

STANDARDS OF BIOTECHNOLOGICAL PROGRESS IN THE CONVENTION ON HUMAN RIGHTS AND BIOMEDICINE

Dr. habil. Marzena Furtak-Niczyporuk, University Professor

Medical University of Lublin, Poland

e-mail: marzena.furtak-niczyporuk@umlub.edu.pl; <https://orcid.org/0000-0003-2444-6456>

Abstract. The Convention on Human Rights and Biomedicine was adopted on November 19, 2019 by the Committee of Ministers of the Council of Europe, after which it was opened for signature on April 4, 1997 in the Spanish city Oviedo. Undoubtedly, it constitutes a response to the rapid progress in biology and medicine, serving as the primary legally binding instrument for the protection of human rights in the field of biomedicine, which generally regulates important ethical issues at the intersection of medicine and law. Although it is of a framework nature, as it is the result of a compromise reached, it has an extremely wide scope and therefore requires further clarification in additional protocols. What is particularly noteworthy is its interpretative value, which is not dependent on its ratification, as it opposes threats to human beings arising from biotechnological progress. It accurately presents the fundamental principles of the protection of human dignity, the primacy of the individual, and equitable access to healthcare. This is followed by the establishment of standards concerning consent to interventions affecting one's health, the protection of private life and the right to information in healthcare, the human genome, scientific research involving human beings, and transplantation.

Keywords: biomedicine; biotechnological progress; human rights.

INTRODUCTION

There is no doubt that biotechnological progress today directly affects the axiology of the healthcare system. In this context, it is particularly important to define standards for biotechnological progress with the necessary application of an axiological approach. Essentially, the axiological approach is then based on the concept of the human being as the highest value and of human rights as the values that make it possible to realize that value [Jasudowicz 1996, 30]. Undoubtedly, this concerns a set of values, namely principles, ideals, or norms that determine the functioning of the healthcare system. Above all, attention should therefore be paid to human life and health in the provision of healthcare services. A healthcare service should each time be understood as an action serving the prevention, preservation, rescue, restoration, or improvement

of health, as well as any other medical action resulting from the treatment process or from separate regulations governing the rules for their provision¹. Thus, these values can ultimately be reduced to patient safety within the healthcare system. At the same time, patient safety itself should be understood broadly, as a condition encompassing the protection of human life and health against various threats, serving not only the prevention of diseases and epidemics, but also the shaping of a healthy environment, the promotion of a healthy lifestyle, and the ensuring of equitable access to medical care. However, patient safety must in any case be reduced to its legal safety, since the healthcare system is very precisely regulated by law. Legal safety, in turn, is a condition achieved through positive law, protecting a person's vital goods and interests in a manner that is as complete and effective as possible. It has two basic aspects: legal safety in the objective sense, meaning a state in which essential human goods and interests are protected by legal means and an efficiently functioning system ensuring the effectiveness of these measures; and legal safety understood in the subjective sense, which can be equated with a person's sense of legal security [Potrzeszcz 2013, 405-406]. Undoubtedly, primary importance should be attributed to the patient's legal safety in the objective sense, although the significance of the patient's legal safety in the subjective sense must by no means be disregarded or diminished.

1. THE ESSENCE OF THE BIOTECHNOLOGICAL STANDARD

The concept of a biotechnological progress standard reflects a phenomenon that is currently emerging within the healthcare system, while also determining the final shape of its character. It is undoubtedly the conceptual counterpart of a term and, at the same time, a designation formed through a triple lexical combination, to which a specific conventional meaning has been assigned. Although the term "biotechnological progress standard" is expressed in the singular, it must always be borne in mind that one usually refers in the plural to biotechnological progress standards. In each case, this lexical combination consists of the noun "standard", the noun "progress", and the adjective "biotechnological". As regards the noun "standard", it denotes: an average norm, an average type, a model, a product meeting specified requirements, or a pattern [Jackiewicz 2008, 136]. From a semantic point of view, it should also be emphasized that the noun "standard" establishes a certain average model, a principle defining the characteristics of a given thing as required by law or custom. At this point, a legal observation is also necessary, as the term "standard" functions primarily in international law.

