Legal Certainty on Use of Investigations Deoksiribonukleat Acid (DNA) in the Invisory Process Scientifically

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Absract: The purpose of this study is to understand, analyze, discover and explain the legal certainty of DNA examination results; (2) the effectiveness of the utilization of examination result of DNA Laboratory of Pusdokkes Polri in scientific investigation process in 2007-2016; and (3) the support of legislation, human resources, infrastructure and budget, and the level of legal knowledge and awareness of the community and law enforcement officers in the process of DNA examination. This research method using qualitative approach with purposive sampling technique. The location of scientific research was conducted at the DNA Laboratory of Center for Medicine and Health of the Police located at Jl. New Cipinang No. No. 3B East Jakarta. The results of this study indicate that: (1) the nature of legal certainty on the utilization of DNA examination results is a means to search for and discover material truth that is absolute and conclusive by prioritizing the categorized "gold"

Keyword: Legal Certainty, Scientific Investigation Process

1. Introduction

The reform era to date, public awareness of legal awareness of human rights and degradation has been increasing in line with the increasing qualitras of public knowledge triggered by the increasing threat of terror, economic pressures and becana and the increasing number of criminals including conventional and transnational crime. The evidentiary importance of a crime today in Indonesia is increasingly needed in accordance with the times and the quality of the existing crime.

Police of the Republic of Indonesia as the bearer of police duty in the field of law enforcement is required to be able to work professionally. This is considering that the increasing number of criminality in Indonesia from year to year followed by technological developments of the types of criminal acts are increasingly diverse, so that in every crime events always found biological evidence at the crime scene in very small numbers. It is therefore necessary that standard operating procedures be appropriate in the collection of biological evidence in order to obtain a perfect result.

DNA is deoxyribonucleic acid (deoxyribosanucleic acid) is the smallest unit of living creature that is a hereditary carrier. DNA is present in blood, skin cells, muscles, brain cells, bones, teeth, hair, saliva, heart, mucosa, urine and in all human cells. As is known, DNA is the basic ingredient that builds up all the genetic traits of a person. DNA is present in every human cell and all cells have the same DNA with each other. For example, DNA in skin cells is similar to DNA contained in hair cells and so forth.

In addition, DNA is unique in that each person's DNA is different from that of other people's DNA. Because of this nature DNA can be used as a marker of individual identity, lineage and ethnicity. DNA analysis is widely used for characterizing genetic properties at the molecular level that directly reflects the genotype (genetic material) possessed by certain organisms. DNA testing or testing can be done only with little DNA evidence. This is because a technique called Polymerase Chain Reaction (PCR) or chain polymerase reaction is used.

Forensic science is the application of scientific principles and techniques to provide a legal proof in an investigation. Forensic science can also be said as the application of science into law. One example of the application of forensic science is DNA analysis performed by comparing DNA profiles obtained from suspects or suspect DNA profiles obtained from DNA databases.

The existence of evidence or better known as proof is a very urgent aspect in court proceedings in order to have certainty and law enforcement. For the accuracy or accuracy of the evidentiary effort that justice to be realized and very dependent on legal certainty. Accurate proof is the path to the upholding of justice. On the contrary, inaccurate proof will give rise to injustice and legal uncertainty. Even with the verification of a judge will get a clear picture of the events that are being disputed in court. In reality, the handling of criminal offenses is still often found to have errors and the impression that the investigator is slow or wrong in the handling, especially those that do not maximize the DNA examination, especially the mysterious or unknown suspects.

The use and expectation of DNA testing still encountered some obstacles and the coming of the need for DNA testing. In many cases of criminal acts, for example rape cases are mentioned the linkage of the four factors of the crime scene, body or clothing of the victim, body or clothing of the perpetrator and on the tools used on crime, such as the penis, which is often spelled out in a prism of evidence and is one of the things which can lead to judge confidence. However, the linkage of these four factors is unclear or unavailable, thus resulting in no belief in judges manifesting in the form

Volume 7 Issue 2, February 2018 <u>www.ijsr.net</u> Licensed Under Creative Commons Attribution CC BY of light or simple punishment. Here are some things that make this happen

