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(NON-)MANDATORY NATURE AND PROBATIVE VALUE OF DNA ANALYSIS IN MATERNITY AND PATERNITY PROCEEDINGS

Case law of the European Court of Human Rights**

ABSTRACT: The European Court of Human Rights consistently recognizes the right to know one's biological origins as an integral element of the right to respect for private and family life, as well as the internationally recognized right of the child to identity. States Parties to the European Convention on Human Rights have a positive obligation to ensure a fair balance between the child's right to know their origins, on the one hand, and the putative parent's right to respect for private life and physical integrity, or the existing legal parents' right to preserve the stability of family relations, on the other hand. In this paper, the author examines the scope and probative value of DNA analysis, while addressing broader socio-ethical issues – whether DNA analysis can or should be mandatory, the consequences of non-compliance, and whether the legal system provides alternatives to refusal. This research aims to synthesize the key standards in this field through a theoretical and empirical analysis of the Court's case law. The author employed the following

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methods in the paper: the normative-dogmatic method, the comparative law method, content analysis, the case study method, and purposive sampling.

Keywords: DNA analysis; medical expert testimony; right to know one's origins; case law of the European Court of Human Rights; right to respect for private and family life; maternity and paternity disputes

INTRODUCTION

The Convention on the Rights of the Child guarantees the child's right to know their origins "as far as possible."¹ In legal theory, it has been pointed out that the phrase "as far as possible" should be translated as "whenever possible," as a much stricter and less subjective qualification of the possibility of learning one's origins.²

With the advent of DNA analysis, which is based on each person's unique genetic constitution (except in the case of identical twins),³ proceedings for establishing or disputing parentage have undergone a revolutionary transformation, shifting from the realm of often unreliable circumstantial evidence to that of near-absolute scientific certainty.⁴ Using DNA analysis, the existence of biological parentage can be established with a probability of 99.999% to 99.99999%, and excluded with 100% certainty,⁵ using all cells of the human

¹ Art. 7. of the Convention on the Rights of the Child. Law on the Ratification of the United Nations Convention on the Rights of the Child, *Official Gazette of the SFRY – International Treaties*, No. 15/90, and *Official Gazette of the FRY – International Treaties*, No. 2/97. Cf. Art. 59 of the Family Law, *Official Gazette of the RS*, No. 18/2005, 72/2011. – other law, and 6/2015, as well as Art. 64, para. 2 of the Constitution of the Republic of Serbia, *Official Gazette of the RS*, No. 98/2006 and 115/2021.

² Draškić, M. (2025). *Porodično pravo i prava deteta*. Belgrade: Faculty of Law, University of Belgrade, 253.

³ Draškić, M. (2020). *Komentar Porodičnog zakona: praksa Evropskog suda za ljudska prava, praksa Ustavnog suda, praksa redovnih sudova. Prema stanju zakonodavstva od 1. februara 2020. godine*. Belgrade: Official Gazette, 597. A DNA fingerprint is compared to the graphic code used for serial marking of products on the market. *Ibid.*

⁴ The procedure is carried out by comparing the child's DNA profile with the DNA profile of the parent whose paternity or maternity is being established/disputed, by comparing specific gene locations or DNA regions at chromosomal loci that differ in structure and length. Jović-Prlainović, O. (2021). Presude Evropskog suda za ljudska prava protiv Republike Srbije o primeni genetskog testiranja u paternitetskim parnicama. *Foreign legal life*, 65(1), 48.

⁵ Ponjavić, Z. (2023). *Uticao biomedicine na srodstvo*. Belgrade: Official Gazette, 164; See also: <https://dnk.rs/Utvrđivanje-ocinstva>, accessed on December 10, 2025.

body from various samples (except red blood cells), taken from living persons or human remains.⁶

The European Court of Human Rights (hereinafter: the ECtHR) recognizes the knowledge of one's biological origins as a vital aspect of every individual's private life and identity protected under Article 8 of the European Convention on Human Rights⁷ (hereinafter: the ECHR). States Parties have a positive obligation to establish an effective legal mechanism for the exercise of the child's right to know their origins and to ensure that a "fair balance" is struck between the child's right to know their origins, on the one hand, and the putative parent's right to respect for private life/bodily integrity or the right of the existing legal parents to preserve the stability of family relations, on the other. In this respect, they enjoy a "margin of appreciation," so the existence of such a balance will depend on the circumstances of the particular case.

The subject of the paper is the (non-)mandatory nature and probative value of DNA analysis in maternity and paternity proceedings, with the aim of synthesizing the most important standards in this field through a theoretical and empirical analysis of the case law of the ECtHR.

