Introduction

The main task of forensic science is detecting the perpetrator and collecting evidence to confirm his/her connection with the incident. Among the various identification methods that have been used for a long time, including fingerprints, handwriting or marks of tools used by the perpetrator, DNA identification plays a major role in investigative and judicial practice on the basis of biological traces.

Recovered biological traces are compared with samples collected from suspected or accused persons or/and stored in the DNA profiles database. Since there are no two identical people (only monozygotic twins have identical DNA), biological stains revealed and properly secured at the scene are individual to such a degree that it is possible to indicate their connection with the source, i.e. with a person in question, even with a probability exceeding 99.999999%.

The sequence of every human being's DNA is unique (with an exception of the aforementioned monozygotic twins). It is an identity card with an unforgeable "molecular signature", which can be read and identified. Evidence derived from the results of such analysis helps to establish the relationship between a suspect and the incident or to eliminate a given suspect from the circle of suspects, allowing with a likelihood close to certainty to determine the origin of a crime scene stain coming from the person in question.

Summary

The turn of the twenty-first century was characterised by a dynamic development of DNA analysis. The applications of the achievements in this field include the forensics. An identification of a potential perpetrator of a crime by comparing his/her genetic profile with DNA detected at a crime scene is one of the standards in this area. Such evidence is considered to be almost a hundred percent certain in a criminal trial. The development of DNA analysis in recent years has demonstrated that a biological trace recovered at a scene of a crime can be also used for determining certain features of an individual, including both physical and psychological ones. The Authors concentrate first of all on physical features as they are extensively explored by forensic DNA analysts and they do not evoke as acute controversies as identifying person's character based on analysing DNA. By defining person's appearance, biogeographic origin and age it is possible to generate an image of a potential perpetrator and start searching for a specific person. As a result, questions arise as to whether such phenotyping is acceptable under the law, in particular whether it can serve as a detection tool and, perhaps even more difficult one, whether the result may become evidence in a case and lead to proving guilt or innocence of a suspect. The article focuses on the regulations of the Police Act and tasks performed by the police as they can be the largest beneficiaries of the new method for identifying a suspect. However the question, whether and to what extent it can be used at further stages of the proceedings calls for a separate discussion. According to the Authors, the provisions of the Police Act do not adequately regulate the issue in question, which may result in violation of civil rights and in consequence, lead to breach of the procedural rights of the parties.

Key words: genetic analysis, forensic DNA phenotyping, DNA profile
However, such examinations require a comparison of traces recovered at crime scene with already possessed comparative material: collected from a selected suspect or DNA profiles stored in the database. The situation becomes more complex in case when no suspect is named and there is no matching sample in the database, because that makes an identification impossible.

In such a situation, it is forensic DNA phenotyping (further referred to as FDP) that may prove useful.

**Investigative potential of phenotyping**

A phenotype constitutes the set of observable characteristics of an individual resulting from the interaction of the heritable factors and the environmental conditions (definition from https://sjp.pwn.pl/słowniki/fenotyp.html translated into English). In the light of this definition, forensic phenotyping of DNA consists in predicting the appearance and externally visible traits of a human basing on a biological trace left on the scene. The FDP can therefore be compared to the testimony of an eyewitness who has seen the perpetrator and provides information about him.

As a result of the FDP, basing on genetic analysis of biological material recovered at the scene, an attempt may be made to determine, for example, eye, hair and skin colour of a person who left the mark, as well as their age, size, morphological features of the face and biogeographic origin, also known as ancestral origin, which carries information about the population a person or his/her ancestors originates from.

For years, intensive scientific and experimental works have been conducted to further develop these analyses towards both extending the catalogue of works have been conducted to further develop these analyses towards both extending the catalogue of

**In 2015, in Poland a project titled “Genetyczny portret sprawcy oraz ofiary przestępstwa – opracowanie systemu do określania wyglądu człowieka i pochodzenia biogeograficznego poprzez analizę DNA z wykorzystaniem sekwencjonowania następnnej generacji (NGS)” (Eng. “Genetic portrait of perpetrator and victim of a crime – creation of a system for determining human appearance and biogeographic origin by DNA analysis with use of next generation sequencing /NGS/”) was launched. The project is being implemented by the Consortium consisting of: Central Forensic Laboratory of the Police (Project Leader), Jagiellonian University, Warsaw Medical University, Nicolai Copernicus University in Toruń – Ludwik Rydygier Collegium Medicum in Bydgoszcz, Szczytyn Police Academy and RX FFW special-purpose company of limited liability with a seat in Poznań. The aim of the Project is to elaborate a tool enabling creation of crime perpetrator or victim’s portrait basing on genome information (http://clkp.policja.pl/clk/badania-i-projekty/projekty-badawcze-real/w-toku/86097, Projekty-badawczo-rozwojowe.html; https://www.cm.umk.pl/109-collegium-medicum/projekty-realizowane-w-collegium-medicum-umk/3010-next.html). The conclusion of the implementation is scheduled in 2019.