- 1) Problem of wholeness of evidence, where the victims of rape after an embarrassing event are generally disgusted and immediately bathe or clean themselves, the sheets that contain semen or blood often have been washed or replaced, the floors have been swept and polished. When the victim down to the doctor all was clean. This sort of thing unwittingly will result in the loss of many evidences such as semen fluid / spots, hair of the perpetrator, blood of the perpetrator and so forth required for verification in court.
- 2) Technical issues of collecting evidence, in this case, crime scene processing, where no searching for evidence is procured due to lack of knowledge, inexperience or carelessness results in the loss of much of the data necessary for the disclosure of cases.
- 3) Technical issues of forensic and laboratory examination, the ability to check the rape service centers varies from place to place. Do not perform sperm examination at all, can not distinguish between tears of the blood membrane or tear due to blunt objects on masturbation. DNA fingerprinting performed on ingredients derived from vaginal swabs not only can clearly reveal the perpetrators of rape, but detect the number of perpetrators in cases of rape with many perpetrators. Blood type examinations and DNA scans on nail scraping materials (if the victim is clawed) can also be used to locate the offender.
- 4) Technical problem of physician knowledge of examiner, that is the rarity of forensic doctors, where cases of rape and offenders are handled by obstetricians and even GPs. Ignorance of the principle of collecting evidence and the manner in which it was examined made a lot of important evidence overlooked and undetected during the examination.
- 5) The problem of knowledge of law enforcement officers, there is often a mistake in making allegations that make the suspect completely free, since the investigator, prosecutor and judge only consider seeking evidence in the form of the accused's accusation and neglecting the scientific proof through medical examination and expert testimony.

Another problem is that in Indonesia has not maximized DNA testing, whereas DNA Profiling or DNA fingerprint determination has been used by some countries as a tool to solve legal or criminal cases. Examples of cases that have been successfully solved using DNA fingerprints are murder cases. By determining DNA ownership, the perpetrators whose genetic evidence is left behind at the scene of the crime may be arrested.

DNA technological advances and the discovery of DNA polymorphism have enabled the creation of individual DNA databases for criminal investigation purposes. Many ethical and legal issues arise in the preparation of DNA databases, and this issue is particularly important when one analyzes the legal rules on this issue. The above description illustrates that there is still a law in action gap in the handling of criminal acts, particularly when associated with the use of DNA testing. Therefore research on the nature of legal certainty on the utilization of DNA examination results (Deoxyribonucleic acid) in the process of scientific investigation becomes important and interesting to investigate.

2. Theoretical Framework

Before the formula, the propositions or laws of truth of the universe were formulated by the seekers of the truth, or of the scientists, where the truth was hiding? In short, before civilization can speak of scientific truth because that kind of truth has not been found in the age of truth what kind of "brand" is and who belongs to it? With the language of religion, perhaps we can call, when the truth is still hidden in God's grasp. At that time no one had asked the truth in earnest, through diligent work, using experiments, contemplation, or systematic observation of the various phenomena of the universe. In those days God's righteousness, and we call it divine truth: the only kind of truth and the source of all truth.

Truth is something that can be said to be true based on logical and analytical reasons. A truth can be viewed from different perspectives and methods of each person, so that anyone can express his or her opinion of a truth. For example the truth seen from the point of rationalism and empiricism. Rationalism derives the word ratio has the meaning of mind / thought, is a notion that teaches that the most true source of knowledge is the ratio (mind). While empiricism is a notion that teaches that the true source of knowledge is only the experience gained through one's senses. These two ideas are in contradiction to each other, giving birth to truth theories.

Traditionally, we recognize 3 (three) truth theories of coherence, correspondence, and pragmatic. And there are 5 (five) theories of truth in science, namely: the truth of coherence, the truth of correspondence, the truth of the performance, the pragmatic truth, and the truth of the proposition. Even plus one more theory that is paradigmatic truth.

a) Coherence Truth Theory.

