The Guardian, 18 February 2007
Experimental Theatre
Marius Maxwell

It is absurd for Oxford to be building a new animal testing lab at a time when the accuracy of such testing is so doubtful.

As a neurosurgeon, neuroscientist, and Oxford graduate with three decades of research experience, I am appalled by the university's decision to build a new animal laboratory - and by its recent Orwellian attempts to stifle public debate. How ironic that an institution that relies on academic freedoms for its very existence is attempting to silence its opponents. What is the university trying to hide - besides the fact that non-human primates used in experiments at Oxford are subjected to painful procedures that cause them to vomit and have seizures, diarrhoea and tremors before they are killed? And besides the fact that experimenting on sick, terrified animals endangers human lives?

An article published in December in the British Medical Journal (the latest in a long series of similar sceptical studies) suggests that using animal-based drug testing to predict human outcomes is no more accurate than tossing a coin. The study found that only half of the categories examined actually succeeded in predicting the results of subsequent human trials, and even then, "the quality of the experiments was poor".

This helps to explain why, time and again, drugs that were deemed safe during animal tests have harmed or killed humans. Extensive animal tests on Vioxx did not reveal that people who take the drug have double the risk of a heart attack. Animal tests did not reveal the dangers of Phenactin, E-Ferol, Oraflex, Zomax, Suprol, Selacryn - the list goes on - all of which had to be taken off the market. Ninety-two out of every 100 drugs that pass animal tests fail in clinical trials in people. The reason for these failures is no mystery. Studies published in recent years have shown that primates suffer increased stress when they are handled by humans, restrained for long periods of time and subjected to painful experiments. This causes wild variations in respiration, heartbeat and the release of hormones which render data questionable.

Consider too, using any non-human animals to study human ailments is problematic simply because every species is unique. Metabolism, biochemistry, genetic makeup and expression and physiology are all different. Though all species share some physiological traits, even minor differences in physiology can lead to profound differences in disease pathology, treatment effectiveness and treatment safety - making it impossible to extrapolate research results from animals, including primates, to humans.

Forward-thinking scientists in Great Britain and other countries are now looking for better methods. Instead of squandering £18m to build yet another animal laboratory, Oxford University should join them.

The National Cancer Institute in America, for example, uses human cancer cells, taken by biopsy during surgery, to perform first-stage testing for its new anti-cancer drugs. Private companies are developing three-dimensional computer models that can predict a chemical's effect on all the body's organs, as well as 3-D tissue models of eyes and skin made from human cells. Today's buzzwords are microdosing, nanotechnology and biochip - not "monkey".

Oxford University could help lead the way to what is clearly the future by using its funds to establish a world-class medical imaging and research centre. The explosion of imaging techniques over the past decade (functional MRI being but one) has, by itself, made experiments on non-human primates obsolete.

All the genetic manipulations and wishful thinking in the world will not turn a monkey into a human being. It is time for animal experimenters to admit this and to start pursuing research methods that will help - not harm - desperate human patients.