

DNA Hit of the Year 2019

Top 17 Cases

1. *Filipino housemaid found headless and handless in Dubai*

Country/State: Dubai - United Arab Emirates

Year of Crime and Hit: 2016 and 2016

Executive Summary: A woman was found with her head and hands cut off. After 3 months of investigation Dubai police determined her identity by comparing her DNA to the personal belongings of a missing housemaid, a Filipino woman named Manormeeta Salwaro Dadi. The murder suspect's DNA was obtained from the dead body. Investigations revealed the murderer may have been relative. Police then profiled several of Dadi's relatives and a match was found. The relative confessed when confronted.

Scientific Importance: This woman was almost unidentifiable without a head and hands. Police cross-referenced the date and other details of this woman with active missing person cases throughout the country. This led investigators to the house where she was a housemaid, leading to DNA samples and a match.

Investigative Importance: Dubai police had to sift through 9,751 missing women (runaway maids) cases to find leads for this particular case.

Other: Murderer was a butcher who used his knowledge and expertise as a butcher to cut off the head and hands of the victim. The murderer claimed that he was influenced by "zombie movies" to murder the victim in a such a way.

Submitted Story:

On 25 May 2016, a gruesome discovery was made of a decapitated female body with severed hands and stab wounds to the torso, road-side in a desert area in Dubai. Neither the head nor the hands were found in the area, and so began the challenge of identifying the body. Due to the nature of this horrific case and lack of physical evidence including the murder weapon, answers were needed right away as a matter of public concern. Initially, no database matches were

found for the DNA of the victim. To obtain as much information from the DNA, attempts to identify the body included ancestry analysis and facial reconstruction using DNA phenotype prediction-software.

The results indicated East Asian ancestry with a high probability that the victim's nationality is Filipino. Furthermore, male profile DNA was obtained from the clothing and leg of the dead body but did not match the DNA database at the time. We also analyzed Y-chromosome DNA of the unknown male DNA sample and found that the Y-STR haplotype on the global Y-STR database indicated origin of Filipino population, which helped narrow down the suspect search. This case triggered an expansive national search of suspects and missing people across the seven Emirates to identify the discovered body. After elimination of possible matches, it was found that 32 missing person reports had high-match-potential out of around 9000 reports.

The missing person's belongings were brought in for analysis and 322 samples were processed for DNA profiling. A breakthrough in the case was made when the DNA from one of the missing person's belongings of a Filipino woman employed in the Emirate of Abu Dhabi matched DNA in the database of the deceased. Once the victim's identity was known, it was time to focus on the suspect. Further investigations in the murder pointed to a relative of the deceased residing in the country, a nephew. After profiling 533 DNA samples, the case began to unravel when DNA obtained from the male relative matched the male DNA sample found on the body. During investigations, the suspect confessed that he murdered his aunt over pressure from a financial debt he owed her and led investigators to the severed hands and head, which he burnt and disposed of in a remote desert area in the Emirate of Ajman. A database search indicated that the DNA from the burnt remains (head and hands) matched the DNA of the female victim. The man was arrested on September 20th, 2016.

Links to Media Coverage:

<http://naradanews.com/2016/09/graphic-contentdubai-police-unravels-the-case-of-the-headless-body-of-a-filipino-woman/>

<http://gulfnews.com/news/uae/crime/i-knew-something-bad-had-happened-to-my-wife-1.1900149>

<http://naradanews.com/2016/09/graphic-contentdubai-police-unravels-the-case-of-the-headless-body-of-a-filipino-woman/>

<https://www.thenational.ae/uae/butcher-who-murdered-and-beheaded-filipina-relative-in-dubai-arrested-1.214745>

<http://www.emirates247.com/crime/local/dubai-police-nab-the-butcher-killer-confesses-zombie-films-influenced-him-2016-09-22-1.640823>

<https://www.khaleejtimes.com/news/crime/dubai-expat-buries-aunts-chopped-up-body-across-UAE-desert?X-IgnoreUserAgent=1>

Addendum – Additional Information

1. Additional Narrative from Rashed Alghafri

- i. “Also we would like to highlight some points which we can’t share the documents proofs for it. The most important thing in here, the justice system has taken their of conviction based on DNA evidence solely as there were no other evidences available. The criminal made sure to choose a blind area, not covered by CCTV, and also hiding the victim identify which usually achieved using traditional fingerprints. Therefore, the importance and advantages of DNA profiling are shown in here, were criminals maybe able to hide many different types of critical evidences but they will never be able to fully stop depositing biological cells wherever they go and with whatever they interact with.
- ii. I guess this shows how it is important for countries to accelerate passing legislations and enriching their DNA databases.”

b. Additional Links

- i. <https://gulfnews.com/uae/government/butcher-in-custody-for-filipinas-murder-1.1899929>
- ii. <https://www.thenational.ae/uae/butcher-who-murdered-and-beheaded-filipina-relative-in-dubai-arrested-1.214745>
- iii. <https://www.emirates247.com/crime/local/dubai-police-nab-the-butcher-killer-confesses-zombie-films-influenced-him-2016-09-22-1.640823>
- iv. <https://lovindubai.com/news/dubai-police-solve-headless-woman-case>
- v. <https://filipinotimes.net/news/2016/09/22/butcher-held-for-relatives-murder-in-dubai/>

- vi. <http://naradanews.com/2016/09/graphic-contentdubai-police-unravels-the-case-of-the-headless-body-of-a-filipino-woman/>
- vii. <https://www.moi.gov.ae/DataFolder/magazine2016/Nov/999%20NOVEMBER.pdf>

2. *The Bittrolff brothers*

Country/State: New York

Year of Crime and Hit: 1994 and 2013/4

Executive Summary: Three prostitutes were found dead in a close time span. But the case went unsolved for 20 years. In 2014, the murderer's (Bittrolff) brother's DNA was entered into the state database for an unrelated criminal contempt case, leading to a match.

Scientific Importance: Match came from the murderer's relative being entered into the state database for an unrelated crime.

Investigative Importance: This DNA match solved three cases and revealed a modus operandi that could link the murderer to many more cases.

Other: Murderer was of particularly distraught nature. He had wrestled a pig down to the ground and slit its throat. He shot a deer in the woods, cut the heart out, and ate it raw. After Bittrolff's sentence, the case's prosecutor Robert Biancavilla announced that Bittrolff was also a suspect in at least one of the murders attributed to the Long Island Serial Killer case.

Submitted Story:

In November of 1993, two prostitutes, Rita Tangredi and Sandra Costilla, were murdered in Suffolk County and found posed in the woods in a similar fashion. In January of 1994, a third murdered prostitute, Colleen McNamee, was found in nearby woods. DNA evidence, namely semen, collected from Tangredi and McNamee's respective crime scenes were compared and the analysis revealed "a match". There was no DNA evidence found at Costilla's scene, but similarities between the three incidents led detectives to believe this murder was connected to the other two. A task force, which was formed in 1994, dedicated thousands of hours of manpower to attempt in identifying the perpetrator responsible for these murders. Hundreds of suspects were investigated by the task force and all leads were exhausted. Unfortunately, the case eventually grew cold.

The Suffolk County Crime Lab was able to enhance the DNA found at both scenes to create a single source. That DNA evidence was uploaded into CODIS and did not yield a match to any suspect in the database.

In 2013, the Suffolk County Crime Lab was informed by New York State Office of Forensic Sciences that a partial match to the DNA evidence had occurred when Timothy Bittrolff had been arrested and his DNA was collected and submitted.

In 2014, the Suffolk County Police Homicide Squad formed a second task force, and working in conjunction with the Crime Lab, began collecting discarded DNA evidence from the relatives of Timothy Bittrolff.

On 03/07/14, the Crime Lab informed the Homicide Squad that a DNA pseudo exemplar recovered from the garbage of JOHN BITTROLFF, Timothy's brother, was in fact a match; a "cold hit" to the DNA evidence recovered from the crime scenes in 1993 and 1994.

On 07/21/14, John Bittrolff was arrested for the two cold case murders of Rita Tangredi and Colleen McNamee. Although detectives were unable to charge John Bittrolff with the murder of Sandra Costilla due to a lack of evidence, he remains the prime suspect. A direct exemplar was taken from John Bittrolff at the time of his arrest and it was again confirmed to match the DNA evidence recovered in 1993 and 1994.

On 07/05/17, following a lengthy trial, John Bittrolff was found guilty by a jury for two counts of Murder 2nd Degree. He was subsequently sentenced to two consecutive terms of 25 years to life.

This case attracted significant media attention in the mid 1990's and again twenty years later, with the arrest and prosecution of John Bittrolff. At a press conference announcing the arrest of Bittrolff, former Suffolk County District Attorney Thomas Spota described this case as a "miracle of modern DNA science."

