

Global Update

News in Brief

Tailormade drugs:

It is clear to the meanest intelligence that we need to select drugs according to the characteristics of an individual patient, in order to improve efficacy and reduce side effects. The initial euphoria about the pharmacogenomic approach has given way to scepticism. It is realized that underlying inter-individual variation in drug effects is variation in metabolic phenotype, which is influenced not only by genotype but also by environmental factors such as nutritional status, the gut microbiota, age, disease and the co- or pre-administration of other drugs. Thus, although genetic variation is clearly important, it seems unlikely that personalized drug therapy will be enabled for a wide range of major diseases using genomic knowledge alone. Clayton, *et al.* have recently published an alternative and conceptually new 'pharmaco-metabonomic' approach to personalizing drug treatment, which uses a combination of pre-dose metabolite profiling and chemometrics to model and predict the responses of individual subjects. What the scientists did was to measure metabolites in the urine of a group of genetically similar rats. Then they gave them a toxic dose of paracetamol. Then they measured the extent of liver damage in the rats and built a computer program to link the pre-drug metabolite profile and the extent of liver damage. They then took another group of rats and tried to predict whether they would develop liver damage by studying their metabolite profile in the urine. The results

have been very encouraging. There appears to be an important role for this technique in clinical trials testing drugs in different groups of people. People may also be able to change their metabolic profiles to enhance drug effects by changing their diet, for eg. probiotics like yoghurt which change gut bacteria. (Clayton TA, *et al.* Nature 2006; 440: 1073-1077).

Reservations about reservations:

The Union HRD Minister Arjun Singh is standing firm about increasing reservations upto 49.5% in prestigious universities including AIIMS, IIT's, IIM's and other central universities. He maintains that the controversial proposal is a logical corollary to the 93rd constitutional amendment passed by Parliament. He is unlikely to face resistance from any political group who can ill-afford to anger the economically and politically powerful OBC's. The proposal will be put to the Cabinet after the Assembly polls. Comments from the Prime Minister urging the private sector to include weaker sections in their employee profile has been decried by various captains of industry in the annual CII meeting in New Delhi. Corporates feel it will hurt the competitiveness of the Indian economy and many are considering challenging the move in courts. (The Economic Times 14 April 2006)

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