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Morality of Genetic Engineering

Scientists have accomplished the unthinkable in recent years- making human babies customized by plucking favorable genes and canceling unfavorable traits. Innovation and gene studies have given humanity a new door to determine the next generation. Still, with this opportunity, controversy will determine whether we should keep the door closed, cracked, or sprung open. The new age solely depends on whether this generation exploits the ethical commitment of this new significant, scientific responsibility.

The early 1960s was the first time humanity began conceptualizing the capability of tinkering with genomes in people. According to *Synthego* “History of Genetic Engineering and the Rise of Genome Editing Tools 2024”, enzymes, jellyfish, and bacteria were the original subjects that progressed this technology, and proved the capability of success. This technology however has evolved to other organic materials- including humans. Goals of the research are presented as a potential preventative similar to that of a vaccine. Outcomes, however, are not always reflective of intentions. There are two sides to this coin, the ability to alter the health of babies also provides the ability to alter appearance. Ethically, the scientific revolution of this generation needs boundaries to provide a standard for the unknown achievability of this modern technology.

In addition to the ethical controversy, there are also major safety concerns. The CRISPR gene editing discovery has evolved swiftly, therefore, I don't know how this technology will age. For example, “He Jiankui, a Chinese researcher, claimed that he had edited the genes of two human embryos, and that they had been brought to term”(The Harvard Gazette 2018), but he was sentenced 4 years in prison for his “unethical” experiment. The genetic engineering of the patient could signal alteration of a patient’s condition; however, their reproductive aspects remain

unaffected, therefore, unknown conditions could spring up in unexpecting future generations. Unfortunately, there is a chance of the wrong genes suffering unintentional effects.

In current research disease prevention, specifically, “blood disorders, cancers, inherited eye disease, diabetes, infectious disease, inflammatory disease, and protein-folding disorders”(Innovative Genomics Institute) is the primary focus of the introductory phase of CRISPR. Technology of this nature does include serious consideration, but it could save thousands of lives, its morality lies in the eye of the beholder.