

Rickets under control again in UK

VITAMIN D deficiency rickets is not a disease of epidemic proportion in Britain's Asian community. Dr John Ablett, a senior medical officer in the Department of Health and Social Security (DHSS), said last week there was now enough evidence to confirm that rickets is again on the decline in the UK. The DHSS now takes the view that rickets can be eradicated completely by the use of direct vitamin D supplements to children at risk. A policy of fortifying specific target foods — such as chapati flour — is therefore not necessary.

Rickets was first documented as a serious problem in the Asian community of Glasgow 18 years ago, and since then it has been observed in most of the larger Asian communities in the UK. Despite claims to the contrary by some doctors, the DHSS says the problem can be controlled by the traditional method of vitamin D supplements backed up by a health education programme — directed at the Asian community — about rickets and its adult equivalent, osteomalacia.

The claim that rickets is on the decline is based on figures from hospital admission records. Rickets is not a notifiable disease and data collection is not easy. However, the DHSS has used figures from its Hospital Inpatient Enquiry programme — in which 10% of all hospital admissions are analysed — from over 90 areas. The declining national trend, says the DHSS, is also supported by a survey involving general practitioners in areas with a large immigrant population.

The DHSS says there is evidence that Asian immigrants are entering the country with rickets or osteomalacia, which are quite common in India, Pakistan and Uganda. This means it should now be possible to identify the population most at risk. According to Ablett, the high risk are the infant children of recent immigrants who may be vegetarians, who come from a poor rural background, and who may have a family history of rickets and osteomalacia.

The DHSS's decision that it does not want a food fortification programme is in line with the recommendation of the department's Committee on Medical Aspects of Food Policy (COMA), which has studied the problem for three years.

The composition of milk cannot be altered without renegotiations of a European Economic Community directive (see *Nature* 270, 289; 1977). Margarine has a high composition of fatty acids (46% in some brands; butter has only 10% trans fatty acids) and is causing concern to DHSS officials anyway, as these acids have been implicated in some forms of cancer.

Chapati flour, the most serious conten-



One of the healthy ones: a hospital survey showed decline in rickets in immigrant areas

der, also has problems, largely over what concentration of vitamin D to use. A concentration sufficient to prevent rickets in young children would be dangerously high for adults consuming more flour per head. This is too risky, the DHSS argues, as there is now evidence to suggest that high vitamin D intakes result in high blood calcium and may cause cardiovascular complaints and even heart attacks.

The other problem with vitamin D in chapati flour is that the vitamin is unstable, and up to 50% may be broken down in cooking processes. These technical problems with the flour have still not been resolved, and millers are reluctant to embark on a vitamin D fortification programme unless forced to do so by law.

Finally, there is the problem of hypercalcemia. The DHSS believes — and the COMA report due to be published next year will say this — that there is now good evidence to show that high vitamin D intakes in the 1950s caused the deaths of over 200 infants reported to have hypercalcemia. Although the DHSS acknowledges that chapati flour fortified with vitamin D would not affect this age group, it says that high vitamin D intakes could cause problems for older teenagers and young adults.

In reaching its conclusion to rely on vitamin D supplements, COMA will point out that cod liver oil supplements reduced the incidence of rickets in children, from 13% in 1943 to almost nil by the end of the Second World War in 1945. If vitamin D supplements could eradicate the problem then, the DHSS argues, that it could do the same today.

However, there may be problems on the way. Preliminary evidence from Glasgow and Birmingham suggests that some 10% of children receiving vitamin D supplements are still developing rickets. These groups will require closer scrutiny to identify why this is happening.

Alastair Hay

UK scientists wait anxiously for £7.5m share-out

SCIENTISTS throughout Britain will learn in the next two or three weeks if they have earned a share in the Science Research Council's £7.5 million special investment in new equipment for university and polytechnic research departments. The cash distribution, which will benefit several hundred projects, follows the last government's improvements in the science budget and although the present administration has since reduced the level of increase, the SRC is committed to the move.