Links to Media Coverage:

<https://www.newsday.com/long-island/crime/john-bittrolff-charged-with-cold-case-murders-of-rita-tangredi-colleen-mcnamee-1.8867098>

<https://www.newsday.com/long-island/crime/john-bittrolff-faces-50-to-life-at-sentencing-in-double-murder-1.14146418>

https://en.wikipedia.org/wiki/John_Bittrolff

<https://www.nbcnewyork.com/news/local/Man-Is-Convicted-of-Killing-Long-Island-Prostitutes-432739853.html>

<https://web.archive.org/web/20170913232025/http://www.newser.com/article/64ad0c77a9ee4bdf9b1ec54425d42686/prosecutor-convicted-killer-may-be-tied-to-more-ny-slayings.html#>

<https://nypost.com/2014/07/22/mar-arrested-in-gruesome-decades-old-cold-case/>

Addendum – Additional Information

1. PowerPoint presentation from Kevin Beyrer – see attached case file.

3. *The Case of Jane Britton*

Country/State: Massachusetts

Year of Crime and Hit: 1969; and 2004 (warm hit date) & 2017 (familial testing confirmation date)

Executive Summary: Nearly 50 years ago, Jane Britton, a 23-year-old Harvard graduate student, was found beaten to death and sexually assaulted in her apartment. In the five decades since, investigators have been unable to pinpoint who killed her. In 2017, using new DNA technology, investigators derived a DNA profile from evidence taken from the 1969 killing. This led to a hit in CODIS to Michael Sumpter. But unfortunately, Michael had died in 2001 from cancer. Investigators used Ancestry.com to search for a relative of Michael Sumpter, his brother, to obtain enough familial DNA for a conclusive match, thereby resolving the case. Although the killer died long ago, DNA helped bring closure to Jane's family and helped link Sumpter to several other attacks/killings in the area.

Scientific Importance: The original DNA evidence was taken in 1969 and preserved until a profile could be extracted in 2017.

Investigative Importance: This is the oldest case that the Middlesex District Attorney's office has been able to bring to a resolution. New DNA technology, a hit in CODIS, and 'familial searching' using Ancestry.com all confirmed the identity of this killer. This DNA match also helped link Michael sumpter several other rape and murders throughout the area.

Other: Many speculated that Jane Britton was a victim of the Boston Strangler, or a copycat, since she was murdered in the same building as one of the other victims.

Submitted Story:

On November 20, 2018, District Attorney Marion Ryan publicly announced that the Homicide of Jane Britton on January 7, 1969 a graduate student of anthropology at Harvard University had been solved after 49 years. This officer was assigned to investigate the cold case in 1997. At this time there was no physical evidence located either at the MSP or Cambridge Police Departments.

This officer did locate the autopsy specimens of Jane Britton, which Dr. George Katsas had retained and stored at his office.

With the onset of DNA testing the autopsy specimens were subsequently sent out to Cellmark Diagnostics for testing (1998). A partial DNA profile was identified for use in the newly created CODIS system.

As capabilities in scientific testing increased, and mandated samples were uploaded into the Massachusetts Data Base, a “warm hit” was noted (2004) on a person later identified as Michael Sumpter. Sumpter had been incarcerated in Massachusetts numerous times and died in prison in 2001. Chemists began reworking and retesting available samples from the Britton specimens. In a final effort to locate an identifiable sample, an exhaustive sample was found in a previously analyzed micro tube and established an Y-STR profile of a yet unidentified male. YSTR is not compatible for input into the CODIS system to locate matches.

Having a usable complete YSTR sample for identification purposes, this officer was instructed to focus the investigation on obtaining DNA samples from male persons previously identified in the investigation. Travel across the United States to locations as far as Hawaii and to Canada was undertaken to obtain samples.

Each individual identified agreed to assist in the investigation, despite feelings that they had been “suspect” during their original dealings with law enforcement in 1969. All provided DNA samples for comparison in the case and were subsequently eliminated as the source of the Britton sample. Noting the previous “warm hit” on the Sumpter sample in CODIS. Permission was needed break down the Sumpter CODIS sample from STR to Y-STR for possible comparison. As Sumpter was now deceased, authorization was permitted.

A new updated search on Michael Sumpter revealed that in 2002, the Boston Police Department identified Sumpter from a sample in their department DNA data base as the suspect in the unsolved 1985 rape in the city of Boston. In 2010 Boston Police again identified Sumpter as the suspect in the 1972 unsolved Murder of Ellen Rutchnick from their DNA data base. In 2012, Boston Police again identified Sumpter as the suspect in unsolved murder of Mary Lee McClain in 1973.

Following breakdown of the Sumpter CODIS sample to Y-STR, the Massachusetts State Police Crime Lab was able to identify that Michael Sumpter or a male relative matched the Britton sample. In order to validate, a living male relative would be needed.

This officer traveled to Florida and encountered a very uncooperative brother who wanted no involvement in the Britton investigation. A DNA sample was finally obtained, which was used both to verify Michael Sumpter as the CODIS Source, and later after breaking it down to STR to eliminate the brother.

Michael Sumpter a person unknown to Jane Britton, broke into her apartment on the Night of January 6/7, 1969, sexually assaulted her and violently beat her about the head and killed her. This was the first of 3 murders and other sexual assaults Sumpter would commit, but not be held accountable for until the advent of DNA testing. To date, this is the oldest case solved at the SPDU-Middlesex.

Links to Media Coverage:

<https://www.boston.com/news/crime/2018/11/20/jane-britton-harvard-cold-case-solved>

<https://www.boston25news.com/news/who-killed-jane-britton-50-year-murder-investigation-finally-closed/875994868>

https://www.washingtonpost.com/nation/2018/11/26/nearly-years-harvard-was-haunted-by-an-unsolved-murder-dna-now-points-serial-rapist/?utm_term=.283a039c20ec

4. *Kalashnikov, C4, and Detonators all linked via DNA*

Country/State: Bahrain

Year of Crime and Hit: 2017 and 2017 and 2018

Executive Summary: Several cases of terrorism-related crimes produce DNA profiles matching all to one suspect.

Links to Media Coverage: None provided.

Story:

Case Number 1:

On 19/08/2017, an unknown metallic can was found on the side of the road, near a police road camp. Later on, it was found to be positive for the explosive (C4-RDX). DNA was collected from the plastic cap of the metallic can and a DNA mixture was found. DNA was recorded as NO HIT in the DNA Database. The DNA was amplified using GlobalFiler PCR amplification kit.

Case Number 2:

On 11/11/2017, police authorities found a Kalashnikov rifle (AKS) in an abandoned house. DNA mixtures were collected from several parts of the rifle. One of the contributors of the black belt attached to the rifle matched to one of the sources of the cap in the previous case. DNA mixtures were stored in the DNA Database. The DNA was amplified using GlobalFiler PCR amplification kit.

Case Number 3:

On 19/11/2017, the DNA lab received several electrical devices. They contained receivers, transmitters, batteries, a cardboard box, and detonators. After observing the items, Directional Focus Fragmentation Charge (DFFC) type was found. Samples were positive for the explosive (C4-RDX) and (Calcium Carbonate) and when mixed with other explosible materials, a combustible dust cloud can be formed. DNA was collected from several parts of the DFFC. One of contributors of the cells from the electrical device found a DNA match. Other DNA HIT was found as one of the contributors of the cardboard box.

Meanwhile, DNA collected from a hidden tape inside the explosive (C4-RDX) as well as one of the contributors of the battery came as a matching HIT to the unknown suspects of the previous cases. DNA sample was recorded in the DNA Database. The DNA was amplified using GlobalFiler PCR amplification kit.

Case Number 4:

On 16/12/2017, we received another similar explosive IED (i.e. DFFC) containing white powder and detonator. DNA collected from the white substance (which is found to be C4-RDX) was a match to the previous unknown suspect. DNA sample was recorded in the DNA Database. The DNA was amplified using GlobalFiler PCR amplification kit.

Case Number 5:

On 21/01/2018, An abandoned store was located with many dangerous items linked to terrorism activity. One of the samples was a wired remote device. DNA collected from the wire connected to the remote device matching the unknown suspect in the previous cases. DNA sample was recorded in the DNA Database. The DNA was amplified using GlobalFiler PCR amplification kit.

References obtained:

During the investigation into the 5 mentioned cases, many reference samples were collected based upon the areas where these samples were found. On 23/01/2018, one of the reference samples came as a matching HIT for the previous samples and the suspect was brought for investigating and confessed for dealing with the explosive material and rifle. Reference DNA was amplified using GlobalFiler Express PCR amplification kit.

Significance of the HIT:

This suspect is a dangerous terrorist working with in an organized terrorist cell, with possession of many explosive materials that can wipe off an entire area in the Kingdom of Bahrain. In case of such incident, many human and economic fatalities will occur as the terrorism in Bahrain has no religion and color and affects everyone.

So far, many of policemen and tens of civilians were dead or badly injured due to the explosions that took years in the past years.

