

## ABSTRACT

The rising tide of using DNA evidence in criminal investigation runs over more than two decades in Sri Lanka. Yet the crime and recidivism rate together with culprits evading and escaping from the justice system increases day in and out and it has been the case up to this day. The purpose of this research is to explore the reasons as to why, even inspite of the existence of such an efficient and capable tool of DNA evidence in criminal investigation, Sri Lanka has not been successful in reaching the expected and desired goals in the criminal justice system. This research paper aims to study the adequacy of the prevailing legal framework in respect of DNA evidence, and attend to its lacuna and deficiencies so that an enhanced and advanced legal regime could be established. This research is carried out using a qualitative approach based on both library and empirical research.

The research findings indicate that the existing legal framework on DNA evidence should be further equipped and enhanced with specific provisions to cater to DNA evidence. The findings illustrate that even at present investigation authorities should be more educated and trained in applying DNA evidence and also the DNA experts should be more empowered in identifying and collecting DNA samples. The researcher identifies the significance of introducing a National DNA Database in Sri Lanka, together with a data protection legal regime. This study aspires that it will provide a guideline to decision makers to enrich the existing legal framework of DNA evidence to gain a real outcome from this efficient forensic investigation tool in an effective criminal justice system that upholds the rule of law in the country.

**Key Words-** DNA Evidence, criminal aspect, tool of investigation, effective criminal justice system.