, this may become one of the technique's most common uses.

Kathy Johnston

Report urges US engineers to take an international view

Washington

US ENGINEERS must pay more attention to international activities to avoid being left behind in their rapidly changing profession. That conclusion comes from a report* of a panel of the National Academy of Engineering requested by the National Science Foundation (NSF). Although money will be needed for some of the panel's specific suggestions to develop this global perspective, the report's authors argue that a change of attitude is the key to ensuring the vitality of academic and industrial engineering.

The engineering world has changed in the past few decades. The United States has seen its balance of trade worsen, and now even high-technology imports exceed exports. Other countries have a proven capacity for technological innovation, and the world market-place for new technology has grown dramatically.

But the academy's report warns that reactionary attitudes exist within US engineering communities, notably a "bias against using what is 'not invented here' ". That the National Technical Information Service spends only one per cent of its \$30 million annual budget collecting material from foreign countries is an example of this myopia.

At the same time, the panel says other countries have been quick to take advantage of engineering riches where they exist. As an example, the report cites statistics showing that in 1984 there were 13,160 Japanese studying at US universi-

ties, but only 730 Americans studying in Japan. The point is not to limit Japanese enrolment in US institutions, but to encourage more US involvement in education abroad.

To that end, the report urges the NSF to establish 100–200 postdoctoral fellowships annually for foreign study. The newly established NSF engineering centres should ensure that advances in other countries are not overlooked, and engineering schools should consider forming on-campus international technology assessment centres. The report urges engineering schools to require competence in a foreign language — with particular emphasis on Japanese and other Asian languages — as a requirement for graduation.

Albert R. C. Westwood, corporate director for research and development at Martin Marietta Corporation and chairman of the industrial panel of the academy's report, says engineers have traditionally been poor at communicating with foreign colleagues. But Robert White, president of the National Academy of Engineering, points out in a letter accompanying the report that companies and indeed nations "must be cooperative to be competitive".

Although concern has been expressed about technology transfer from the perspective of national security, the report argues that, with thoughtful implementation, "the benefits of international cooperation in engineering and technology are likely to outweigh risks". Protectionism is ultimately futile, "since technology inevitably diffuses".

Joseph Palca

* *Strengthening US engineering through international co-operation: some recommendations for action.* National Academy of Engineering, Washington DC 1987.