

# Uncovering the Identity and Causes of the Death of Victim of Murder Case in Indonesia through Forensic Science

Mahrus Ali\* Haekal Abdalla Jouf

Faculty of Law, Universitas Islam Indonesia, Jl. Kaliurang, km 14,5 Sleman, Yogyakarta, Indonesia

E-mail of the corresponding author: [mahrus\\_ali@uii.ac.id](mailto:mahrus_ali@uii.ac.id)

## Abstract

Forensic science is the science of conducting examinations and collecting physical evidence found at the crime scene and then presented in court. The role of a forensic expert in the judicial process, namely examining the crime scene. This usually occurs in large cases. A forensic expert only comes to the scene of the crime at the request of the authorities. This present study aims to find out the role of forensic science in uncovering the identity and causes of death of victims of murder, and to find out the obstacles arise and the efforts that can be made in the process of uncovering the crime of murder. This study revealed that the usual forensic stages include collection, protection, analysis and presentation. Forensic science in uncovering crimes is very necessary. This aims to minimize the occurrence of wrong sentences, wrong arrests, and assist the performance of law enforcers in determining the perpetrators of crimes. In every handling of a murder incident, both in the processing of the TKP (scene of the case) and in determining the TKP, it does not rule out the possibility that the investigator experiences difficulties or there is something that applies in processing the crime scene of a murder case.

**Keywords:** forensic science, criminal act, murder

**DOI:** 10.7176/JLPG/119-10

**Publication date:** March 31<sup>st</sup> 2022

## 1. Introduction

Kinds of legal problems are increasingly occurring along with the times, in conjunction with the rapid increase of science and technology. This results in the behavior patterns of the community changing to become increasingly complex. More and more patterns of human behavior are not in accordance with the norms prevailing in society. These deviant behaviors can lead to an offense and even crime. Crime will cause unrest in society in general. Therefore, efforts are always being made to overcome these crimes, even though in reality it is very difficult to completely eradicate crime because basically crime will continue to develop along with the development of society. Legal development will always develop along with the development of society. Likewise, legal issues will also develop along with the development of problems that occur in society. One of the negative impacts arising from the development of science and technology is the emergence of an increase in the type and modus operandi of crime, so that the investigation and investigation process also requires a way to use modern science and technology. One of the assistive sciences to solve this problem is forensic science.<sup>1</sup>

In Indonesia, crime is increasingly occurring, both conventional crime and digital crime (Cybercrime). Conventional crimes are in the form of murder, theft, assault, and robbery, while cybercrime is in the form of carding, phishing, falsifying data, and spreading fake news (*hoax*). Every criminal act that occurs will be examined to find the material truth and the complete truth as possible. In this case, law enforcers are tasked with looking for valid evidence to reveal a criminal act. The stages of the criminal offense examination process are investigation, prosecution and trial. An important stage in disclosing a criminal act is proof, because it will determine whether someone is guilty or free. According to Article 183 of the Criminal Procedure Code states that 'a judge may not impose a sentence on a person unless with at least two valid pieces of evidence he is convinced that a criminal act actually occurs and the defendant is proven guilty'<sup>2</sup> Based on article 184 of the Criminal Procedure Code, there are 5 pieces of evidence that are valid in the eyes of the law, namely, witness testimony, expert testimony, letters, instructions, and statements of the accused<sup>3</sup>.

The investigation process in uncovering a crime requires a scientific approach. With a scientific approach, law enforcement does not only depend on the testimony of living witnesses or suspects in the investigation of a crime. One example of a scientific approach is forensic science. When you hear the term forensics, the first thing you think of is post-mortem, autopsy, or death. This includes a branch of forensic science, namely forensic

<sup>1</sup> Octo Iskandar and Naufal Hafidh Suwanda, "Peranan Ilmu Forensik Dalam Pengungkapan Tindak Pidana Kekerasan Fisik Dalam Lingkup Rumah Tangga Yang Dilakukan Istri Terhadap Suami (Studi Kasus Putusan No.1550/Pid.Sus/2015/Pn.Mks)". *Jurnal Krtha Bhayangkara*, Volume 13 Nomor 1, Juni 2019. p 101.

<sup>2</sup> Article 183 of the Criminal Procedure Code.

<sup>3</sup> Article 184 paragraph (1) of the Criminal Procedure Code ("KUHP") states that valid evidence is: testimony of witnesses, expert statements, letters, instructions and statements of defendants. In a system of proof of criminal procedural law that adheres to the *stelsel negatief wettelijk*, only legal evidence according to law can be used for proof, this means that outside these provisions, valid evidence cannot be used.

medicine. In addition, forensic science consists of forensic biology, forensic chemistry, forensic physics, forensic entomology, ballistics, forensic metallurgy, forensic toxicology, forensic odontology, forensic anthropology, forensic psychiatry, forensic psychology, forensic pathophysiology<sup>1</sup>, and digital forensics.

In the world of medicine, there is one name of science, namely forensic medicine. Forensic science is a specialized branch of medical science that utilizes medical science to assist law enforcement and solve problems in the field of law. The scope of forensic medicine has evolved over time, from the beginning only to the death of crime victims, unexpected and unexpected deaths, unidentified corpses, to surviving crime victims, or even suspected skeletons, tissues and biological materials coming from humans.<sup>2</sup> The types of cases also extend from murder, assault, sexual crimes, domestic violence, child abuse and neglect, disputes over divorce, fraud and abuse of insurance, to violations of human rights.<sup>3</sup>

Forensic science is the science of conducting examinations and collecting physical evidence found at the crime scene and then presented in court. The role of a forensic expert in the judicial process, namely examining the crime scene. This usually occurs in large cases. A forensic expert only comes to the scene of the crime at the request of the authorities. For example, there is a case of a plane crash, where there are no survivors. Most of the bodies of the victims of the plane crashed, so it is necessary to identify the victims. This is where forensic experts work. During the identification process, the forensic odontologist<sup>4</sup> examines the teeth for victim identification, the forensic anthropologist identifies the victim based on the bones found. Whereas in a murder case, examination by a forensic expert, especially forensic medicine, will be very important in terms of determining the type of death and to find out the cause of death, time of death, which is very useful for the authorities to determine the suspect and sentence him. Apart from working at the crime scene, a forensic expert also works in a forensic laboratory. In Indonesia, forensic laboratories only exist within the Polda (Regional Police), and not all of the existing Polda have a forensic laboratory. The forensic laboratory is a place to analyze evidence. For example, in the case of drug abuse, determining the type of drug and whether a person is consuming drugs can be done at the crime scene or at the laboratory. In other cases, such as cases of rape, murder cases with firearms, cases of counterfeit money, cases of fire, cases of assault, and cases of murder using poison. In general, the usual forensic stages include collection (acquisition), protection (preservation), analysis (analysis) and presentation (presentation). Forensic science in uncovering crimes is very necessary. This aims to minimize the occurrence of wrong sentences, wrong arrests, and assist the performance of law enforcers in determining criminals. In a typical criminal investigation, a crime scene investigator, sometimes known as a Crime Scene Investigator (CSI), will collect physical evidence from a crime scene, victim and / or suspect. Forensic scientists then examine the collected material to provide scientific evidence to aid in police investigations and court proceedings. As such, they often work very closely with the police. If a death occurs, forensics can be used to determine when, where and how someone died. If it is not a natural death, forensics can also prove if someone else was responsible for causing the death, and what weapons were used in the crime.<sup>5</sup>

