

ABSTRACT

Zeybek Ünsal Ç. Ethics and Human Rights Problems of Emerging Technologies in Biomedicine, Hacettepe University, Graduate School of Health Sciences, Medical Ethics and History of Medicine Program, Doctor of Philosophy Thesis, Ankara, 2020. Close interaction between life and engineering sciences, emerging nanotechnologies, biotechnologies, information communication technologies, and the use of neurotechnology in medicine have led to the development of new methods of diagnosis and treatment. The development of these technologies has made it possible to change and improve human biology and make interventions in the human brain and body using new technologies in biomedical research, thereby causing new ethical and human rights problems. Accordingly, a need has arisen to re-question existing legal regulations protecting human life and human rights and traditional ethical approaches. The extent to which the relevant regulations protect human rights and freedoms and how to limit scientific research against in the face of future developments are also important for the development of these technologies and the sharing of benefits from scientific research. Against this background, this thesis study discussed the universalization process of bioethics, the work done by the Council of Europe on developing technologies, and ethical and human rights problems that have emerged during the development of new technologies by referring to examples from countries in relation to the Convention on Human Rights and Biomedicine (Oviedo Convention). To this end, the study comparatively examined national legal regulations concerning the prominent bioethics issues including research on embryos, genome modification, cloning, stem cell research, and hybrid/chimeric embryo formation. The study also addressed the direction of traditional ethical debates and the ways to balance the freedom of scientific research and human rights. Additionally, using possible legal regulations in specific areas, the study illustrated which legal rules can optimally protect which values. Finally, it offered suggestions about how to establish a body/bodies that oversee scientific research.

Keywords; Emerging technologies, bioethics, nanotechnology, biotechnology, information and communication technologies, neurotechnologies, Council of Europe, Oviedo Biomedicine Convention, Turkey