Also, we have found out that DNA/STR can be generated from the touch DNA contaminated with explosive material (i.e. C4-RDX) and calcium Carbonate. We have found out that these materials are not affecting DNA recovery. Also, from the source of DNA found on the IEDs and explosives, we can easily define the role of each terrorism in the terrorism cell; whether this person is working as an electrician that deals with electrical circuits, distributors of the IEDs to a specific locations or assembler who assemble the IEDs altogether. Also, from the number of the

DNA profiles, we can estimate the number of the terrorists in the terrorism cells and help us in investigations.

Unfortunately, there is not enough research on the explosives and what we are dealing in Bahrain, is based upon our own research and daily routine work on explosives, arms and ammunitions.

5. *France and Germany team up*

Executive Summary: Two women are raped in France near the same area in Paris by what appears to be the same man. DNA evidence is obtained from the rape kits from both women. After running the DNA profile through the French database, there is no match. But after submitting it to Germany and other countries, French authorities receive a match from the German database. He had been arrested for violent acts in Germany. Authorities locate and arrest him.

Scientific Importance: International DNA profile sharing between European Union countries.

Investigative Importance: This case was solved by two European countries using the Prum treaty's powers. After DNA gave authorities the identity of the man, authorities used the suspect's cellphone and Facebook data to pinpoint his likely location in a southern seaside town (Cap d'Agde). Because this man was homeless, authorities struggled at first to try and locate the man.

Other:

Submitted Story:

On February 20, 2018, a rape occurred in France, in Val de Marne, in the Paris region. The analyzed stains allowed to determine a male profile, unknown in the French database (FNAEG). In June 2018, an article 4 PRUM exchange with Germany revealed a hit (quality 1 – hit count 16) with a reference profile of the German database.

A few days later in July 2018 a rape with violence and theft is committed in Yvelines, France. The query undertaken in the French DNA database (FNAEG) and an article 3 PRUM request allowed to identify the same DNA profile. Both cases are associated.

After confirmation of the hit by a DNA national expert, the French police requested their European counterparts with the PRUM step 2. The German police informed them that the suspect was a 22 years old Moroccan migrant, with police records for robberies with violence and illegal stay.

His identity has been registered in the French wanted persons database. Using the geolocation of his mobile phone, the police located the suspect in the Paris region, then at Agde in southern France.

On August 6, 2018, the suspect was arrested by the local police for traveling by train without ticket. The verification of his identity revealed that he was searched in for these rape cases. The analysis of his DNA confirmed his involvement in the two rapes in the Paris region

Charged with a judicial inquiry, he was placed in pre-trial detention. The Prüm exchange system have allowed to identify and arrest the perpetrator of these two rapes

Articles to Media Coverage:

<http://www.leparisien.fr/yvelines-78/ile-de-france-le-voleur-arrete-au-cap-d-agde-08-08-2018-7847097.php>

<https://actu17.fr/lhomme-sans-papiers-qui-avait-viole-2-femmes-en-region-parisienne-interpelle-au-cap-dagde/>

6. “Randy”, not “Frank”

Country/State: California

Year of Crime and Hit: 2018 and 2018

Executive Summary: Rapid DNA is used to solve a crime 3 days after it was committed.

Story:

Around 8:00 pm on 11/6/18 in the city of Orange, California, a man looked outside his home and saw two men arguing in a red Mustang. The driver stepped out of the car, walked over to the passenger side and began hitting the passenger with an unknown object in the neck, head and chest. The passenger struggled out of the car and ran away from his assailant into a neighbor’s home, dazed and asking for help. The victim was taken to a nearby hospital and treated for multiple serious stab wounds to the head and neck. When the victim was questioned by investigators at the hospital, he said he had been arguing with a friend, “Frank” from Fontana, California

According to the witness, as the assailant ran to his car, he tripped and fell on the ground before speeding away. The witness showed police the area where he saw the assailant fall and Orange Police CSI collected apparent blood from that area. While investigators were focused on a suspect, “Frank from Fontana”, blood swabs from the location on the ground where the suspect fell were transported from the active crime scene to the OCDA Rapid DNA program the morning of 11/7/18.

Multiple crime scene blood swabs believed to be from the perpetrator were tested on the Thermo Fisher RapidHIT™ 200 instrument. Two hours later, complete profiles were generated from all samples tested, resulting in the same male profile. The male profile was immediately searched against the local OCDA DNA database, a consensual DNA database consisting of profiles collected as a condition of a misdemeanor's case disposition, and a suspect was identified. The hit was to a man named “Randy”, a violent felon who was currently on parole and in the OCDA DNA database for misdemeanor resisting arrest, not “Frank from Fontana”. Randy was not a person of interest and the focus of the investigation immediately pivoted away from the innocent “Frank from Fontana” to Randy.

The same day, Orange Police, with the assistance of Randy's parole officer, located the suspect at a local motel in the city of Orange. The suspect's red Mustang was observed parked outside, and when Randy was arrested, the police found additional critical evidence: bloody bedding and clothing in the motel room. Furthermore, the suspect had fresh cuts on his hands, consistent with cuts he could have sustained during the stabbing.

After Orange Police detectives read the suspect his Miranda rights, he fully confessed to stabbing the victim, saying, "It's a crime, you got me, I'm caught, and I ain't never going home... I guess I'm just evil...Got to be the world's dumbest criminal."

The victim viewed a photo lineup of the suspect and identified the arrestee as his assailant. On 11/9/18, just three days after the crime, Randy was formally charged with attempted murder for the vicious attack, promoting public safety and justice with the speed of Rapid DNA.

Addendum – Additional Information

1. Additional Narrative from Jody Hynds
 - a. "Inserted below is a facebook post from OPD regarding the Rapid Hit back in November. The hit was obtained 11/7/18 in our local DNA database using Thermofisher's RapidHIT 200 generated profile. OCDA filed charges against the suspect two days later on 11/9/18. The crime lab completed their expedited testing in January 2019. The crime lab expedites testing when the OCDA's office generates a Rapid DNA hit on evidence. If the suspect had been identified in January in CODIS after the completion of the testing of the evidence at the crime lab (and not the same day of the crime), the perpetrator's knife wounds would have healed, he would have had time to discard any additional evidence that was collected at the motel that same day and a few months to come up with practiced cover story. The investigation was focused on "Frank from Fontana" – the victim had a friend "Frank from Fontana" they were investigating. Without a rapid DNA hit early in the investigation, an innocent man could have continued to be the focus of the investigation for months. This is the value rapid DNA testing. Exonerating the innocent, focusing the resources dedicated to an

investigation on the perpetrator within hours of a crime. We had a preliminary hearing where the use of Rapid DNA was introduced and the defense attorney had no questions – I took a clip of that transcript and added it. We have a jury trial date set for 4/30/19 against Randy Shelton.

- b. The real success with Rapid DNA technology has been because of our local DNA database. Twelve years ago, the OC District Attorney at the time understood career criminals start with local low-level crime. He thought if we could get DNA from people for misdemeanors, we could not only stop criminals before they escalate but also act as a deterrent to those who may choose a better path in life. Our DNA database is consensual, we offer DNA as a condition for a negotiated plea for misdemeanors. Depending on the charges, they may be offered a drug treatment program, reduced or dismissed sentencing. We have over 180,000 Orange County individuals in our database and over 11,000 crime scene profiles developed at the Orange County Crime Lab.
 - c. When rapid technology was introduced in 2011, we saw the potential for the use of this technology with crime scene evidence. Because we already had a robust local database collection program managed by forensic scientists, district attorneys and the bureau of investigation, the addition of rapid DNA was a perfect fit. Forensic scientists validated the instrument's ability to test crime scene evidence and limited the samples to blood, saliva, neat semen and buccal swabs. We only test evidence using the rapid instrument when there is sufficient sample to also send to the crime lab for testing. Crime lab tested evidence is used for court while rapid testing is used for quick investigative leads.
 - d. <https://behindthebadge.com/ocdas-rapid-dna-team-big-hit-garden-grove-pd-oc-law-enforcement-agencies/>
 - e. This link described the value of the Rapid DNA program to one of our agencies using the program. It's not specific to this case."
2. Additional Files – See attached case file.

7. Rape in a Dental Office

Country/State: Brazil

Year of Crime and Hit: 2012-15 and 2018

Executive Summary: DNA links several rapes committed throughout Brazil to a single suspect.

Scientific Importance: This is the first case in Brazil in which the author of serial sexual crimes was identified through DNA examination, with the assistance of the National DNA Database. This also involved the sharing of DNA profile data directly between Brazilian states before submission to the national DNA database.

Investigative Importance: This DNA match connected to the suspect not only directly to four similar rapes, but also indirectly as a suspect in over 50 different crimes.