Crime under the guise of law enforcement must be watched out for Indonesian society in a transitional period since the reform era. Currently, there is a lot of bias between law enforcement efforts and law users that are carried out for personal or group interests where Indonesia is still in a transition period towards a democratic society. There has been a lot of abuse of authority in the legal, political and economic fields. All policies are carried out in the framework of mere formality. In fact, there are many crimes behind it that are camouflaged. The case of the former Chairman of the Corruption Eradication Commission, Antasari Azhar, in the murder of Nasrudin is one example of how the crime of Nasrudin's murder can be wrapped up as if law enforcement efforts were being carried out. A special team was formed to deal with Nasrudin on the pretext of state interests. In fact, the alleged executors of Nasrudin's murder were informed that they were on duty in the interests of the state. In this case, knowledge is needed that can be used in investigating a criminal case for the sake of law and justice.

This science is often known as Forensic Medicine. Forensic Medicine has a very important role in revealing a crime that has occurred, especially in cases that are difficult to solve or require special techniques in disclosing them.<sup>6</sup> Based on context of the study, this paper aims to explore the role of forensic science in uncovering the identity and causes of death of victims of murder as well as the obstacles arise and the efforts that can be made in the process of uncovering the crime of murder.

---

<sup>1</sup> Pathophysiology of convergence of pathology with physiology, is the study of disordered physiological processes that cause, result or are associated with disease or injury. Pathology is a medical discipline that describes conditions that are normally observed during disease states, whereas physiology is a biological discipline that describes the processes or mechanisms operating in an organism. Pathology describes abnormal or unwanted conditions, whereas pathophysiology attempts to explain functional changes that occur in a person due to a disease or pathological condition.

<sup>2</sup> Budi, Sampurna, "Peranan ilmu forensik dalam Penegakan Hukum". Jakarta: FK UI, 2008, p 32.

<sup>3</sup> *Ibid.* p 33.

<sup>4</sup> A science dealing with the teeth, their structure and development, and their diseases.

<sup>5</sup> Marchel R. Maramis, "Peran Ilmu Forensik Dalam Penyelesaian Kasus Kejahatan Seksual Dalam Dunia Maya (Internet)", *Jurnal Ilmu Hukum*. Vol.II/No.7/Julii-Desember /2015. P 43.

<sup>6</sup> *Ibid.* p 45.

## 2. Material and Method

This study employed doctrinal legal research. There were several approaches in compiling this research, namely statutory and conceptual approaches. Primary legal source are binding legal materials because they are issued by the government including the Criminal Code, Code of Criminal Procedure, and regulation of the Head of the National Police of the Republic of Indonesia Number 12 of 2011 concerning Police Medicine.<sup>1</sup> The data collection technique carried out was through literature study by examining the rules in law, journals, or other existing legal sources that are related to the subject matter This research used descriptive qualitative research by examining data that has been obtained from the literature and selecting other sources that are in accordance with the object under study.<sup>2</sup> After which it can be concluded and drawn baselines objectively and systematically in the form of a narrative explanation.

## 3. Result and Discussion

### 3.1 Forensic Science and Its Legal Basis for Criminal Case

Forensic is a field of science that is used to assist the law enforcement process through the application of science. Forensic Science is a science that is used for legal purposes by providing scientific evidence that can be used in court to solve crimes.<sup>3</sup> In general, Forensic science is the science of examining and collecting physical evidence found at the crime scene and then presented in court. Important information provided by forensic science helps the justice system. The information obtained by using Forensic science is to make light of a case by examining and analyzing dead evidence, so that with Forensic science, various information must be obtained as follows:<sup>4</sup>

- a. Information on *corpus delicti*, from examination of both the scene of the crime (TKP) and evidence can explain and prove that a criminal act has occurred.
- b. Information on the modus operandi, some criminals have their own ways of committing crimes. By examining the evidence in relation to the modus operandi, it can be seen who the perpetrators are.
- c. Linking a suspect with a victim, examining evidence at the crime scene or the victim can result in the suspect's involvement with the victim, because in a criminal act there must be material from the suspect left behind with the victim.
- d. Linking a person to a crime, after a criminal act has occurred, there are many possibilities for a crime scene or victim by someone other than the suspect to take advantage.
- e. Disproving or supporting a Witness's Testimony, examination of evidence can provide clues as to whether the information provided by the suspect or witness is lying or not.
- f. Identification of a suspect, the best evidence that can be used to identify a suspect is fingerprints, because fingerprints have very characteristic characteristics and are very individual for each person.
- g. Providing investigative leads, examination of evidence can provide clear directions.

The stages in a Forensic examination include collection (Acquisition), maintenance (Preservation), analysis, and presentation. According to Bambang Widodo Umar, forensics is a way to prove or uncover cases to get the real truth. Forensics is a way to obtain evidence or tools to obtain evidence, not evidence itself. For example, like a bullet that is fired, does the bullet come from weapon A. To test it, Forensics is used.<sup>5</sup> In the crime of murder, forensic science is very much needed, the crime of murder is included in a material crime (*Materiale delict*), meaning that for the perfection of a criminal act it is not enough to commit the act, but it becomes a condition that has consequences. The criminal act of murder causes disturbance to public order and state order.<sup>6</sup> Murder is an inhuman crime, because murder is an act that results in the loss of the life of another person, whether it is done intentionally or unintentionally.<sup>7</sup>

The crime of murder can be carried out by planning in advance which the legislators call 'moord'<sup>8</sup> or abbreviated as premeditated murder which is an act of murder with the heaviest threat of punishment of all forms of crimes against human souls, as stated in Article 340 of the Book of Law. Criminal Law that 'Anyone who deliberately and deliberately seizes the life of another person, is threatened with premeditated murder, with the death penalty or life imprisonment or for a specified period of time, a maximum of twenty year'.<sup>9</sup>

Forensic medicine is an interdisciplinary science which in everyday practice applies all the knowledge that medical sciences, have accepted as reliable and scientifically solid facts or processes, and qualitative and

<sup>1</sup> Bambang Sunggono, "Metodologi Penelitian Hukum", Jakarta: PT. Raja Grafindo Persada, 2007, p. 27-28.

