

Cold Case Review

WE ALIGN EXTENSIVE EXPERIENCE WITH NEW TECHNOLOGIES AND ALTERNATIVE APPROACHES TO UNLOCK CRUCIAL EVIDENCE IN UNSOLVED HOMICIDE, MISSING PERSON AND SEXUAL OFFENCES CASES.

- Innovative techniques
- Imaginative strategies
- Unfailing attention to detail



Eurofins Forensic Services offers a complete case review service to support all stages of an investigation and in particular, specialises in unsolved homicide cases, missing person cases and sexual offences. We have a dedicated cold case team consisting of scientists with a range of expertise, including current casework, and a combined experience of over 150 years in forensic science. **Scientists work closely with the investigating team to review work previously undertaken, exploiting new technologies and alternative approaches to unlock that crucial piece of evidence.**

Flexible Approach

We offer a flexible approach to assist police review teams in all types of enquiries - ranging from facilitating the retrieval of retained materials from the forensic archive, through to detailed and thorough staged scientific reviews.

A case review specialist is assigned to each case and, depending on requirements, will devise and agree a strategy to be executed by Eurofins' select team of case review practitioners in conjunction with the investigative team.

The strategy is tailored to the needs of the investigation throughout, and any results obtained will be interpreted and re-assessed accordingly. Acting as a single point of contact, the case review specialist provides regular updates and continued advice, and is ideally placed to identify new opportunities as they become apparent, or indeed to stop a particular line of enquiry if it is deemed no longer beneficial to the case.

As well as undertaking individual reviews, Eurofins Forensic Services has developed

a service specifically to assist forces in the management and delivery of large-scale historic sex offence projects. This service includes the collation of all relevant case information, including the review, case progress and results into a customised case review database which can produce tailor-made reports.

Authoritative advice is offered relating to historic case reviews, such as continuity, integrity of materials, contamination, the findings of original scientists, assisting with interview strategies for victims and suspects and the presentation of cases to court. Forensic awareness and training can be included and is often vital in helping the police team and the CPS tackle key issues regarding the review of historic offences.

Specialist Knowledge

Eurofins Forensic Services has invested significant resources in research and development to determine the best way to deal with archived material. We have developed specific protocols regarding the optimum methodologies for the examination of slides and tapings; especially in relation to DNA, but also taking into consideration the many other valuable evidence types that can be present within such materials.

In addition to advanced technical capabilities, Eurofins' strengths lie in the expertise and knowledge of their case review specialists.

These individuals:

- Have extensive in-depth knowledge of historic examination methods; this can be absolutely crucial when setting strategies and interpreting new findings.
- Employ a range of techniques not commonly required in live casework, including the extensive use of microscopy as a search tool and a wide range of presumptive testing capabilities.
- Consider a wide range of evidential materials; from fibres and other traces through to the latest DNA advances.
- Work on the basis that there is always the chance of finding vital evidence no matter how often the item has been examined before.
- Challenge and re-interpret original findings in the light of research and new information.
- Understand the workings of the forensic archive and how retained materials for various cases came into being.
- Understand historic DNA processes, and particularly the labelling of extracts.
- Are fully aware of continuity, packaging and integrity issues regarding historic materials and exhibits; including the impact of storage on evidential items in the intervening time.
- Are patient, meticulous and thorough lateral thinkers and creative problem-solvers.
- Have received awards and commendations from the criminal justice system and the monarchy in recognition of their contribution to forensic case reviews.

With such a wide range of examination types available in-house, we are able to combine different aspects of our expertise in imaginative ways; being part of a larger scientific organisation with an emphasis on innovation, quality and customer service puts us at the forefront of delivery in forensic science.

Case Studies

These examples demonstrate the value forensic science can bring to historic investigations; Eurofins Forensic Services offers a wide variety of scientific techniques and technologies to support investigators in these challenging cases.

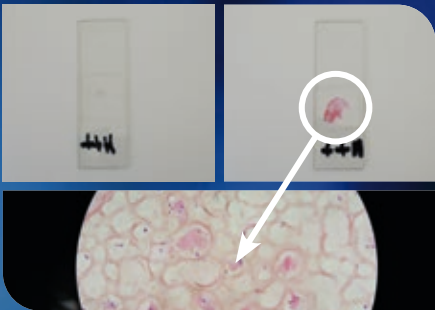
Advanced Tools

In 2001 a 17 year old was raped by a stranger on her way home. At the time, only traces of semen were recovered from the intimate swabs. The remains of the original intimate swabs and associated examination tubes had been retained, and were re-extracted using Eurofins' 'SpermTrap' method. Many more sperm cells were recovered using this process and a full DNA profile was obtained. A search of the NDNAD yielded no matches, therefore a familial search was undertaken. This led directly to the offender who pleaded guilty and was sentenced to 19 years in prison.



Connecting Crimes

The recent scientific review of a rape of a 19 year old from 1977 led to a match to an individual who had been convicted of the kidnap, rape and murder of a 16 year old in 2001. Further investigative and scientific work ultimately lead to further convictions for 16 offences against 5 other victims, including the rape from 1977. A whole life sentence was passed.

