By Greg Barns

Doubts about the integrity of DNA evidence in sexual assault charges

Defendants in a number of recent cases have been acquitted or released from prison after the DNA evidence relied upon by the prosecution to secure their convictions was found to be contaminated.

Farah Jama is a 22-year-old Somalian refugee. Living in Melbourne, he might have thought the days of hell he left behind in his war-torn country were over. He was wrong. In 2006, Mr Jama was wrongly accused, tried and convicted of raping a woman at a nightclub, despite having an alibi and there being no independent corroboration of the evidence of the person who was raped.

While this case raises interesting and disturbing questions about the potential for racism in the Australian jury system, the major weapon used by the state against Mr Jama was DNA evidence. This evidence was the Holy Grail for the prosecution, but it turned out to be contaminated. Frighteningly, police and prosecutors in this case viewed DNA evidence as having some sort of 'mystical infallibility', a report on the case found.

Mr Jama served 15 months in prison before he was released in December 2009 and, in June 2010, the Victorian government awarded him $550,000 in compensation for his ordeal.

What's the lesson from the Jama case? It's simple really. Do not always believe DNA evidence in sexual assault cases, because it can be flawed.

A 2003 report by the Australian Law Reform Commission notes that:

> 'Laboratory staff could make errors in conducting DNA analysis, in interpreting or reporting the results of the analysis, or in entering the resulting DNA profile into a DNA database system. This might result from the failure to comply with an established procedure, misjudgment by the scientist, or some other mistake.'[1]

The Commission also observed:

> 'A suspect's DNA profile might match the profile found at a crime scene as a result of tampering with the crime scene, or subsequent substitution of DNA samples. This might occur where the actual offender, a police investigator, or another person deliberately leaves a suspect's genetic sample at the crime scene. Alternatively, it is possible that a suspect's sample might later be substituted for the actual crime scene sample to falsely implicate the suspect in the offence.'[2]

And, as a 2006 NSW Parliamentary Library Research Paper rightly says:

> 'Even if the possibilities of coincidental match, lab error, contamination and tampering are discounted, a DNA profile match does not necessarily establish guilt beyond reasonable doubt. This is because there may still be the possibility that the defendant's DNA sample was innocently left at the crime scene before, during or immediately after the offence.'[3]

Given these uncontroversial statements and observations, it is worth examining the Jama case in more detail to ascertain how it is that police and some lawyers could have become so determined to accept the infallibility of the DNA evidence in that particular case.

A report by retired Victorian Supreme Court judge, Frank >>

Vincent, tabled in the Victorian Parliament by Attorney-General, Rob Hulls, on 6 May 2010, sets out in detail the way in which DNA evidence in a sexual assault case can be 'misused'.

The crux of the case against Mr Jama was that his DNA had been found in samples taken from the victim who had been raped in a nightclub. Mr Jama's DNA had come to be in the possession of the police because he had been investigated in a completely unrelated sexual assault matter, which did not involve him being charged.

In other words, the prosecution case was predicated on the DNA evidence being accepted. The DNA found in the samples taken from the victim belonged to Mr Jama and sexual intercourse had taken place without her consent, and therefore the jury could be satisfied that Mr Jama was guilty of rape.

As Mr Vincent pointed out in his report, this was an example of the way in which our legal system, both 'conceptually and operationally', 'is being required to accommodate and respond to awe-inspiring and almost magical developments in human knowledge and technologies which, for most part, those involved have little or no knowledge or experience. In the present case, the obviously unreserved acceptance of the reliability of the DNA evidence appears to have so confined thought that it enabled all involved to leap over a veritable mountain of improbabilities and unexplained aspects that, objectively considered, could be seen to block the path to conviction.'[4]

DNA evidence in sexual assault and other cases is a useful tool, but it must be carefully used and placed into proper perspective, Mr Vincent wrote. And it must be 'understood that a calculation of statistical likelihood provides a dangerous basis for conviction, if it is upon that alone that proof beyond reasonable doubt exists'.[5]

And the advances in technology, which today allow for DNA to be extracted from the most minute amount of material, have increased the need for this cautious approach, Mr Vincent writes, because the smaller the particles the more easily they can be wrongly transferred.