¹ See Article 5, point 40 of the Act of 27 August 2004 on healthcare services financed from public funds (Journal of Laws 2025, item 1461 as amended).

An international legal standard can then be understood as legal provisions of a model or average nature, operating within a given international community [Jackiewicz 2008, 137]. However, no attempts are usually made to construct definitional formulations in this respect, as it is typically accompanied by an object that modifies its previously established independent meaning. Finally, we are dealing with the adjective “biotechnological”, which derives from the noun “biotechnology”, and therefore it must subsequently be appropriately explained. The term “biotechnology” itself originates from the Greek words “*bios*” (biology), “*technikos*” (art, craft), and “*logos*” (science) [Breczko 2011, 22]. Naturally, technology denotes a purposeful and economically efficient process of transforming natural resources into usable goods [ibid.]. Accordingly, biotechnology should now be understood as the use of biological systems, living organisms, or their components for the production or modification of products or processes for a specific application.² The adjective “biotechnological” must therefore take into account the meaning of biotechnology presented above.

Undoubtedly, the history of biotechnological progress standards is considerably shorter than the history of biotechnology itself. The history of biotechnology dates back to ancient times, as evidenced, for example, by the production of beer, wine, and bread using yeast around 6000 BC, and by the manufacture of various soy-based products using *Aspergillus* fungi around 300 BC [Shurtleff and Aoyagi 2021]. Although the foundations for the development of biotechnology were established only in the modern era, primarily during the period from the seventeenth to the nineteenth century, it was then, for example, that Antonie van Leeuwenhoek discovered bacteria in 1686 and Louis Pasteur discovered the pathogenicity of bacteria in 1838 [Breczko 2011, 22]. However, the dynamic development of biotechnology occurred only in the second half of the twentieth century and at the beginning of the twenty-first century, when, among other achievements, James Watson and Francis Crick described the structure of DNA in 1953; the team led by Kary Mullis developed the polymerase chain reaction in 1983; Calgene in Davis produced the genetically modified Flavr Savr tomato in 1994; the team led by Ian Wilmut cloned the sheep Dolly from somatic cells in 1996; and Human Genome Project determined the DNA sequence of the human genome in 2003 [Kurcek 2026]. It is clear that biotechnology today covers many areas, such as: agriculture, breeding, food industry, environmental protection, health care [ibid., 24]. From the point of view of the subject matter of the present considerations, namely the development of biotechnological progress standards within the healthcare system, it is also justified to accept the term “biotechnomedical progress” [Breczko

² See Article 2 of the Convention on Biological Diversity, done at Rio de Janeiro on 5 June 1992 (Journal of Laws 2002, No. 184, item 1532).

2011, 24]. The fundamental standards of biotechnological progress within the healthcare system derive from the treaty acquis of the Council of Europe, which has long been concerned with matters related to advances in biology and medicine. Particular emphasis should be placed on the Convention on Human Rights and Biomedicine, formally entitled the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine and subtitled the Convention on Human Rights and Biomedicine, which was adopted by the Committee of Ministers of the Council of Europe on 19 November 1996 and opened for signature in Oviedo on 4 April 1997, and which entered into force on 1 December 1999.³ The Minister of Justice of the Republic of Poland signed the Convention in question on 5 May 1999, although it has not yet been ratified, as it continues to raise numerous controversies. Consequently, the Team for the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine was dissolved pursuant to the Order of the Minister of Health of 13 October 2015, the body which had been responsible for preparing its ratification.⁴ Several other European countries are in a similar situation, including the Netherlands, Luxembourg, Sweden and Italy.⁵

The definition of a biotechnological progress standard first requires the identification of its related structural elements, which should, of course, be regarded as the content of the analysed concept, so that a methodologically correct equivalence definition can subsequently be formulated. Although the term “biotechnological progress standard” is commonly used, reference is sometimes also made to a “bioethical standard”, which does not, however, appear to be a justified approach [Grzymkowska 2008, 21-27]. Undoubtedly, this results from the fact that the Convention on Human Rights and Biomedicine is very often referred to as the Bioethics Convention, as it gives legal force to the fundamental principles of medical ethics. Initially, it was

³ See the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine (adopted by the Committee of Ministers of the Council of Europe on 19 November 1996) [hereinafter: Convention on Human Rights and Biomedicine], <https://rm.coe.int/0900001680926e40> [accessed: 28.02.2026].

