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ABOUT US

WHITE BLACK LEGAL is an open access, peer-reviewed and refereed journal provided dedicated to express views on topical legal issues, thereby generating a cross current of ideas on emerging matters. This platform shall also ignite the initiative and desire of young law students to contribute in the field of law. The erudite response of legal luminaries shall be solicited to enable readers to explore challenges that lie before law makers, lawyers and the society at large, in the event of the ever changing social, economic and technological scenario.

With this thought, we hereby present to you

THE LAWSUIT AND THE LEGAL IMPLICATIONS OF GENE EDITING

AUTHORED BY: C DHANALAKSMI¹

SYNOPSIS:

Biology has undergone a revolution thanks to gene editing, which offers enormous promise for curing illnesses, boosting human characteristics, and even improving food crops. But this potent technology also brings up difficult moral and legal issues. The article examines the legal consequences of gene editing from the perspective of the first Chinese-born gene-edited children. It addresses the He Jiankui case, germline editing's ethical issues, the changing regulatory environment, and possible legislative frameworks to guarantee responsible development and implementation.

KEY WORDS: *laws, He Jiankui, gene editing, HIV, and legal implications.*

INTRODUCTION:

A new age of genetic modification has begun with the development of CRISPR-Cas9 gene editing. With the ability to precisely alter an organism's DNA, this technique holds enormous promise for improvements in agriculture, biotechnology, and medicine. Gene therapy is a genetic illness treatment method used to fix mutated genes, such as sickle cell anaemia and cystic fibrosis. In the context of disease prevention, genetic modifications give resistance against infectious illnesses such as malaria or HIV. It improves food security in agriculture and animal husbandry by making crops resistant to pests, drought, or illnesses. It also allows for the engineering of faster-growing animals or more resilient animals to disease. But there are also big ethical and legal questions around the potential of gene editing.

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THE CASE OF THE GENE-EDITED BABIES:

In 2018, Chinese scientist He Jiankui shocked the scientific world by claiming to have produced the first gene-edited offspring. He altered the twin girls' CCR5 gene using CRISPR-Cas9, ostensibly rendering them immune to HIV infection. Many reasons contributed to the worldwide outrage this experiment caused:

Germline editing: This technique was used in the experiment to change an embryo's genetic composition so that it can be passed on to subsequent generations. Concerns concerning unanticipated outcomes and the moral ramifications of modifying the human germline are brought up by this.

Absence of Informed Consent: It's possible that the parents of the infants were not completely aware of all the dangers and unknowns involved in this experimental process.

Uncertain Safety: There are worries about possible health issues for the modified kids and their future descendants because it is unclear how safe CRISPR-Cas9 editing will be in the long run for humans.

THE GENE EDITING LEGAL MAZE:

The legal landscape around gene editing is continuously developing, with differing levels of comprehensiveness across national and international authorities. These are a few of the most important legal factors. They are as follows:

Intellectual property: There are questions about who owns the patents for gene editing instruments and gene sequences. It's critical to strike a balance between innovation and providing access to this technology for research and development.

Regulatory Oversight: Exact rules and regulations are required to guarantee the security and moral behavior of gene editing research, especially when it comes to human applications.

Informed Consent: Strict protocols for obtaining informed consent must be set up to guarantee that people are aware of the benefits as well as the drawbacks of gene editing before enlisting in research projects.

International Cooperation: As gene editing technology is cross-border, worldwide cooperation is essential to creating a universal legislative framework for ethical R&D.

The Lawsuit of He Jiankui and Possible Legal Obstacles:

He Jiankui's experiment caused a great deal of controversy, which led to his dismissal from the

university and an imprisonment of three years for practicing medicine unlicensed. Although germline editing was not specifically covered by any laws in China at the time, his activities made it evident that controls were necessary. Future legal actions involving gene editing may face the following obstacles:

Crimes Charges: Unauthorized gene editing research might be seen as criminal carelessness or assault, especially when it involves human subjects.

Civil Lawsuits: People who have been adversely affected by gene editing, either directly or indirectly through inheritance, may bring legal action against organizations or researchers.

Regulatory Contraventions: Penalties and fines may follow noncompliance with established restrictions regarding gene editing research.

Beyond the Case: More Comprehensive Legal Consequences:

A clear reminder of the necessity for ethical gene editing technology development and deployment is provided by the He Jiankui case. Here are a few more legal things to think about:

Enhancement of Humanity: Gene editing for human improvement presents difficult moral and legal issues on what constitutes normalcy, justice, and anti-discrimination.

Regulation of genetically modified organisms (GMOs): Gene-edited goods may be subject to some of the GMO restrictions now in place, which raises concerns over labelling and safety evaluations.

Public Participation: Creating legal frameworks that take into account societal values and concerns around gene editing requires including the public in talks about the technology.

INTERNATIONAL ORGANISATIONS' CONTRIBUTION TO THE CREATION OF A WORLDWIDE FRAMEWORK FOR GENE EDITING RESEARCH AND DEVELOPMENT:

Establishing Standards and recommendations: To create recommendations for safe and moral behaviours, international organisations such as the World Health Organization (WHO) bring together specialists. This guarantees a minimum standard of supervision among various nations.

Encouraging Transparent Communication and Cooperation: Global platforms serve as a platform for dialogues between scientists, decision-makers, moralists, and the general public. This promotes openness and cooperation in scientific endeavours.

Handling Ethical Issues: Since gene editing, and especially germline editing, has an impact on future

generations, there are a lot of ethical issues to consider. International organisations offer forums for debating these issues and creating risk-reduction strategies.

Ensuring Equitable Access: Research on gene editing has enormous promise to improve healthcare. International organisations strive to guarantee that all countries, not just industrialised ones, have fair access to these potential advantages.

Avoiding Abuse: Due to the potential for misuse, precautions must be taken. International organisations contribute to the creation of the laws that guard against abuse and promote responsible growth.

CONCLUSION:

Gene editing is a formidable tool with a plethora of potential advantages. But it's important to navigate the legal and moral minefield. Robust regulatory frameworks, international collaboration, and continuous ethical debate are necessary to strike a balance between fostering innovation and protecting human health. A clear reminder of the necessity of responsible gene editing technology research and implementation is provided by the lawsuit against He Jiankui.

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