Story:

Between the years of 2012 and 2015, several women were raped in the states of Amazonas, Mato Grosso, Rondônia and Goiás. The aggressor acted in the same modus operandi: he attacked the victims at home after pretending to ask for some information or a glass of water. Although he acted always in the same way, he was constantly changing city and committing crimes in locations up to 2,000 km distant from each other.

In September 2015, in the state of Rondônia, after committing robberies and a rape to a secretary of a dental office, Célio Roberto Rodrigues, 35, who also used the name of Herley Nascimento Santos, was arrested. At this time the state of Rondônia still did not have DNA laboratory. Despite this, the biological material of the suspect was collected and his profile was compared with cases investigated in the neighboring state of Mato Grosso. The comparison immediately confirmed the involvement in four rapes within that state. When the genetic profiles were uploaded to the National DNA Database, new compatibilities were found with three genetic profiles inserted by the database of the state of Amazonas.

In February of 2018, analyzing samples collected from two victims of rapes in the city of Goiânia (in the state of Goiás), the Goiás' DNA laboratory obtained two similar genetic profiles. Both were inserted in the local database and

uploaded to the National DNA Database, being detected coincidences with the genetic profiles of the traces of the crimes attributed to Célio Roberto Rodrigues.

So far, the Brazilian National DNA Database already has 10 hits among genetic profiles of sexual crimes attributed to Célio Roberto Rodrigues. He is currently being investigated for the sexual abuse of more than 50 victims in the states of Amazonas, Rondônia, Mato Grosso and Goiás. 23 of them occurred in the city of Manaus (Amazonas), where he is accused of rape of children, adolescents and adult women

This is the first case in Brazil in which the author of serial sexual crimes was identified through DNA examination, with the assistance of the National DNA Database. The large distance between crime sites and the lack of evidence linking the abuser to the crimes made it difficult to resolve them, which would probably be unsolvable if it were not for the existence of DNA Databases. As a serial rapist, we believe that it is still possible to elucidate other sexual crimes of this same perpetrator as sex crime backlog samples are being processed.

Links to Media Coverage:

<http://g1.globo.com/ro/rondonia/noticia/2015/09/preso-por-estupro-em-ro-e-suspeito-de-violentar-cerca-de-40-mulheres.html>

https://www.apcf.org.br/horus/arquivos/revistas/revista_apcf_37_web.pdf<http://www.gazetadigital.com.br/editorias/cidades/banco-de-dna-identifica-suspeito-de-crimes-sexuais-em-serie/471940>

Addendum – Additional Information

1. Additional Narrative from Aline Costa Minervino
 - a. In June 2004, Célio Roberto Rodrigues, robbery a beauty salon in Rondônia. He was arrested but he escaped from the prison in Rondônia.
 - b. A few years later, he started a series of crimes in Amazona
 - c. - In November 2010, he raped a 16-year-old victim.
 - d. - In January 2012, he and another criminal raped a woman. Twelve days later, he raped another woman.
 - e. - In March 2012, he raped two children (13 and 14 years-old) and, four days later, stole a car.
 - f. - In April 2012, he raped a 12-year-old child.
 - g. - In June 2012, he stole a car and raped an beauty salon employee.

- h. - In July 2012, he robbery a dental office and raped the secretary.
 - i. - In August 2012, he rapped two girls (11 and 14 years-old). Fifteen days later, he robbery a house, raped two women and murdered the owner.
 - j. Still in August 2012, he was arrested, but he escaped from Amazonas' prision four months later.
 - k. In January 2013, he raped more two women.
 - l. In February 2013, he stole a drugstore.
 - m. We were a time without information of crimes committed by the individual, but, at the end of 2014, a rape commited by Célio arises in Mato Grosso. In 2015, there were three more rapes in Mato Grosso.
 - n. In May 2015, he raped a woman in Goiás. Twenty five days later he raped another one.
 - o. In September 2015, he robbery a dental office and raped the secretary in Rondônia. He was arrested and the Mato Grosso's police chief went to Rondônia and collected a biological sample of the criminal for inclusion in DNA databases. From there, most of the traces of the crime sites reported above could be related.
2. Additional Files – See additional case files.

8. *The Golden State Killer*

Country/State: Ventura and Sacramento County, California

Executive Summary: Joseph DeAngelo had committed a spree of rapes (more than 50) and murders (12). For over 30 years, investigators struggled to develop a suspect. In 2001, investigators using DNA evidence linked the crime to others committed in the Bay Area and to murders throughout Southern California, thereby linking DeAngelo's crimes and further revealing his modus operandi, victim profiles, geographical reach, etc. Then, California police recently found an unusually well-preserved sample from one of the crime scenes, but could not find a match in the traditional database. But a near-match was eventually found on a genealogy website, called GEDmatch. GEDmatch led to one of DeAngelo's relatives. Because the site provides family trees, detectives were able to look for relatives who might not have uploaded genetic data to the site themselves.

Scientific Importance: This case used the breakthrough new method of using genetic genealogy via GEDmatch and other ancestry databases to find a criminal suspect.

Investigative Importance: The detectives in the Golden State Killer case uploaded the suspect's DNA sample. But they would have had to check a box online certifying that the DNA was their own or belonged to someone for whom they were legal guardians, or that they had "obtained authorization" to upload the sample.

Other: Residents of the neighborhoods stalked by the killer said he changed the way they lived their lives. A carefree California lifestyle of open doors and children riding their bicycles to school was forever changed with the knowledge that a rapist now lurked. The case had a profound impact not just on fear and public safety in California, but also on the way that rapes were investigated and how rape victims were treated.

Submitted Story:

On April 23, 2018, criminalists at the Sacramento County Laboratory of Forensic Science compared an abandoned DNA sample obtained from Joseph James DeAngelo to unknown samples collected from multiple crime scenes linked

to the notorious Golden State Killer. The results indicated that it was at least 1.10 x 10¹⁰ more likely that Mr. DeAngelo was the contributor to crime scene unknown samples than a random unrelated individual. After forty-four years of exhaustive investigation, law enforcement agencies across the state of California had finally found the needle in the haystack.

The scope of Joseph DeAngelo's alleged crime spree is staggering, encompassing 13 murders, more than 50 rapes and over 100 burglaries between 1974-1986. His monikers reflect the sweeping geographical impact of his crimes – the Visalia Ransacker, the East Area Rapist, the Original Night Stalker and the Golden State Killer. In total, 11 counties felt the brunt of his crimes: Sacramento, Yolo, Stanislaus, San Joaquin, Alameda, Contra Costa, Santa Clara, Tulare, Santa Barbara, Ventura and Orange County. Joseph DeAngelo is currently charged with 13 murders and 13 counts of kidnapping for robbery.

Victims alleged to have been murdered by Mr. DeAngelo include Professor Claude Snelling in Visalia on September 11, 1975; Brian and Kattie Maggiore killed while walking their dog in Rancho Cordova on February 2, 1978; Dr. Robert Offerman and Debra Manning in Goleta on December 30, 1979; Lyman and Charlene Smith in Ventura between March 13-16, 1980; Patrice and Keith Harrington in Dana Point on August 21, 1980; Manuela Witthuhn in Irvine on February 6, 1981; Cheri Domingo and Greg Sanchez in Goleta on July 27, 1981; and Janelle Cruz in Irvine on May 5, 1986. Modus Operandi and DNA evidence from many of the crime scenes established a case-to-case link over the years.

In early 2018, law enforcement turned to Investigative Genetic Genealogy to finally identify the individual responsible for these horrific crimes. Using genealogy websites to help identify the suspect through biological relatives, Joseph DeAngelo was developed as a suspect and ultimately arrested for these offenses. To our knowledge, this was the first successful law enforcement utilization of the genetic genealogy investigative technique in the United States. Since the arrest of DeAngelo, the technique has been used to solve approximately 40 additional cold case murders and rapes.

The unanswered questions from a cold case murder linger on for years, haunting the victim's family and the investigators who work tirelessly to solve the crimes. Whatever the killer touched, wherever he walked, whatever he left behind will one day bear mute witness against him. Through investigative genetic genealogy justice will finally have its day in a court of law.

[Links to Media Coverage:](#)

<https://www.nytimes.com/2018/04/25/us/golden-state-killer-serial.html>;
<https://www.npr.org/sections/thetwo-way/2018/04/26/606060349/after-arrest-of-suspected-golden-state-killer-details-of-his-life-emerge>
<https://www.nytimes.com/2018/04/27/health/dna-privacy-golden-state-killer-genealogy.html?module=inline>

Addendum – Additional Information

1. Arrest Warrant Redacted from Anne Marie Schubert – see attached case file.
2. Case is still pending therefore information is limited.

