ICSDB
International Coalition to Stop Designer Babies

Countering the Threat of GM Designer Babies and Eugenics

Introduction

The development in 2012 of a new genetic engineering technology, known as 'CRISPR-Cas9' or 'genome editing' has reawakened scientists' dreams of human genetic modification (HGM; note 1). Entrepreneurial IVF doctors are eyeing a future lucrative market in genetically 'enhanced' 'designer babies'. This would be the culmination of a 120-year agenda of eugenics, which never went away, after 1945 (see box on page 3).

Elite scientific academies are officially cautious about these prospects (primarily because of safety risks to children). However, a disturbing number of influential scientists are working to move ahead with HGM. It is now clear that leading scientists either turned a blind eye to or actively encouraged the Chinese scientist He Jiankui to create the first GM babies. He announced these births in late 2018 at the second International Summit on Human Genome Editing (ISHGE), organised by the science academies, to a chorus of international outrage. And in 2025, right-wing tech billionaires close to Donald Trump announced they were starting companies to commercially exploit the technologies. In the next year or two, the British government may attempt to legalise HGM, overturning the ban that has existed since 1990.

HGM is not an everyday issue. Although the term is overused, this is a true example of an existential change for humanity, in which babies are genetically designed, like commodities, to be 'superior' to other babies. It was because of the horrific experience of such eugenic attempts to 'improve' the human gene-pool in the 20th century that, in the 1990s, governments took the extraordinary step of banning these technologies before they were even technically possible. The only other major parallel is biological weapons, and even that ban is qualified.

The International Coalition to Stop Designer Babies has been created to defend the many existing bans on HGM in international treaties and national laws. We are calling for a global treaty to ban HGM and related technologies, including human cloning.

HGM is medically unnecessary

International organisations, the biotech industry and many scientists justify the prospective use of HGM to 'cure' babies, to 'eradicate' diseases and allow parents who are carrying gene variants responsible for diseases to have healthy 100%-genetically-related children.

Firstly, unlike 'somatic gene therapy' , in which genes are introduced into e.g. patients' liver or lungs, no lives are saved with HGM. Our coalition is not opposed to gene therapy. But the embryos that are specifically created in the lab for the purpose of HGM are not patients. No independently existing child will be cured of any disease.

Secondly, as acknowledged even by the advocates of allowing HGM, **there is no unmet medical need for HGM**. There are only exceedingly rare instances

Why we must oppose HGM

HGM is medically unnecessary - there are already robust methods that allow parents whose children may have genetic impairments to avoid this possibility (2).

HGM is unsafe and unethical - much research shows that CRISPR technology creates new, potentially dangerous, mutations throughout the genome. It is unethical to subject future children to those risks, simply because their parents desire 100% genetically related children. .

HGM is an existential threat to equality, democracy and human rights

The free-market form of eugenics created by HGM would empower ableism, racism, sexism and other oppressions, by shaping parents' choices about what kinds of people will be born. It would fundamentally undermine basic social commitments to equality, diversity and inclusion. Wealthy parents would be able to give their children even greater advantages over other children. In a time of rising neo-fascism, allowing HGM would be an act of unthinkable scientific irresponsibility. Ultimately, HGM is incompatible with democracy.

Like human cloning, HGM is referred to in international declarations and treaties as contrary to human dignity, because it reduces human beings to designed and optimised consumer objects. This undermines the basis of human rights.

Unsafe and unethical

As a growing number of scientific reports have shown, the supposedly precise and accurate genomic editing methods used in **HGM**, such as **CRISPR-Cas9**, are in reality unreliable. They lead to unpredictable errors at sites not targeted for modification, as well as those intended for modification, sometimes leading to the elimination of whole **chromosomes,** potentially producing mutations that have never previously been seen in humans.