⁴ Order of the Minister of Health of 13 October 2015 on the dissolution of the Team for the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine, and the implementation of Directives 2004/23/EC, 2006/17/EC and 2006/86/EC concerning safety and quality standards for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells, including gametes, gonads, embryonic and foetal tissues, and reproductive organs or parts thereof (Official Journal of the Ministry of Health 2015, item 59).

⁵ See <https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treaty-num=164> [accessed: 28.02.2026].

intended to bear such a title; however, it was ultimately considered misleading, as it does not emphasise the significance of legal regulation and, moreover, it can never promote all ethical options [de Wachter 1997, 13-23]. It should be strongly emphasized that only the Council of Europe has developed binding standards concerning the mutual relationship between bioethics and human rights [Ashcroft 2010, 639-60]. Up to that point, both bioethical norms and human rights had been unstructured practices resulting from the interaction of a wide range of factors: doctrine, intellectual debate, institutional frameworks, political interests, and the activities of interested individuals [Grzymkowska 2008, 21]. Ultimately, the Council of Europe succeeded in developing biotechnological progress standards characterised by inherent universality and generality, by referring to legal principles rather than detailed legal norms linked to specific legal constructs [Jackiewicz 2008, 137-38; Lipowski 2010, 126]. In any case, it should further be established that legal principles are then a key structural element, the carrier of which is an international agreement subject to ratification; consequently, they must be strictly binding [Jackiewicz 2008, 138]. Generally, they are accompanied by additional structural elements of a supplementary nature, which also occur outside the ratified international treaty, namely in additional protocols issued on its basis [Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 26]. Accordingly, it may now be accepted that a biotechnological progress standard within the healthcare system always identifies a legal principle contained in a ratifiable international treaty, designed to protect human rights in the field of biomedicine in light of rapidly advancing biotechnological progress.

On the basis of the above, it should further be stated that a biotechnological progress standard within the healthcare system is a legal institution. This is because legal principles are regarded, from the perspective of law and legal science, as legal institutions, insofar as they derive directly or indirectly from legal norms and are aimed at a legally defined purpose. Legal principles therefore mean the norms of applicable law or their logical consequences assessed as fundamental for a given legal system or part thereof [Kmieciak 2000, 72]. Generally, legal principles appear in two basic senses: a descriptive sense – as a normative model for the shaping of a legal institution in aspects that are particularly significant for that institution; and a directive sense – as legally binding norms belonging to a given legal system, in some sense superior to other norms of that system, including in particular legal institutions to which a special role is assigned within the legal system, different from the roles assigned to the remaining norms of that system [Leszczyński 2005, 72]. Naturally, the principles constituting the biotechnological progress standard within the healthcare system should be classified as directive principles, as they are intended to directly serve the protection of human rights. Undoubtedly, the role of legal principles in their directive sense is expressed

in the fact that they define duties to achieve certain states or articulate generally recognised values that are to be respected [Stahl 2004, 72]. Human rights should be further understood as specific subjective rights that a person is entitled to by reference to natural law [Motyka 2004, 16]. Since they are: inherent, universal, inalienable, inviolable, indivisible, and interdependent [ibid., 17]. Thus, human rights, belonging to the most important phenomena and categories of legal orders, are indeed strongly connected with the axiological reasoning of natural law, but they also have two key perspectives of primary practical importance: a regulatory and an institutional one [Leszczyński 2025, 17]. Specifically, from a regulatory perspective, this refers to the Convention on Human Rights and Biomedicine, whereas the institutional perspective encompasses the biotechnological progress standards contained therein. Undoubtedly, these two perspectives must be appropriately correlated in order to ensure the most effective protection of human rights. This requires first emphasising the regulatory perspective so that the institutional perspective can subsequently be rationally taken into account.