The subject matter is presented in the paper through several thematic sections. After examining the implications of theories on the basis of the parent-child legal relationship for issues of (non-)mandatory nature and probative value of DNA analysis in maternity and paternity proceedings, the focus of the research shifts to an analysis of the legal regimes governing DNA analysis in maternity and paternity proceedings in comparative and domestic law, with particular reference to the solution adopted in the Law on Establishing

⁶ Draškić, M. (2020). *Komentar Porodičnog zakona: praksa Evropskog suda za ljudska prava, praksa Ustavnog suda, praksa redovnih sudova. Prema stanju zakonodavstva od 1. februara 2020. godine*. Belgrade: Official Gazette, 597. The most advanced and reliable medical expert examination for determining origins before the advent of DNA analysis was the analysis of the so-called human leukocyte antigen (HLA Ag).

⁷ Jović-Prlainović, O. (2021). Presude Evropskog suda za ljudska prava protiv Republike Srbije o primeni genetskog testiranja u paternitetskim parnicama. *Foreign legal life*, 65(1), 53. Art. 8 of the ECHR reads:

"1. Everyone has the right to respect for his private and family life, his home and his correspondence.

2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others." Law on the Ratification of the European Convention for the Protection of Human Rights and Fundamental Freedoms (with Protocols), *Official Gazette of Serbia and Montenegro – International Treaties*, No. 9/2003, 5/2005, and 7/2005. – corr., and *Official Gazette of the RS – International Treaties*, No. 12/2010, and 10/2015.

the Facts about the Status of Newborn Children Suspected of Having Disappeared from Maternity Hospitals in the Republic of Serbia⁸ (the Law on Missing Babies). The central part of the paper is then devoted to an analysis of the case law of the European Court of Human Rights using the methods of content analysis and case study on a selected sample of representative judgments. Finally, the conclusion summarizes the most important findings and formulates the corresponding recommendations.

IMPLICATIONS OF THEORIES ON THE BASIS OF THE LEGAL PARENT-CHILD RELATIONSHIP FOR THE (NON-)MANDATORY NATURE AND PROBATIVE VALUE OF DNA ANALYSIS

By analyzing the literature, two theories were identified on the primary basis of the legal parent-child relationship, which directly shape the issues of the (non-)mandatory nature and probative value of DNA analysis in maternity and paternity proceedings.

According to the first, the “socio-legal” theory, parentage is primarily a legal and social relationship whose defining features lie in psychosocial stability, long-term relationships, and the factor of effective care for the child. Under this theory, knowledge of the biological truth is not always in the child’s best interests: priority is given to the continuity and quality of relationships, which is why both the admissibility of the use of DNA evidence and its probative value must be limited by procedural and value-based considerations and aligned with other values and human rights, since law is *ars boni et aequi*.⁹

This theory points to the limited use of DNA analysis and its weak probative value, as well as to its non-mandatory, that is, voluntary, application.

The second theory gives precedence to biological truth as the foundation of the legal parent-child relationship.¹⁰ Its main argument is that it is always in

⁸ Law on Establishing the Facts about the Status of Newborn Children Suspected of Having Disappeared from Maternity Hospitals in the Republic of Serbia, *Official Gazette of the RS*, No. 18/2020.

⁹ Ponjavić, Z. (2023). *Uticaj biomedicine na srodstvo*. Belgrade: Official Gazette, 164; See also: <https://dnk.rs/Utvrđivanje-ocinstva>, accessed on December 10, 2025, 23–24, 161–162, 167–169, 181–197. See also: Ponjavić, Z., Palačković, D. (2017). Pravo na dokaz genetskom ekspertizom u postupku utvrđivanja porekla deteta. *Pravni život*, 600(10), 123–138.

¹⁰ Draškić, M. (2000). Dobrovoljno ili obavezno podvrgavanje medicinskom veštačenju u maternitetskim i paternitetskim parnicama? *Law – Theory and Practice*, 17(2), 22; Cvejić-Jančić, O. (2018). Refleksije o značaju krvne veze u odnosima roditelja i dece. *Pravni život*, 607(9), 667–670, 674.

the child's best interests to grow up in an atmosphere of truth and trust, while the stability of the family environment must not be built on concealment of the truth, especially because long-term stability is often not guaranteed, which can be a consequence of divorce, the breakdown of non-marital unions, or the death of the legal parent.