These problems seem to be particularly bad in human embryos, and if CRISPR is used on embryos, it is impossible to check that all cells of the embryo have been correctly engineered and that none of them have new mutations introduced by CRISPR. In addition, all embryo manipulation technologies, are known to introduce **epigenetic** mutations which can also drastically affect a resulting child. These problems mean that HGM of embryos can *never* be shown to be safe. Creation of GM babies would be a speculative experiment on children who cannot consent, and upon all their descendants.

Because of these safety problems, scientists are increasingly turning to methods for engineering cells that give rise to either sperm or eggs. The idea is that these could be grown in culture and genetically modified and then used to create embryos. Scientists are trying to create 'artificial gametes', grown from adult body cells that are induced to produce sperm or egg precursors. But again, these techniques of reversing the normal differentiation of cells are bound to create epigenetic mutations.

When we remember that these forms of HGM would only ever be conducted in order to satisfy parents' desires to be 100% genetically related to their children or, worse, to make them 'enhanced' designer babies, it becomes clear that **HGM can never be acceptable on basic medical ethics criteria.** Genetic relatedness, whilst important to many, is not a medical benefit to either parent or child. We cannot submit a child to the risks of HGM technologies when there is no medical benefit.

where existing technologies, such as genetic testing of IVF embryos or foetuses, cannot help parents with genetic impairments to avoid passing them on to their children. Egg or sperm donation can deal with all other cases, albeit with a partial loss of genetic relatedness.

Are we ready to open the Pandora's box of genetic modification of human beings, with its profound consequences for all of humanity, simply to satisfy a tiny number of prospective parents who insist upon 100% genetically related children? Instead of promoting genetic relatedness at all costs, governments could improve access to other possibilities to build families, such as adoption and co-parenting.

Slippery slopes and designer baby eugenics

Although advocates of HGM claim that it is necessary to prevent genetic diseases, it is very clear that the main market will be in creating enhanced 'designer babies', because it is here that genetic engineering can do much more than existing technologies. Selection of embryos can only work with the genes present in the parents, whereas with genetic modification, genes can be altered and even introduced from other species.

Medical ethics insists upon the distinction between treatment of pathological conditions and enhancement of normal variation. However, that line is proverbially hard to define and experience with pharmaceuticals and surgery shows that the lucrative benefits of selling enhancements lead to a systematic campaign to redefine the normal as pathological, or to blatant selling of enhancements. The U.K.'s Nuffield Council on Bioethics (often cited as the UK national bioethics commission) already stated in 2017 that there can be no ethical objection to genetically enhanced designer babies. In the same breath, they criticised 'slippery slope' arguments as scaremongering! With this background, **the burden of proof is on the advocates of HGM to show why we would *not* end up in the world of designer baby eugenics. In our view, the only realistic way to prevent that is to defend the ban on any use of HGM.**

Should we 'Make People Better'?

A society which allowed free market eugenics to develop would be abandoning basic political standards of inclusion, equality and diversity. Rather than competitively 'enhancing' children, we want a world which celebrates and accepts all individuals and groups of people and does not rely on biological determinist and often-oppressive judgements (such as those based on racist, classist, sexist and ableist norms) of what a 'better' human being looks like. Experience with

the way that cosmetic surgery and drugs are used, for example, to help women conform to sexist ideas of what their bodies should look like, shows that allowing HGM would mean that these oppressions would increasingly dictate which kinds of people get born. In a society that judged the value of people based upon their genes and allocated educational and other resources according to that, the groups worst affected would almost certainly be disabled, working class and minority ethnic people.

In such a situation, existing social inequalities would be drastically exacerbated as wealthy people, who could afford the technology, gave their children even greater advantages over other children. Eugenics is an extreme form of anti-egalitarianism that is ultimately incompatible with democracy, which is based upon an assumption of basic equality of human beings (e.g. in the US constitution). Why would a world in which large numbers of people were judged to be basically biologically inferior to others continue to give unenhanced humans their democratic rights?