According to this theory the existence of conformity or harmony between something else with something that has a higher hierarchy of something unsure, either in the form of scheme, system, or value. Coherence is biased in the sensual rational order as well as on the transcendental plane. The theory of coherence can also be called the theory of consistency, ie the theory that says, a statement is considered true if the statement is coherent or consistent with previous statements that have been considered logically correct.

b) The Correspondence Theory of Truth

The correspondence theory holds that a statement is said to be true if the knowledge material contained in the statement corresponds to the statement that is in the nature or the object to which the statement is pointed. The corresponding thought is to think that the existence of something is relevant to something else. Relevant correspondence is evidenced by the presence of inconsistent or contradictory events between reality and the expected fact.

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c) Paradigmatic Truth Theory

That is a theory that states true if the theory is based on a particular paradigm or perspective and there are scientific communities that recognize the paradigm. The paradigmatic truth is actually the development of the truth of correspondence. The paradigm serves as an acceptable juridical decision in the unwritten law.

d) The Theory of Legal Certainty

Certainty is a definite subject (circumstance), stipulation or determination. The law must be inevitably and fairly. It must be a standard of conduct and fair because the guidelines of conduct must support a reasonable order. Just because it is fair and implemented with certainty the law can perform its functions. According to him, certainty and justice are not mere moral demands, but factually characterize the law. An uncertain and unfair law is not just a bad law, permitting it not law at all. Both traits include the law itself (den begriff des Rechts). Law is a collection of rules or rules in a common life, the whole rules of conduct that apply in a life together, which can be forced to execute it with a sanction. Legal certainty is an indispensable feature of law, especially for written legal norms. The law without a certainty value will lose meaning because it can no longer be a guideline of behavior for all people. Sweet potatoes incertum, ibi jus nullum (where there is no legal certainty, there is no law). According to Apeldoorn, legal certainty has two aspects. First, on the matter can be determined (bepaalbaarheid) law in the things of concrete money. This means that the parties seeking justice want to know what is the law in a special case, before he started the case. Secondly, legal certainty means legal security. That is, protection for the parties to the abuse of judges.

e) Theory of Law Enforcement

The definition of law enforcement can also be interpreted as legal organizing by law enforcement officials and by any person having an interest in accordance with their respective authorities according to the applicable law. Criminal law enforcement is a unified process begins with investigation, arrest, detention, trial of defendant and ends with correctional prisoner. According Soerjono Soekanto, law enforcement is an activity of harmonizing the values of values that are outlined in steadfast rules and acts of conduct as a series of final value translation. To create, maintain and maintain peace of life. Criminal law enforcement is the application of criminal law in concrete by law enforcement officers. In other words, criminal law enforcement is the imposition of criminal regulations. Thus, law enforcement is a system that involves harmonizing values with rules and real human behavior. These rules then become guidelines or benchmarks for behavior or actions that are considered appropriate or appropriate. The behavior or attitude of the act is aimed at creating, maintaining, and maintaining peace.

f) The Theory of Proof

Proof is the central point of court in a court case. Proof is the provisions that contain the rulings and guidelines on the ways that the law justifies proving wrongs that are indicted to the defendant. The meaning of the actual proof shall not be found in any Article which provides for its regulation either in the Criminal Procedure Code or in other legal provisions.Evidence is one of the most essential processes in the discovery of the material truth of a criminal case, so that in the process of verifying the case in the court it is necessary to have evidence and evidence that can actually make light of a crime which it suspects.

3. Discussion

Description of DNA Examination Utilization

Trial proceedings, generally halal goods collected by police investigators are shown. However, the perpetrators of the crime sometimes do not acknowledge the evidence and what has been alleged to him, so the judge hesitates on the authenticity of the evidence. It is here, the role of sciencebased scientific technology that plays to clarify and relate the evidence and other findings that have been collected by police investigators in the field. One of them with DNA examination.

DNA is a genetic material present in the cells of the human body. Every body part of a human individual has the same DNA, as the DNA of the blood will be identical to the DNA of hair, bones, saliva / saliva and so on. The human DNA's profitability is unique and nothing is the same among human beings. The existence of DNA in the cell nucleus causes the condition to be so stable that it will not change, from the human being in the womb until the human is buried in the ground. Although DNA is characteristic or individual, comparable DNA advantages can be extracted from the DNA of others with a biological connection such as a parent or child, since the DNA is inherited half of the father and half of the mother, making it easier to match.