In May, 2017, an international project VISAGE (The VISIBLE Attributes Through Genomics) was commenced. The Project Consortium consists of 13 academic, police and judiciary partners from 8 European countries (http://www.visage-h2020.eu/). The participants on the Polish side include Jagiellonian University and Central Forensic Laboratory of the Police. The objective of the works of the Consortium is to organise the available knowledge concerning the use of DNA analysis in forensics, as well as elaborate, validate and implement analytical tools for predicting persons’ appearance basing on DNA samples, which may be subsequently used in routine forensic examinations. The general limitations of current forensic use of DNA are to be eliminated and new technologies designed will enable sooner and more efficiently determine suspects basing on DNA data from crime scenes (Erasmus MC media release).

The first and, presently, the simplest test is analysis of some of the DNA markers, which provides information on the biogeographical origin of a given person (Phillips et al., 2016). At the same time, scientific works and laboratory research that has been conducted in recent years give a possibility to determine with higher and higher precision appearance characteristics of a person in question. Nowadays, even a small quantity of biological material left at a crime scene, including that recovered from archeologic findings, makes it possible to differentiate between blue and brown eye colour with accuracy at the level of over 90%, to determine hair colour: with 69% accuracy for blond, with 78,5% accuracy for brown, with 80% accuracy for red and 87,5% accuracy for black, and to determine skin colour with accuracy at the level from 72% to 97% (Arduino Marano, Fridman, 2019).

The newly designed tool for profiling of pigmentation features is to allow making a physical description of a person in a manner that used not be possible to achieve, i.e. faster and less costly, due to simultaneous prediction of the three pigmentation characteristics (Chaitanya et al., 2018).

It is worth emphasising that characteristics, which can be determined by DNA phenotyping, such as eye, hair and skin colour are among the best visible and most often noticed ones, so they can constitute a valuable information for the investigators conducting the detective procedure.

In addition to that, DNA analysis enables defining face features (Lippert et al., 2017) and characteristics related to illnesses causing deformation, such as cleft palate, cleft lip or facial dysplasia (Arduino Marano, Fridman, 2019). It is possibly the most controversial and most difficult analysis requiring an analysis on a large scale.

Thanks to an analysis of genes it is possible to effectively diagnose a tendency to early hair loss and
androgynous balding, as well as estimate person’s age (Phillips at al., 2016).

A gene is a DNA section containing a sequences of nucleotides: coding sequence comprising an instruction on the phenotype, as well as non-coding sequence, which has no phenotypic effect. Information that is unique for DNA “owner” is found in the coding part of the genome. Its analysis gives a possibility of creating at least partial genetic image of a person the revealed trace comes from, with some exaggeration and hope that in future it will be possible in full scope, one may call the process “drawing” a portrait. As it has been indicated, even now, determining eye, hair and skin colour, size and age, and even facial shape can be attempted.

Independent of determining physical characteristics questions have arisen whether genes also give a possibility to make a description of psychological traits of trace’s owner, e.g. tendency to aggressive behaviour or using violence. The works in that respect are at the stage of basic research and, according to the scientists, the obtained results ought to be treated with caution (Mendes et al., 2009). Aggressive behaviour may form also by environmental factors. Even though research has led to pinpointing a group of, so-called, candidate genes, i.e. the ones that may be responsible for a high level of aggression, but the results are not sufficiently categorical (Fernàndez Castillo, Cormand, 2016) as not to cause controversy concerning their application in forensics.

Rapid progress in such oriented examinations raises concerns about excessive interference in the privacy of citizens. At the same time, it already calls for asking questions about legal issues of forensic DNA phenotyping by the Police or other authorities, and the extent of making use of its results.