Originally only about £3 million had been considered for the equipment programme but the SRC has since been inundated with responses from scientists following its March appeal for applications for new research hardware. Now an expected £5.25 million alone is to go to chemistry, physics, biology and other departments covered by the SRC's science board and the remaining £2.25 million will be split between departments covered by the engineering, astronomy, and nuclear physics boards.

The decision to invest its share of the first £10 million increment in the science vote on equipment follows the SRC's prophetically accurate view that future increases were by no means guaranteed. So it was decided to spend the money as quickly as possible and grants for projects which would involve commitments to staff for several years were ruled out.

"We consider the best way that we can help universities and polytechnics to benefit from the present circumstances is to encourage them to pay particular attention to their needs for equipment", stated the March letter from the SRC to researchers.

This decision also recognised that many departments are facing severe financial problems in purchasing modern, sophisticated — and expensive — replacements for outdated instruments to provide the traditional "well-founded" university laboratory. This latter role is the function of the University Grants Committee, of course, but there are many intermediate areas between the domains of the SRC and the UGC.

Although the SRC stresses that it is not taking over any of the UGC's functioning, it is hard not to view the move as some form of help for the now financially-burdened UGC. However, in providing this new equipment, which will include items such as nuclear magnetic resonance instruments and mini-computers, the SRC is selecting those laboratories where it feels investment is best suited for its future research programme.

And the level of this need for new equipment can be judged by one estimate of £35 million for the total value of the applications received by the SRC. However

these applications were dealt with by the usual grant selection committees of the SRC and only those graded "alpha" were considered for equipment grants. Of these, about 50 per cent were selected for awards.

Now researchers are about to learn if their projects have been judged suitable.

Robin McKie

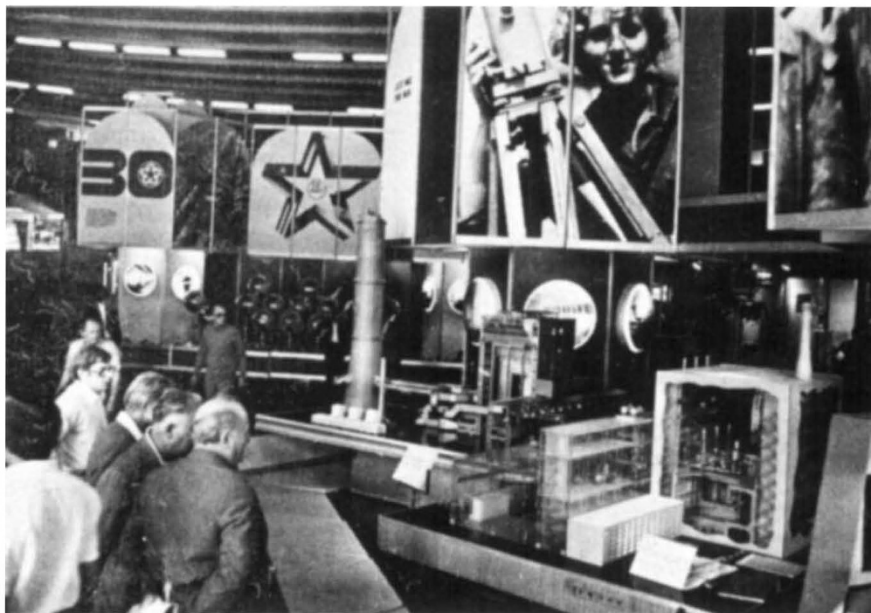
Investors refuse to back genetic engineering

ALTHOUGH two major British firms are investing in the industrial application of genetic manipulation techniques, some academics feel the UK is not putting enough money into transferring their research work into industry. The UK has not managed to adopt the US practice of using venture capital to set up small groups of academics and industrialists who develop research to the point where it can be applied to industrial processes. "Investment in the UK is very low", according to Professor K. Murray of Edinburgh University. "Most of the use of genetic manipulation is by small US venture capital groups."