DNA examination has been able to be done by the Police since the 90's, which at that time still use conventional methods and certainly requires quite time-consuming workmanship. Currently, the DNA Laboratory of Pusdokkes Polri has applied the DNA methods and technology that have been used internationally, so the results of DNA testing can be accounted scientifically and acknowledged. The results of DNA testing in the form of profit-profit DNA will be stored into a DNA data bank that will be used to connect between evidence, crime scenes, witnesses, victims and suspects in order to obtain a clear picture of the modus operandi of criminal acts that occurred.

DNA in the cells of the human body resides in the cell nucleus and mitochondria. DNA examination by the Police Laboratory of Pusdokkes Polri focused on DNA inside the long tinier cell nucleus and composed in a stable chromosome compact structure. One of the roles of DNA in the disclosure of criminal cases proved in 2008, in which pieces of human flesh were found inside the Mayasari Bhakti P64 bus majoring in Pulogadung - Kalideres. This case is a difficult case because the witness (bus conductor who found the package containing pieces of human flesh) did not know clearly the passengers who are suspected to leave the package. Intensive follow-up of human flesh cuts indicates that there are oil marks attached to the evidence. Until finally done crime scene at the house of a public transport driver who is rumored by a friend seprofesinya already a few days do not work.

From the scene of crime scene obtained matching DNA profile between the blood streaks attached to walls and door

International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2016): 79.57 | Impact Factor (2015): 6.391

frames with pieces of human flesh, so it can be concluded that the victim was killed in the house. The DNA examination of the evidence collected from the scene of a crime scene can be used as legal evidence in a court hearing, in accordance with article 184 paragraph 1 of the Criminal Procedure Code. Furthermore, the statement or opinion of a DNA examiner Nadir at a court hearing so-called expert testimony can make the light of a case, as has been done in relation to the example of the above criminal case. Thus it can be said that the involvement of the process of DNA examination of every evidence collected from the scene by the investigator makes the process of disclosure of a case tend to be faster and directed.

Overview of DNA Laboratory of Pusdokkes Police of the Republic of Indonesia

DNA Laboratory of Pusdokkes Polri was pioneered by Dr. Christanto TH (Alm), dr. Slamet Poernomo, drg. Alphonsus G, dr. Lukman Hakim, Drs. Putut T. Widodo and Sri Aminarni (Alm), from 1990 to 2005 with activities such as Serological Test, Dot Blot (1992), Organic Isolation Validation (1993), HLA DQ-A (early 1994), D1S80 (late 1994) , and SA Gel Electrophoresis. So in the early pioneering of the laboratory, from a series of validations conducted, DNA isolation technique with the title "Alpusri" succeeded and used as a mainstay method. The name "Alpusri" is taken from a combination of three dock personnel namely, Alphonsus RQ, Putut T. Widodo, and Sri Aminarni.

The rehabilitation and construction of a new DNA laboratory by the Police in collaboration with the Australian Federal Police (AFP) was conducted from 2006 to 2007 until March 26, 2007 the new Police Pusdokkes DNA Laboratory was officially inaugurated by the National Police Chief and Commissioner of the Australian Police. The DNA laboratory of Pusdokkes Polri is a forensic DNA laboratory, where forensic DNA laboratories have the highest inspection standards and can be used in criminal cases, but can also be used for identification purposes such as cases of Disaster Victim Identification.

Since 2007, the DNA Laboratory of Pusdokkes Polri has been able to handle cases of murder, mutilation, rape, paternity, disappearance, DVI or terrorism with more than 160 cases with more than 1000 samples. Among the cases that can be handled there are cases of serial killings by Veri Idham H. alias Ryan in Jombang, Citizens victims of forest fires in the state of Victoria Australia, the case of the fall of Sukhoi aircraft and terrorism cases. The development of criminal DNA database of perpetrators in Indonesia was also carried out by the Poly Pusdokkes Police Laboratory gradually and continuously in 2009.

