

Bioethics expert calls for research into genetically modified babies

January 6 2020



Credit: University of Abertay Dundee

The creation of genetically modified babies is not only ethically justifiable but "highly desirable," according to academic research from a leading UK bioethicist.

Dr. Kevin Smith from Abertay University in Dundee, Scotland, published ethical analysis concluding that the risks of gene editing are now low enough to justify its use with [human embryos](#), with a view to producing genetically modified (GM) people.

In the paper, published in medical ethics journal Bioethics, Dr. Smith argued that an ethically sound attempt could be less than two years away, and predicted such research could kick-start a revolution in human genetic modification.

The academic, who is program leader for Abertay's Biomedical Science courses, said research in this area would offer hope to parents at risk of transmitting serious genetic disease to their future children.

Modern genetic studies have revealed that most genetically influenced human diseases result from the actions of several genes, and show that genetic modification is the only conceivable way to deal with multiple disease-associated genes within an embryo.

Dr. Smith said: "The human germline is by no means perfect, with evolution having furnished us with rather minimal protection from diseases that tend to strike in our later years, including cardiovascular disease, cancer and dementia.

"GM techniques offer the prospect of protecting future people against these and other common disorders. This has previously been achieved to an extent in GM experiments on animals.

"If several common disorders could be avoided or delayed by genetically modifying humans, the average disease-free lifespan could be substantially extended."

Dr. Smith said the sooner that scientists are permitted to start creating

GM people, the sooner a wide range of benefits will be attained.

However he warned that an ethical approach must be at the heart of any advances if public trust is to be won.

Dr. Smith said: "Society is largely opposed to genetically modifying humans, and the negative publicity generated by the ethically problematic first-ever production of GM babies in China last year was strongly criticized by most geneticists and ethicists, further hardening attitudes against the creation of so-called "designer babies."

"However, by delaying an ethically sound move towards a world where we can reduce genetic disease, we are failing those who suffer through [disease](#) and debilitating conditions.

"If such negative attitudes to biomedical innovation had prevailed in the 1970s, the development and use of IVF—a massively beneficial medical technology—would have been severely delayed, and indeed might never have come to fruition."

Dr. Smith's research sparked intense media interest with BBC News, ITV and Sky among the many outlets providing coverage.

More information: Kevin Smith. Time to start intervening in the human germline? A utilitarian perspective, *Bioethics* (2019). [DOI: 10.1111/bioe.12691](https://doi.org/10.1111/bioe.12691)

Provided by University of Abertay Dundee

Citation: Bioethics expert calls for research into genetically modified babies (2020, January 6) retrieved 2 May 2024 from

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