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APPLICATION OF DNA EVIDENCE IN CRIMINAL JUSTICE SYSTEM

ABSTRACT

The whirring gears of progress, both scientific and social, have thrown unforeseen wrenches into the machinery of justice. As our world spins and shifts, the specter of crime looms larger. Yet, amidst the shadows, forensics emerges as a beacon of clarity, offering irrefutable evidence as a silent witness in courtrooms and investigations alike. Its meticulous hand not only guides criminal inquiries but also untangles the knots of civil disputes, ensuring truth finds its voice regardless of the forum.

INTRODUCTION

The blueprint of life itself, the DNA that threads through most living things, has become a battleground of science and debate. Among the arsenal of forensic tools, DNA analysis stands out, peering into its secrets gleaned from hair, saliva, or even a whisper left on a cigarette to forge links between evidence and individuals. In the courtroom, DNA has become a regular, powerful player, not just in the pursuit of criminals but also in unraveling the tangled threads of parentage and identity in civil case

DNA Forensics in the Indian Legal System

In the Indian legal system, the powerful tool of DNA evidence finds itself entangled in a web of procedural quirks and unresolved questions. While Section 53 of the Code of Criminal Procedure allows police to seek medical assistance for investigations, it leaves the collection of crucial biological evidence like blood or sperm solely in the hands of medical professionals. This creates a crucial gap between investigation and evidence-gathering, potentially hindering thorough case-building.

The 2005 amendment attempted to address this by allowing DNA collection from both the suspect and complainant in rape cases. Yet, the road to admissibility remains bumpy. Different rulings from the Supreme Court and various high courts offer conflicting perspectives. Despite acknowledging the scientific accuracy of DNA testing, judges sometimes hesitate to embrace this evidence due to legal and ethical concerns, leaving it shrouded in uncertainty.

This inconsistency underscores the urgent need for legislative reform. Both the Indian Evidence Act of 1872 and the Code of Criminal Procedure of 1973 predate the widespread use of DNA forensics and fail to adequately address its complexities. Revisiting and updating these legal frameworks to keep pace with technological advancements is crucial for unlocking the full potential of DNA evidence in the pursuit of justice.

Despite the hurdles, India's journey with DNA forensics showcases promising strides. Dedicated centers like the CCMB and CDFD demonstrate a commitment to harnessing this technology. Cases where DNA testing played a role in appeals and re-examinations highlight its growing influence in shaping judicial decisions.

As India moves forward, a balanced approach is paramount. Open dialogue, comprehensive legal reforms, and robust ethical frameworks are essential to ensure that this powerful tool serves the cause of justice without compromising individual rights. Only by carefully navigating the knotty legal landscape can we ensure that DNA evidence fulfills its potential, bringing clarity and truth to the Indian legal system.

THE EVIDENTIAL SIGNIFICANCE OF DNA IN INDIAN CRIMINAL AND CIVIL PROCEEDINGS

A fair and just legal system hinges on accurate and unbiased evidence. In recent years, scientific advancements, particularly DNA technology, have revolutionized how justice is served in India. Its integration into the Criminal Justice System (CJS) has been nothing short of transformative, serving as a crucial component in various criminal investigations and civil cases. From sexual assault and child abuse to murder and paternity disputes, DNA offers scientifically grounded evidence, often beyond reasonable doubt, that sheds light on previously shrouded corners. Its impact extends beyond new cases, breathing new life into cold and unresolved investigations.

The foundation of evidence admissibility in India rests on the Indian Evidence Act (IEA) of 1872. While the act predates many modern scientific methods, including DNA analysis, it recognizes the

value of expert opinions in Section 45. This provision allows individuals with specialized knowledge in fields like science and forensics to present their findings, paving the way for DNA evidence to be considered in court.

In the pivotal case of *Kunhiraman vs. Manoj (1991)*, the court relied on Section 45 to deem the DNA expert's report admissible, showcasing the potential of this technology within the established legal framework. However, the path to utilizing DNA as the sole pillar of a case remains challenging. Section 60 of the IEA prioritizes oral testimony, often relegating scientific evidence to a supporting role. In instances where witness accounts contradict DNA findings, the court often sides with the former, raising concerns about the hierarchy of evidence.

This reliance on eyewitness testimony presents a hurdle to fully harnessing the power of DNA evidence. Potential biases, inaccurate recollections, and even external pressures can compromise the reliability of oral accounts. To ensure a truly just and equitable system, India's legal framework needs to evolve alongside scientific advancements, giving due weight to robust scientific evidence like DNA and placing increased emphasis on its independent role in delivering accurate

INTERNATIONAL JURISPRUDENCE IN CRIMINAL TRIALS

The 1950s saw the curious case of Anna Anderson, a woman claiming to be the lost Russian princess Anastasia. After her death, DNA analysis definitively proved she wasn't a Romanov. It was a hint of the power this new technology, DNA fingerprinting, held.

In 1986, the world witnessed the first criminal use of DNA when Richard Buckland, a rapist and murderer, was surprisingly acquitted thanks to this cutting-edge evidence. 1987 saw DNA used to pinpoint a child's father and convict a rapist in Florida.

Meanwhile, DNA helped overturn a wrongful conviction in Chicago in 1989 and confirmed the fate of Nazi doctor Josef Mengele in 1992. Plant DNA even figured in a Texas murder case in 1992, while DNA analysis saved a man from death row in Arkansas in 1993.

Even unsolved crimes weren't immune to DNA's reach. The brutal 1993 murder of musician Mia Zapata was finally solved in 2002 using the killer's DNA, obtained from a later arrest.

Today, DNA evidence plays a critical role in criminal investigations worldwide. From the UK and Australia to Kuwait, this powerful tool shapes verdicts and delivers justice

CONCLUSION

Good things:

Catches the bad guys: It can link suspects to crimes more accurately than older methods, leading to convictions and stopping criminals.

Saves money: Faster investigations and fewer wrong accusations mean less spending.

Stops false accusations: The right person doesn't get blamed if DNA points elsewhere

Makes criminals nervous: Knowing they might get caught might stop them from doing more crimes.

Bad things:

Pressure to confess: Police might push suspects to talk or cooperate due to strong DNA evidence.

Privacy concerns: Taking DNA samples and looking at genetic data can feel like an invasion of privacy.

New ways to catch people: As DNA technology gets better, police might start using it in ways we haven't thought of yet, which could change how investigations work.