Commission: Health Committee

Question: What are the constraints necessary to genetic modification of the human gene pool?

Author: Sweden

With to the discovery of CRISPR, gene editing is now a much easier and cheaper way to make very precise changes to DNA. This allows scientists to explore the function of genes and, in principle, correct mutations that cause diseases. It is has been a huge breakthrough, but like everything that’s new and unknown, it has created a lot of debate around how far this should be taken and wether it is ethically correct.

Sweden has an innovative life science industry, strong academia and world leading infrastructure for research. It considered to be one of the world’s most prominent research nations. The government is investing significant resources in research and development reaping the benefits of contemporary globalization.

Government investment and other public fundings for research totaled about SEK 40 billion in 2017. Some salient examples of investments resulting from the latest research bill are MaxIV in Lund, a new centre for clinical trials in Gothenburg, and the SciLifeLab in Stockholm and Uppsala.

Our country believes that this advance in science presents an opportunity to better our citizens lives, by letting them live in a world where genetic diseases, that up until now had no cure, are not to worry about.

International collaboration is necessary to push through with these advances and use them to their full potential. Last year, a cooperation agreement on research between the Swedish agency for innovation, Vinnova, and the Chinese Ministry of Science and Technology was signed.

Of course, precautions must be taken with this research, such as not letting the embryos life advance until scientists are sure there are no risks by letting them being born. In september 2016, a Swedish biologist, Fredrik Lanner, genetically modified a healthy embryo, but he was only studying it, and destroyed it after 14 days of growth.

Humans have been engineering life for thousands of years through selective breeding. We chose animals and plants with useful traits, slowly changing the species.

It mustn't be considered morally incorrect to choose the genes of future generations, since it is a part of natural selection, and it would even be cruel not to spare children of preventable diseases, if we have the means to do so.

No matter what we want to do, the technology exists, and the word has spread.

We now have two options: either to ban human genetic engineering, leading the science to go to places with jurisdiction and rules we’re not comfortable with, or to lead research, ensuring that further advances are done with precaution and transparency.