Objectification of human beings

A central concept of humanist philosophy, upon which human rights are based, is the idea that we must treat all human beings as persons, not objects. A human being has human rights, including the right to life and must not, for example, be treated purely as a means to an end or, as in slavery, be bought and sold like an object or an animal. Religious people sometimes express this as 'we must not play God with our children'.

The expression ‘designer babies’ arose in the 1980s from the fashion for ‘designer jeans’. The term is a critique of the consumerist aspect of reproductive and genetic technologies, of the type of parent, obsessed by e.g., a particular set of looks, who would design their child to conform to their fantasy. Here, it is obvious that the child is just an object, a vehicle for the parents’ whims.

We must not treat our children as a commodity to be acquired, and control their specifications, like a new computer. Children have a right, to be accepted as they are.

Parents who would design a child in this way would be unacceptably coercing the child's future: are the child's choices and achievements really their own, or are they just the result of their genetic programming? And is the child loved for themselves or only to the degree that they fulfil the parents' plans? Most parents have hopes for their children, but those that employ HGM to design them would have *expectations*.

What is eugenics?

The ‘science’ of eugenics originated in the early years of the 20th century as a project aiming to improve the genetic stock of human populations. Practically, it mainly tried to eliminate the ‘unhealthy’ and the abnormal’, especially people with cognitive impairments. These early forms of eugenics focused mainly on disability, race, class, and its implementation resulted in immigration and marriage restrictions, forced sterilization and, in Nazi Germany, culminated in the murder of disabled people, Jews, Roma people and others in the Holocaust.

Scientists often try to dismiss links between 20th century eugenics and their current projects. But in fact, eugenics did not disappear after the Holocaust and there has been a strong continuity of eugenics, including the persistence of coercive and racist forms, from the early 20th century until the present (3). Although in Western medicine there is now an emphasis on parental autonomy, the ongoing context of devaluation of the lives of disabled people and lack of adequate financial support for families with disabled children, results in outcomes from e.g. prenatal screening which eugenicists of the first half of the 20th century would have heartily approved of. Since the 1980s, overt advocacy of eugenics has passed to transhumanists, and to bioethicists arguing that a supposedly non-coercive ‘free market’ or ‘liberal’ eugenics is not merely desirable but a duty (4). In fact, many examples of free-market eugenics are already quietly happening in the field of assisted reproduction (5) - free market eugenics is not a ‘scare story’ or a ‘slippery slope argument’.

HGM has, since the mid-20th century, always been the holy grail of eugenicists, a way of, as Isaac Asimov put it, "putting eugenics on a rational basis" (6). This would be bad enough in the liberal political climate of most of the last 80 years, but in a time of rising right-wing authoritarianism, legalising HGM would be an act of extreme scientific irresponsibility.

Conclusion: should we “make people better”?

In early 2018 James Watson, one of the co-discoverers of the structure of DNA, told He Jiankui to “Make people better”. This short phrase sums up much that is wrong with the idea of GM designer babies.

Like all eugenicist and transhumanist statements,

Technocratic aims, technocratic methods

Although HGM is an issue that affects the future of all human beings, the process by which HGM is being promoted for legalisation is highly undemocratic. First, it denies the strong international consensus on this issue, the many national laws and international conventions which prohibit HGM. The 1997 Council of Europe Convention on Human Rights and Biomedicine (Oviedo convention), ratified by 29 European countries prohibits HGM and cloning, and the UNESCO bioethics committee agrees that it is unacceptable. An analysis of the policies of 106 countries related to HGM found that out of the 96 countries that do have relevant policy documents, 70 prohibit the use of genetically modified in vitro embryos to initiate a pregnancy (Baylis et al., 2020). Recognising that consensus, and perhaps the urgent danger of commercialisation of HGM, in 2025, the International Society for Gene Therapy has called for a 10 year moratorium on attempts at HGM.