Legal Certainty of DNA Examination Results

The law has the character of governing and forbidding, of being coercive, of physical and psychic binding. Because the law has the characteristics, the nature and the binding power, the law can give justice, is able to determine who is wrong and who is right, has the right to punish wrong, the law can compel him to obey the rules, and impose sanctions on the violators.

As evidence in court, DNA test evidence has been very commonly used universally in this world. Especially in the field of criminal proof, especially against cases of robbery, murder, or rape. This is understandable because in such cases it is quite possible that the culprits leave materials that are DNA samples, such as blood, hair, skin cells, saliva, semen (water sperm), sweat, and others. In addition, there has been much evidence that this DNA test can send innocent people to jail or prevent innocent people from imprisonment.

DNA testing can identify a person's error with a higher degree of certainty, as the basis of each individual's DNA sequence is unique. In this forensic application, DNA technology used is RFLP analysis. The result of the analysis is fragmented fragments separated by electrophoresis. This method is used to compare DNA samples from suspects (suspect murder criminals for example), victims, and small amounts of cement, blood or other muscle tissue found at the scene of the case.

Based on the above description, it can be explained that the application of DNA technology in the field of forensic medicine, the use of DNA analysis for the settlement of forensic cases is also increasing. The role of DNA testing in law enforcement process can be seen from the utilization of DNA test technology to:

- 1) Personal identification, carried out in cases of discovery of unidentified victims, such as in cases of accidents, killing, mass disaster, aircraft accidents;
- 2) Tracking the genetic relationship (disputed parentage or parent doubt case). The tracking of parent-child relationships is done in cases of alleged infidelity, paternity cases, mother's doubt cases, infant cases confused, immigration cases.
- 3) Tracking the source of biological material is examination of trace evidence in order to search for offender (examination of semen spots, vaginal swab, nail scrap), search for victim (blood spots on suspect clothes, at scene, and cell analysis on bullet cytology), as well as analysis of body parts in mutilation cases.

Effectiveness of Utilization of DNA Laboratory Inspection Result of Pusdokkes Polri in Scientific Investigation Process Year 2007 – 2016.

The number of cases revealed with the help of DNA tests handled by the Police DNA Laboratory of Pusdokkes within 10 years (2007 - 2016) shows the development of cases that tend to increase. More details are shown below:

International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2016): 79.57 | Impact Factor (2015): 6.391



Based on the above diagram shows in the period of 10 years the number of cases handled by the Police Laboratory of Pusdokkes Polri undergo different changes. Changes in the number of cases increased from 2007 by 19 cases increased until in 2010 to 94 cases. In 2011, there was a decrease of 77 cases, then increase in 2012 as many as 93 cases, in 2013 decreased to 83 cases. After that the increase from 2014 to 2016 reached 182 cases.

Factors Supporting Legislation Regulations, Human Resources, Infrastructure and Budget Facilities, And Level Of Knowledge And Legal Awareness Of The Society And Law Enforcement Officials In The Process Of DNA Examination

Legislation

Implementation of DNA examination in the process of investigation scientifically requires the existence of adequate legislative support so that every law enforcement officer can perform their duties and authorities quickly and accurately, and can avoid law enforcement apparatus from potential mistakes or mistakes in the handling of criminal acts and cases others. Law enforcement and law enforcement in Indonesia is far from perfect. Weakness not only in the legal system and legal products, but in law enforcement. The public expectation to obtain guarantee and legal certainty is still very limited. The enforcement and enforcement of the law has not proceeded in accordance with the principles of justice and truth.

The data show that 77 people or 77% said that legislation support in the utilization of DNA examination results was adequate and adequate. So it can be concluded the majority of respondents stated that the support of legislation is adequate in the implementation of DNA examination. However, there are still quite a lot of respondents who believe that the support of legislation in the utilization of DNA examination is not sufficient as much as 22 people or 22%, so it needs to be further explored the constraints factor.

Human Resources

The motion of legal renewal which is not supported by the enhancement of guidance to its apparatus will result in a non-renewable law that will not mean anything. His goodness and perfection will be lost in the sluggishness, arrogance, wickedness, and depravity of the law enforcement officers, as the Taverne states that the goodness, goodness, and perfection of the criminal procedure law are determined by the good of the apparatus. That is why, between the renewal of criminal procedure law and the enhancement of the attitude of law enforcement officers, it must run simultaneously so that there will be no gap between legal reform and the mental attitude of the executors.