9. *Chandler, Mr. X*

Country/State: Ohio

Year of Crime and Hit: 2002; and 2015 and 2017

Executive Summary: A young boy in Texas dies in a car accident. A man steals his identity and assumes it as his own. In 2002 this man committed suicide and authorities only then realize the man's fake identity. They seek to find out why. After a long chase, investigators finally find a DNA sample and subsequently extract a profile. With the help of IdentiFinders in 2016, GEDmatch to find the man's son, whose DNA is used to find a familial match. His true identity, through his son's identity, is confirmed.

Scientific Importance: GEDmatch and IdentiFinders are used to determine the identity.

Investigative Importance: U.S. Marshals in Ohio turn to IdentiFinders in 2016 for help identifying the true identity of the man. IdentiFinders turns to GEDmatch.

Others: Theories circulating on the internet as to this man's true identity range from the Zodiac Killer to a former Nazi war criminal on the run.

Story:

The use of genetic genealogy to solve the Joseph Newton Chandler III identity theft case represents a breakthrough in forensic identification – a cold case solved with autosomal SNP testing and GEDmatch, six weeks prior to the arrest of the Golden State Killer. It not only demonstrated the feasibility of genetic genealogy for forensic identification, the case pushed the limits of the technology, producing a successful identification based on minimal, highly degraded DNA.

When "Chandler" (Mr. X) committed suicide in July 2002 in Eastlake, OH, authorities discovered his was an assumed name; the real Chandler was an eight-year-old boy killed in a 1945 car accident in Texas. In 1978, Mr. X had obtained a social security number in Chandler's name while living in Rapid City, SD. Thereafter X moved to Cleveland, where he resided until his death.

In 2015, with no CODIS hit, the investigation into X's possible criminal activities stalled pending his identification. The US Marshal for Northern Ohio consulted a forensic genealogist hoping that Y-STR analysis would generate leads to X's identity. A match between Mr. X's Y-profile and a Y-profile in a genetic genealogy database indicated that his surname might be Nicholas.

In mid-2017, the Marshal authorized autosomal SNP testing by a genetic genealogy research group. To circumvent direct-to-consumer DNA companies' prohibition on forensic casework, an independent lab was used to perform 30x whole genome sequencing (WGS) on DNA extracted from X's cancer biopsy tissue from the 1990s. Bioinformatics then produced autosomal SNP data that was uploaded to GEDmatch, but only third cousin and more distant matches were found.

Prolonged exposure to paraffin had destroyed most of X's genome. Because GEDmatch is not constructed to operate on highly degraded DNA, the team uploaded electronically degraded versions of their own GEDmatch data to assess the possible appearance of "ghost" matches producing false leads. After six months, the team had created a family tree with roughly 16,000 people, based on genealogies of two dozen matches. The tree included several Nichols but no Nicholas'. A second WGS exhausted the remaining DNA, with similar results. Combining the two 30x datasets to produce a 60x dataset introduced a new match connected to the wife of a Mr. Nichols already in the composite tree. The identification of their son Robert Nichols as "Chandler" was supported by Gedmatch relationship estimates and by a clue on a 1985 rental agreement. Nichols' childhood home in the 1920s was 1823 Center St., New Albany IN; on the rental application "Chandler" referenced a fake sister living at 1823 Center St., Columbus, OH.

This landmark case involved efforts of 15 volunteer genetic genealogists devoting >3000 hours over six months. Its success depended on finding genetic genealogy Y-STR and autosomal SNP matches to distant relatives; it proved that GEDmatch can be used with highly degraded DNA where only a fraction of the genome has survived. The identification of Robert Nichols as Chandler has allowed the investigation of his possible criminal activities to move forward; otherwise the case would have remained unsolved forever.

Links to Media Coverage:

<https://www.wkyc.com/video/news/mystery-of-joseph-newton-chandler-iiis-true-identity-to-be-revealed/95-8166292>;

<https://www.wkyc.com/article/news/crime/authorities-reveal-true-identity-of-joseph-newton-chandler/95-565963729>;
<https://www.youtube.com/watch?v=bomuPyO8jos>; <https://melmagazine.com/en-us/story/the-man-who-woke-up-as-an-8-year-old-boy>;
<https://www.forensicmag.com/news/2018/06/dna-doe-project-names-another-giving-major-piece-infamous-ohio-mystery>;
<https://www.youtube.com/watch?v=1FdVPZQrdn4>
<https://www.gimletmedia.com/shows/science-vs/brhod5/the-mystery-of-the-man-who-died-twice>
<https://www.insidehook.com/article/crime/mystery-joseph-newton-chandler-iii>
<https://www.wcpo.com/news/local-news/hamilton-county/cincinnati/son-of-man-who-stole-dead-boy-s-identity-my-brothers-and-i-had-always-wished-he-had-found-peace>
https://www.cleveland.com/metro/2018/06/authorities_solve_cold_case_of.html
https://www.washingtonpost.com/news/morning-mix/wp/2018/06/22/he-stole-the-identity-of-a-dead-8-year-old-police-now-want-to-know-what-he-was-hiding-from/?utm_term=.e065b12d5e0a
<http://dnadoeproject.org/case/joseph-newton-chandler/>

Addendum – Additional Information

- a. Additional Narrative from Peter Elliott
 - i. The identification of Joseph Newton Chandler III using Gedmatch represents a breakthrough in forensic identification. This use of genetic genealogy autosomal SNP testing for the successful resolution of a case developed a roadmap for a new form of forensic identification that has since proven valuable many times over. The team’s success involved taking a number of educated risks and meeting many unexpected challenges. Here is a summary of the major points in the investigation.
 - ii. There were no previously-known examples using whole genome sequencing to produce a Gedmatch-compatible data file for a forensic DNA sample. The team took six months to find a sequencing lab that would agree to process such a high-risk forensic sample; they even considered shipping the sample to a lab in Chile that was developing single-cell extraction methods. The minimum amount of DNA required was quoted as 20 ng, assuming a fresh sample; Chandler (Mr. X)’s DNA sample was only 10 ng, and as revealed later, was highly degraded - only 10% of his genome had survived fourteen years of exposure to paraffin.

- iii. The DNA had been extracted from a tissue biopsy of a malignant cancer tumor; there was a risk that the DNA from the tumor would exhibit damage caused by the malignancy that would adversely affect the genealogical data ultimately obtained from the tissue.
- iv. After sequencing was complete, bioinformatics software was applied to the results to generate multiple data files for upload to Gedmatch. Because of the large gaps and uneven degradation in the genome revealed by sequencing, different thresholds were applied during the creation of the files to trade-off confidence level with the amount of data produced; higher confidence resulted in a smaller data file. Even so, there was no a priori knowledge of which confidence level - if any - would generate useful and self-consistent Gedmatch matches.
- v. Even after successful Gedmatch uploads, it was not known whether the Gedmatch matching algorithms would function correctly when applied to data from a compromised sample where only 10% of the genome had survived. It was not known which, if any, of X's matches were authentic, and which, if any, were artifacts of matching algorithms that were designed for use only with fresh DNA. To identify "ghost" matches, the team artificially degraded their own data files by deleting the markers missing from the bioinformatics-generated versions of X's data files. They compared their original "fresh" data with their artificially degraded results on Gedmatch to assess the probability of matches that would not appear if X's genome were intact and healthy.
- vi. The team had only used half of the library that had been prepared for sequencing. After six months, with ~16,000 people in their composite family tree, and with no resolution, they decided to risk the remaining library to perform another round of 30x sequencing, with the knowledge that this would exhaust the DNA on the case.

- vii. When the data generated by the second round of 30x sequencing produced virtually identical Gedmatch results, the team had the two sets of sequencing data combined to create a 60x dataset. As hoped, some of the data from dataset No. 1 filled in some of the gaps in dataset No. 2, producing a new match who appeared authentic.
- viii. An exact match to Mr. X's Y-profile with online Y-STR genetic genealogy databases had revealed a possible paternal-line connection with a Colonial Virginia family named Nicholas, but genealogical research could not find a link for him to this family. However, within a few hours of the new upload to Gedmatch, the team discovered the new match was related to a Mrs. Nichols; Mr. Nichols had already been placed in the tree, connected to a previous match. By linking the new match's tree to the existing one, the team was quickly able to identify the Nichols' son Robert Ivan Nichols as Mr. X through a clue on a 1985 rental agreement. Nichols' childhood home in the 1920s was 1823 Center St., New Albany IN; on the rental application "Chandler" referenced a fake sister living at 1823 Center St., Columbus, OH.
- ix. Although the Nichols/Nicholas Y-DNA match had been exact, Nichols' connection to the Nicholas family was later discovered to have occurred at the latest in the mid to late 1600s, prior to the Nicholas family's arrival in America.
- x. Within a few hours of identifying Robert Ivan Nichols as Joseph New Chandler, the team had developed a large portfolio of information that even included Nichols' high school yearbook picture and military records. The team located his two surviving sons, one of whom agreed to provide a CODIS sample for legal identification. Subsequently letters written by Nichols' mother and wife were collected documenting their unsuccessful efforts to locate him for decades.
- xi. Nichols' motives for identity theft are still undetermined, as are his activities between his last contact with his family in 1965 and his appearance as Joseph Newton Chandler in 1978.