At a meeting on "new horizons in industrial microbiology" at the Royal Society last week, several industrialists responded to these criticisms by saying that venture capital was available but that "research has to pay at some time". The economic climate in the UK meant that many firms did not think it was worth taking the risk of backing a new and uncertain technology. Even if the manufacture of drugs and vaccines by genetic manipulation and, more generally, the production of alternative fuels from organic material by microbiological methods, did become technically feasible, it would be some time before the new processes were economically competitive with current technologies.

A lack of communication between academics and industry was partly to blame for the failure to transfer new ideas. Academics tended to approach industry before their research was sufficiently developed for industry to take advantage of it. Industry, on the other hand, was not willing to take up a promising piece of research where the academics had left off. The result was a gap where good research could fall by the wayside. Dr J D Coombes of Hoechst, UK thought that matters might be improved if academics did not always have to approach the National Research Development Corporation first with their ideas and if they could hold patents.

For the scientists, a major worry was that government spending cuts might affect research. "Staff levels are running down and capital expenditure is down. We will not be able to conserve the strength we already have," said Professor B S Hartley of Imperial College. □



Poznan Fair: only the Poles had their own trading agency

Selling Polish science

THIS year, for the first time, the Polish Ministry of Science, Higher Education and Technology is appearing as an exhibitor in its own right at the Poznan International Fair, under the trading name Posteor; previously only projects developed in universities and polytechnics under its aegis have been on display.

Posteor is a financially autonomous organ of the Ministry of Science, somewhat analogous to the UK National Research Development Corporation. It was set up in 1973, a time when the Academy of Sciences first scrutinised the problems involved in the relationship between research and production. These discussions led to Poland's scheme of graduated 'problems' vital to the economy which are to be solved by science (23 November 1978 page 313); while, on the administrative side, Posteor was established to handle the implementation of new discoveries and technologies into production.

Implementation is a major problem throughout the Comecon bloc, but only Poland has adopted the idea of a special trading company. Indeed, by working through an existing foreign trading enterprise, Polservice, Posteor can earn valuable hard currency marketing know-how and licences abroad as well as protecting Polish patent rights. Through its exhibition at the Fair, Posteor hopes not only to increase its foreign outlets, but also to sell its technology and expertise at an earlier stage of development. "We can exhibit ideas, pilot technologies and know-how," explained one representative, "even if we haven't ironed out all the snags of full-scale production."

The small selection of projects on display is indeed wide-ranging: it includes a method for producing phosphates as a by-

product of sulphuric acid manufacture, and practical expertise in geodesy and water surveying, as well as an analogue system for measuring the field distribution near high voltage power lines — Poland will have its first 350 MW lines next year, as part of the Comecon supergrid. A method of cutting the petrol consumption of the average automobile by 15% underlines the importance of energy saving in the Posteor exhibits: other examples range from a cold-hardening process for worm-drive castings down to a method of freeze-drying whole potatoes. Indeed, energy conservation is a major theme of the entire Polish display, from the generating sets exhibited by Elektrim to the coal-mining pavilion with its placards extolling the leading role of the coal industry.

Following a winter when exceptional weather conditions led to a total halt in production, Poland is now rethinking one aspect of her energy policy, the proposed compensation deal with Austria. Under this agreement, Austria would build hydro-electric generating stations on the Bug, and in return would take two thirds of the current produced for the next 25 years. This scheme — like the proposal for a trans-Czechoslovakia pipeline to carry coal dust to Austria — is dear to the heart of Austrian trade minister Josef Staribucker, and such deals are normally popular with the Polish planners because they save hard currency by paying in kind rather than cash. But it is now most unlikely to go through, for, as the Polish vice-minister of trade, Edwin Wisniewski, told journalists at the Fair: "Coal and energy are now far too precious for compensation deals. We shall always be willing to sell them, so long as we have them to sell — but it must be strictly for cash." Vera Rich