

Example of research paper on dna and the law

[Law](#), [Evidence](#)



Mathematics

The topic for this research study is the applicability of DNA evidence in resolving criminal cases.

Thesis Statement: DNA evidence is not an accurate means of identification of suspects because DNA analysis can be compromised, prone to errors and opposing interpretations due to external factors such as environment, contamination and bad laboratory practice.

According Gardner and Anderson (2009), DNA evidence remains to be the most accurate means to identify a person. It has been an important development in criminal investigation and also a significant contribution to the entire criminal justice system. It provides a reliable basis for conviction. It has been considered an accurate indicator that will be able to determine the guilt and innocence of an accused. When compared to fingerprint analysis, DNA testing is considered more superior because the technology has been improved over time which allows the test of smaller amounts of material, faster testing procedures and more conclusive results. DNA has been considered as a futuristic technology has become a reality (Gardner and Anderson, 2009). DNA is part and parcel of forensic technology. This technological advancement such as DNA (Deoxyribonucleic acid) profiling became an essential aid to effective policing in identification of the suspects and their victims.

Every person's DNA is unique and matchless. The new DNA testing creates evidence that will help the police in the resolution of cases. DNA testing was discovered in the 1980s during criminal investigations (Dempsey and Forst, 2011). The STR (Short Tandem Repeat) DNA is a scientific testing using

deoxyribonucleic acid which can produce accurate forensic evidence that will strengthen the case against the accused or cause his acquittal. The significance of using the STR technology is the determination of biological tissue which can be collected during crime scenes that will match the suspect's DNA. Samaha (2011) stated that the DNA shall comprise the whole genetic make-up humans. At present, the technological advancement the police use in crime scene laboratories is the Combined DNA Index System (CODIS). The CODIS has the ability to connect one suspect in any part of the country. Samaha (2005) stated that CODIS is a system software program that operates the databases of DNA profiles of convicted persons, missing persons and unresolved crimes. Samaha (2011) argued that the use of DNA has been assisting in the resolution of cases filed in court because it has the ability to prove innocence of the accused without causing delay to the criminal processes of the present justice system.

One of the most common forms of DNA that is used as forensic evidence in criminal investigations is through fingerprints. Fingerprint evidence is usually in the form of finger ridges. In fact, even partial distorted fragments still forms part of the finger ridge, and as such they can still be used to identify the person who has touched the object that has been found in the crime scene investigation. It will still form part of the methods to catalog an individual who is involved in a case. The mere fact that there is a distorted that was imprinted on an object which is an importance piece of evidence in a particular case is already enough to justify a conclusion. Laska (2011) has stated that ridge details are unique and distinct and can still be determined even if the fingerprint marks left on the object are distorted images. The

ridge details contained in the friction ridges of the corrugated skin surface are formed during fetal development and shall remain until it reaches the postmortem decomposition stage except in cases where it has been scarred or damaged. Finger ridge analysis is an accepted science and cannot be faulted since what can be seen by the naked eye can be verified by forensic science. Thus, DNA analysis has become an acceptable and a reliable method that deals with identification of individuals during crime scene investigations. However, there are criminal experts who have stated that there are inaccuracies being committed in majority of the DNA exonerations in the United States due to false forensics and the flawed manner in obtaining the evidence. Some of the methods used to gather evidence is through fingerprinting, ballistics, blood splatters, dog sniffing, whose reliability are being questioned. In many cases, even correctly collected and analyzed DNA results can lead to opposing view that may result to a vague conclusion (Semikhodskii, 2007). As a consequence, the administration of the criminal justice system which is intended to preserve integrity in seeking justice and truth, has now been subjected to scrutiny. DNA evidence should be treated as any other type of evidence in such a way that it should be successfully challenged in the courtroom. Understanding how DNA evidence is evaluated and obtained shall allow lawyers to watch out for the pitfalls in evidence and data interpretation (Semikhodskii, 2007). In addition, the use of skills of lawyers in dealing with identification of evidence to emphasize them to the judges and the jury can affect the admissibility of DNA evidence in court.

Thus, it is for this reason that criminal defense attorneys should challenge

every piece of forensic evidence presented before them, and assess its reliability before declaring to form part of admissible evidence. Criminal defense attorneys should refrain from accepting “expert” testimony as gospel truth and upholding it to be reliable, regardless of whether the trial court accepted the witness to be qualified to offer expert testimony. In fact, some jurors argue that “forensic evidence” is infallible since the evidence analysis methodologies used in most of this science were not validated and may bring inaccurate results (Go Articles).

Thus, in order for DNA to qualify as solid evidence, the evidence must be validated and secured before the justice system accepts its reliability in the resolution of cases. In addition, if there is a flaw in the manner of gathering the DNA evidence, the forensic science will not be considered as exact and accurate as it appears. It may even result to the failure of the entire justice system and victimize innocent people. The irresponsible conduct being in the manner of collecting and analyzing of evidence by some crime laboratory departments in the country will affect the result of the investigation of the criminal justice system due to unreliable evidence analysis methodologies. Such blatant errors should be resolved to serve the ends of justice.

In conclusion, although DNA evidence has become an efficient tool in solving crimes, there are some instances that DNA does not prove reliability, such as in the case of fingerprint evidence that has been admitted in court in resolving criminal cases. In the case of *Maryland v. Rose*, the court held that fingerprint testimony is not admissible in evidence and that the ACE-V (Analysis, Comparison, Evaluation and Verification) methodology is the type of procedure that should be obliterated because of its broad framework.

Thus, it failed to qualify as a validated method to produce reliable results. It is admitted that fingerprint evidence has been an efficient instrument to solve crimes, but does not stand alone by itself to support a decision to render a judgment of conviction for the accused. This is supported by the rejection of the court on the Frye test, and declared to be eliminated for being a subjective, untested, unverifiable identification procedure and produces infallible results. The poor forensic analysis done by examiners can cause the conviction of innocent people who will be sentenced to suffer life imprisonment for crimes they did not commit. Hence, the reliability of fingerprint evidence can still be developed over time after application of technology and continuously evolving scientific processes.

Semikhodskii (2007, p. 136) stated that DNA evidence must be gathered in extreme caution to reduce the probability of miscarriage of justice. Although DNA represent the highest standard of forensic science, the poor forensic analysis done by examiners can cause the conviction of an innocent man who may be sentenced to suffer imprisonment for a crime he did not commit (Reagan, 2009). DNA can be prone to errors, uncertainties and conflicting interpretations. As a result, DNA analysis can be compromised due to external factors such as contamination, environment, human error and bad laboratory practice. Therefore, it is recommended that further study must be conducted in order to develop new methods to verify DNA evidence before its admission in court. DNA testing is an important tool that will help solve crimes, but it should also be carefully studied and must adapt to the continuously evolving scientific processes in order to ensure that the result is accurate. It shall also be the duty of the lawyers and the judges to determine

the probative value of the DNA evidence that is being presented in court.

References

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