

Can Amanda Knox's appeal overturn 'guilty' verdict based on contaminated DNA evidence?

In 2007, Meredith Kircher, a British student studying in Italy, was found dead, casting the lives of her roommate and her roommate's ex-boyfriend, accused of the murders, into chaos.

Found guilty in January of Kircher's murder, American Amanda Knox and Italian ex-boyfriend Raffaele Sollecito face almost 30 years in prison after a re-trial that put a heavy emphasis on the key evidence used in the previous cases, a kitchen knife with contaminated DNA.

The knife in question, which prosecutors dubbed "the murder weapon," has not been linked directly to the murder – there were neither blood nor DNA that proved it was used to kill Kircher. If anything, the knife was needing to be washed from previous use as a kitchen utensil. Knox's lawyer intends to file yet another appeal, but this time to the Italian Supreme Court.

Greg Hampikian, founder and director of the Idaho Innocence Project, voiced his concerns about the DNA evidence, stating "some independent forensic scientists told the BBC, there was no evidence of blood found on it..."

"I could see the problem with the case right away," Dr. Hampikian told the BBC.

[The] knife recovered from Sollecito's house was found to have Ms Knox's DNA on the handle and a small amount of DNA on the blade "consistent with the victim". . . . [Hampikian said] "That is significant because Miss Kercher had never gone to that house, so what is she doing on the blade of the knife? "While that may seem on its face to be evidence of a crime, in order to substantiate such a small amount of DNA you look for blood, and I can't emphasise enough how small this was – it was just a few cells." But there was no evidence of blood or any other body fluids found, the Boise State researcher points out. "You can't really wash the blood off and leave the DNA in any practical sense. That means that the few cells or molecules might have been from the laboratory after they amplified Miss Kercher's DNA," he explains. . . .

Claims have been made that the initial evidence was handled using dirty gloves and that investigators entered the crime scene without protective clothing.

In An Introduction to Forensic DNA Analysis, Norah Rudin and Keith Inman "define contamination as the inadvertent addition of an individual's physiological material or DNA during or after collection of the sample as evidence...A contaminated sample is one in which the material was deposited during collection, preservation, handling, or analysis."

To prove how easily DNA evidence can be contaminated, Dr. Hampikian and his team carried out a demonstration in which they picked up used soda cans using clean gloves, then used the same gloves while placing a new knife into an evidence bag. Once the knife was tested, it was found to have tiny

fragments of traceable DNA from the soda cans.

Knox's attorney, upon hearing the forensics specialists, argued that it was absurd for the knife to have been the murder weapon when evidence not only proved that the knife was used primarily for cooking, but it was also proved to have been unwashed and put back into the drawer.

But other experts are not so keen on using the word 'contaminated' when it comes to DNA evidence to try to discredit key evidence. David Balding from University College London's Genetics Institute, says that DNA is found everywhere in our environment but certain samples of DNA still provide unique markers.

The point is you have to allow for that to do a correct evaluation of the evidence; all of that kind of contamination just isn't a problem, as it's not going to match. The only contamination that matters is something that would have got the suspect's DNA.

Prof Balding helped to analyse the bra clasp on which Raffaele Sollecito's DNA was detected in the Kercher investigation.

A lot of people walked in and out of the room, there's been a lot of controversy about that. But could any of that have brought Sollecito's DNA into the room? There's no doubt that his DNA is on the bra clasp; the only question is how it got there.

Jo Millington, a senior forensic scientist at Manlove Forensics, agrees. "In the Kercher case in particular, there's not been due consideration given to how DNA can be transferred and that's rife across DNA analysis in the UK," she said.

Knox's attorney has stated she will pursue an appeal to the Italian Supreme Court.

Additional resources:

- Amanda Knox and DNA Contamination, Biopolitical Times
- [Kercher trial: How does DNA contamination occur?](#), BBC
- [DNA evidence in Amanda Knox's trial does not connect her to murder victim](#), Washington Post