<sup>2</sup> Sugiyono, "Metode Penelitian Kuantitatif Kualitatif Dan R&D", Bandung: Alfabeta, 2010, p 9.

<sup>3</sup> Onan Purba, Rumelda Silalahi, "Peran Ilmu Kedokteran Forensik Dalam Pembuktian Tindak Pidana Penganiayaan". *Jurnal Retenrum*, Volume.1 No. 02 Tahun 2020, p 129.

<sup>4</sup> Mayrany J. Wuwung, Tindak Pidana Pembunuhan Berencana Menggunakan Racun, *Lex Crimen* Vol. VII/No. 4 /Jun/2018, p 65.

<sup>5</sup> *Ibid.* Mayrany J. Wuwung.

<sup>6</sup> *Ibid.*

<sup>7</sup> Soerdjono Soekanto dan Purnadi Purwacaraka, "Sendi-Sendi dan Hukum Indonesia", Citra Aditya Bakti, Bandung, 1992, p 27.

<sup>8</sup> P.A.F. Lamintang dan Theo Lamintang, "Delik-Delik Khusus Kejahatan Terhadap Nyawa, Tubuh dan Kesehatan", Sinar Grafika, Jakarta, 2010, p 51.

<sup>9</sup> KUHAP dan KUHP, Sinar Grafika, Jakarta, 2013, p 116.

quantitative definitions with the help of which accurate and reliable statements can be made.<sup>1</sup> The premeditated murder case against Wayan Mirna Salihin is one of the crimes that has attracted the attention of many people. The courtroom is almost always full of visitors. The trial often lasted until midnight, and parts of the trial were broadcast live on television. Curiosity has made many people concerned about the development of this case, wanting to know the real cause of Wayan Mirna Salihin's death. The poison that is used as a clue is closely related to other evidence to provide the strength of the evidence and strengthen the confidence of the judge in making decisions. The poison used is a deadly chemical that can be categorized as part of planning to carry out the crime of murder, if it is supported by other evidence, such as expert testimony and even witness testimony. Thus, to prove the use of poison as a part of premeditated murder requires expert information. Expert advice is used to confirm that the poison can lead to death. The process of proving poison as the cause of death does not only refer to the capacity or ability of an investigator, investigator, public prosecutor, lawyer or judge but involves other competent parties to prove that poison is the cause of death of a person, so that with competent involvement the perpetrator who commits a crime premeditated murder can be held accountable.

The process of proving the act of premeditated murder by using poison, then the method that must be done is to examine the poison that has been used. Examination of poison can be carried out on people who are still alive and people who have died or corpses, even on bodies that have been buried. In uncovering the criminal act that occurred, especially to find out the causes of the death of a person who was suspected of being killed by poison, the investigators would use Forensic Science and would ask for help from an expert in forensics. Forensics are usually used to assist investigations in a crime case.

The legal basis for forensics is in the Criminal Code ("KUHP") and Law Number 8 of 1981 concerning Criminal Procedure Law ("KUHAP"). The Criminal Code states that experts who refuse to provide assistance to the police can face criminal penalties as stipulated in Article 224 and Article 522 of the Criminal Code. Article 224 stipulated that anyone who is summoned as a witness, expert or interpreter according to the law deliberately does not fulfil the obligations under the law which must be fulfilled, is threatened: 1. in a criminal case, by a maximum imprisonment of nine months; 2. in other cases, by a maximum imprisonment of six months."<sup>2</sup> Article 552 stated that any person who according to the law is summoned as a witness, expert or interpreter, does not come illegally, and is punishable by a maximum fine of nine hundred rupiahs.<sup>3</sup>

If the police have asked for help, forensic experts are obliged to provide assistance. Then, there is no mention of forensics in the Criminal Procedure Code. What is regulated in KUHAP is related to medical experts. Referring to various types of forensics, forensic experts can be said to be medical experts. Regarding medical experts, Article 133 paragraph (1) of the Criminal Procedure Code authorizes investigators to submit requests for information from judicial medical experts if the investigation involves injured, poisoned, or dead victims. This request for expert information is made in writing.

### 3.2 The Role of Forensic Science in Uncovering the Identity and Causes of Death of Victim of Murder

Forensics can be defined as the field of science that is used to assist the process of upholding justice through the process of applying science.<sup>4</sup> Various kinds of sciences that are related to the problem of crime, among others, criminal law, criminal procedural law, forensic medicine, forensic chemistry, forensic chemistry, and forensic psychology. A person who studies forensic science and applies it to the world of work is known as a forensic expert.<sup>5</sup> Based on article 184 of the Criminal Procedure Code, there are 5 pieces of evidence that are valid in the eyes of the law, namely, witness testimony, expert testimony, letters, instructions, and statements of the defendant. In a crime, it will definitely leave a trail even though it has been planned very neatly and perfectly. We call these traces as evidence that can be examined and analyzed and then the results of the examination are obtained.<sup>6</sup> The results of this examination are called evidence which can be classified as expert witness testimony if the forensic expert conducting the examination is asked for information at a court. It is classified as a letter if the result of the examination is in written form or what is called an examination report.<sup>7</sup>

However, the process of examining evidence in fact does not always run smoothly and without difficulty, so that a forensic expert must be thorough and precise because the results of his examination play an important role in making decisions in court. Based on this, the role of forensic science is to make a case clear, namely by

<sup>1</sup> Krishan K, "Anthropometry in Forensic Medicine and Forensic Science- 'Forensic Anthropometry'". *The Internet Journal of Forensic Science*. 2006 Volume 2 Number 1. p 1.

<sup>2</sup> Article 224 of the Criminal Code.

<sup>3</sup> Article 522 of the Criminal Code.

<sup>4</sup> J. B. Firth, Forensic Science, *Journal of the Royal Society of Arts*, Vol. 93, No. 4689 (APRIL 13th, 1945), p 228.

<sup>5</sup> Christopher J. Lawless and Robin Williams, Helping with inquiries or helping with profits? The trials and tribulations of a technology of forensic reasoning, *Social Studies of Science* Vol. 40, No. 5, STS and Neoliberal Science (October 2010), p 733.

<sup>6</sup> Tracy Alexander, DNA evidence - have we progressed in the last 10 years?. *Medico-Legal Journal*, 2016, Vol. 84 No. 3, p 116.

<sup>7</sup> Nurul Faiza, Peran Ilmu Forensik dalam Penegakan Hukum di Indonesia, <https://www.kompasiana.com/nrlfaiza/5dc1323ed541df6ed908f552/peran-ilmu-forensik-dalam-penegakan-hukum-di-indonesia?page=1>. 5 November 2019. Accessed April 05 2021.



searching for and finding the complete material truth about an act or criminal act that has occurred.<sup>1</sup> The usual forensic stages include collection, protection, analysis and presentation.<sup>2</sup> Forensic science in uncovering crimes is very necessary. This aims to minimize the occurrence of wrong sentences, wrong arrests, and assist the performance of law enforcers in determining the perpetrators of crimes.