However, after all other leads had been exhausted, without the use of Gedmatch in conjunction with online Y-DNA genetic genealogy databases, Robert Ivan Nicholas would never have been identified.

2. Additional Links

- a. <https://www.gimletmedia.com/shows/science-vs/brhod5/the-mystery-of-the-man-who-died-twice>
- b. <https://www.insidehook.com/article/crime/mystery-joseph-newton-chandler-iii>
- c. <https://www.wcpo.com/news/local-news/hamilton-county/cincinnati/son-of-man-who-stole-dead-boy-s-identity-my-brothers-and-i-had-always-wished-he-had-found-peace->
- d. https://www.cleveland.com/metro/2018/06/authorities_solve_cold_case_of.html
- e. https://www.washingtonpost.com/news/morning-mix/wp/2018/06/22/he-stole-the-identity-of-a-dead-8-year-old-police-now-want-to-know-what-he-was-hiding-from/?utm_term=.e065b12d5e0a
- f. <http://dnadoeproject.org/case/joseph-newton-chandler/>
- g. <https://www.wkyc.com/article/news/crime/how-did-authorities-solve-the-true-identity-of-joseph-newton-chandler-iii/95-566345556>

1. PDFs and Pictures – see attached case file.

10. *Attacked while jogging*

Country/State: Hungary

Links to Media Coverage: See below.

Year of Crime and Hit: 2013 and 2018

Executive Summary: After a woman is murdered while on her evening job, police resort to DNA sampling over 1,770 individuals to look for a match to suspect's DNA found in the victim. A relative is found and a likely suspect developed. Then in 2018, police received a cold hit for the murder after a homeless man was entered into the database.

Scientific Importance: Familial matching and cold hit.

Investigative Importance: Over 1,500 people had their DNA collected under this investigation.

Submitted Story:

A 36-year old woman (named Krisztina KGy, a wife and mother of a child) was found naked, possibly raped and strangled in a forest area of the 23rd district called Soroksár of Budapest, Hungary on 25 September 2013. The victim (V) was attacked during her regular evening jogging at the location of the crime. The case became soon and remained for long breaking news shocking the whole society of Hungary

As a result of the CSI, autopsy and the subsequent DNA analysis, two male DNA profiles could be determined, one of them (P1) from faint bloodstains recovered on V's body. The other male DNA profile (P2) was genotyped from touch samples and larger biological stains found on and near the body and on the offence tools (ropes). Based on the genetic evidence the police set up an investigation theory for two perpetrators.

The DNA profiles did not give direct matches either in the Hungarian or foreign DNA databases. During the subsequent years in different areas of Hungary DNA mass screening of altogether 1,770 individuals was performed without producing any investigative leads. In August 2014, in the framework of a scientific research project, familial DNA database searching was initiated using the two unknown

DNA profiles. The search was repeated among the newly added reference profiles on a monthly basis. In September 2015 the familial database search yielded a promising candidate as being the possible sister (S) of P1. The police found and sampled the father (F) and two nephews of S. However, the mother (M) and the only known full brother (B) of S were already dead. By supposed coincidence, B had passed away in a car accident only a week earlier than the murder date. The additional police investigation brought to light that autopsy of B had been carried out just before that of the victim on the same dissection table on the same day by the same personnel. Thus during the autopsies a contamination from B to the victim had likely occurred and therefore P1 may be B. Tissue block samples from M were found and her DNA profile was managed to be genotyped. The parenthood of M and F toward S and P1 was proved by autosomal, Y-chromosomal STR and mitochondrial control region DNA analyses.

The admission of the two-perpetrator misconception of the police was a breaking news again in Hungary in 2017. In September 2018 a database cold hit (direct match) gave rise to the final breakthrough in the case when P2 matched with the DNA profile of a convicted offender, named Szilveszter R in the Hungarian DNA database. Szilveszter R immediately became the suspect of the case. He is a homeless male with criminal records of burglaries and he's had local knowledge of the crime scene due to his childhood spent in Soroksár. As of March 2019 the case is being closed by the police before the prosecution process.

Links to Media Coverage:

https://index.hu/belfold/2013/09/30/terrorrol_szo_se_volt_soroksaron/

<https://zoom.hu/hir/2017/07/24/hanyagsag-miatt-kerestek-ket-tettest-a-negy-eve-meggyilkolt-sorosari-futo-no-ugyeben/>

<http://www.origo.hu/itthon/20180908-ezt-mondtak-el-a-rendorok-a-soroksari-no-gyilkosarol.html>

Addendum – Additional Information

1. Additional Links

a. <https://444.hu/tag/soroksari-gyilkossag>

b. Please be sure to Google Chrome or Google website translate

11. A trafficked woman is returned home

Country/State: China

Year of Crime and Hit: 2019 and 2019

Executive Summary: DNA is used to verify the identity of a woman who went missing for 26 years and lost her contact with her family and identity. Police reunite her with her family and find her name.

Scientific Importance: Chinese missing persons DNA effort.

Investigative Importance:

Submitted Story:

In February 25th of 2019, a homeless woman who called herself Wu Rangxia, reported to the police that she had been abducted by a man and a woman in Guangdong Province in 1993. Then she had been trafficked to a man called Zhang Xiyuan in Wuwei City, Gansu Province. After eight years, the poor woman escaped and roamed to Ningxia, but she has forgotten her identification and been insanity. That's why she sought help from the police.

Wu has been trafficked for 26 years, and the distance among these places is more than 2,000 kilometers. And most importantly, the poor woman has been hurt deeply by these things that she suffered, the information she provided is limited. After these years, the related intelligences also have changed, so the case is really a big challenge for the investigation.

Changde PSB received the request from Ningxia police and Wu, depending on the local population profiles and the reports of missing persons, they investigated and interview the suspected parents who have immigrated to another city. After the approval of the suspected parents, the technical collected and analyzed their blood samples, and they found there was genetic variation in FGA locus. Then they loaded the samples to the DNA database, and matched Wu's DNA profile, finally confirmed Wu is the biological daughter of the suspected parents. After 26 years, Wu has returned to her own parents and the sweet home.

12. *From Saanich to Seattle – two Canadians murdered en route*

Country/State: Snohomish County, Washington

Year of Crime and Hit: 1987 and 2018

Executive Summary: A rape and murder of a woman and a murder a man led investigators to one unknown suspect. DNA recovered from the rape kit produces a DNA profile, which is submitted to CODIS and the Canadian DNA database with no hits. The case went cold and remained unsolved for 30 years. After revisiting a 1977 cold case, Detective Jim Scharf decided to enlist the help of Parabon NanoLabs in this 1987 case. Parabon developed a DNA profile, a DNA phenotype, and performed genealogical research. It then offered to submit this DNA profile to the GEDmatch, the public, open-source genealogy DNA database. With the help of CeCe Moore, this led to a familial match to the suspect's parents. Using genealogy, investigators found the suspect's name, and then eventually his location. After tailing the suspect, investigators recovered a used coffee cup from the suspect's car. DNA recovered from the cup matched the suspect's original 1987 DNA.

Scientific Importance: According to Jim Scharf (submitter), this case is the first case in which Parabon NanoLabs developed a DNA profile from a crime scene and submitted to the public open-source genealogy DNA database called GEDmatch, even before it was used in the Golden State Killer case.

This case used DNA Phenotyping and GEDmatch.

Investigative Importance: This is time the Parabon + GEDmatch is performed. Investigators also tailed the suspect until a used coffee cup fell off his truck.

Submitted Story:

On November 18, 1987 Jay Cook and Tanya Van Cuylenborg left Saanich, British Columbia on Vancouver Island, Canada to run an errand for Jay's father. They were to go to Seattle, Washington in Cook's van to pick up furnace parts. They did not make it to their destination. On November 24th 1987, the partially clothed body of Tanya Van Cuylenborg was found in a ditch in Skagit County. Her autopsy revealed that she had been shot with a .380 gun to the back

of her head. She had been restrained with zip-tie fasteners and was sexually assaulted. DNA evidence of the suspect was recovered from her body. On November 25th 1987, Tanya's wallet, ID, keys for the van, a pair of surgical gloves, and a partial box of .380 ammo were located under the back porch of "Essie's" Tavern in Bellingham, WA. Jay Cook's van was located about 1 block east of Essie's. Tanya's pants were recovered from the van with DNA evidence on them from the suspect. On November 26th 1987, Jay Cook's body was found by the "High Bridge" south of Monroe, Washington in Snohomish County. He had been strangled with a ligature and zip ties were found at the scene. DNA recovered in the case was entered into CODIS and the equivalent database in Canada, but no matches were ever made. The case went unsolved for over 30 years.

