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CTD: 07HG - HUMAN GENETICS AND MOLECULAR STUDIES
SUB-DOMAIN: 1. INDIGENEITY AND SOCIAL JUSTICE

PANEL TITLE:

HUMAN GENOME EDITING AND ITS ETHICAL DILEMMA FOR SOCIAL JUSTICE, SUSTAINABILITY AND GLOBAL PEACE

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ABSTRACT

Ever since there has been a move to develop policies toward eliminating sickle cell anaemia among the tribal populations of India, one vital option to reach the goal in future may be through genome editing. The inclusion of new technologies like CRISPR-Cas9, TALENs, CAR T-cells, and others have created new opportunities for human genome editing. Prior to 2015, the utilization of genomic editing for humans was reserved only for the somatic cell lines. But the introduction of CRISPER-Cas9 made it possible to modify the human germ line for the first time. From the philosophical perspectives the main objective of biomedical advancements is to improve the human condition. The prospect of performing germ line alterations on human being targets the field of medicine by decreasing the genetic pool. But from theological perspectives there may be negative repercussion of germ line modifications. There are vast arrays of cultural and public perspective too on genome editing. These can be attributed to many factors which may split into nationality, religion, political affiliation etc. Genetic engineering since long has been used to modify viruses to vaccinate against specific diseases, but the news of the genetically edited twins in China in 2018 brought to the fore question of the ethics of therapeutic gene editing in human embryos. In fact, Prof He Jiankui, who was responsible for the germ line human gene editing was widely condemned and was sentenced to f prison for three years. The Lancet Editorial in its issue of March 2023, veered the attention of the public that a better international consensus is essential on how to advance gene editing, while safeguarding humanity's collective gene pool. The first CRISPR-based technology to eliminate sickle cell disease as well as beta-thalassemia is expected to be approved by regulators of developed nation very soon. Such advances not only have the potential to bring enormous benefits for humankind, but also bring unique social and ethical challenges.

The present panel will try to focus on different dimension of ethical dilemmas we have to face for adopting these new technologies. Whether it will be socially justified? Whether it will be sustainable in terms of Global peace? What will be the role of Anthropology in such a diverse bio-cultural problem? These are some of the questions we will try to understand under this panel.

Keywords: Human Genome Editing, Ethics, Global Peace, Sustainability

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