Forensic doctors play a very important role in law enforcement to reveal evidence that can be either a body or a part of a human body.<sup>3</sup> There are many examples of cases, for example in cases of murder, cases of rape, cases of maltreatment and even mutilation cases that require the role of a forensic doctor to assist law enforcement officials in uncovering a crime in accordance with their expertise and knowledge of how the crime was committed by the accused of examining the victim.<sup>4</sup> Forensic doctors also play an important role in finding material truth in criminal cases, the fields of law and medicine cannot be separated to enforce the law, especially in the context of proving a person's guilt relating to the body or parts of the human body.<sup>5</sup> Seeing the growing expertise of criminals who can hide their crimes before the law, so that the role of doctors who have their own expertise in helping the process of solving cases related to the human body is increasingly needed, only doctors are able and can help reveal the mystery of the state of evidence that can be in the form of a body or part of the human body. The role of forensic doctors in proving criminal cases is to assist law enforcement officials from the investigation stage to the trial stage regarding criminal acts related to the human body or soul to make clear the criminal incident.<sup>6</sup>

Forensic science and criminalistics laboratories generally provide the following types of information based on the scientific examination of physical evidence collected from scenes of crimes, victims, and suspects.<sup>7</sup> If viewed from the practice of its implementation, the role of the Forensic Laboratory, namely as an expert witness, is needed in every stage of a case examination which is closely aimed at proving the case in question, and in the end the proof must be carried out in front of the court.<sup>8</sup> In relation to proof of a criminal case, in general the role of expert testimony can be given into two forms, the first is a written statement commonly called *visum et repertum* and expert statement (results of laboratory research).

The doctor in this case is a Forensic Laboratory specialist who can provide assistance in relation to the judicial process in terms of:

- a. Examination at the scene of the case. Usually requested by the authorities in terms of uncovering the causes of death. This examination by a forensic expert will be very important in determining the causes of death, in this connection the doctor will make a report on the criminalistic laboratory examination report,
- b. Examination of evidence,
- c. Providing testimony in court proceedings, in this case what is said by him (forensic expert) will be categorized as expert testimony).

Expert information is required as formulated in Article 180 paragraph (1) of the Criminal Procedure Code that in the event that it is necessary to clear up issues arising in a court session, the Chief Judge of the session may ask for expert information and may also submit new materials by those concerned.<sup>9</sup> The calling expert witnesses are specialists in Medical Science of Justice to justice is done even if the court case was already there post-mortem, but sometimes judges still require the presence of a doctor maker of a post mortem to testify orally as an expert or also referred to statements of experts. This information was given by the doctor because there were still doubts about the type of psychotropic used, even though there was a *visum et repertum*, also to justify his opinion. Another reason for the information given at trial is because it cannot be given at the time of examination by the investigator or the public prosecutor.

Regarding the *visum et repertum*, although in the Criminal Procedure Code there is no requirement for investigators to submit requests to forensic doctors or other doctors (experts), but for the sake of case examination and to make the case clearer and to support the judge's conviction, it would be better if the *visum et repertum* is requested from the doctor concerned. Settling criminal cases requires proving the incidents of the cases that occurred to prove the perpetrator who was involved in the crime. Proof of a criminal case is an attempt

<sup>1</sup> Henry Lee, New Concepts In Criminal Investigation, *Medicine And Law*, Vo. 36 No 1. March 2017, p 330.

<sup>2</sup> The United States Department Of Justice, Forensic Science. <https://www.justice.gov/olp/forensic-science>. Accessed April 05 2021.

<sup>3</sup> Jennifer L. Mnookin, Simon A. Cole, Itiel E. Dror, Barry A. J. Fisher, Max M. Houck, Keith Inman, David H. Kaye, Jonathan J. Koehler, Glenn Langenburg, D. Michael Risinger, Norah Rudin, Jay Siegel, And David A. Stoney, The Need For A Research Culture In The Forensic Sciences, *UCLA Law Review*, Vol. 58, Issue 3, 2011, p 738.

<sup>4</sup> Howell T. Heflin, 25 Years of The Alabama Criminal Code, *Alabama Law Review*, Vol. 56 No. 4, Summer 2005, p 971.

<sup>5</sup> Yulia Monita dan Dheny Wahyudhi, Peranan Dokter Forensik Dalam Pembuktian Perkara Pidana. file:///C:/Users/User/Downloads/2188-Article%20Text-4313-1-10-20150314.pdf. Accessed April 05 2021, p 139.

<sup>6</sup> Michael L. Perlin, The Supreme Court, The Mentally Disabled Criminal Defendant, And Symbolic Values: Random Decisions, Hidden Rationales, Or "Doctrinal Abyss?", *Arizona Law Review*, Vol. 29 No. 1, 1987, p 22.

<sup>7</sup> Joseph Peterson, Ira Sommers, Deborah Baskin, and Donald Johnson, The Role and Impact of Forensic Evidence in the Criminal Justice Process, Document No: 231977, National Institute Of Justice, No 2006-DN-BX-0094, p 17.

<sup>8</sup> Richard J. Bonnie and Christopher Slobogin, The Role Of Mental Health Professionals In The Criminal Process: The Case For Informed Speculation, *Virginia Law Review*, Vol. 66 No. 3, April 1980, p 493.

<sup>9</sup> Article 180 paragraph (1) of the Criminal Procedure Code.

to prove that it is true that the criminal act in question has occurred and that the defendant is the perpetrator of the crime.<sup>1</sup> Proof is done by submitting valid evidence before the court. In order to obtain or at least approach the material truth, evidence (investigation and examination of physical evidence) must be proven scientifically.

Valid evidence is evidence that is in accordance with the law, namely fulfilling the principle of “admissibility” (acceptable) as regulated by the prevailing laws and regulations. Forensic and criminalistic experts play a role in evidentiary efforts by providing two valid pieces of evidence, namely expert accounts and letters (made by experts). In this case, the expert’s testimony is not limited to the provisions concerning “things that the witness has experienced or heard or seen”, but it is given the opportunity to give an opinion or opinion based on his expertise, as long as the applicable provisions, and then, Criminal cases can be uncovered by the police using sophisticated identification technology by taking fingerprints of victims using the MAMBIS tool (namely the Mobile Automated Multi Biometric Identification System).<sup>2</sup>

Evidence is the presentation of evidentiary tools that can be used as legal evidence by a judge examining a case in order to provide certainty about the truth of the events presented.<sup>3</sup> In Article 184 paragraph (1) of the Criminal Procedure Code (KUHAP) it is stated that the valid evidence is: witness statements, expert statements, letters, instructions and statements of the accused. In a system of proof of criminal procedure law that adheres to the negative *wettelijk* system, only evidence tools that are valid according to law can be used for proof.<sup>4</sup> This means that outside of these provisions it cannot be used as valid evidence.