After working on a genealogy DNA case with Barbara Rae-Venter to try to identify a Jane Doe homicide victim from a 1977 case, Detective Jim Scharf talked to Parabon Nanolabs on April 24th 2018 about doing genetic genealogy with the suspect DNA file that Parabon previously used in this case to generate a Phenotype report. On April 26th 2018, Steve Armentrout, who is the founder and CEO of Parabon Nanolabs, contacted Detective Scharf and offered to upload the DNA file to a public database called GEDmatch. This is the first time Parabon used this genetic genealogy technique to attempt to identify a suspect. The file report came back on 04-27-18 naming possible relatives to the suspect sample. Parabon enlisted the help of CeCe Moore to build a family tree around the matching relatives. One relative was linked to the suspect's mother and one was linked to the suspect's father. Their only son is William Earl Talbott II. Talbott grew up seven miles away from where Jay Cook's body was found. Detectives followed William Talbott and recovered a paper coffee cup that fell from his work truck when he opened his door while stopped at a traffic light. DNA from the cup matched the STR-DNA profile from the rape of Tanya and her pants in Jay's van. Talbott was arrested on 05-17-18 and his palm prints were taken by Detective Scharf. The WSP Crime Lab matched Talbott's palm print to one latent print taken from the back door of the victim's van when it was recovered. William Talbott is scheduled to go to trial on April 1st, 2019.

Links to Media Coverage:

<https://www.heraldnet.com/news/suspect-arrested-in-1987-deaths-of-young-couple-from-bc/>

https://en.wikipedia.org/wiki/Murder_of_Jay_Cook_and_Tanya_Van_Cuylenborg

<https://www.cbsnews.com/news/william-earl-talbott-arrested-in-1987-killing-of-tanya-van-cuylenborg-jay-cook-in-washington/>

13. *Upper Austria*

Country/State: Austria

Year of Crime and Hit: 1989 and 2014?

Executive Summary: In 1989, 81-year-old retiree Angela Fritsch was raped and strangled in her apartment. After her case was declared a cold case two separate times, investigators revisit the case in 2014. Upon review, they find new sources of DNA (semen). Two profiles are found and sent to the Austrian database. The second profile came back as a match to a man with an extensive criminal record who had already been seen serving jail time. On the day he came out of jail, police stopped him and presented the evidence against him for the 1989 rape and murder. He confessed within 6 hours.

Scientific Importance: This case involved mixed DNA profiles. Advanced in DNA technology and forensic evidence allowed the recovery of additional DNA evidence from the victim's garments previously thought to be lost.

Investigative Importance: This was a direct hit to a convicted offender, who confessed within 6 hours. This solved an almost 30-year-old cold case.

Submitted Story:

On June 15th, 1989, the 80-year-old Angela F. was found murdered in her apartment in Steyr, Upper Austria. She was lying in supine position in her living room with bare lower body and pieces of clothes wrapped around her head. Around her neck there was a strangulation tool knotted from a belt. The victim had been punched in the face, followed by a fall on the back of the head as well as an attack against the neck. Semen was detected in the vaginal swabs.

In summary, death was caused by strangulation with multiple blunt force impact to the face and falling on the back of the head. The victim was raped, no defense violations were found. After the crime, the perpetrator ransacked the apartment for cash and stole 1,000 shillings from the victim's purse. More than 40 potential suspects were intensively interrogated. With very strong suspicion against two persons from the close environment of the victim, however, no evidence could be provided.

In 1999, the case was reinvestigated as a "cold case". Unfortunately, the sperm traces sampled during the autopsy were no longer findable. The further investigation of the presence of sperm on the garments was negative. On several contact traces only the victim's DNA could be found.

In December 2013, the case was again reinvestigated as a "cold case". Upon a close inspection of the crime scene photos, potential further trace carriers could be identified in a joint work between the DNA laboratory and the investigating officers. For example, it could be seen that the bra has been pushed up by the perpetrator. After the public prosecutor's office was initially opposed to another investigation due to a lack of prospects for success, it could be persuaded in several discussions that currently much better investigation methods are available than during the first investigations. Thus, another examination was arranged, in which in particular the bra and the strangulation tool should be examined.

DNA was sampled from a total of 38 different areas, and a mixture of victim's DNA and male DNA was detected in 5 areas. It was the DNA of two different men (person 1, person 2). DNA of person 1 was detected in four areas, DNA of person 2 in only one area (bra, bottom of the cups). After sending the mixed DNA profiles to the Austrian DNA database on February 6th 2014, the mixed profile with person 1 did not give a match. However, the mixed profile with person 2 matched the DNA of a convicted offender.

The person in question was 20 years old at the time of the crime, has 22 criminal records, has just served a 4-year prison sentence for rape, was a so-called "temporary releaser" and was due to be released in February 2014. He was interrogated on February 10th 2014 when coming back from temporary release and confessed three hours later. He had never been considered as a potential suspect, there was no relation to the victim. According to the perpetrator, it was a chance meeting. He watched the victim unlock the front door, asked if he could help her, escorted her to the apartment, raped her, and murdered her.

Links to Media Coverage:

<https://www.heute.at/oesterreich/oberoesterreich/story/Sexualmord-in-Steyr-nach-25-Jahren-geklaert-10178706>

<https://derstandard.at/2000008378284/Oberoesterreicher-25-Jahre-nach-Mord-in-Steyr-verurteilt>

<https://www.nachrichten.at/oberoesterreich/Sex-Mord-nach-25-Jahren-geklaert-U-Haft-verhaengt;art4,1319764>

Addendum – Additional Links

1. Additional Narrative from Franz Neuhaber

- a. “The offender was 20 years old when committing the crime. He decided spontaneously to commit the crime, the victim was selected purely by chance. In 2010 he was sentenced to prison for abusing the authority relationship and rape of his stepdaughter in about 100 (!) cases. He would have been released from prison on 2014-02-28, but on 2014-02-06 we got the DNA-match, so he was sent back to custody. At this time he had 22 previous convictions. On 2015-01-28 he was sentenced to prison for 17 years 4 months and in addition was classified as mentally abnormal lawbreaker with an extremely high chance of committing further crimes when set free again.
- b. He saw the old woman - who was completely unknown - after a local visit on the street and offered her his help in unlocking the front door and asked her to use the toilet in her apartment. That was her death sentence. After the murder he also searched the flat for about half an hour for valuables and stole money. He also made a confession to the murder after the DNA hit and stated to have been drugged (Speed) at the time of the crime.
- c. He was not a blank slate even before this rape and murder. Overall, he had 21 convictions, starting from the age of 15, for property offenses but also violent offenses against, among others, female partners. He was repeatedly relapsed immediately after release and again criminal. In the psychological assessments, he was rated as above average risk of relapsing back for sexual offenses and as highly relapsing dangerous (most likely relapse probability) for violent crime. He refuses psychological treatment attempts in detention. If he were ever released, he would soon be back in those directions.
- d. Without the DNA match, he would never have been convicted for this murder.
- e. It should be mentioned, that initially the public prosecutor's office was initially opposed to another investigation due to a lack of prospects for success. Only after several discussions they were convinced that there is a chance. And it should also be mentioned that a large number of suspects have been checked, even international. Among them, in particular relevant penalized offenders

(sex offenders or convicted for a homicidal offense, etc.). The main suspicion was directed for years against twin brothers from the wider family environment of the victim (grandnephew), as well as their mother, who were interrogated again and again. This suspicion lasted practically until the final clarification of the case.”

f. Additional Links

- i. <https://www.nachrichten.at/oberoesterreich/80-Jaehrige-vergewaltigt-17-Jahre-fuer-den-Angeklagten;art4,1542409>
- ii. <https://www.krone.at/428096>
- iii. <https://ooe.orf.at/news/stories/2630959/>
- iv. <https://www.nachrichten.at/oberoesterreich/Mord-an-Steyrer-Pensionistin-nach-25-Jahren-geklaert;art4,1305976>
- v. <https://derstandard.at/2000008378284/Oberoesterreicher-25-Jahre-nach-Mord-in-Steyr-verurteilt>
- vi. <https://www.nachrichten.at/oberoesterreich/Sex-Mord-nach-25-Jahren-geklaert-U-Haft-verhaengt;art4,1319764>
- vii. <https://www.heute.at/oesterreich/oberoesterreich/story/Sexualmord-in-Steyr-nach-25-Jahren-geklaert-10178706>
- viii. https://www.meinbezirk.at/steyr-steyr-land/c-lokales/sexualmord-in-steyr-nach-25-jahren-geklaert_a839660
- ix. <https://www.oe24.at/oesterreich/chronik/oberoesterreich/Sex-Mord-Taeter-nach-25-Jahren-ueberfuehrt/132230186>
- x. <https://www.nachrichten.at/oberoesterreich/Sexualmord-steht-nach-25-Jahren-vor-Klaerung;art4,1305969>
- xi. <https://kurier.at/chronik/oberoesterreich/urteil-sexualmord-an-witwe-nach-25-jahren-gesuehnt/97.995.789>
- xii. <https://ooe.orf.at/news/stories/2793506/>

2. PowerPoint Presentation – see attached case file.

14. Sikhangele Mki – Sentenced for 15 life terms

Country/State: Cape Town, South Africa

Year of Crime and Hit: 2011-15 and 2015

Executive Summary: In 2014, Sikhangele Mki was sentenced to 11 months of prison for assault with intent to cause grievous bodily harm. Under South Africa's recently passed DNA Act, police collected Mki's DNA sample. His DNA profile was in turn submitted to the national DNA database matching him to a large series of rapes committed between 2011 and 2015 affecting dozens of girls and women. Overall, that DNA profile match linked him to 84 charges, which included 30 counts of rape, 27 of kidnapping, 12 of robbery with aggravating circumstances, and four of assault with intent to cause grievous bodily harm. Mki admitted to raping some his victims more than once. Nine were under the age of 16, with his youngest victim being just 11 years old.