It is not certain whether the current legal status provides a legal basis for such research and whether it is sufficient to meet forensic goals, the achievement of which from the technological side is already possible or will be possible in a short time. The problem is all the more complicated because it is important to remember the information that can be obtained through DNA phenotyping is diverse, and its determination and use may in various ways affect the individuals’ right to privacy in administering their own personal data. Certainly, extensive protection is necessary in case of information on diseases that “donors” of biological evidence left at crime scenes may be unaware of. However, this does not necessarily apply to the features of the external appearance, which are generally visible to third parties and which, as a rule, are not protected by law. Of course, one should always take into account a deliberate change in the appearance of the person in question, for example, by hairdressing (dyeing, colouring, wigs), plastic surgery, changing eye colour with contact lenses, etc.

Present legal status in Poland

The processing and use of data from the genetic code is regulated in art. 20 paragraph 1a of the Police Act. The ability to process and exchange information, including personal data, included in this provision may relate to personal data referred to in art. 14 paragraph 1 of the Act of December 14, 2018 on the protection of personal data processed in connection with the prevention and combating of crime (hereinafter referred to as Personal Data Protection Act), which expressis verbis arises from paragraph 1a art. 20 – data on the results of deoxyribonucleic acid (DNA) analysis include information only on the non-coding part of DNA.

Article 14 paragraph 1 of the Act on the Protection of Personal Data refers to information revealing racial, ethnic origin, political views, religious beliefs, worldview, membership in trade unions and processing of genetic data, biometric data in order to identify an individual, health information, data on sexuality and sexual orientation of a natural person (hereinafter referred to as “sensitive data”).

For the first time, the regulation of the use of personal data concerning the genetic code was incorporated in the Police Act in 2001. Article 20 paragraph 2 stipulated that the Police was able to collect, process and use information for detection and identification purposes, including personal data about persons suspected of committing offenses prosecuted against public indictment, minors committing acts prohibited by the Act as crimes prosecuted by public indictment, persons of unknown identities or attempts to hide their identity and wanted persons, also without their knowledge and consent, in particular personal data referred to in art. 27 paragraph 1 of the Act of 29 August 1997 on Personal Data Protection (Journal of Laws No. 133, item 883, from 2000: No. 12, item 136, No. 50, item 580 and No. 116, item 1216, and of 2001: No. 42, item 474 and No. 49, item 509). However, in relation to data about DNA code, this applies only to non-coding regions of the genome. Article 27 paragraph 1 referred to data on racial or ethnic origin, political views, religious or philosophical beliefs, religious, party or trade union membership, as well as on health status, DNA code, addictions or sex life, as well as on previous convictions, sentences and penalties, and also other judgments issued in court, or administrative proceedings.

In subsequent amendments to the Police Act, the content of art. 20 in the part referring to the DNA data has not changed. The legislator used to regulate and still regulates the collection, processing and use of information only about the non-coding part of DNA.

The question then arises whether such regulation is appropriate and whether it is sufficient. In order to answer it, it is worth considering what has been exactly written down in the said regulation.

As it has been indicated, the Police Act refers to the processing and use of data from the genetic code.
DNA analysis is contained in a DNA data collection, it stipulates that information including the results of disposition of art. 21a paragraph 1 of the Police Act; but only those processed in databases. Such an such as results of analysis on the coding part of DNA, connection with prevention and combating crime of information, including personal data handled in provision will prohibit processing and exchange Laboratory of the Police. With this assumption, the art. 20 paragraph 1a of the Act on the Police allows for processing of genetic data is certainly connected to the DNA Database and identification opinions issued on the basis of comparative analyses of biological material, it seems doubtful that the regulation should refer to detective activities and the use of DNA analysis at this stage of the proceedings.

The answer to these doubts is not simple. Article 20 paragraph 1a of the Act on the Police allows for a varied interpretation (more on this topic: Tomaszewski, Girdwoyń, 2018). This provision may refer, on the one hand, to all genetic tests carried out in police laboratories, which are legitimate under the current law, and then the processing and exchange of information, including personal data, processed in connection with preventing and combating crime excludes FDP. In the light of this provision, the data that can be processed for the results of DNA analysis include information only about the non-coding part of DNA, whereas phenotyping is possible primarily on the basis of coding regions of the genome. This narrowing down interpretation of this provision is supported by its linguistic connotation, as it clearly allows the processing of only those personal data that are obtained from the non-coding part of DNA. However, it should be remembered that the lack of direct regulation allowing the Police to conduct FDP on the basis of a coding part of DNA may mean limiting forensic examinations and practical use of their results, despite the fact that modern science offers such possibilities. Equally important, however, is the right of citizens to privacy. The analysis of the coding part of DNA poses a threat of much deeper interference in the sphere of civil rights and freedoms due to the risk of disclosing medical data, regarding the occurrence of “donor’s” hereditary diseases, etc. than when using only non-coding parts of DNA.

