



On Monday November 26th of 2018, the Associated Press reported that a Chinese laboratory led by Dr. He Jiankui helped make the first genetically engineered human children, a set of twins. Dr. He's team purportedly attempted to alter a gene called *CCR5* in these embryos, with the hopes of giving the children future resistance to HIV infection. These claims are not verified as of this writing.

What is Human Germline Engineering?

Human germline editing is a process by which a human's DNA code is altered in such a way that the changes will be passed to future generations. The 'gene edits' impact the person being treated as well as future generations. We can contrast this with 'gene therapy' where cells may be genetically altered to treat disease, but these changes cannot be transmitted to their children. All outcomes of gene editing, good or bad, are permanent in the treated cells. If it can be used safely for human germline editing, the technology holds potential to improve lives and prevent illnesses that cannot be addressed by other methods and ensure that a hereditary disease is no longer passed down in a family.

Human germline editing has been a subject of debate for decades, but has recently become more technically feasible following advances in gene editing technologies. Ethical and safety concerns must be considered to ensure that if humanity chooses to proceed with using the technology, it is done in a safe and responsible manner. It is an important debate to be had between scientists, the public, and policymakers and while there is great potential in the technology, its impact will be felt by all.

The Genome Writers Guild Response

The Genome Writers Guild joins the rest of the scientific community in significant concern over the purported news and awaits more information regarding the validity, approach, and oversight of this research. Issues like human germline editing demand continued engagement, education, and constructive discussion with the public. Science is meant to serve the common good, and technologies like human germline editing impact everyone. Decisions of this magnitude and impact do not belong to any one individual or small group and must be considered in the context of all of humanity. The news of the Chinese laboratory makes this discussion more publicly visible and, as expected, an overwhelmingly negative response from the scientific community has resulted. However, the debate about human germline editing is just beginning, and it is important that we do not make hasty decisions, in either direction, on this topic just because it suddenly entered the news. Gene editing technologies are powerful and in many ways are able to provide invaluable benefit to humanity if carried out responsibly. To do so while not preventing progress, transparency and understanding are required. The Genome Writers Guild seeks to take advantage of this moment to encourage scientists

and members of the public alike to get informed and start an open, respectful conversation on where genome engineering including gene editing should head.

Genome Writers Guild Mission

The Genome Writers Guild is comprised of researchers, physicians, students, entrepreneurs, investors, government representatives, futurists, artists and interested public members who seek to engage the scientific community, policymakers, and the public to develop a code of conduct and collective responsibility regarding genome engineering and gene editing technologies through education, dissemination of ideas, dialogue, and constructive discussion.