All of this means that 'before evidence of such seeming strength is placed before a jury, the greatest possible care must be taken to ensure that its limitations are understood and that it is safe to rely upon it', Mr Vincent concluded. 'There is such danger in the uncritical acceptance of what Mr Vincent called 'the mystical infallibility attributed to it', that DNA's 'reliability must be the subject of the most careful scrutiny'.[6]

His remarks have a noble lineage. As far back as 1979, former South Australian Chief Justice, Len King, warned that jurors can be 'overawed by the scientific garb in which the evidence is presented and attach greater weight to it than it is capable of bearing'.[7] Justice Hampel gave similar warnings about the overwhelming impact of DNA evidence on jurors in a 1992 case,[8] as did the Queensland Court of Appeal in 1998.[9]

The sorts of issues that the Vincent Report grappled with are currently the subject of a High Court of Australia appeal. In *Forbes v The Queen,* an appeal from ACT Court of Appeal, the complainant was unable to identify her attacker. DNA taken from the complainant's clothing and a semen stain on her clothing was characterised by expert witnesses at the trial as providing 'extremely strong' evidence that Mr Forbes was the source of that DNA, the likelihood ratio for 'extremely strong' being greater than one million. Mr Forbes denied the offence and adduced exculpatory evidence, including an alibi supplied by his wife.

The argument before the High Court, which has yet to hear the appeal, is that in a case such as Forbes, where conclusions from DNA evidence can only ever be expressed in terms of likelihood, and where there is no other incriminating evidence, then an accused must be acquitted.

The significance of the High Court's decision to hear the Forbes case was summarised by prominent Queensland criminal lawyer, Chris Nyst. 'The man in the street believes that the Crown has to prove someone is guilty beyond any reasonable doubt. What is happening now is DNA evidence is introducing the concept of proof by probability,' Nyst told *The Australian.*[10]

In the meantime, how does one prevent a repeat of the disgraceful injustice that flowed from the Jama case? How does one prevent jurors from being blinded by science or believing that *CSI* is not just a TV program, but real life?

The Australian Institute of Criminology (AIC) has proposed that jurors be given a tutorial pre-trial, so that they can better understand and assess DNA evidence. In a paper released in March 2010, Jane Goodman-Delahunty and Lindsay Hewson reported on a trial designed 'to identify factors that improve jury understanding and use of inculpatory DNA evidence; that is, evidence that links a suspect to a crime'.[11]

Goodman-Delahunty and Hewson found that a 20-minute tutorial presented by an expert before the commencement of a trial 'on complex scientific information assisted in resolving jurors' acknowledged difficulties'. A 'generic expert tutorial on DNA profiling tested in the study dramatically increased juror understanding, whether the information was presented verbally or with multimedia'.

'The findings of this study, like others examining juror uses of expert evidence, showed that if jurors are given clear and well-sequenced complex information, they deal competently with it,' the authors concluded.

DNA evidence is not an end in itself. It is merely part of the forensic arsenal; jurors must not be allowed to view it as infallible. ■

Notes: **1** ALRC (2003), Essentially Yours: *The Protection of Human Genetic Information in Australia,* n35, p1094. **2** *Ibid,* p1095. **3** G Griffith and L Roth (2006), *DNA Evidence, Wrongful Convictions and Wrongful Acquittals;* NSW Parliamentary Library Research Service Briefing Paper 11/06 p11. **4** Hon FHR Vincent (2010), Inquiry into the circumstances that led to the conviction of Farah Abdulkamir Jama, p37. **5** *Ibid,* p42. **6** *Ibid* p43. **7** *R v Duke* (1979) 22 SASSR 46 at 48. **8** *R v Lucas* (1992) 2VR 109. **9** *R v Fletcher* (1998) 2QR 437. **10** C Merritt (2010), 'DNA under legal microscope', *The Australian,*30 March 2010. **11** J Goodman-Delahunty and L Hewson (2010), 'Enhancing fairness in DNA jury trials', *Trends and Issues in Criminal Justice* No. 392 (AIC).

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