This theory, on the other hand, emphasizes the mandatory use of DNA analysis and its strong probative value, as well as mandatory testing, but at the same time advocates a functional separation between the right to know the truth about one's origins, as an imperative, and the right to exercise parental rights, which would be subject to a separate judicial assessment through the prism of the child's best interests; accordingly, a child could have more than two parents with different roles (biological and sociological parentage).¹¹

LEGAL REGIME OF DNA ANALYSIS IN MATERNITY AND PATERNITY DISPUTES – COMPARATIVE CASE LAW AND THE SOLUTION ADOPTED IN DOMESTIC LAW

This part of the paper analyzes the regimes governing the (non-)mandatory nature and probative value of DNA analysis in maternity and paternity proceedings in comparative and domestic law.

Comparative Law

In comparative law, there are also two models for establishing origins. On the one hand, there is the Germanic system, similar to the Nordic and common-law systems, which is based on the blood tie as the basis for establishing a child's origins and under which establishing the biological truth regarding the child's origins is the court's primary objective; accordingly, the court is tasked with securing the truth in the manner formulated as "with or against everyone, by all means, and at any cost." The other is the Romance model, based on the principle of the voluntary establishment of the legal parent-child relationship, in which greater attention is paid to psychosocial reality. The differing approaches within these systems to biological truth also condition the courts'

¹¹ Draškić, M. (2000). Dobrovoljno ili obavezno podvrgavanje medicinskom veštačenju u maternitetskim i paternitetskim parnicama? *Law – Theory and Practice*, 17(2), 22; Cvejić-Jančić, O. (2018). Refleksije o značaju krvne veze u odnosima roditelja i dece. *Pravni život*, 607(9), 667–670, 674.

different powers with respect to DNA evidence,¹² as well as with respect to whether or not the parties are required to undergo DNA testing. Comparative analysis indicates two basic approaches to a party's refusal to undergo DNA analysis: (1) direct coercion/physical force (for example, in Germany with police assistance),¹³ and (2) indirect sanctions (fines, imprisonment) or procedural consequences (losing the case) that encourage cooperation.

In a large number of countries, including Germany, refusal to undergo testing, as well as the DNA evidence obtained, constitutes a criterion evaluated by the court within the framework of the principle of free evaluation of evidence¹⁴ – provided that it is not treated as the sole and decisive criterion in evidentiary proceedings. This model differs from the English mechanism of “drawing inferences” from refusal to take a DNA test,¹⁵ which often leads to an unfavorable outcome in the litigation for the opposing party, even though the other evidence supports the opposite conclusion. Namely, in England, parentage is often resolved as an incidental, that is, a preliminary issue, for example, in maintenance proceedings, where the preliminary issue of parentage determines the decision on the main issue, unlike in continental European legal systems such as the French one, where a judgment on origins has an *erga omnes* effect, making judges reluctant to deliver a judgment based solely on procedural disobedience.¹⁶ In Greek law, there is a presumption that the opposing party's allegations are true in the event of refusal to undergo a DNA test where there are no special medical reasons.¹⁷ Some countries prescribe fines or imprisonment. For example, in Austria, fines, imprisonment, and even the compulsory bringing of a person for testing are applied, though not physical force, for the purpose of carrying out the test.¹⁸ In Italian law, third parties may be punished by a symbolic fine because the outcome of the dispute does not affect them.¹⁹ In Switzerland, in addition to physical coercion, which was

¹² Ponjavić, Z. (2023). *Uticaj biomedicine na srodstvo*. Belgrade: Official Gazette, 164; See also: <https://dnk.rs/Utvrđivanje-ocinstva>, accessed on December 10, 2025, 175–176.

¹³ Deutscher Bundestag, *Zivilprozessordnung* (ZPO), Berlin, 2005, para. 372a.

¹⁴ Ponjavić, Z. (2023). *Op. cit.*, 175–176.

¹⁵ Parliament of the United Kingdom. *Family Law Reform Act 1969*. London, 1969, s. 20.

¹⁶ Frank, R. (1996). Compulsory physical examinations for establishing parentage. *International Journal of Law, Policy and the Family*, 10(2), 207; Draškić, M. (2000). Dobrovoljno ili obavezno podvrgavanje medicinskom veštačenju u maternitetskim i paternitetskim parnicama? *Law – Theory and Practice*, 17(2), 20.

¹⁷ Draškić, M. (2000). *Op. cit.*, 602.

¹⁸ Frank, R. (1996). *Op. cit.*, 208.