The Criminal Procedure Code does not clearly state what is meant by evidence. However, Article 39 paragraph (1) of the Criminal Procedure Code states what can be confiscated, namely:<sup>5</sup> a) objects or claims of a suspect or defendant which are wholly or partly alleged to have been obtained from a criminal act or as the result of a criminal act; b) objects that have been used directly to commit a criminal act or to prepare it; c) objects that are used to obstruct a criminal investigation; d) objects specially made or intended to commit a criminal act; and e) other objects that have a direct relationship with the criminal act committed.

Public prosecutor is obliged to prove the events presented by submitting evidence before the trial to be judged by the panel of judges for its correctness. Then the Public Prosecutors, Legal Counsel and Panel of Judges conducted a legal review. The public prosecutor discloses the results of the evidence in a requisitor. Then the Legal Counsel responded to the Public Prosecutor’s indictment in a note of defense (*pledooi*), which would then be discussed by the Panel of Judges in the final verdict.<sup>6</sup> In the procedure of proof of the Public Prosecutor, the Legal Advisor and the Panel of Judges who lead the examination of criminal cases at the trial must pay attention to the provisions of the law of evidence which govern the method of proof, burden of proof, kinds of evidence, as well as the strength of the evidence, and so on.

### 3.3 The Obstacles Arise and the Efforts that can be Made in the Process of Uncovering the Crime of Murder

In every handling of a murder incident, both in the processing of the TKP (scene of the case) and in determining the TKP<sup>7</sup>, it does not rule out the possibility that the investigator experiences difficulties or there is something that applies in processing the crime scene of a murder case.<sup>8</sup> As for the obstacles determined by the investigator in determining the crime scene of not a murder crime are as follow. First, changing in the authenticity of the place that occurred at the scene of the incident. Before the team of investigators arrived at the location where the incident took place, the conditions at the scene of the case had changed, were no longer original, were damaged, these things were influenced by several factors such as natura factor, animal factor, and human factor. The natural factors can be an obstacle for investigators in the process of handling a crime scene because they can change the authenticity of a crime scene, such as rain, heat, storms, and floods. Animal factor is meant that the traces or items left by the perpetrator can change due to the presence of animals entering the crime scene, so that the traces are left at the scene.<sup>9</sup> While human factors include; a) the suspect tries to remove evidence; b) a sense of public curiosity so that it is included in the TKP; c) Lack of accuracy of officers handling TKP; d) late reports so that the TKP is damaged by people, witnesses, or the public; and e) statements of witnesses who seem closed

<sup>1</sup> David Mccord, *Procedures V. Proceeds: Evaluation of The Commercial Reasonableness Of Dispositions Of Collateral Under Article Nine Of The Uniform Commercial Code*, *Tennessee Law Review*, Vol. 63 No. Issue 4, Summer 1996, p 976.

<sup>2</sup> Muhammad Rifai, Dahlan Ali, Mahfud, “Kegunaan Sidik Jari Dalam Proses Investigasi Perkara Kriminal Untuk Mengetahui Identitas Korban Dan Yang Melakukan Perbuatan Pidana”. *Syiah Kuala Law Journal*. Vol. 3, No 3. Desember 2019, p 33.

<sup>3</sup> *Ibid*. Ramadinne Nuzunulriyanti, p 35.

<sup>4</sup> Martiman Prodjohamidjoyo, “Sistem Pembuktian dan Alat-alat Bukti”, Jakarta: Ghalia, 2009, p 19.

<sup>5</sup> Pasal 39 ayat (1) KUHAP.

<sup>6</sup> Romli Atmasasmita, “Hak Asasi Manusia dan Penegakan Hukum”, Binacipta, Bandung, 2012, p 18.

<sup>7</sup> Deepak Sharma, *Murder Mystery Solved with the Help of Forensic Investigation*, *Brazilian Journal of Forensic Sciences, Medical Law and Bioethics*, Vol. 9 No. 3 (2020): Volume 9 - Número 3, 366-372, p 367.

<sup>8</sup> Budi Setiawan, Anis Mashdurohaturun, Munsyarif Abdul Chalim, “Penyidikan Terhadap Pelaku Tindak Pidana Pembunuhan Dengan Pemberatan Di Polda Jateng”. *Jurnal Hukum Khaira Ummah*, Vol. 12. No. 4 Desember 2017, p 913.

<sup>9</sup> Handar Subhandi Bakhtiar, Andi Muhammad Sofyan, Muhadar, Slamet Sampurno Soewondo, *The Essence Of Autopsy In The Criminal Investigation Process*, *International Journal Of Scientific & Technology Research*, Vol. 8, Issue 10, October 2019, p 11.

or covered up for fear of giving testimony.<sup>1</sup>

Second, investigators have lack experience in conducting investigations. It does not rule out that internal factors can also be an obstacle or obstacle to the crime scene investigation process, such as the inexperience of investigators, which means that investigating officers can also be an obstacle to the course of the investigation process. Such as the lack of understanding of the crime scene handling procedure, the lack of the level of accuracy of one of the investigating officers, the lack of professionalism of the investigating officers in the crime scene handling process so that the results that the investigating officers should obtain to make disclosures at the crime scene are not optimal.

Third, the absence of equipment at the time of carrying out the investigation. In searching for and collecting evidence at the scene of the incident, the police as investigating officers often encounter obstacles in the field, this is due to limited facilities and infrastructure. The success of investigating officers in handling the crime scene cannot be separated from the maximum and the professionalism of the performance of the investigating officers, but this is also supported by the completeness of tools that are very functional in helping educators to handle crime scenes such as for example in the framework of examining fingerprints, tools such as those are needed. Laser Print Finger and Laser Print Detector. For now, such tools are only used and provided at the Regional Police and for their staff, if needed, these tools can only send existing fingerprint samples for comparison at the Regional Police, this will take quite a long-time which result in the investigation process was not effective.<sup>2</sup>

Fourth, unavailability of Fingerprint Retrieval Database. Legal factors can also be a hindering factor in the processing of the crime scene. For now, there is no legal regulation that specifically regulates the implementation of the police's task of taking fingerprints as a whole, whether foreigners residing in the territory of Indonesia or Indonesian citizens themselves, the unavailability of data bases is therefore certainly an obstacle in Investigation process in the event of a criminal act in which the perpetrator or victim is located in the territory of the Unitary State of Indonesia, meaning that the investigating officer has difficulty matching the fingerprints of the victim or perpetrator which results in the processing of the crime scene being hampered due to the fingerprint tracing system manually.<sup>3</sup>

Some efforts made by investigators to overcome obstacles when determining the place of the crime of murder case. To begin, the Police strive to immediately respond to public reports to come to the TKP in order to secure and protect the TKP so that the TKP does not change and its authenticity is maintained. There is coordination between senior investigators and new investigators in order to cooperate and be schooled again in investigative training, especially for investigators who have just been appointed as investigators. Striving for facilities and infrastructure to be immediately equipped at the Police and Department Police<sup>4</sup> levels. In addition, the police for now are still trying to manually investigate the discovery of fingerprints due to the absence of comparative fingerprints.

