103335 - Is It Permissible to Study Genetic Engineering in Islam?

the question

Is there anything wrong with studying human genetic engineering?

Summary of answer

Studying genetic engineering is permissible in Islam as long as it is used for beneficial purposes and adheres to ethical guidelines.

Detailed answer

Praise be to Allah.

What is Genetic engineering?

Genetic engineering is technology that alters the genes that are found in every living being. The cells of all living things contain a number of genes which carry this chemical information which determines the qualities and characteristics of the individual being. (*Al-Mawsu`ah Al-`Arabiyyah Al-`Alamiyyah*)

Permissible Uses of Genetic Engineering

Human genetic engineering includes that which is beneficial and permissible according to Islamic teachings, such as using it to prevent or treat hereditary disease or reduce its impact, whether by means of gene surgery which replaces one gene with another, or introduces a gene into the patient’s cells, or inserts a gene into another living being in order to replicate that gene in larger numbers so that it may be used to treat some diseases.

Prohibited Applications of Genetic Engineering

And some types of human genetic engineering are harmful of prohibited, such as using it to change the genetic structure for the purpose of what is known as eugenics, or attempting to tamper with genes in order to affect a person's character and other qualities, or to interfere with his ability to be individually responsible, or using it to create hybrid living beings for the purpose of entertainment or scientific curiosity.

Islamic Guidelines for the Use of Genetic Engineering

This was discussed in a symposium of the Islamic Organization for Medical Sciences in Kuwait, under the heading: Heredity, Genetic Engineering, the Human Genome and Genetic Medicine: an Islamic Perspective. The symposium was held with the participation of the Islamic Fiqh Council in Jeddah, the regional office of the World Health Organisation in Alexandria and the Islamic Organization for Education, Science and Culture, 23-25 Jumada Al-Akhirah 1419 AH/13-15 October 1998. A number of senior jurists, doctors, pharmacists, specialists in biological science and scholars from the humanities participated in the symposium.

Among the recommendations made were the following:

3. Genetic engineering:

The symposium has discussed the topic of genetic engineering and the reservations and fears with which it has been surrounded since its inception in the 1970s, because if it is practised without any guidelines or restrictions, it is a two-edged sword which may be used for good or for ill.

The symposium thinks that it is permissible to use it to prevent, treat or mitigate disease, whether through gene surgery which replaces one gene with another or inserts a gene into the patient's cells, or inserts a gene into another living being in order to replicate that gene in larger numbers so that it may be used to treat some diseases. However, use of genetic engineering on reproductive cells should be prevented, because of the Shar`i reservations concerning that.

The symposium affirms the necessity of states providing such services to their citizens of modest income who need it, because it is very costly to provide.

The symposium thinks that it is not permissible to use genetic engineering for evil purposes or to cross the genetic barrier between different species for the purpose of creating hybrid beings for the purpose of entertainment or out of scientific curiosity.

Similarly, the symposium thinks that it is not permissible to use genetic engineering as a means of changing the genetic structure for the purpose of what is called eugenics, or any attempt to tamper with the genetic make-up of humans, or to interfere with an individual's ability to be individually responsible. All of these are matters that are prohibited according to Islamic teachings. …

The symposium does not think that there is anything wrong, in Islamic terms, with using genetic engineering in the fields of agriculture and animal husbandry, but the symposium cannot ignore the voices that have recently warned of the possibility of long-term harm that could affect humans, animals, agriculture or the environment, and it thinks that companies and factories that produce foods of animal or vegetable origin should point out to the public anything offered for sale that is produced through genetic engineering (or genetic modification – GMO), so that the purchaser will be aware of what he is buying. The symposium also recommends monitoring the consequences of genetic modification of foods, and they should follow the advice and recommendations of the US Food and Drug Administration, the World Health Organisation and the World Food Programme in particular.

The symposium notes the necessity of establishing organisations to protect and educate consumers in the Muslim world.

In other recommendations, it says:

12. The scholars of the Muslim world should write books simplifying scientific information about heredity and genetic engineering, so as to spread awareness and support concerning this issue.

13. Muslim countries should introduce genetic engineering through a program of education at various levels, paying particular attention to university studies and postgraduate education."
(Majallat Majma` Al-Fiqh Al-Islami, issue no. 11, Vol. 3, p.533)

Based on that, there is nothing wrong with studying human genetic engineering and using it for beneficial and permissible purposes only.

For more details, please see the following answers: 21582 , 111969 , 119830 .

And Allah knows best.