¹⁹ *Ibid.*, 207.

prohibited even under the previous regulation,²⁰ indirect coercion through punishment for contempt of court is no longer permitted either.²¹

Positive Law of the Republic of Serbia

In the law of the Republic of Serbia, the Family Law (hereinafter: the FL) contains no special provisions on DNA analysis in maternity and paternity proceedings. The relevant provision of the FL stipulates that, in proceedings concerning family relations, the court may establish facts even when they are not disputed between the parties, and may also investigate, of its own motion, facts that neither party has put forward.²² Therefore, in these actions, the court's powers are based on the investigative principle. The FL also provides that, in maternity and paternity actions, no default judgment may be rendered, nor a judgment based on admission or waiver, and that the parties may not enter into a court settlement.²³ In that sense, the use of all means of evidence is allowed in these actions, including expert examination through DNA analysis. The taking of this evidence is decided by the court at its discretion, upon a party's motion or *ex officio*. Such a position of the court serves the function of establishing the biological truth, which, to a certain extent, corresponds to the Germanic model.²⁴ In domestic case law, there are numerous judgments establishing a child's origins even without expert medical evidence.²⁵

In Serbia, DNA evidence is only one item of evidence, and not the key criterion, in accordance with the principle of free evaluation of evidence under the Law on Civil Procedure²⁶ (hereinafter: the LCP), under which the court decides, according to its own conviction, on the basis of a conscientious and careful assessment of each item of evidence separately, of all the evidence as a whole, and on the basis of the results of the entire proceedings, which facts it will consider proven. In this regard, the theory emphasizes that the expert wit-

²⁰ Frank, R. (1996). Compulsory physical examinations for establishing parentage. *International Journal of Law, Policy and the Family*, 10(2), 207–208.

²¹ Ponjavić, Z. (2023). *Uticaj biomedicine na srodstvo*. Belgrade: Official Gazette, 221–222.

²² Art. 205 of the Family Law.

²³ Art. 258 of the Family Law.

²⁴ Ponjavić, Z. (2023). *Op. cit.*, 176.

²⁵ Draškić, M. (2000). Dobrovoljno ili obavezno podvrgavanje medicinskom veštačenju u maternitetskim i paternitetskim parnicama? *Law – Theory and Practice*, 17(2), 601–603.

²⁶ Art. 8. Law on Civil Procedure, *Official Gazette of the RS*, No. 72/2011, 49/2013. – decision of the Constitutional Court, 74/2013. – decision of the Constitutional Court, 55/2014, 87/2018, 18/2020, and 10/2023. – other law.

ness must seek to provide the court with a “report offering the greatest possible degree of reliable assistance in making the final decision.”²⁷

If a party refuses to undergo DNA analysis, the court will likewise assess that refusal on the basis of the above rule on the free evaluation of evidence, but also on the basis of the rules on the burden of proof, according to which:

“If the court cannot establish a fact with certainty based on the evidence presented (Art. 8), it will apply the rules on the burden of proof regarding the existence of that fact.

The party claiming to have a right bears the burden of proving the fact that is essential for the emergence or exercise of that right, unless otherwise provided by law.

The party disputing the existence of a right bears the burden of proving the fact that prevented the emergence or exercise of that right, or as a result of which the right ceased to exist, unless otherwise provided by law.”²⁸

Regarding the obligation to undergo DNA analysis in these proceedings, there is no uniform position in domestic legal theory. Some authors believe that the duty to cooperate and to undergo a DNA test is comparable to the obligation to provide a joint document, arguing that the taking of a sample is minimally invasive and relatively safe. Another group of authors, however, emphasizes the protection of physical integrity and the adequacy of the free evaluation of evidence, insisting on written informed consent in the presence of a doctor.²⁹ There are also arguments in favor of mandatory DNA testing, subject to a proportionality assessment where there are *prima facie* circumstances, that is, indicia justifying suspicion, “especially if it is carried out on material separated from the body” (e.g., nails, hair).³⁰ Nevertheless, there is a noticeable agreement in theory regarding the position that the court’s decision should not be based solely on the refusal to undergo a DNA test.³¹

In legal theory, on the other hand, there is also disagreement as to whether the rules on the objective burden of proof are in accordance with the

²⁷ Mušicki, D., Novaković, S., Hancko-Mesaroš, Č. (1994). Osporavanje bračnog očinstva. *Glasnik of the Bar Association of Vojvodina*, 64(4), 26.

²⁸ Art. 231 of the LCP.

²⁹ Kovaček-Stanić, G. (2014). *Porodično pravo: partnersko, dečje i starateljsko pravo*. Novi Sad: Faculty of Law, University of Novi Sad, 288; Ponjavić, Z. (2023). *Uticaoj biomedicine na srodstvo*. Belgrade: Official Gazette, 164; See also: <https://dnk.rs/Utvrdjivanje-ocinstva>, accessed on December 10, 2025, 202.

³⁰ *Ibid.*, 210–211.