The development of science is always manifested through the Education process which aims to improve the relationship between general knowledge and human experience to the environment as a whole. Knowledge development is not born or created spontaneously, but through the process of conscious sustainability and is based on the needs of knowledge that is usually adjusted denagn work or profession for humans.

The analysis results show as many as 68 people or 68% stated that the support of human resources in the utilization of DNA examination is very adequate and adequate. So it can be concluded the majority of respondents stated that the support of legislation is adequate in the implementation of DNA examination. Apparently, there are still many respondents who believe that human resources support in the utilization of the result of DNA examination is not enough as much 31 people or 31%.

Support Facilities and Budget

Facilities are basically shaped facilities or tools that are used directly for the continuity of an activity. Typically, this tool or facility has an important role, because without it, the activity will not be well organized. In fact, activities will not exist without the tool. For example, in educational activities, schools or teaching, which are included in the facilities are tables, benches, blackboards, classes, buildings and others in the school. However, there is one thing that is also included in other forms of means. It is time. Time is included in the group of means. Time can not be measured and included in abstract form. But, time is definitely needed and in direct contact with the activities undertaken. This is what makes the time to enter in this group. While Infrastructure, is a public facility in the location of the event. When taking samples of educational or school activities, infrastructure can be roads and electricity. Both are needed for continuity of the main activities in the venue.

The results of the analysis indicate that 87 people or 87% stated that the support of infrastructure facilities in the utilization of DNA examination is sufficient and adequate. So it can be concluded the majority of respondents stated that the support of legislation is adequate in the implementation of DNA examination. It appears that few respondents perceived that the support of prasana facilities in the utilization of the result of DNA examination is not adequate as much as 12 people or 12%

Furthermore, to get a picture of budget support at the DNA Laboratory Pusdokes Police analysis results show as many as 71 people or 71% said that budget support in the utilization of DNA examination is very adequate and adequate. So it can be concluded the majority of respondents stated that adequate budget support in the implementation of DNA examination. It appears that few respondents considered that budgetary support in the utilization of DNA examination results inadequate as many as 28 people or 28%.

Level of Legal Awareness and Awareness

The DNA Laboratory of Pusdokkes Polri is in charge of organizing operational activities and fostering the field of DNA testing at the central level and territorial support and carrying out research development, education and training, science reference center and DNA lab technology. To find out how far the level of knowledge and legal awareness of the community regarding the use of DNA examination results in scientific investigation, the results showed 55 people or 55% said that the level of knowledge and awareness of the community in the utilization of DNA examination is sufficient and adequate. So it can be concluded the majority of respondents stated that the support level of knowledge and awareness of public law in the implementation of DNA examination. Apparently, there are still many respondents who think that budget support in the utilization of DNA examination is less adequate as much as 8 people or 40%.

The level of knowledge and legal awareness of law enforcement officers is an important element in the framework of law enforcement, because the success or failure of law enforcement can not be separated from the level of knowledge and legal awareness of its apparatus. The level of knowledge and awareness of law enforcement apparatus will be a reference of good or bad law action of law enforcement officers in enforcement of crime. To find out the extent to which the level of knowledge and legal awareness of law enforcement officers in the utilization of DNA examination results in scientific investigation, the results show that 76 people or 76% of respondents stated that the level of knowledge and law awareness of law enforcement officers is adequate and adequate. it can be concluded that the majority of respondents stated that the support of the level of knowledge and legal awareness of law enforcement officers is adequate.