These obstacles did not discourage investigators from continuing to investigate the case. The investigators retraced the series of events starting from the crime scene, the parents of the victims, and the surviving witnesses. However, after several days, they still found no new clues. For this reason, the investigators decided to call in the presence of an expert, in this case a forensic doctor, to perform an exhumation.<sup>5</sup> An exhumation is a medical action carried out on the basis of law in the framework of proving a criminal act by re-digging a body that has been buried and based on the permission of the victim's family. Finally, by carrying out the process by experts, the investigators again received new, clearer instructions. So, the role of experts in the process of investigating these cases has a big role in resolving criminal cases that require such experts. Experts in handling cases are very influential, not forgetting their role when conducting crime scenes when there is a murder case. Murder criminal cases can be solved with it expertise. Here we all realize that their presence is very helpful and even indispensable in handling criminal cases.<sup>6</sup>

The definition of expert testimony according to Article 1 point 28 of the Criminal Procedure Code is information provided by a person who has special expertise on matters needed to make clear a criminal case for the purpose of examination. In criminal cases, expert statements are regulated in Article 184 paragraph (1) of the

<sup>1</sup> Henny Saida Flora, Fingerprint Identification Function In The Case Reveal Crime Of Murder, *South East Asia Journal Of Contemporary Business, Economics And Law*, Vol. 9, Issue 4, April 2016, p 42.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.* p 914.

<sup>4</sup> Resort Police (abbreviated Polres) is the command structure of the Indonesian National Police in regencies / cities. The Resort Police in urban areas are commonly referred to as the "Municipal Police" (Polresta). "Polrestabes" is usually used for provincial capitals.

<sup>5</sup> Rod Gehl and Darryl Plecas, Introduction to Criminal Investigation: Processes, Practices and Thinking, Chapter 7: Witness Management, <https://pressbooks.bccampus.ca/criminalinvestigation/chapter/chapter-7-witness-management/>, Accessed April 30 2021.

<sup>6</sup> Rengga Permana Prayudistira, Upaya Penyidik Dalam Menentukan Tempat Kejadian Perkara Pada Tindak Pidana Pembunuhan (Studi di Polisi Resor Kota Malang), <https://media.neliti.com/media/publications/35371-ID-upaya-penyidik-dalam-menentukan-tempat-kejadian-perkara-pada-tindak-pidana-pembu.pdf>, Kementerian Pendidikan Dan Kebudayaan Universitas Brawijaya Fakultas Hukum, Fakultas Hukum Universitas Brawijaya, p 11.

Criminal Procedure Code which states that one of the valid evidences in court is expert testimony.<sup>1</sup> Furthermore, Article 186 of the Criminal Procedure Code which states that an expert's testimony is what an expert state in a court session.

#### 4. Conclusion

Forensic medicine helps law enforcement officials to reveal acts that constitute a crime of murder such as performing identification to find the identity and causes of death of victims of crime of murder. In the event that the identity of the dead victim is not found, looking for clues related to documents that can show the identity of the victim. Tracing the victim's identity using the MAMBIS tool, sending the body to the hospital for an autopsy examination to find out the identity of the victim as a whole, and disseminating information related to the results of autopsy examinations to the public in order to get a response from the victim's family are also significant in this sense. Nevertheless, investigator also faces obstacles in determining the crime scene of a murder crime such as natural factor, animal factor, human factor, and the absence of equipment at the time of investigation.

In the future, law enforcers must get an understanding of its importance in studying forensic medicine in uncovering crimes, mainly concerning human victims because it is related to the rights of victims whose lives have been forcibly confiscated by the perpetrator. In addition, the issue of post-mortem is the main problem that connects doctors with investigators or the judiciary, so the understanding of this matter must be well mastered, not only for doctors but also for investigators, public prosecutors, defenders, and court judges. The identification, investigation and examination stages are carried out by personnel who have professional competence and standards.

#### References

- Abdussalam, "Forensik". Jakarta: Restu Agung, 2006.
- Abdullah Marlang, "Pengantar Hukum Indonesia", As Center, 2009, Makassar.
- Adami Chazawi, "Pelajaran Hukum Pidana Bagian 1", Raja Grafindo Persada, 2002, Jakarta.
- Ahmad Wardi Muslich, Hukum Pidana Islam (Jakarta: Sinar Grafika), 2016.
- Bambang Sunggono, "Metodologi Penelitian Hukum", Jakarta: PT. Raja Grafindo Persada, 2007.
- Budi, Sampurna, "Peranan ilmu forensik dalam Penegakan Hukum". Jakarta: FK UI, 2008.
- Djoko Prakoso dan I Ketut Murtika. "Dasar-Dasar Ilmu Kedokteran Kehakiman". Rineka Cipta. Jakarta. 1992.
- Munir Fuady, "Teori Hukum Pembuktian (Pidana dan Perdata)", PT Citra Aditya, 2018, Bandung.
- Romli Atmasasmita, "Hak Asasi Manusia dan Penegakan Hukum", Bina cipta, Bandung, 2012.
- Martiman Prodjohamidjoyo, "Sistem Pembuktian dan Alat-alat Bukti", Jakarta: Ghalia, 2009.
- Ramadinne Nuzunulriyanti, "Fungsi Ilmu Kedokteran Forensik Dalam Mengungkap Kasus Pembunuhan Terhadap Ibu Dan Anak." Fakultas Hukum Universitas Lampung Bandar Lampung, 2018.
- Idries, "Pedoman Praktis Ilmu Kedokteran Forensik Bagi Praktisi Hukum". Jakarta: Sagung Seto, 2009.
- Firganefi dan Ahmad Irzal Fardiansyah. "Hukum dan Kriminalistik." Justice Publisher Badan Penerbit: Fakultas Hukum Universitas Lampung, 2014.
- Yasmil Anwar dan Adang, "Sistem Peradilan Pidana", Widya Padjadjaran, Bandung, 2009.
- Lilik Mulyadi, "Hukum Acara Pidana", PT. Alumni, Bandung, 2007.
- Amir Ilyas, "Asas-Asas Hukum Pidana", Rangkang Education, 2012, Yogyakarta.
- PAF Lamintang, "Bahasa Hukum Indonesia", Alumni, 1997, Bandung.
- P.A.F. Lamintang dan Theo Lamintang, "*Delik-Delik Khusus Kejahatan Terhadap Nyawa, Tubuh dan Kesehatan*", Sinar Grafika, Jakarta, 2010.
- Muladi, "Kapita Selektta Hukum Pidana", Badan Penerbit Universitas Diponegoro, Semarang, 1995.
- Rusli Effendi dkk, "Masalah Kriminalisasi dan Dekriminalisasi dalam Rangka Pembaruan Hukum Nasional" dalam BPHN, Simposium Pembaruan Hukum Pidana Nasional Indonesia, Binacipta, Jakarta, 1986.
- Sudarto, "Kapita Selektta Hukum Pidana", Alumni, Bandung. 1986.
- Soekanto, Soerjono, "Kriminologi: Suatu Pengantar", Cetakan Pertama, Ghalia Indonesia, Jakarta.
- Handoko Duwi, "Kriminalisasi Dan Dekriminalisasi, Hawa Dan Ahwa", Pekanbaru, 2015.
- Sugiyono, "Metode Penelitian Kuantitatif Kualitatif Dan R&D", Bandung: Alfabeta, 2010.
- Soerdjono Soekanto dan Purnadi Purwacaraka, "*Sendi-Sendi dan Hukum Indonesia*", Citra Aditya Bakti, Bandung, 1992.
- Budi Setiawan, Anis Mashdurohatun, Munsyarif Abdul Chalim, "Penyidikan Terhadap Pelaku Tindak Pidana Pembunuhan Dengan Pemberatan Di Polda Jateng". *Jurnal Hukum Khaira Ummah*, Vol. 12. No. 4 Desember 2017.
- Muhammad Rifai, Dahlan Ali, Mahfud, "Kegunaan Sidik Jari Dalam Proses Investigasi Perkara Kriminal Untuk