³¹ Draškić, M. (2000). Dobrovoljno ili obavezno podvrgavanje medicinskom veštačenju u maternitetskim i paternitetskim parnicama? *Law – Theory and Practice*, 17(2), 21; Ponjavić, Z. (2023). *Op. Cit.*, 216.

investigative principle.³² In the judgment *Jevremović v. Serbia*, which found, *inter alia*, a violation of Article 8 of the ECHR, the ECtHR did not find the rules on the burden of proof themselves inadequate, but rather the practice of repeatedly quashing judgments and remanding the case for retrial in appellate proceedings, which, *inter alia*, also led to the finding of a violation of the right to a hearing within a reasonable time under Article 6 of the ECHR.³³

The author believes that the current rule on the burden of proof is problematic, where indicia (e.g., correspondence, witnesses) do not lead the court to a reasonable degree of conviction when establishing parentage, thereby prolonging uncertainty regarding parentage. Accordingly, when there is other evidence, i.e., indicia of parentage, the author proposes the introduction of a rebuttable statutory presumption of parentage in the event of refusal to undergo DNA analysis that is not justified by medical reasons, which would shift the burden of proof solely onto the “non-compliant” party. The introduction of fines should also be considered.

Law on Missing Babies

Although it does not regulate maternity and paternity proceedings, the Law on Establishing the Facts about the Status of Newborn Children Suspected of Having Disappeared from Maternity Hospitals in the Republic of Serbia³⁴ (Law on Missing Babies) is significant for our analysis because, in civil matters, it expressly regulated, for the first time, the conduct of DNA analysis for the purpose of establishing biological parentage – here a relevant element for establishing the truth about the status of missing newborn children.

The Law on Missing Babies was adopted in order to implement the obligations of the Republic of Serbia arising from the judgment of the ECtHR in *Zorica Jovanović v. Serbia*³⁵, and with the aim of establishing the truth about the status of missing newborn children under the conditions set out in this Law, through one-party non-contentious proceedings based on the investigative principle and the principle of urgency.

A motion for the establishment of facts and a claim for the award of compensation for non-pecuniary damage could be filed until November 3, 2020, at the latest. After the court decisions made on the basis of this Law

³² Bodiřoga, N. (2025). *Grđansko procesno pravo*. Belgrade: Official Gazette, 364; Petrušić, N. (2024). *Grđansko procesno pravo. Knj. 1. – Parnično procesno pravo*. Niš: Faculty of Law, University of Niš, 342.

³³ *Jevremović v. Serbia*, (App. no. 3150/05), October 17, 2007.

³⁴ Law on Establishing the Facts about the Status of Newborn Children Suspected of Having Disappeared from Maternity Hospitals in the Republic of Serbia, *Official Gazette of the RS*, No. 18/2020.

³⁵ *Zorica Jovanović v. Serbia*, (App. no. 21794/08), March 26, 2013.

become final in all initiated proceedings, the Law ceases to have effect, except for the provisions regarding the establishment of a commission tasked with the collection of facts.³⁶

Article 19 of this Law stipulates that the court may order DNA analysis to establish the facts about the status of a missing newborn child, with the authority to request a search of the National DNA Registry, and that the data obtained through DNA analysis may be used exclusively for the purpose of conducting these proceedings. Samples could be taken from a wide range of persons, including human remains, under different regimes for:

The applicant (parents, close relatives, and a person who doubts their own origins) – who was required to provide a sample, unless this would result in harm to their health; in the event of unjustified refusal, the proposal was deemed withdrawn. This leads to the discontinuance of the proceedings, as a stricter procedural sanction than the application of the rules on the burden of proof under the LCP, given that a sample from the applicant is indispensable as the primary item of evidence for comparing DNA profiles and for the further course of the proceedings;

Third parties (e.g., medical staff, adoptive parents) – the taking of a sample was entirely voluntary, exclusively on the basis of written consent.

An analysis of the application of this Law from the perspective of awarding compensation for non-pecuniary damage for a violation of the right to respect for family life led to the conclusion that it solely served the purpose of appeasing parents' claims through compensation for non-pecuniary damage.³⁷ The results of the analysis indicate that, in the vast majority of cases, namely 413 of them (68% out of a total of 651), the court, after conducting the proceedings, was unable to establish what had happened to the child and merely recorded that state of affairs. In only 16 cases did the court, after conducting the proceedings, establish facts concerning the child's status. In all 16 of those cases, the court established that the child had died. In no case were other circumstances established that would explain what had happened to the child. The remaining 175 cases were concluded in another manner (29%), by decisions of a procedural nature or by decisions rejecting the motion to initiate proceedings for the establishment of facts.³⁸ In 604 out of a total of 651 cases (93%), a claim for the award of fair monetary compensation for non-pecuniary damage was also made, and that claim was granted in 404 cases (67% of the

³⁶ Arsenijević, B. (2025). Dosuđivanje naknade nematerijalne štete u slučajevima nestalih beba – iskustva primene zakona. *Glasnik of the Bar Association of Vojvodina*, 85(2), 425.