2. REGULATION OF BIOTECHNOLOGICAL PROGRESS STANDARDS

The assessment of the Convention on Human Rights and Biomedicine is not unequivocal from a regulatory perspective. At the outset, it is necessary to make certain observations regarding the legislative technique employed. First and foremost, it should be noted that it establishes only a general legal framework for the protection of human rights in the field of biomedicine, although it may be further specified in agreed additional protocols.⁶ To develop the principles in selected areas of biomedicine, the following additional protocols have been adopted to date: the Additional Protocol on the Prohibition of Cloning Human Beings, opened for signature in Paris on 12 January 1998 and entering into force on 1 March 2001; the Additional Protocol concerning Transplantation of Organs and Tissues of Human Origin, opened for signature in Strasbourg on 24 January 2002 and entering into force on 1 May 2006; the Additional Protocol concerning Biomedical Research, opened for signature in Budapest on 25 January 2005 and entering into force on 1 September 2007; and the Additional Protocol concerning Genetic Testing for Health Purposes, opened for signature in Strasbourg on 27 November 2008 and entering into force on 1 July 2015.⁷ Since the Conven-

⁶ See Article 31 of the Convention on Human Rights and Biomedicine.

⁷ See http://www.coe.int/t/dg3/healthbioethic/texts_and_documents/ETS168_Polish.pdf; <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680081562>; <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=090000168008371a>; <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680084824> [accessed: 17.05.2026]

tion on Human Rights and Biomedicine covers a broad scope of regulation, it had to take the form of a framework convention and therefore subsequently requires further specification in additional protocols [Jasudowicz, Czepek, and Kapelańska-Pręgowska, 2014, 13]. For the sake of universality, the authentic languages of the Convention on Human Rights and Biomedicine are both French and English, in order to reconcile the experience of fundamentally different legal cultures: civil law and common law. Consequently, numerous issues not covered by legal consensus, as well as provisions that are difficult to interpret or mutually exclusive legal recommendations, were omitted [Biesaga 2006, 25; de Wachter 1997, 20]. Despite these limitations, it was not possible to eliminate all controversies, for example regarding the admissibility of medical interventions or research experiments on persons incapable of giving consent, which was criticised in Germany due to associations with Nazi medicine [Biesaga 2006, 26]. In consequence, an attempt was made to introduce terminological order, although it cannot be regarded as having been properly achieved. In order to eliminate disputes, for example concerning the key definition of a “person”, the Convention uses, alongside the terms “person” or “any person” (French: *personne, toute personne*) in both its title and other provisions, the significantly broader term “human being” (French: *l'être humain*) (Articles 1, 2, 5, 6, 7, 15, 16) [Biesaga 2006, 26ff].⁸ At the same time, terms closely related in meaning also appear, namely: “individual” (French: *individu*) and “member of the human species” (French: *appartenance à l'espèce humaine*).⁹

In turn, the assessment of the Convention on Human Rights and Biomedicine must also address the substantive content of the regulation. It should therefore be emphasized from the outset that it remains the only internationally legally binding instrument for the protection of human rights in the field of biomedicine to date [Dąbrowska 2019, 35; Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 13]. At the same time, it distinguished biotechnological progress standards within the healthcare system that possess a legally binding character, something achieved therein for the first time and never subsequently supplemented outside it [Salako 2008, 339-56]. Moreover, it is emphasized that they have been attributed a specific semi-imperative character, since they may, as a rule, not be subject to limitations unless such limitations are provided for in domestic law with regard to the protection of public safety, the prevention of crime, the protection of public health, or the protection of the rights and freedoms of others¹⁰. On the other hand, this specific semi-imperative character is also reflected in the possibility of guaranteeing a higher level of protection under domestic law; howev-

⁸ See the Convention on Human Rights and Biomedicine.

⁹ See the Preamble to the Convention on Human Rights and Biomedicine.