But despite this, the elite science academies of the US, UK and China are pushing ahead for legalisation, in a process dominated by scientists that ignores the voices of civil society and critical scientists. Reflecting the huge significance of the issue, the first summit of the science academies in 2015 concluded that a '*broad societal consensus*' (ISHGE and LaBarbera, 2016) was needed to proceed. However at the 2018 summit, despite the worldwide outrage at the announcement of the first GM babies, the summit committee simply dropped this requirement and announced plans for a pathway towards clinical trials of HGM. At the 2023 summit, perhaps partly due to our coalition's efforts, the committee agreed that further discussion was needed about *whether* to proceed with HGM at all. However, in the UK it is likely that there will be moves to legalise HGM without even a parliamentary debate. It is hard to ignore the way that the technocratic goal of 'improving' and controlling human lives through genetic modification is being pushed by scientific elites through technocratic, anti-democratic methods.

it expresses a contempt for ordinary human beings, the contempt of people who think themselves superior to the mass of humanity. Instead of improving people's lives by changing society through democratic political action, it prefers manipulation of their genes. It reduces people to objects, 'made' by scientists and controlled in an industrial production system (where quality control is, of course, always paramount). These are the dangers that lurk behind the well-meaning and seemingly harmless promises of advocates of HGM. **It makes sense to make better refrigerators, but we must not apply this mentality to human beings.**

The governments that banned HGM and cloning in the 1990s did so for extremely good reasons. The global rise of right wing authoritarian governments make those reasons even stronger. It often seems that the technocratic advocates of HGM want to go ahead simply because it is technologically possible and because they don't like anything to get in the way of 'the advance of science'. That an extreme form of scientific irresponsibility.

The International Coalition to Stop Designer Babies has been created to defend and strengthen the existing laws and treaties. **We need a global ban on HGM and cloning.** Within those responsible limits, science can be conducted more safely and with greater public trust. This would prevent 'reproductive tourism', where unscrupulous IVF doctors set up clinics in countries that lack a regulatory system. The first effort to legalise HGM will probably be in the UK, through the revision of the Human Fertilisation and Embryology Act. **It is vital that people come together for the sake of our common humanity to stop this.**

Notes and references

1. We use the term 'human genetic modification' (HGM) rather than 'genome editing' to refer to genetic modification of human eggs, sperm, or embryos to create a person who is genetically engineered in all cells of their body and will pass on the genetic changes to their offspring. Genetic engineering of cells for purposes of treating a particular disease in a patient, e.g. skin, liver, or lung cells, which we do not oppose, is usually referred to as somatic gene therapy.

2. In arguing that there are robust ways to prevent genetic impairments being passed on to children, we do not ignore the fact that many disabled people feel that e.g. prenatal screening is a continuation of eugenics. They argue that these practices reflect society's wish that they did not exist. This is an extremely difficult issue, which is beyond the scope of our campaign. Many members of the coalition have much sympathy with such arguments, and some of us are disabled people. That issue can only be resolved through a long-term process of social dialogue. But whatever your views on this issue, HGM is medically unnecessary.

3. For example, in many countries, eugenics laws remained on the statute books after World War II, and were actively used in e.g. Sweden, until the 1970s. China created a law very similar to early 20th-century eugenics laws in the late 90s. In the second half of the 20th century, coercive population control programs targeted indigenous and poor people, e.g. in India in the 1970s and Peru in the 1990s. In the 2000s, up to 150 poor, black or Latina women in California prisons were sterilised without informed consent.

4. See e.g. the work of Julian Savulescu or John Harris.

5. In the US egg donation market, there is a large financial premium on eggs from women at Ivy League universities compared to those from working class women. A Danish company, the leading supplier of sperm for IVF in the UK, announced in 2009 that it was ceasing to recruit donors with red hair, since there was no market for their sperm in the UK, due to the UK prejudice against people with red hair, which derives from Anglo-Saxon racism against the Celtic people of Britain. In 2024 it was revealed that a US company is offering to allow women to select IVF embryos with 'the highest IQ'.

6. Asimov, I. *The Genetic Code* New American Library, 1962, p 181.