³⁷ *Ibid.*, 440.

³⁸ *Ibid.*, 435–436, 440.

proceedings in which the claim for compensation for non-pecuniary damage was decided). Of those, in 399 cases the claim was granted in decisions stating that the child's status could not be established, and in only 5 cases was the claim granted in decisions establishing facts concerning the child's status. The court rejected the claim for compensation for non-pecuniary damage in a total of 25 cases (4%). Of those, in 14 cases the claim was rejected together with a decision stating that the child's status could not be established, and in 11 cases together with a decision establishing facts concerning the child's status.³⁹

The author points out that such a state of affairs is in direct contradiction with the position of the ECtHR, expressed in *Zorica Jovanović v. Serbia*, that any award of compensation for non-pecuniary damage does not constitute an effective remedy in respect of the applicant's principal claim – namely, to obtain information about the real fate of her son.⁴⁰ Although the subject matter of this analysis was neither the courts' practice in exercising their investigative powers nor their practice with regard to DNA analysis, it is justified to conclude that the possibility of conducting DNA analysis, although provided for by law, remained in practice unused or marginalized, and that the reasons for the foregoing state of affairs lie in part in the inconsistency between the investigative principle under Article 8 of this Act and the principle of voluntary sampling from key third parties, which is unjustified having regard to the sanctions applicable to witnesses under Article 20 of this Law.

THE CASE LAW OF THE EUROPEAN COURT OF HUMAN RIGHTS – RESEARCH METHODOLOGY AND FINDINGS

For the purposes of the empirical research into the case law of the ECtHR, the sample was formed purposively. To that end, the author accessed the HUDOC database at the web address: <https://hudoc.echr.coe.int>

Using the advanced search function, the following was first entered in the “text” field:

“(“mandatory” OR “refusal” OR “compel” OR “court order” OR “order” OR “obligation” OR “obligatory”) AND (“DNA” OR “genetic”) AND (“parentage” OR “paternity” OR “maternity” OR “parentage”)”.

³⁹ Arsenijević, B. (2025). Dosuđivanje naknade nematerijalne štete u slučajevima nestalih beba – iskustva primene zakona. *Glasnik of the Bar Association of Vojvodina*, 85(2), 435–436.

⁴⁰ *Ibid.*, 440.

Then, in the side menu, the filter “Article 8” and the keywords “(Art. 8) Right to respect for private and family life” were selected. The search covered the period from 1 January 2000 to 10 December 2025, which resulted in a total of 69 decisions being identified. In the next stage, all 69 decisions were analyzed using content analysis in order to identify those in which the issue of the mandatory nature of DNA testing and its probative value was explicitly considered in the context of Article 8 of the ECHR. The following variables were used in the analysis:

Does the case concern maternity/paternity proceedings before a national court (yes/no)?

Is there an explicit position of the ECHR on the compulsory nature of DNA testing, the consequences of refusal, the admissibility, or the probative value of DNA evidence (yes/no; brief description)?

An assessment of whether a “fair balance” had been struck and the final outcome of the proceedings (violation/no violation of Article 8 of the ECHR).

By applying the first variable, a total of 29 decisions related to maternity/paternity proceedings were identified. Due to the limited scope of the paper, three decisions were selected from this smaller group using the case-study method, on the basis of the following criteria:

Mikulić v. Croatia, as the chronologically first to deal directly and in its entirety with the legal consequences of refusal to undergo testing;

Mifsud v. Malta, as the key case on the issue of the compulsory testing of living persons;

Moldovan v. Ukraine, which mainly concerns the issue of admissibility and probative value of DNA evidence – building on existing scholarship in which the ECtHR’s positions on the protection of the stability of the sociological (legal) family have already been analyzed in detail;⁴¹ here, the author analyzes the relationship between biological truth and social factors from the perspective of establishing/disputing parentage where no socio-emotional relationship exists with the “legal” (sociological) parent.

The findings of the research into the ECtHR’s case law are set out below.

Mikulić v. Croatia

*Mikulić v. Croatia*⁴² is a decisive case for the analysis of the State’s positive obligations under Article 8 of the ECHR with regard to the question

⁴¹ See, for example: Novaković, U. (2017). Biološka istina i(ili) stabilnost porodičnog života u svetlu Konvencije o pravima deteta i najnovijih standarda Evropskog suda za ljudska prava. *Pravni život*, 600(10), 227–248.