4. Conclusion

- 1) The legal certainty on the use of DNA examination results is a means of searching for and discovering absolute material truths by emphasizing significant evidence in real evidence / physical evidence which is categorized as "gold" (showing the direct relationship of the perpetrator and the victim such as on a knife proof) and qualified "green" (excellent in the search for a condom-like DNA profile) that can be held true and there is no doubt about the accuracy of the results of the DNA test (coclusive results), through the process of sampling (evidence) at the scene of a crime scene conducted by trained personnel (by upholding professionalism and ethical codes) to the DNA analysis process (by meeting the proven Good Laboratory Practice tested and accredited ISO 17025), so that investigated and investigated crimes can be revealed to be candid and clear scientific by maximizing an authenticity of DNA test that has 99.9% accuracy, as the use of DNA testing as a primary identification method that can stand alone in determining the identity of an individual (individual) based on Interpol recognized standards in the operation of Disaster Victim Identification.
- 2) Implementation of the use of DNA examination in the process of scientific investigation at the DNA Laboratory Pusdokkes Polri from 2007 to 2016 has been effective, with the number of cases handled approximately 754 cases and the number of DNA evidence of approximately 6751 samples, can be analyzed by 93,63% and can not be analyzed because of damage (degradation) equal to 6,37%. This is also in line with the support of the Pusdokkes DNA Laboratory in the handling of several major cases in Indonesia, such as one of the scientific settlement and the presence of legal certainty in the case of false arrest and misidentification of victims of "Tea Garden Asrori" behind the series of Very Idham Henyansyah aka Ryan Jombang.
- 3) The support of legislation, human resources, infrastructure and budget, and the level of knowledge and legal awareness of the community and law enforcement officers in the DNA inspection process have been adequate, but there are still some outstanding issues that need attention.
- 4) There is still a lack of specially regulated legislation (lex specialis) regulating the utilization of DNA examination results by Polri institutions, where the current legal instruments are only the Regulation of the Chief of Police of the Republic of Indonesia Number 12 Year 2011 regarding Police Medicine which is deemed to have not been specifically regulated about the use of DNA technology and to the extent it applies internally.

References

[1] Abineno, Tim Buser Sempat Hanya Makan Ubi Kejar Aco, BeritaManado.com, 9 Januari 2014, Ali Achmad, Menguak Teori Hukum (Legal Theory) dan Teori Peradilan (Judicial Prudence) termasuk Interpretasi

DOI: 10.21275/ART2018376

Undang-Undang (Legis Prudence), Penerbit Kencana, Jakarta, 2014.

- [2] -----, Menguak Realitas Hukum Rampai Kolom dan Artikel Pilihan dalam Bidang Hukum, Penerbit Kencana, Jakarta, 2008.
- [3] Ali, Achmad dan Heryani, Wiwie, *Menjelajahi Kajian Empiris Terhadap Hukum*, Penerbit Kencana Praneda Media Grup, Jakarta, 2012.
- [4] Andayono, Peran Puslabfor Bareskrim Polri dalam Rangka Scientific Crime Investigation, Makalah, Puslabfor Bareskrim Polri, Disampaikan pada Workhop Pengolahan TKP, di hotel Borobudur, Jakarta, 21 Desember 2011.
- [5] Arniti, Ni Komang Ayu dan Budiartha, I Nyoman Putu, *Pengantar Ilmu Hukum "Ilmu Bantu Hukum Sebagai Ilmu Kenyataan"*, Makalah Ilmu Bantu Hukum, Universitas Warmadewa, Denpasar, 2016.
- [6] Astuti, Shellanika Ari, Kekuatan Pembuktian Keterangan Ahli Forensik Dalam Tindak Pidana Pembunuhan Bayi Oleh Ibunya (Tinjauan Yuridis Putusan No. 147/Pid.B/2013/PN.Pwt.), Skripsi, Fakultas Hukum, Universitas Jenderal Soedirman, Purwokerto, 2014.
- [7] Asyraf, Kekuatan Pembuktian Keterangan Ahli Forensik Dalam Tindak Pidana Pembunuhan Bayi Oleh Ibunya (Studi Kasus Di Mahkamah Syariah, Shah Alam, Selangor), Skripsi, Universitas Islam Negeri Sultan Sarif Kasim Riau Pekanbaru, 2014.
- [8] Atmadja, Djaja Surja, Pemeriksaan Forensik Pada Kasus Perkosaan dan Delik Aduan Lain, Informasi Reproduksi, Situs informasi singkat pengantar kuliah sistem reproduksi bagi mahasiswa fakultas kedokteran Jumat, 25 Desember 2009, Tersedia pada https://online-

journal.unja.ac.id/index.php/biospecies/article/view/27 4, Diakses 10 Desember 2017.