On the other hand, one may only attempt to refer art. 20 paragraph 1a of the Police Act to processing of DNA information in databases, e.g. in the National DNA database maintained in the Central Forensic Laboratory of the Police. With this assumption, the provision will prohibit processing and exchange of information, including personal data handled in connection with prevention and combating crime such as results of analysis on the coding part of DNA, but only those processed in databases. Such an understanding of this provision is supported by the disposition of art. 21a paragraph 1 of the Police Act; it stipulates that information including the results of DNA analysis is contained in a DNA data collection, which is administered by the Chief Commander of the Police. Thus, under the current regulations, there would be no explicit ban on obtaining information based on the coding part of DNA by means of FDP for detective purposes in connection with the prevention and combating of crime. This would give a possibility of phenotyping based on the coding part of the DNA, which in such a situation would not include restrictions applied to databases.

The grounds for applying FDP can also be found in art. 14 of the Police Act. Within the scope of their duties police officers perform operations as well as reconnaissance, investigative and administrative and organizational tasks aiming at recognition, prevention and detection of crimes, tax offenses and petty crime. While performing these activities, they are authorised to perform the following activities:

1) collecting friction ridge skin prints or buccal swabs from persons:
   a. in the manner and in cases specified in the Code of Criminal Proceedings and the Act of 22 November, 2013 on procedure of dealing with persons with mental disorders posing a threat to life, health or sexual freedom of other persons (Journal of Laws from 2014: item 24, from 2015: item 396, from 2016: item 2205 and from 2018: item 2435),
   b. for the purpose of identification of persons of unknown identity and persons attempting to conceal their identity, in cases when identification in another way is impossible,
   c. upon their consent, for the purpose of identification of missing persons or corpses of undetermined identity,
   d. for the purpose of identification or detection of crime perpetrators, according to the rules stipulated in the Police Act,

2) collecting friction ridge skin prints or biological material from human corpses of unknown identities. As it follows from the above analysis, there is no regulation in the Polish legislation that explicitly refers to the FDP’s forensic application.

This has not been changed, either, by the recently introduced regulations dealing with protection of personal data, i.e. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/ EC (General Data Protection Regulation, hereinafter referred to as the Regulation), or Directive of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data by competent authorities for the purposes of crime prevention, conducting preparatory proceedings, detecting and prosecuting criminal acts and executing penalties, on the free flow of such data and repealing Council Framework Decision 2008/977 / JHA (hereinafter referred to as the Directive),
or the Act on personal data protection processed in a relationship with prevention and combating crime of 14 December 2018 (Journal of Laws of 2019, item 125) implementing the Directive into the Polish law. The above provisions, although they deal with protection of personal data, do not regulate the use of FDP and do not create restrictions in this respect.

Such diverse interpretations and general phrasing of the discussed provisions, which, after all, affect an important sphere of public affair and an equally important sphere of private affairs, are the reason for the existence of a “grey zone” that does not grant certainty as to the scope of the existing provisions in which forensic DNA experts have to manoeuvre. It can be assumed that this situation, as well as the requirements of investigative practice have been the reasons for making the attempts to use the FDP when the previous methods of forensic identification proved insufficient or there were no investigative hypotheses regarding the identity of the perpetrator or victim.

Several such cases that ended in success have been reported in Polish forensic practice. An example is a case of 2011, in which experts determined the colour of eyes and hair on the basis of traces left by the perpetrator of a murder in Gdynia (Abramowicz, 2012).