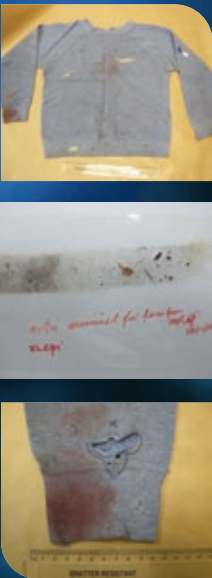


Reliability of Findings

EFS undertook work over a period of 6 years in the complex re-investigation of the murder of two schoolgirls in 1986. The suspect had previously been acquitted, so this case fell under the amended 'double jeopardy' rules. A team of scientists re-evaluated all of the previous scientific findings in relation to paint traces, hairs, fibres and DNA, retested samples with modern analytical techniques where possible, and carried out examinations which had not been previously contemplated. A major part of the work done at EFS was an assessment of the reliability of the findings, the integrity of the exhibits and the diligence with which the case had been approached by scientists at all times since the murders took place.

As a result of the in-depth scrutiny of the continuity of the exhibits, an EFS scientist deemed that significant DNA results reported by a colleague were not sufficiently robust to be presented as evidence at court. Whilst this finding was initially unwelcome news for the investigating officers it redirected the examination strategy and ensured that the evidence which was ultimately heard at trial could withstand rigorous scrutiny and rebut suggestions of bias within the company.

As a direct result of the efforts of a dedicated and extremely experienced team of scientists, the defendant was found guilty in December 2018, and the families of the two young girls finally had some closure in this tragic case.



Innovative techniques

Imaginative strategies

Unfailing attention to detail

JUSTICE AT LAST. 33 YEARS AFTER TWO LITTLE GIRLS DIDN'T COME HOME.

Case summary

- Murder of two schoolgirls in 1986.
- Suspect was acquitted in 1987, but he went on to commit a serious sexual assault and attempted murder on another schoolgirl in 1990, for which he was convicted.
- The murders were re-investigated under new double jeopardy laws, and a scientific review commenced in 2012.
- New DNA profiling results provided compelling evidence to link the suspect to the crime together with fibres, hairs and paint connections.

Convicted in 2018 and given two life sentences.

Serial rapist who dodged justice for 26 years is jailed thanks to advances in DNA profiling.

Case summary

- Following a cold case review, retained microscope slides from two rapes in 1979 were tested and matched to an individual on the NDNAD.
- He pleaded guilty and received a 10 year sentence.
- At the time of his conviction, DNA evidence potentially linked him to a rape in 1991. However, there was insufficient evidence to proceed with a prosecution.
- Several years later, as DNA tools and interpretation software advanced, the case was reviewed again leading to a successful prosecution.

Sentenced to a further 12 years, to run consecutively

Rapist hunted for 20 years arrested on board flight to Pakistan moments before take-off.

Case summary

- 2001 victim abducted into a car as she was walking home. Awoke in a stranger's flat to find a male having intercourse with her, in the company of another man.
- A DNA profile was obtained from semen on intimate samples, and following a scientific review a different male profile was obtained from semen on pubic hair.
- There were no matches on the NDNAD but a familial search led to one of the offenders, and subsequent investigative research led to the second offender.

Sentenced to 11 years and 6 years.

Rapist finally jailed 35 years after attacking woman at knife point in her garage.

Case summary

- Victim was attacked in 1981 in her own car after parking it in her garage following a day at work.
- A DNA profile was obtained from semen on microscope slides prepared during the original examination.
- There were no matches on the NDNAD, therefore a familial search was undertaken which eventually led to the offender.

Sentenced to 11 years and 8 months

MURDERED WOMAN'S FAMILY THANK COLD CASE POLICE AS 'EVIL' MAN JAILED DECADES LATER.

Case summary

- Body of a female was recovered from a lake in 1987. She was gagged and bound by her hands and feet.
- The case remained undetected until a review commenced in 2020.
- Re-examination of the gag revealed the presence of semen.
- A profile obtained from the semen matched that of a convicted rapist on the NDNAD.
- The same male profile was obtained from tapings of the victim's bra, which appeared to have been undone by the offender.
- In 1981 a 16-year-old girl had been raped in the same area.
- Items from this case were sent to EFS in 2021 and semen was found on tapings from the victim's knickers.
- The profile obtained matched the same convicted offender on the NDNAD.

**Previous convictions for two rapes, burglary and kidnap.
Sentenced to a minimum term of 30 years**

Rapist caught 17 years after being reported thanks to DNA technology.

Case summary

- Repeated abuse on step-daughter from the age of 8 to 15; reported in 2001.
- Semen was detected on intimate samples but no profile was obtained.
- Samples re-extracted with advanced techniques following a cold case review.
- A DNA profile matching the step-father was obtained.

Sentenced to 18 years.

Tailored support



Advanced forensic tools



Specialist cold case scientists

Collaborative and proactive



Knowledge of historic methods



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