It would be misleading to claim that these two methods of doping are the only traumas for anti-doping agencies (or, indeed, that genetic modification is the immediate next problem). The recent past has seen celebrity performance enhancers occupy a significant amount of tabloid space. Amino acid, creatine, and the steroid nandrolone, have been particularly notorious between 2000 and 2002. In between these examples and genetics is a constant stream of new products that require new kinds of doping test.

### *New technology*

A good example of new technology that is posing new problems for the formulation of anti-doping policy are hypobaric training systems, more commonly known as altitude chambers or altitude tents (Baker and Hopkins, 1998). This method of performance enhancement is particularly interesting for a number of reasons. First, altitude chambers have remained within the rules of international sport. Currently, there are no restrictions on their use for competition, except in Norway, where a ban exists. However, in 2002, a steady stream of newspaper articles following various international sporting events brought into question whether this would remain. For this reason, at the 2002 Tour de France, winner Lance Armstrong and a number of his team mates were using such tents. As well, England soccer player David Beckham used an altitude chamber in an attempt to promote the recovery of his injured foot prior to the 2002 Soccer World Cup.

Each of these instances of successful use has brought into focus whether such methods should be legal. Briefly, the value of these technologies is that they allow athletes from low altitudes to level the playing field when competing at countries of higher altitude, where the air is thinner and the capability for endurance is lessened for the low-altitude athletes. By using an altitude chamber, it is hypothesised that a low-altitude athlete can diminish the advantage of a high-altitude athlete. Previously, the science underpinning this technology was (and continues to be) applied to altitude training where athletes would physically move between locations in order to push themselves harder (Levine and Stray-Gunderson, 1997). The similarity between using a hypobaric chamber and conventional altitude training is often given as an ethical justification for the former. Moreover, each is regarded as being justifiable just because they purport to equalising the playing field. Otherwise it is thought that athletes who live at high altitude would have an oxygen-carrying advantage.

One of the inconsistencies with this defence is that athletes do actually use this technology in a manner that is different from athletes who simply live in countries of high altitude. Low-altitude athletes are increasingly training in low-altitude locations – where it is much easier to push the body harder – and sleeping in altitude chambers for maximum benefit. Nevertheless, the technology remains legal, though this would seem to be to the dissatisfaction of some key figures in international sport. IOC President Jacques Rogge suggested that this decision for altitude chambers to remain legal might need reconsideration. His concerns are largely intuitive, rather than being premised upon some coherent