In November 2015, a double homicide was committed in Wrocław. At the scene of the crime two traces of blood belonging to a third party were recovered in addition to victims’ blood. Initial analyses of that stain helped to establish that this person had been a male. In December 2016, officers detained an 18-year-old man who threatened to kill other women. A comparative analysis of detained man’s DNA profile and the profile obtained from the blood left on the scene of the double homicide showed full match (Catalogue..., 2017). In the Central Forensic Laboratory of the Police, analyses were carried out to determine the age of the biological trace donor. As a result of using the forensic DNA phenotyping tool, it was possible to obtain information that the estimated biological age for the donor of first sample was 16 years, and of the second – 18. The results were consistent with the age of the detained perpetrator of the murder. This confirmed that such analyses made sense and obtained results were reliable (Catalogue ..., 2017).

Generation of a “genetic portrait” basing on DNA analysis was used in examinations aiming at identification of historical characters, for example the remains of Nicolaus Copernicus and Władysław Sikorski (Bogdanowicz et al., 2009, pp. 1279–1282; Kupiec, Branicki, 2009, pp. 9–146). An interesting point within the results of those analyses was the conclusion that both persons had had blue eyes. Because in case of general Władysław Sikorski the correctness of that result was confirmed by his schoolmates high precision and reliability of the analyses with respect to eye colour was demonstrated.

In the era of fast developing genetics and forensic DNA analysis, as well as improving possibilities of using biological traces left at crime scenes for identification of crime perpetrators, a question should be considered whether the information obtained as a result of analysing the entire DNA may be used in criminal proceedings. It is necessary to consider the EU regulations in that matter. It is also advisable to check how these problems have been approached in national legislature of those European Union Member States, which have attempted their direct regulation.

**Law of the European Union and selected Member States**

In the European Union legislation, the fundamental regulations of privacy and personal data protection are contained in articles 7 and 8 of the Charter of Fundamental Rights of the European Union. Article 7 speaks of the right of every person to respect for their private and family life, home and communication. Art. 8 indicates, as follows:

1. Everyone has the right to the protection of personal data concerning him or her.
2. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified.
3. Compliance with these rules shall be subject to control by an independent authority.”

The right to the protection of personal data is also defined in the Treaty on The Functioning of the European Union and the Recommendation of 10 February 1992 No. R (92) 1 of the Committee of Ministers of the Council of Europe on the analysis of deoxyribonucleic acid (DNA) in criminal proceedings. The latter directly defines the procedure of sampling and carrying out DNA analysis for the purposes of identifying a suspect or other person in the context of a criminal investigation. It was adopted due to the need to create a common policy to protect individuals and society, to assist in the criminal justice system, in particular in determining guilt or innocence basing on DNA analysis techniques, and to ensure that the introduction and use of DNA analysis techniques took into account the basic principles of respect for a human body and the dignity of each individual, as well as the right of the accused to defend himself.

The Recommendation formulates a categorical guidance that samples collected for DNA analysis and the results of tests obtained for the needs of criminal proceedings should not be used for any other purpose. An exception is granted when the information is requested by the person from whom the samples were taken. These recommendations should be observed by the governments of the Member States of the European Union in the preparation of internal legislation.
From recommendations containing only principles and guidelines that should be taken into consideration by the governments of the Member States in the process of creating internal legislation, the European Union proceeded to directives that are binding on the Member States in their entirety, so they may not be applied in an incomplete way, selectively or partially.

As mentioned above, on 27 April, 2016, the European Parliament and the Council (EU) adopted the Directive. Its article 10 provides for the processing of personal data revealing racial or ethnic origin, political opinions, religious or ideological beliefs or trade union membership, and the processing of genetic data, biometric data to uniquely identify a natural person, information on health or sexuality and sexual orientation of a person is permitted only if it is strictly necessary, subject to appropriate safeguards for the rights and freedoms of the person the data refers to, and:

“1) is authorised by UE regulations or by the law of a Member State;

2) it is necessary to protect the vital interests of the data subject or another person; or

3) such processing relates to personal data that is obviously made public by the data subject.

Both genetic and biometric data are understood as personal data.”

The Directive defined genetic information as personal data relating to the inherited or acquired genetic characteristics of a natural person which give unique information about the physiology or health of that natural person, and which result from the analysis of a biological sample from the natural person in question. In contrast, biometrical data mean personal data resulting from specific technical processing relating to the physical, physiological or behavioural characteristics of a natural person, which allow or confirm the unique identification of that natural person, such as facial images or dactyloscopic data.

The European Union does not directly regulate the issue of FDP. The wide loophole created by the Directive, e.g. in the above-mentioned article 10 point 1, does not solve the problem, leaving the decision with individual Member States.

