

Title: Problems with Unregulated CRISPR Experiments
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With the creation of a synthetic CRISPR (clustered regularly interspaced short palindromic repeats) science-fiction has become reality and humane genetic engineering is a plausible way to help eliminate disease and birth defects. CRISPR was introduced in 2012 as a tool that can easily and cheaply be used to alter DNA ("Genetic Engineering" 1). Even though there are strong biases against doing human trials for genetic engineering and that the long-term repercussions are yet unknown, with the right regulations and federal funding to guide it, human genetic engineering could be a great boon to society. There is a current issue with the field regarding Chinese Scientist He Jiankui, who conducted his own unethical genetic modification experiment and brought to term twin girls that he claims are immune to the H.I.V. People are calling for regulations of all germline experiments. There are several diseases that genetic engineering can help treat such as genetic disorders like cystic fibrosis and hemophilia and health issues like emphysema and muscular dystrophy, it also shows potential to be a treatment, to be paired with chemotherapy, for cancer ("Genetic Engineering" 2). The current regulations restricting genetic modifications only effect federal funding for the experiments and not the actual experiments themselves. There exist proposed guidelines for the limitation of human genetic engineering. Though they may be in response to He Jiankui's experiment, they attempt to advance the field considering the mounting opposition, which is a step in the right direction.

Works Cited

Caplan, Arthur. "Getting Serious about the Challenge of Regulating Germline Gene Therapy."

PLoS Biology, vol. 17, no. 4, Apr. 2019, pp. 1–5. EBSCOhost,

doi:10.1371/journal.pbio.3000223.

Fenech, Lisa. "Creating the Perfect Human Race: How Far Will We Go for Designer Families?"

Family Court Review, vol. 56, no. 1, Jan. 2018, pp. 150–164. EBSCOhost,

doi:10.1111/fcre.12328.

"Genetic Engineering." Gale Opposing Viewpoints Online Collection, Gale, 2019. Gale In

Context: Opposing Viewpoints,

<https://link.gale.com/apps/doc/PC3021900072/OVIC?u=cypressc&sid=OVIC&xid=f885>

6dcd. Accessed 8 Oct. 2019.

Regalado, Antonio. "Engineering the Perfect Baby. (Cover Story)." MIT Technology Review,

vol. 118, no. 3, May 2015, p. 26. EBSCOhost,

search.ebscohost.com/login.aspx?direct=true&db=f6h&AN=102929707&login.asp&site

[=ehost-live&scope=site.](https://search.ebscohost.com/login.aspx?direct=true&db=f6h&AN=102929707&login.asp&site)

Wang, Haoyi, and Hui Yang. "Gene-Edited Babies: What Went Wrong and What Could Go

Wrong." PLoS Biology, vol. 17, no. 4, Apr. 2019, pp. 1–5. EBSCOhost,

doi:10.1371/journal.pbio.3000224.