

OPENING STATEMENT

Ranking Member Eddie Bernice Johnson (D-TX)
Committee on Science, Space, and Technology

The Science and Ethics of Genetically Engineered Human DNA
Research & Technology Subcommittee Hearing

June 16, 2015

Thank you, Madam Chairwoman for holding this hearing, and I want to join you in welcoming our distinguished panel of witnesses.

This afternoon we are talking about new gene editing technologies that have promising applications in fields ranging from medicine to energy to agriculture. The Chinese research paper that prompted this hearing highlights the need to have a serious examination of the science, safety, and ethics of gene editing technologies.

I want to thank the Chairwoman and Ranking Member for putting together this hearing with an impressive panel of expert witnesses. Additionally, I want to acknowledge Dr. Foster, whom I understand was instrumental in advocating for this hearing.

The technologies we are discussing today can alter DNA—the blueprint of life. There are significant safety, efficacy, and ethical issues concerning these technologies. What are the ethical uses of these technologies? Is it ethical to use them if they could cure a disease? What if they just treated a disease?

Any applications that would alter germline cells, where changes are passed down through generations, have additional ethical issues. For example, is it ethical for the current generation to consent to changes for a future one?

Although today we are discussing human applications, we should not forget that these same technologies also have great potential for use in energy and agriculture. Gene editing could be used to create biofuels and new crops. Responsible applications of these technologies could lead to significant economic growth if the U.S. takes the lead in research and transferring that research to the private sector.

I look forward to hearing from the witnesses about the state of the gene editing science and potential applications. Additionally, the U.S. needs to take a leadership role in addressing relevant ethical issues so I am glad that the panel includes a bioethicist to help us better understand what is involved.

Finally, I look forward to hearing about the National Academies' plans to address these and other important questions surrounding this emerging research area.

Thank you and I yield the balance of my time.