¹⁰ See Article 26 of the Convention on Human Rights and Biomedicine.

er, reservations may likewise be entered in the event of their incompatibility with domestic law.¹¹ Undoubtedly, it must also be emphasized that the application of the Convention on Human Rights and Biomedicine is not directly dependent on its ratification, as it possesses interpretative value that is difficult to overestimate. Its provisions have repeatedly been invoked by domestic courts, including the Polish Supreme Court of Poland, as guidance supporting the interpretation of national law [Dąbrowska 2019, 35; Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 13-14]. A similar situation occurs in the case law of the European Court of Human Rights, which admittedly has no jurisdiction to adjudicate on the basis of the Convention itself; however, by treating it, in accordance with the Vienna Convention on the Law of Treaties of 23 May 1969, as an important interpretative context, the Court has used it in the interpretation of the European Convention on Human Rights of 4 November 1950 [Dąbrowska 2019, 35; Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 14; Seatzu 2015, 5-14]. Accordingly, the prevailing view is that the Convention on Human Rights and Biomedicine represents a clear step forward in the protection of human rights. This is because it has become a key legal instrument for properly regulating the rapidly developing applications of biology and medicine [Dąbrowska 2019, 36]. The term “applications of biology and medicine” was thus given preference at that time, particularly over the term “life sciences”, which was considered too extensive, as it is more appropriately correlated with the human being [Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 26]. In any case, the Convention on Human Rights and Biomedicine covers all biological and medical applications involving the human being, which is equally reflected in prevention, diagnosis, therapy, and research.¹²

3. TYPES OF BIOTECHNOLOGICAL PROGRESS STANDARDS

Although the Convention on Human Rights and Biomedicine establishes only a certain European minimum of biotechnological progress standards, which has become common to its signatories, this is due to existing ethical divergences in the provision of many healthcare services within the healthcare system. Among these, a clear distinction should consistently be made between general and specific biotechnological progress standards. General biotechnological progress standards currently include: the standard of protection of human dignity and the identity of the human being, the standard of the primacy of the human person, and the standard of equitable access

¹¹ See Articles 26 and 36 of the Convention on Human Rights and Biomedicine.

¹² *Ibid.*

to healthcare.¹³ On many occasions, the indicated general biotechnological progress standards are identified under the same names with its general principles, which of course constitutes a certain simplification referring to their key structural elements. Undoubtedly, the standard of protection of human dignity and the identity of the human being guarantees every person, without discrimination, respect for their integrity as well as other fundamental rights and freedoms in the context of the applications of biology and medicine. Accordingly, fundamental anthropological values are then established, which are identified with the terms “dignity”, “identity”, and “integrity” [Krajewska MMVI, 121-45]. These fundamental values should then serve as a basis for the interpretation of all human rights in biomedicine [Dąbrowska 2019, 37; Biesaga 2006, 25]. At the same time, the signatories of the Convention on Human Rights and Biomedicine agreed to adopt, within domestic law, the necessary measures to achieve this objective. The standard of the primacy of the human being, in turn, is based on the principle that the interest and welfare of the human being prevail over the exclusive interest of society and science. Accordingly, the traditional dominance of the value associated with the term “the interests of society and science” over the value encompassed by the term “the interests and welfare of the human being” is rejected [Safjan 2000, 5-18]. Therefore, scientific achievements and even their most promising applications must not be pursued in violation of human rights [Safjan 2000, 5-18]. Finally, the standard of equitable access to healthcare was established, which requires appropriate measures to be taken in order to ensure fair access to high-quality healthcare, taking into account health needs and available resources. In this context, justice is a value understood as the absence of discrimination and a satisfactory degree of effectiveness in guaranteeing access to healthcare [Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 29]. However, the implementation of appropriate measures to this end rests with the signatories of the Convention on Human Rights and Biomedicine.

From the perspective of specific biotechnological progress standards, it is first necessary to acknowledge that they are linked to specific principles, as they generally relate to particular issues concerning the protection of human rights in biomedicine. Accordingly, they indirectly derive from applicable law, as they constitute logical consequences of its norms. To the category of specific biotechnological progress standards, the following may currently be included: consent to medical intervention, respect for privacy and the right to information, protection of the human genome, responsible transplantation, and safeguards in scientific research. At times, specific biotechnological progress standards are also identified with specific principles,

¹³ See Chapter I (General provisions), Articles 1-3 of the Convention on Human Rights and Biomedicine.