⁴² *Mikulić v. Croatia* (App. No. 53176/99), February 7, 2002.

whether the State did enough to enable the child's right to know their origins to be realized.

The facts were such that, in paternity proceedings before a national court, the putative father evaded a court order for DNA testing as many as six times. Owing to procedural passivity and the absence of effective enforcement mechanisms or clear legal consequences for obstruction under Croatian law at the time, the proceedings remained stalled for years. In the proceedings before the national courts, there were serious violations of procedural law and multiple adjournments of hearings.

In its decision, the ECtHR found multiple violations of the ECHR, including a violation of Article 8 on account of the lack of effective procedural measures to strike a fair balance between the interests of the child and those of the putative father, so that the applicant's "prolonged uncertainty" amounted to a failure to respect her right to respect for private life. It concluded that a system that does not provide for coercive measures in such proceedings is acceptable only on condition that it affords "alternative means" for the speedy and independent establishment of paternity, and that the general power of the court to freely evaluate the evidence was not a sufficient and adequate alternative mechanism. This is also confirmed by the County Court's judgment quashing the first-instance decision, on the ground that paternity could not be based primarily on the avoidance of testing. At the same time, while taking into account the States Parties' "margin of appreciation," the ECtHR points to more effective comparative systems in which, where the defendant refuses to cooperate, either coercive measures (a fine/imprisonment) or procedural sanctions (statutory presumptions of paternity as a direct consequence of refusal to undergo testing) are applied.

In 2003, Croatia adopted a new *Family Law* (hereinafter: the FL RC), which provided for the possibility of medical expert examination, "*in accordance with the achievements of contemporary science*" in such proceedings. It prescribed a maximum period of three months for waiting for the taking of this evidence, and further provided that, upon expiry of that period, the hearing would proceed regardless of whether that evidence had been taken, and *that the court would assess the significance* of a failure to respond to a summons for expert examination or of one party's refusal to allow the expert examination to be carried out.⁴³ This provision has been retained in the current FL RC, which also provides that, in such proceedings, the advance payment for the costs of the expert examination is to be paid from court funds.⁴⁴ The author is

⁴³ Art. 292 of the Family Law, *Narodne novine*, No. 116/03.

⁴⁴ Arts. 390 and 391 of the Family Law, *Narodne novine*, No. 103/15, 98/19, 47/20, 49/23, 156/23.

of the opinion that the courts will not render a judgment to the detriment of the party who refused DNA analysis solely on the basis of that refusal, given that, under Croatian law, a judgment in such proceedings has an *erga omnes* effect.

Mifsud v. Malta

*The judgment in Mifsud v. Malta*⁴⁵ defined the limits of proportionality and justification for mandatory (compulsory) DNA testing in such proceedings.

As regards the facts, the Maltese courts, acting on Ms X's claim for the establishment of paternity, ordered the putative father (Mr Mifsud) to undergo a DNA test. The order was issued on the basis of statutory provisions authorizing the court to order genetic testing without the party's consent, whereby the lack of the individual's consent is *de facto* overcome (substituted) by a compulsory court order. The applicant opposed that order, relying on the right to respect for private and family life under Article 8 of the ECHR.

The disputed issue was whether the mandatory wording of the domestic law in itself constituted a violation of Article 8, or whether the proceedings as a whole, including two instances of constitutional jurisdiction, nevertheless secured a fair balance. The ECtHR found that there had been no violation of Article 8 of the ECHR and that a fair balance had been achieved in the interference with Mr Mifsud's private life, given that there had been constitutional and judicial review of the proportionality of the competing interests before compulsion was applied. The specific arguments were as follows.

According to the ECtHR, the testing order was in accordance with the law (Art. 100A of the Maltese Civil Code) and pursued a legitimate aim – the protection of Ms X's right to establish her identity and origins. It was then emphasized that, although the law appears mandatory, in practice a DNA test will not be ordered unless there are *prima facie* indicia justifying it, for example, the fact that the applicant had been present in her life for years, had provided her with real property for housing, had stood as godfather to her child, and the like. In addition, a constitutional remedy was available to the applicant, and the constitutional courts carried out a detailed proportionality analysis before the final order was made and concluded that the daughter's interests outweighed the father's interests, which *de facto* substituted for the lack of discretionary power on the part of the civil court. Furthermore, the use of a buccal swab (from the inside of the cheek) was assessed as a minimally invasive measure that did not constitute a significant intrusion upon bodily integrity. Finally, the process was considered fair because the applicant had had an opportunity to participate at all stages of the proceedings, submit

⁴⁵ *Mifsud v. Malta* (App. No. 62534/00), December 15, 2006.

evidence, initiate constitutional proceedings, and challenge the test results, thereby ensuring his procedural safeguards (the right to defend himself and the principle of equality of arms), since the opposing party had not been relieved of the burden of proof.