Among the EU Member States, three main approaches to the FDP problem can be observed: clear regulations allowing for phenotyping (e.g. in the Netherlands, Slovakia), a ban on its performance resulting from other laws or regulations (e.g. in the majority of German Federal States, Austria) or no regulations on this issue (Poland should be included in this group in the light of the above considerations).

Until recently, the clearly regulated approach to the FDP had only existed in the Netherlands and Slovakia (Samuel, Prainsack, 2018).

Dutch Code of Criminal Proceedings allows the prosecutor or the investigating judge to request tests aiming at determining the origin, gender and other externally visible characteristics of the wanted person. The test results are used in court proceedings. The Code does not contain a closed catalogue of features that may be predicted from DNA. Therefore, each feature to be examined must be individually approved by a separate decree. The legislator did not provide granting the police the authority to commission and conduct these analyses (Samuel, Prainsack, 2019).

In Slovakia, the possibility of determining the phenotypic characteristics is stipulated in paragraph 4 of the Law on the use of deoxyribonucleic acid analysis for the identification of persons (417/2002 Z.z. Zákon z 21. júna 2002 o používaní analýzy deoxyribonukleovej kyseliny na identifikáciu osôb). The FDP is used in cases of exceptionally serious crimes, in connection with a crime against life and health, a crime against freedom and human dignity and in relation to the identification of corpses or cut-off parts of the human body, unless the identity of the person is determined by analysis of deoxyribonucleic acid in the database or in the national databases of deoxyribonucleic acid of EU Member States (ibidem).

Recently, a similar solution that clearly regulates the possibility of DNA phenotyping has also been adopted in Bavaria, Germany. Until recently, legislation throughout Germany allowed forensic examiners to only use “non-coding” areas, meaning that DNA could only be used to verify the identity of the person. Concluding on individual characteristics of a person using DNA phenotyping used to be considered a violation of the right to privacy (Weigmann, 2015).

The example of Germany, however, shows that the approach to FDP is changing from rejection to admission. On May 15, 2018, Bavarian Landtag passed an amendment to the law on police duties. The Act allowed for such analysis of DNA samples, which gives the opportunity to indicate geographical origin and visible physical characteristics, including hair, eye and skin colour, as well as the age of an unknown suspect posing an immediate threat. Bavaria became the first Land in Germany, which allowed it (https://www.gwern.net/docs/genetics/heritable/2018-vogel.pdf; http://www.gesetze-bayern.de/Content / Document / BayPAG-32). This led to resistance and public protests, as it was pointed out that the legislator allowed too much interference in the privacy of citizens. However, the public protests did not convince the Parliament in Munich to change its position.

The situation is different in Austria, where there is no explicit regulation regarding the use of FDP, but under other regulations a ban is formulated. The FDP is prohibited because general legal provisions stipulate that forensic analysis of DNA may only include non-coding regions (Samuel, Prainsack, 2018).

Most EU countries do not deal with the subject of the FDP in general. There is neither a clear regulation allowing its use, nor the presumed regulation prohibiting the use of forensic DNA phenotyping. This applies, for example, to Sweden and Spain, where, despite the
lack of any specific legal provision, this technique is being used (ibidem).

Summary
The technological progress in genetics during the last few decades is impressive and it is sometimes difficult for a layman to know what is already possible and what still remains a promising prospect. Recently, scientists have determined that the non-coding part of DNA, constituting approximately 97% of the human genome, does not have character of "junk" and plays a specific role, e.g. in controlling the process of cell development. More and more individual features, which, with a constantly progressing accuracy, describe the owner of the genetic code, can be made out from the coding part of DNA (Arduino Marano, Fridman, 2019). DNA analyses will be becoming cheaper and easier to execute, not only by the judicial authorities, which means that they will be used more often and more widely, also in the area of detection and combating of crimes.

It seems, therefore, that regardless of the chosen course and adopted solutions, Polish law should explicitly identify the possibility of using the FDP in Police and criminal proceedings. Clear boundaries ought to be drawn taking into account, on the one hand, ethical, teleological and axiological postulates, and on the other, also the benefits that FDP can bring in detecting offenders and improving the security of citizens.

The above text constitutes an invitation to discussion on the use of FDP for detection and evidential purposes and the need to regulate by law the possibility of its use in practice.

Bibliography

Literature and sources


**The Internet**


*Translation Ewa Nogacka*