although this unfortunately occurs without deeper theoretical reflection [Jasudowicz, Czepek, and Kapelańska-Pręgowska 2014, 39, 47]. As regards consent to medical intervention, it must be assumed that any medical intervention is preceded by the free and informed consent of the person undergoing it, where that person has the capacity to give such consent. In the case of persons who are unable to express their will, appropriate solutions corresponding to their situation are applied. Consent to medical intervention may take various forms, including even tacit consent. For the respect of privacy and the right to information, it is important that every person has the right to know all collected information concerning their health. Naturally, the right to know is accompanied by a corresponding right not to know such information. At the same time, both the right to know and the right not to know are subject to certain limitations, whether in the interests of the patient or for the protection of the rights of third parties or collective interests [ibid. 2014, 37]. Undoubtedly, the protection of the human genome is then reduced to the prohibition of any discrimination against a person on the basis of their genetic heritage [ibid., 39]. Interventions aimed at modifying genetic traits that are not related to disease, as well as those intended to introduce modifications into the genome of offspring, are also prohibited [Dąbrowska 2019, 38]. Finally, medically assisted procreation techniques are prohibited insofar as their purpose is the selection of the sex of the future child, except in cases where such selection is intended to avoid a serious sex-linked hereditary disease. In the same spirit, the prohibition of human cloning has also been introduced. Particular importance is likewise attached to responsible transplantation from any type of donor, with guarantees of the rights of persons incapable of giving consent to organ procurement. However, the human body and its parts must not give rise to financial gain or be improperly used. Finally, protection in scientific research is also established, which is generally conducted freely, although subject to numerous limitations with regard to all research participants, including persons incapable of giving consent, as well as *in vitro* embryos.

CONCLUSION

In conclusion, it should be emphasized that the Convention on Human Rights and Biomedicine emerges from European culture, which clearly refers to its Christian roots and numerous moral awakenings following tragic historical experiences [Biesaga 2006, 25]. Accordingly, it rejects an extreme scientific, liberal, and secular orientation characteristic of American culture [ibid.]. Undoubtedly, it expresses a mature anthropological outlook, which is primarily characterized by: the primacy of the dignity and identity of the human being over freedom, and the primacy of the human being over society, science,

and technology [ibid., 26]. In this regard, it constitutes an important point of reference for the protection of human rights in the field of biomedicine, but it does not resolve worldview-related disputes. For this reason, difficulties arise in the ratification of the Convention on Human Rights and Biomedicine, although almost everyone recognises the need to address increasingly complex bioethical challenges. To some extent, this also reflects states' reluctance to be bound by an international treaty, as its implementation would, after all, need to be ensured effectively. Although the Convention on Human Rights and Biomedicine provides for the right to appropriate compensation for unjustified harm resulting from a medical intervention and requires the imposition of sanctions in such cases, it does not specify the procedure for pursuing such claims under domestic law where a State, after ratification, fails to fulfil its obligations. At this point, it should also be noted that individual complaints cannot be brought directly on the basis of the Convention; rather, it requires appropriate implementation in domestic law. Such implementation must take into account the need to consider the following categories of provisions: provisions that are in clear contradiction with the Convention, which entail their complete amendment; provisions that reflect the model set out in the Convention but do so imprecisely, and therefore require appropriate revision; provisions that generally meet the requirements of the Convention but require supplementation or clarification through a pro-conventional interpretation; and the absence of provisions required under the Convention, which creates space for legislative intervention.¹⁴ In any case, the Convention on Human Rights and Biomedicine should soon address current issues such as human genetic engineering, the enhancement of human nature, and the definition of the human embryo.

REFERENCES

- Ashcroft, Richard E. 2010. "Could Human Rights Supersede Bioethics?" *Human Rights Law Review* 10(4):639-60.
- Biesaga, Tadeusz. 2006. "Europejska Konwencja Bioetyczna." *Medycyna Praktyczna* 11-12:25.
- Breczko, Anetta. 2011. *Podmiotowość prawna człowieka w warunkach postępu biotechnomedycznego*. Białystok: TEMIDA 2.
- Dąbrowska, Anna. 2019. "Standardy bioetyczne Rady Europy." *Prawo i Więź* 4(30):35.
- de Wachter, Maurice. A.M. 1997. "The European convention on bioethics." *Hastings Cent. Rep.* 27(1):13-23.