Therefore, mandatory DNA testing is justified if the procedure is fair and if proportionality has been thoroughly assessed by the national courts.

Moldovan v. Ukraine

*The judgment in Moldovan v. Ukraine*⁴⁶ stands out in the ECtHR's most recent case law because it emphasizes the supremacy of biological (scientific) truth over legal formalism.

The facts were such that the domestic courts in Ukraine rejected a claim for the establishment of paternity despite a DNA test showing a 99.9999% probability of paternity. The rejection was justified by reliance on the outdated 1969 Family Code, which, for the establishment of paternity, required proof of "social" circumstances (cohabitation and a shared household before the child's birth, the joint raising or maintenance of the child, or reliable evidence of acknowledgment of paternity).

In its judgment, the ECtHR found a violation of Article 8 of the ECHR as a result of the State's failure to comply with its positive obligation to ensure the individual's right to know his origins as part of the right to respect for private life, owing to the domestic courts' failure to examine the DNA evidence submitted "sufficiently thoroughly." First, relying on its earlier case law, the ECtHR reiterated that a DNA test is "the only scientific method of determining accurately the paternity of a child" and that its probative value "substantially outweighed" any other evidence. It further characterized the mechanical application of an outdated law as equivalent to "inflexible time-limits or other procedural limitations" that make the establishment of paternity practically impossible. The problem is that this law was enacted at a time when DNA testing was unavailable, and this is therefore qualified as an arbitrary disregard for the truth. The judgment also emphasized that, for the first time in the appellate proceedings, the Appellate Court, in a summary, superficial, and unreasoned manner, called into question the reliability of the DNA test (because of the manner in which the blood sample had been transported – by private courier services and by members of the applicant's family), without taking additional steps, such as hearing the expert or ordering a new expert examination, which amounted to a breach of the procedural guarantees under Article 8.

⁴⁶ *Moldovan v. Ukraine* (App. No. 62020/14), March 14, 2024.

This judgment sends the message that laws must be enacted and applied in a manner that ensures the effective protection of rights, and that courts are required to thoroughly examine all relevant evidence, especially evidence obtained by means of modern, reliable, and scientifically grounded DNA analysis.

CONCLUSION

Comparative legal analysis, including Serbian law, shows that in most legal systems a slight preference is given to the protection of the individual's physical integrity (with the exception of Germany, which gives primacy to biological truth), but that indirect coercion, through procedural consequences or penalties, is nevertheless used to exert mild pressure on parties to undergo DNA analysis in maternity and paternity proceedings.

Based on an analysis of the ECtHR's case law, three key principles have been synthesized that define the States' positive obligations under Article 8 of the ECHR with regard to the (non-)mandatory nature and probative value of DNA analysis in these proceedings.

The first principle is *the principle of procedural efficiency*. States must ensure effective and expeditious proceedings. The absence of coercion must be offset by effective alternative means for the speedy issuance of a decision.

The second principle is *the principle of proportionality and minimal invasiveness*. Ordering DNA testing is permissible only where there are *prima facie* indicia and following thorough judicial balancing of the rights of the child and the putative parent. The principle of minimal invasiveness in sampling must always be respected.

The third principle is *the principle of the primacy of biological truth over legal formalism*. Domestic courts are required to examine DNA evidence thoroughly. Arbitrary disregard of biological truth, by giving precedence to outdated laws, violates Article 8 of the ECHR.

The ECtHR's case law increasingly affirms the primacy of biological truth, which is most commonly applicable where no socio-emotional relationship exists between the child and the "legal" parent. However, where such a relationship does exist, the decision to admit DNA evidence and the evaluation of that evidence must result from a careful balancing of all interests. In this context, the best interests of the child are the primary, but not the sole, criterion. Accordingly, biological truth will not be established where doing so would bring more harm than benefit, which is consistent with the child's right to know their origins "as far as possible" under Article 7 of the Convention on the Rights of the Child. The author therefore subscribes to the position

favoring the limited use and probative value of DNA analysis. The author also subscribes to the position favoring relatively voluntary submission to testing in these proceedings and, where there is other evidence, that is, indicia of parentage, as well as the introduction of a rebuttable statutory presumption of parentage in the event of refusal to undergo DNA analysis that is not justified by medical reasons, which would shift the burden of proof solely onto the “non-compliant” party. The introduction of fines should also be considered.

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