



## **Human Genetics Alert Press Conference: Stop GM Human Embryos!**

### **Statement of Dr David King, HGA Director**

#### **1. Why we must not allow research to create GM embryos**

Human Genetics Alert is not reassured by the government's promises to prohibit the creation of GM babies for the moment. In our view, this is a cynical strategy designed to lull the public into a false sense of security. It is very clear that its ultimate aim is to allow the creation of GM babies. If this were not the plan, why allow scientists to begin research? It would be wrong to invest funding in research and to raise hopes of future cures for disease unless the aim was to eventually allow this technology to be used.

Because most European countries have firmly ruled out the possibility of ever allowing human genetic modification (HGM), the EU has excluded such research from its funding programmes.

However, once we start down this path, it will be very hard to turn back. Once scientists are able to dangle before the public realistic, rather than theoretical possibilities of curing genetic diseases, it will be very difficult to counter well-meaning support for HGM. At that point we would be subjected to a barrage of hype and emotional blackmail, as we have seen with stem cell research. As Dr Antoniou will show, in fact, HGE is entirely medically unnecessary, since there are many other ways of avoiding genetic disease. There is therefore no medical reason to even begin such research.

A further reason for not leaving the decision over HGM until it is a mature technology comes from the experience of the GM food debate. The lesson that has been learnt is that there must be democratic debate at the earliest stages of research, so society can decide which technological paths to go down. If these decisions are left to unaccountable scientists and corporations, often driven by the prospect of financial gain, it is not surprising that the technology is rejected by the public later on, and trust in science is undermined. As Dr Antoniou will mention, gene therapy researchers are particularly concerned that premature moves towards HGM by entrepreneurial fertility scientists will undermine public support for their own efforts to treat genetic disease.

#### **2. What's wrong with HGM?**

The two main problems with HGM can be summed up in the phrase 'consumer eugenics'.

Commodification of embryos and children: Traditionally, we see human beings as inviolable, and as endowed with rights: they must be accepted as they are. Human genetic modification overthrows that basic conception, degrading human subjects into objects, to be designed like any other consumer object, according parents' whim. Accepting such a change would have consequences both for individual humans and for society at large which we can barely imagine. Obvious consequences would be a disruption of parents' unconditional love for children. If you have given your child an expensive set of genes you will expect them to perform according to

their specifications. Cloning and HGM represent an unprecedented intent to determine and control a child's life trajectory: for the child, it would undermine their sense of free will and of their achievements. These concerns are what many people mean when they say that we should not play God with our children.

Eugenics: The social consequences of the use of cloning and HGM in our society would be disastrous. Parents would tend to engineer children to conform to social norms, with regard to physical ability, appearance and aptitudes, even though many of those social norms are inherently oppressive. For example, disabled people have often expressed fears that free-market eugenics would reduce society's tolerance for their genetic impairments. A free-market techno-eugenics could also easily have the disastrous consequences spelled out in Lee Silver's *Re-making Eden*. Since access to such expensive technology would be on the basis of ability to pay, we could see the emergence of biologically as well as financially advantaged ruling elites.

### **3. Public opinion**

HGA has conducted an analysis of the responses to the government's consultation on Review of the HFE Act. 290 people and organisations gave clear answers to question 60, about whether to allow genetic modification of embryos. Of these, 219 (76%) were opposed to allowing research, 71 (24%) were in favour. Given the general predisposition in our society to support anything that can be called medical research, we think that a majority of more than 3:1 against allowing research is remarkable, and indicates that the public has a clear grasp of the consequences of beginning HGM. We do not know why the government has ignored the strong voice of public opinion on this subject.

Of the 71 who were in favour, 44 were scientists or from scientific or medical organisations, and only 27/290 ordinary members of the public. Although nearly all scientific and medical respondents were in favour of allowing research, there were some notable exceptions: the Royal College of Physicians, and Professor Anne McLaren, the well-known embryologist, opposed genetic modification of human embryos.

### **4. Who is seeking to profit from HGM?**

Because HGM is so controversial, few scientists will openly advocate it. An exception is Ian Wilmut, who 10 years ago this month announced the cloning of Dolly the sheep. Wilmut has recently been advocating allowing HGM, using (not surprisingly) a version of his cloning technique. This is not mere of misguided hopes of curing genetic diseases: he also has a clear profit motive, as a number of his patents (1) cover techniques for human as well as animal GM.

Another celebrity scientist who is aiming to profit from HGM is Professor (Lord) Robert Winston. Winston has been amassing patents (2) on his own technique for HGM for many years, although he has been less public than Wilmut in his advocacy.

### **References**

1. Patent numbers: US2006064763, GB2331751. The latter patent includes claims on genetically modified human embryos, as 'inventions'. Note: the claims of patent applications are extremely carefully drafted; general expressions, such as mammal, vertebrate, animal include humans, whereas, where the intention is to only claim nonhuman animals, the claims very clearly use the words 'nonhuman animal', 'nonhuman mammal' etc. Patents can be viewed online at <http://ep.espacenet.com>, go to 'advanced search'.
2. Patent numbers: US2002138865, WO0069257, WO0029602. In addition to methods, Winston's patents include claims on genetically modified human semen.