<sup>1</sup> Zuni Asih Nurhidayati, Perbedaan Pemberi Keterangan Ahli dan Saksi Ahli, [http://itjen.pu.go.id/single\\_kolom/49#:~:text=Mari%20kita%20kulik%20lebih%20lanjut,tentang%20hal%20yang%20diperlukan%20untuk,](http://itjen.pu.go.id/single_kolom/49#:~:text=Mari%20kita%20kulik%20lebih%20lanjut,tentang%20hal%20yang%20diperlukan%20untuk,) 17 Jun 2020, Accessed April 30 2021.



- Mengetahui Identitas Korban Dan Yang Melakukan Perbuatan Pidana”. *Syiah Kuala Law Journal*. Vol. 3, No 3. Desember 2019.
- Mario Lasut, “Visum Et Repertum Sebagai Alat Bukti Dalam Tindak Pidana Pembunuhan Berencana”. *Lex Crimen* Vol. V/No. 3/Mar/2016.
- Ridwan & Hardi Syah Hendra, Kedudukan Keterangan Saksi Ahli Forensik Dalam Penetapan Perkara Pidana Dalam Hukum Positif Di Tinjau Dari Pespektif Hukum Islam. *Legitimasi*, Vol. VII No. 1, Januari-Juni 2018.
- J. B. Firth, Forensic Science, *Journal of the Royal Society of Arts*, Vol. 93, No. 4689 (April 13<sup>th</sup>, 1945).
- Lilik Eko Sukaryono and Amin Purnawan, The Role of *Visum Et Repertum* as A Provision Effort On Criminal Financing, *Jurnal Daulat Hukum*, Volume 3 Issue 1, March 2020.
- Sherly Adam, “Fungsi Keterangan Ahli Dalam Pembuktian Tindak Pidana Pembunuhan”, *Jurnal Belo*, Volume 4 No. 2 Februari 2019-Juli 2019.
- Deepak Sharma, Murder Mystery Solved with the Help of Forensic Investigation, *Brazilian Journal of Forensic Sciences, Medical Law and Bioethics*, Vol. 9 No. 3 (2020): Volume 9 - Número 3, 366-372.
- Masrizal Afrialdo, “Pelaksanaan Penyelidikan Dan Penyidikan Perkara Pidana Oleh Kepolisian Terhadap Laporan Masyarakat Di Polisi Sektor Lima Puluh”, *Jom Fakultas Hukum* Volume III, Nomor 2, Oktober 2016.
- Victor Imanuel W. Nalle, “The Relevance of Socio-Legal Studies In Legal Science”. *Mimbar Hukum*. Volume 27, No 1, February 2015.
- Krishan K, “Anthropometry in Forensic Medicine and Forensic Science- ‘Forensic Anthropometry’”. *The Internet Journal of Forensic Science*. 2006 Volume 2 Number 1.
- Mayrany J. Wuwung, Tindak Pidana Pembunuhan Berencana Menggunakan Racun, *Lex Crimen* Vol. VII/No. 4 /Jun/2018.
- Stephen Cordner, David Ranson & Richard Basset, “The Foundations of the Comparison Forensic Sciences: Report of the President’s Council of Advisors on Science and Technology” (2016) 24 *Journal of Law and Medicine* 297-302.
- Onan Purba, Rumelda Silalahi, “Peran Ilmu Kedokteran Forensik Dalam Pembuktian Tindak Pidana Penganiayaan”. *Jurnal Retenrum*, Volume.1 No. 02 Tahun 2020.
- Marchel R. Maramis, “Peran Ilmu Forensik Dalam Penyelesaian Kasus Kejahatan Seksual Dalam Duni Maya (Internet)”, *Jurnal Ilmu Hukum*. Vol.II/ No.7/, Juli-Desember 2015.
- Octo Iskandar and Naufal Hafidh Suwanda, “Peranan Ilmu Forensik Dalam Pengungkapan Tindak Pidana Kekerasan Fisik Dalam Lingkup Rumah Tangga Yang Dilakukan Istri Terhadap Suami (Studi Kasus Putusan No.1550/Pid.Sus/2015/Pn.Mks)”. *Jurnal Krtha Bhayangkara*, Volume 13 Nomor 1, Juni 2019.
- Christopher J. Lawless and Robin Williams, Helping with inquiries or helping with profits? The trials and tribulations of a technology of forensic reasoning, *Social Studies of Science*, Vol. 40, No. 5, STS and Neoliberal Science (October 2010).
- Tracy Alexander, DNA evidence - have we progressed in the last 10 years?. *Medico-Legal Journal*, 2016, Vol. 84 No. 3.
- Terrence F. Kiely, The Houses Of Deceits: Science, Forensic Science, And Evidence An Introduction To Forensic Evidence, *Land and Water Law Review*, Vol. 35, Issue 2 (2000).
- Henry Lee, New Concepts In Criminal Investigation, *Medicine And Law*, Vo. 36 No 1. March 2017.
- Jennifer L. Mnookin, Simon A. Cole, Itiel E. Dror, Barry A. J. Fisher, Max M. Houck, Keith Inman, David H. Kaye, Jonathan J. Koehler, Glenn Langenburg, D. Michael Risinger, Norah Rudin, Jay Siegel, And David A. Stoney, The Need For A Research Culture In The Forensic Sciences, *UCLA Law Review*, Vol. 58, Issue 3, 2011.
- Howell T. Heflin, 25 Years of The Alabama Criminal Code, *Alabama Law Review*, Vol. 56 No. 4, Summer 2005.
- Michael L. Perlin, The Supreme Court, The Mentally Disabled Criminal Defendant, And Symbolic Values: Random Decisions, Hidden Rationales, Or “Doctrinal Abyss?”, *Arizona Law Review*, Vol. 29 No. 1, 1987.
- Richard J. Bonnie and Christopher Slobogin, The Role Of Mental Health Professionals In The Criminal Process: The Case For Informed Speculation, *Virginia Law Review*, Vol. 66 No. 3, April 1980.
- David Mccord, Procedures V. Proceeds: Evaluation of The Commercial Reasonableness Of Dispositions Of Collateral Under Article Nine Of The Uniform Commercial Code, *Tennessee Law Review*, Vol. 63 No. Issue 4, Summer 1996.
- Henny Saida Flora, Fingerprint Identification Function In The Case Reveal Crime Of Murder, *South East Asia Journal Of Contemporary Business, Economics And Law*, Vol. 9, Issue 4, April 2016.
- Henny Saida Flora, The Role Of *Visum Et Repertum* In Disclosure Of Criminal Action, *International Journal of Business, Economics and Law*, Vol. 18, Issue 4, April 2019.
- Handar Subhandi Bakhtiar, Andi Muhammad Sofyan, Muhadar, Slamet Sampurno Soewondo, The Essence Of Autopsy In The Criminal Investigation Process, *International Journal Of Scientific & Technology Research*, Vol. 8, Issue 10, October 2019.

