international rates of hip fractures are higher in countries where calcium consumption is high. [5]

Prevention of osteoporosis does not depend on calcium, but rather in preserving the bone matrix, which depends on the fine control of osteoblast and octeoclast activity.

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## Trade systems in less-developed countries

Sir—In your Jan 27 editorial[1] you note the limitations of the multilateral trade system in meeting the needs of poor countries. The World Trade, Organisation (WTO) agreement on trade-related features of intellectual property rights (TRIPS) obliges all member states to provide a minimum of 20-year patent protection for medicines. This system will affect access to medicines because prices, especially for new drugs, will increase and the extended global protection of pharmaceutical patents will stifle generic competition.

In the TRIPS agreement, potentially negative effects of patent protection are recognised by allowing for compulsory licences and parallel imports. But whether less-developed countries will be able to make use of such safeguards remains to be seen. The omens are not good. So far, where such countries have tried to build them into national law, more-developed countries have faced legal action in the case of South Africa.

South Africa is under fire for trying to simplify procedure by giving the Minister of Health the mandate to issue a compulsory licence and parallel imports. The US has now brought Brazil before a WTO dispute settlement body for its legislation on compulsory licensing that requires a patent holder to produce in Brazil. This move could over time affect the country's successful AIDS programme that is heavily reliant on the ability to locally produce cheap medicines. By use of affordable generic antiretrovirals the programme has managed to cut mortality rates by around 50%.

Pharmaceutical manufacturers should withdraw from the case against South Africa. Governments in more-developed countries should support governments trying to develop laws that will enable them to increase access to medicines that their populations urgently need. Seemingly generous offers of price discounts and donor assistance will mean very little if governments in poorer countries are not allowed to let public-health interest prevail over commercial interest.

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1 Editorial. World trade rules and cheaper drugs. *Lancet* 2001; **357:** 243.

Sir—As South Africa is in the dock for trying to produce affordable drugs for its HIV positive population, it would be more appropriate to deliver a guilty verdict on the multinational pharmaceutical companies using the WTO regulations to prosecute this case.

But while the latter try to prevent less-developed countries such as South Africa, Brazil, and India from producing their own cheaper HIV drugs, governments in more-developed countries seem reluctant to challenge this. They seem to expect higher ethical self-regulation from drug companies, wishfully thinking that consideration for the well-being of all human beings will temper those companies' drive for profit.

The tackling of HIV takes more than drugs, cheap or not. People with HIV infection need clean water, good housing, employment, freedom from war, and starvation if the drugs are to work for them. However, to ensure that we are all healthy is not amenable to the profit motive of the pharmaceuticals, who exist to make money for the few. Public health cannot be left to private hands.

And, after 4 years of promising, our own government should finally produce its HIV strategy and make clear its contribution to tackling HIV, here and worldwide, including calling for the companies to drop their lawsuits against less-developed countries such as South Africa, and calling for all other governmental and non-governmental organisations to join in this demand.

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## Seizures after buproprion overdose

Sir—A woman aged 19 years presented with an altered mental state, agitation, and auditory and visual hallucinations. She had a resting tachycardia and generally increased tone and reflexes. She denied taking recreational drugs.

Shortly after admission she had two brief generalised seizures. A standard toxicology screen show no cause of these. Because of clinical concern about the possible contribution of 3,4-methylenedioxy-methamphetamine (MDMA [Ecstasy]), she was pressed on this issue. She denied recreational drug use but admitted to having taken 3·75 g of bupropion (25 tablets) after a domestic dispute. She had no further seizures and was discharged the next day.

Bupropion is a novel monocyclic antidepressant that was noted incidentally to have a potent effect on reducing nicotine dependence. The drug substantially augments smoking cessation rates and has been licensed in the UK for this purpose.[1,2] Bupropion and MDMA share common structural similarities with amphetamines and their similarities in overdose are, therefore, unsurprising. The symptoms are thought to be related to dopamine re-uptake inhibition and include hallucinations, seizures, cardiotoxic effects, and death.[3-5]

Smoking kills half of all regular tobacco users and, therefore, bupropion is an important new drug. Clinicians in the UK should be aware of its potential for toxic effects, especially in overdose, since widespread media publicity has resulted in a substantial increase in its use in the community.

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