¹⁴ See the reply of the Secretary of State in the Ministry of Justice – acting on behalf of the Prime Minister – to question No. 3402 concerning the ratification of the European Convention on Human Rights and the Dignity of the Human Being with regard to the Application of Biology and Medicine <https://orka2.sejm.gov.pl/IZ3.nsf/0ef7f697fde785dac125737800332d33/cfee1e4ea3ce409ec12574d0003fa0b0?OpenDocument> [accessed: 28.02.2026].

- Grzymkowska, Maja. 2008. "Czy Europie potrzebne są wspólne standardy bioetyczne?" *Europejski Przegląd Sądowy* 4:21-27.
- Jackiewicz, Andrzej I. 2008. *Prawo do dobrej administracji jako standard europejski*. Toruń: Adam Marszałek.
- Jasudowicz, Tadeusz. 1996. *Administracja wobec praw człowieka*. Toruń: Dom Organizatora TNOiK.
- Jasudowicz, Tadeusz, Jakub Czepek, and Julia Kapelańska-Pręgowska. 2014. *Międzynarodowe standardy bioetyczne. Dokumenty i orzecznictwo*. Warszawa: Wolters Kluwer Business.
- Kmieciak, Zbigniew. 2000. *Ogólne zasady prawa i postępowania administracyjnego*. Warszawa: PWN.
- Krajewska, Atina. MMVI "Pojęcie godności w prawie europejskim i porządkach krajowych w kontekście rozwoju biomedycyny." *Problemy Współczesnego Prawa Międzynarodowego, Europejskiego i Porównawczego* IV:121-45.
- Kurcek, Anna. 2026. "Historia biotechnologii." <https://e-biotechnologia.pl/artykuly/historia-biotechnologii/> ;accessed: 28.02.2026].
- Leszczyński, Jerzy. 2005. "Obowiązek prawny." In *Wielka encyklopedia prawa*, edited by Brunnon Hołyst, and Eugeniusz Smoktunowicz, 72. Warszawa: Wydawnictwo Prawo i Praktyka Gospodarcza.
- Leszczyński, Leszek. 2025. "Istota oraz typy ochrony wolności i praw człowieka." In *Podstawowe standardy europejskiego systemu ochrony praw człowieka*, edited by Leszek Leszczyński, and Bartosz Liżewski, 17. Lublin: Wydawnictwo UMCS.
- Lipowski, Paweł. 2010. "Zakres przedmiotowy Europejskiej Konwencji Bioetycznej z dnia 7 kwietnia 1997 r. a stan regulacji prawnych w Polsce." In *Bioetyka w zawodzie lekarza*, edited by Weronika Chańska, and Jan Hartman, 126. Warszawa: Wolters Kluwer Business.
- Motyka, Krzysztof. 2004. *Prawa człowieka. Wprowadzenie. Wybór źródeł*. Lublin: Verba.
- Potrzeszcz, Jadwiga. 2013. *Bezpieczeństwo prawne z perspektywy filozofii prawa*. Lublin: Wydawnictwo KUL.
- Safjan, Marek. 2000. "Prawo polskie a Europejska Konwencja Bioetyczna." *Prawo i Medycyna* 5:5-18.
- Salako, Solomon E. 2008. "The Council of Europe Convention on Human Rights and Biomedicine: a new look at international biomedical law and ethics." *Med Law*. 27(2):339-56.
- Shurtleff, William, and Akiko Aoyagi. 2021. "History Of Koji – Grains And/Or Soybeans Enrobed With A Mold Culture (300 Bce To 2021): Extensively Annotated Bibliography And Sourcebook, Soyinfo Center." <https://www.soyinfocenter.com/pdf/265/Koji.pdf> [accessed: 01.02.2026].
- Stahl, Małgorzata. 2004. "Zasada demokratycznego państwa prawa." In *Prawo administracyjne. Pojęcia, instytucje, zasady w teorii i orzecznictwie*, edited by Zofia Duniewska, Barbara Jaworska-Dębska, Ryszarda Michalska-Badziak, et al., 72. Warszawa: Difin.
- Seatzu, Francesco. 2015. "The Experience of the European Court of Human Rights with the European Convention on Human Rights and Biomedicine." *Utrecht Journal of International and European Law* 5:31(81). <http://dx.doi.org/10.5334/ujiel.da>