

Abstract

The recent breakthrough discovery of the molecular genome editing tool CRISPR/CAS9 represents a complete revolution in the field of molecular biology, biomedicine and other related fields. It is a highly effective biomolecular tool, derived from the bacterial immune system, with which it is possible to introduce precise changes in the genomes of all organisms. The thesis is limited to the ethical evaluation of the use of CRISPR/CAS9 exclusively in human gene therapy. Thanks to its efficiency, simplicity, accuracy and low financial costs, the CRISPR/CAS9 editing tool, in compliance with ethical parameters, already has a broad spectrum of use in therapeutic procedures on somatic or body cells in the treatment of human genetically determined diseases without introducing a change into the future offspring of the given individual. In addition to great therapeutic potential, the application of CRISPR/CAS9 raises many ethical questions related to the possibilities of its further use, possibly misuse. Ethically problematic genetic procedures include: human hereditary genome editing, i.e. the targeted alteration of the genome of sex cells, progenitor cells and cells of early embryonic development stages with the therapeutic goal of eliminating a genetically determined disease associated with the introduction of this change into the future offspring of a given individual. Furthermore, there are controversial non-therapeutic experimental genetic manipulations, such as: free non-therapeutic experimentation, design of a human individual at the request of parents and targeted improvement of the human individual, thus the human species. The scientific community is intensively discussing issues related to the possibility of misuse of the method through ethically problematic and controversial applications of CRISPR/CAS9 and thinking about regulation strategies and setting bioethical boundaries and limits. It is important to reflect that these controversial procedures hide tendencies of a selective eugenics mentality, which from a Christian point of view contradicts the basic ethical principles of human dignity, autonomy, integrity and vulnerability. The Catholic Church is also involved in the professional discussion, whose magisterium fearlessly defends the human dignity of every person from the beginning to natural death and clearly proclaims that not everything that is technically possible is also morally acceptable. With its opinion, the Catholic Church creates space for honest and professional reflection, which is supposed to protect human life and its dignity while solving current bioethical questions that arise as a result of new scientific discoveries.