- [9] Chaniago, Alfitri Johar, Eksistensi DNA sebagai Alat Bukti di Persidangan. Kamis, 07 Juni 2012, Artikel HukumTersedia pada http://alfitrijohar.blogspot.co.id/2012/06/eksisten-dna-sebagaialat-di.html, Diakses 10 Desember 2017.
- [10] Damang, Kekuatan Pembuktian Alat Bukti Surat, Makalah Hukum Pidana, Negara Hukum, 27 November 2011, Tersedia pada http://www.negarahukum.com/hukum/kekuatanpembuktian-alat-bukti-surat.html, Diakses pada 10 Desember 2017.
- [11] Faal, M., *Penyaringan Perkara Pidana Oleh Polisi* (*Deskresi Kepolisian*), Penerbit Pt. Pradnya Paramita, Jakarta, 1991.
- [12] Fardhinand, Hilman Ali, Eksistensi Tes DNA (Deoxyribo Nucleic Acid) sebagai Alat Bukti dalam Pembuktian Hukum Pidana, Artikel, Lex Crimen Vol. IV/No. 2/April/2015, Tersedia pada https://ejournal.unsrat.ac.id/index.php/lexcrimen/articl e/view/8042/7603, Diakses pada 10 Desember 2017.
- [13] Fauzi, Muhamad, Perihal Alat Bukti Tes DNA, Official website, Tersedia pada http://www.muhamadfauzi.com/2017/01/perihal-alatbukti-tes-dna.html, Diakses pada 10 Desember 2017.
- [14] Forensik, Warta Laboratorium, Mengenal Lebih Dekat Laboratorium Forensik Bareskrim Polri, Rabu, 12 Mei

2010,Tersediapadahttp://wartalabfor.blogspot.co.id/2010/05/mengenal-lebih-dekat-puslabfor.html,Diaksespada10Desember 2017.

- [15] Heriyanto, Hakikat Peranan Kedokteran Forensik pada Tahap Penyidikan dalam Proses Pembuktian Tindak Pidana Pembunuhan, Disertasi, Program Pascasarjana Universitas Muslim Indonesia Makassar, 2016.
- [16] Ishaq, Musaddeq, Kepolisian Siapkan Data Induk DNA Kriminal, AntaraNews.com, Senin, 5 Februari 2007, Tersedia pada https://www.antaranews.com/berita/52598/kepolisiansiapkan-data-induk-dna-kriminal, Diakses 10 Desember 2017.
- [17] Larasati, Dinar, Prosedur Pemeriksaan DNA dalam Laboratprium DNA Pusdokkes Polri, Laporan Kegiatan Magang Mahasiswa, Jurusan Biologi Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Sebelas Maret, Surakarta, 2013.
- [18] Perdanakusuma, Musa, *Bab-bab tentang Kedokteran Forensik*, Penerbit Ghalia Indonesia, Jakarta, 1984.
- [19] Polri, Laboratorium DNA Pusdokkes, Laporan Pelaksanaan Penelitian (Penentuan Jumlah Minimal Sampel Otot dan Darah untuk Pemeriksaan DNA di Laboratorium DNA Pusdokkes Polri) Tahun 2014, Jakarta, 2014.
- [20] Polri, Pusdokkes, Panduan Teknis tentang Pengambilan Sampel DNA bagi Petugas Olah TKP atau Penyidik, Jakarta, 2012.
- [21] -----, Panduan Teknis Pengambilan Sampel DNA bagi Petugas Olah TKP / Penyidik, Edisi Kedua, Jakarta, 2015.
- [22] ------, Puslitbang Mabes, Laporan Hasil Penelitian dan Survey tentang Pembuatan Prototype Kendaraaan Response DNA dalam rangka Pelayanan Prima, Jakarta, 2015.
- [23] Soekanto, Soerjono, Faktor-faktor yang Mempengaruhi Penegakan Hukum, Penerbit UI Press, Jakarta, 1983.

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DOI: 10.21275/ART2018376