### Law/Regulations:

Article 180 paragraph (1) of the Criminal Procedure Code.  
Article 184 of the Criminal Code states.  
Article 183 of the Criminal Code.  
Article 221 paragraph (1) point 2 of the criminal code.  
Article 306 RIB.  
Article 179 paragraph (1) of the Criminal Procedure Code.  
Article 39 paragraph (1) of the Criminal Procedure Code.  
Article 5 paragraph 1 letters (a) and (b) of the Criminal Procedure Code.  
Article 522 of the Criminal Code.  
Article 224 of the Criminal Code.  
Article 184 paragraph (1) of the Criminal Procedure Code.

### Website:

Anis En Nabiilah, "Peran Ilmu Forensik dalam Mengungkap Kasus Kriminalitas di Indonesia". <https://www.kompasiana.com/anisen/5df5fd8b097f3641352dc9f2/peran-ilmu-forensik-dalam-mengungkap-kasus-kriminalitas-di-indonesia>. 15 December 2019. Accessed 19 February 2021.

Jimly Asshiddiqie, "Penegakan Hukum". file:///C:/Users/WIN10/Downloads/Documents/Penegakan\_Hukum.pdf. Accessed 25 November 2020.

Tri Jata Ayu Pramesti. "Forensik dan Ruang Lingkupnya Dalam Mengungkap Tindak Pidana". [https://www.hukumonline.com/klinik/detail/ulasan/cl6647/forensik-dan-ruang-lingkupnya-dalam-mengungkap-tindak-pidana/#\\_ftn1](https://www.hukumonline.com/klinik/detail/ulasan/cl6647/forensik-dan-ruang-lingkupnya-dalam-mengungkap-tindak-pidana/#_ftn1). 09 September 2016. Accessed 25 November 2020.

Nafiyusl Qodar, "Ini Hasil Visum Pembunuhan Sadis Wanita dengan Cangkul". <https://www.liputan6.com/news/read/2509289/ini-hasil-visum-pembunuhan-sadis-wanita-dengan-cangkul>. 17 May 2016. Accessed 20 December 2020.

Nurul Faiza, Peran Ilmu Forensik dalam Penegakan Hukum di Indonesia, <https://www.kompasiana.com/nrlfaiza/5dc1323ed541df6ed908f552/peran-ilmu-forensik-dalam-penegakan-hukum-di-indonesia?page=1>. 5 November 2019. Accessed April 05 2021.

The United States Department Of Justice, Forensic Science. <https://www.justice.gov/olp/forensic-science>. Accessed April 05 2021.

Antara, "Hasil Visum Jenazah Alumni IPB yang Tewas di Sukabumi, Ada Kekerasan Fisik", <https://jabar.inews.id/berita/hasil-visum-jenazah-alumni-ipb-yang-tewas-di-sukabumi-ada-kekerasan-fisik>. 23 July 2019. Accessed 20 December 2020.

Rod Gehl and Darryl Plecas, Introduction to Criminal Investigation: Processes, Practices and Thinking, Chapter 7: Witness Management, <https://pressbooks.bccampus.ca/criminalinvestigation/chapter/chapter-7-witness-management/>, Accessed April 30 2021.

Rengga Permana Prayudistira, Upaya Penyidik Dalam Menentukan Tempat Kejadian Perkara Pada Tindak Pidana Pembunuhan (Studi di Polisi Resor Kota Malang), <https://media.neliti.com/media/publications/35371-ID-upaya-penyidik-dalam-menentukan-tempat-kejadian-perkara-pada-tindak-pidana-pembu.pdf>, Kementerian Pendidikan Dan Kebudayaan Universitas Brawijaya Fakultas Hukum, Fakultas Hukum Universitas Brawijaya, Accessed April 30 2021.

Yulia Monita dan Dheny Wahyudhi, Peranan Dokter Forensik Dalam Pembuktian Perkara Pidana. file:///C:/Users/User/Downloads/2188-Article%20Text-4313-1-10-20150314.pdf. Accessed April 05 2021. <https://www.honestdocs.id/autopsi-otopsi>. Accessed 12 February 2021.

### Documents:

Kepolisian Negara Republik Indonesia, Simposium Penyelidikan Ilmiah Medis dalam Penegakan Hukum, HUT Fakultas Kedokteran UGM ke 58, Jogjakarta 6 maret 2004.

Joseph Peterson, Ira Sommers, Deborah Baskin, and Donald Johnson, The Role and Impact of Forensic Evidence in the Criminal Justice Process, Document No: 231977, National Institute of Justice, No 2006-DN-BX-0094.

Nyoman Serikat Putra Jaya, Law Enforcement in the Era of Reformation Delivered at the Pekalongan University open senate meeting in the framework of the XVI Anniversary and the XII graduate graduation on September 5, 1998. Lecturer at the Faculty of Law, UNDIP

Wignjosobroto, Soetandyo, "Kriminalisasi Dan Dekriminalisasi: Apa Yang Dibicarakan Sosiologi Hukum Tentang Hal Ini, disampaikan dalam Seminar Kriminalisasi Dan Dekriminalisasi Dalam Pebaruan Hukum Pidana Indonesia", Fakultas Hukum UII, Yogyakarta, 15 Juli 1993