Scientific Importance: This rape spree was solved via aggressive DNA database legislation requiring convicted to offenders to submit a sample.

Investigative Importance: Judge: "[This case] falls into the category of the most serious cases this court has ever dealt with. The crimes were heinous in the extreme." This is the classic DNA database hit case, where a profile entered for a qualifying crimes links the arrestee/offender to multiple other crimes.

Other: Mki had a particular affinity towards young girls. He was legally branded as a pedophile and added to the national sexual offender registry by the trial judge.

Submitted Story:

The accused conducted a reign of terror over a four-year period. His Modus Operandi, described as "the signature of a person who is cruel, vicious and lacking any sense of empathy", was as follows:

During the evenings, or early mornings of his attacks, he would follow his victims, grab hold of them, threaten them at knifepoint by holding a knife to their necks and would demand money and cellular phones. He would then take them to an isolated place and rape them. Where a victim would resist or try to call for

help, he either punched them or hit them with the back of the knife handle or in some cases he stabbed them to stop them from struggling or crying for help.

Some of his victims were raped more than once. Nine of his 30 victims were under the age of 16, and the youngest victim was just 11. Some victims just happened to be walking in the area where Mki was lurking in the shadows, one was sent to the shop by her mother, one was waiting outside her house for her husband, one was walking home from church, one was returning from choir practice, another from netball practice. One victim was even dragged to a space behind a police station.

The breakthrough in the investigation happened when Mki was arrested and convicted for an unrelated charge of assault with intent to cause grievous bodily harm in 2014 for which he subsequently served 11 months in prison. Whilst serving time in prison and in terms of the recently passed DNA Act in South Africa, police were mandated to collect DNA samples from all convicted offenders, retrospectively and run the resultant forensic DNA profile through their National Forensic DNA database for a comparative search against all other indices, including the crime scene index which in this case contained the forensic DNA profiles of an unknown male in 30 separate rape cases: this is what fortuitously linked Mki to the 30 unsolved rapes, albeit the DNA sample was obtained from Mki as result of an unrelated conviction for common assault.

The case was brought before the High Court of the Western Cape where Deputy Judge President Patricia Goliath compared the modus operandi of Mki to a monster lurking in the shadows, attacking, robbing and raping girls, exploiting the vulnerability of his unsuspecting victims. She went on to say that Mki derived pleasure in the degradation and pain inflicted his victims and his crimes “fell into the category of the most serious cases this court has ever dealt with” and that the crimes were “heinous in the extreme.”

All the victims were emotionally, physically and psychologically severely traumatized by the attacks and they verbalized their feelings eloquently in court: One stopped playing netball, because the incident happened after netball practice; one stopped going to church because the incident happened on her way home from church; another was attacked when she came from a group study and subsequently hated her books following the incident. The victim expressed feelings of being unable to trust and sustain meaningful relationships with men, fear of walking alone in public spaces. One of the victims attempted suicide. They experienced emotions ranging from shock, fear, grief, shame, embarrassment,

anxiety, depression, anger and feelings of alienation and loss of control over their lives.

Victim impact assessments submitted to the Court described the devastating physical and psychological effects the attacks had on them: “They knew me as this sweet determined and goal orientated girl, but that is not anymore”; “I am damaged”; “The crime broke my spirit”; “My life changed from happiness to bitterness”; “It is a pain that can never be taken away - a pain that has taken my freedom”.

Due to the overwhelming DNA evidence against the accused, Mki pleaded guilty to 84 charges which included 30 counts of rape, 27 of kidnapping, 12 of robbery with aggravating circumstances, and four of assault with intent to cause grievous bodily harm.

Captain Myburg, a police psychologist attached to the Investigative Psychology Unit of the South African Police Services with extensive experience in the investigation, research and analysis of the phenomenon of serial murders and serial rapists, compiled a report for the court for sentencing purposes. The report pointed to Mki’s predilection for young girls, stating he should also be regarded as a pedophile. She stated that pedophiles and rapists have the highest rates of re-offending even after interventions aimed at addressing the issue and indicated that research has shown that serial rapists do not stop raping women by themselves and the only way they will stop is by arrest.

DJP Goliath ultimately sentenced Mki to 15 life terms and an additional 120 years, to run concurrently.

Without the power of the NFDD and the DNA legislation which allowed DNA samples to be collected from the accused whilst he was serving time in prison as a convicted offender, it is unquestionable that Mki would have continued his reign of terror.

Who knows how many more vulnerable women and girls lives he would have violated and devastated in the future had he not been linked by the NFDD?

By linking Mki to his crimes through the NFDD, who knows how many vulnerable lives have been saved in the future....

Links to Media Coverage: <https://www.iol.co.za/capetimes/news/monster-serial-rapist-mki-gets-15-life-terms-extra-20-years-11218652>
<https://www.iol.co.za/capeargus/watch-celebrations-as-serial-rapist-handed-15-life-terms-11212309>

15. Benjamin Whitehead and recreating the DNA laboratory from 1988

Country/State: United Kingdom

Year of Crime and Hit: 1988 and 2016

Executive Summary: A woman was raped at knife point in her own home by a man in 1988. Despite DNA technology being in its infancy at this point in time, Nottinghamshire Police investigators managed to collect and archive a DNA sample. They even managed to develop a profile. But there was no national DNA database for comparisons. In 2013, police carried out a cold case review and recovered the archived DNA, which was re-examined using modern DNA profiling techniques. In 2016, police ran that profile against the UK national database, leading to a match, Benjamin Whitehead, a man with an extensive criminal history in the 1980s. Police tracked down the suspect who voluntarily provided his sample, leading to a match (one in 10,000) to the original 1988 DNA profile. Whitehead pled guilty.

Scientific Importance: Detective Inspector Justine Wilson: “This was an extremely complex DNA investigation which involved re-creating a laboratory as used in the 1980s – which the University of Leicester commissioned – *the same laboratory that DNA was discovered under Sir Alec Jeffreys.*”

Investigators recreated the same laboratory in which the original sample and profile was handled in order to ensure reproducibility of the results.

This case involves DNA extracted and profiled in 1988. Investigators used this same DNA sample to convict the suspect in 2018, almost 20 years later. Scientific advances in 2013 and 2014 allowed for this match to be possible.

Investigative Importance: Long time period crime and DNA sampling to match.

Other: Investigators reestablished contact with the victim who now lived abroad. They traveled to her new residence in a foreign country to take new blood samples and take new witness statements in preparation for the case.

Submitted Story:

HISTORIC DNA TECHNOLOGY MEETS NEW - A unique combination of the very latest cutting-edge forensic DNA techniques together with the resurrection of the very earliest DNA technology, dating back to the 1980s, has resulted in the conviction of a rapist for an offence committed 30 years ago.

In 1988 a young woman, whilst asleep at her home in Nottingham, UK, was awoken by a youth wearing a mask. The youth raped her at knifepoint and stole a number of items.

At that time, forensic samples from the victim were examined and subjected to RFLP Multi Locus Probe (MLP) profiling - the very first DNA technology pioneered by Professor Sir Alec Jeffreys at Leicester University. A weak MLP-DNA profile was obtained and several suspects were eliminated at the time, however, with no further investigative leads the case went cold.

In 2014 the case was forensically reviewed by a collaborative team comprising specialist cold case scientists from Eurofins Forensic Services (EFS) and police review officers from the East Midlands (EMOU).

Two microscope slides bearing biological material had been retained from the original forensic examination; Eurofins' scientists therefore had to plan and execute their examinations meticulously in order to maximize the forensic potential in this case. During the early review process, and using more up-to-date DNA technology, a partial SGM+ profile was obtained and, following a search of the UK's National DNA Database®, Benjamin Whitehead was identified as a potential suspect for the first time.

To progress this initial forensic lead, further scientific work was required and a bilateral approach was adopted: Eurofins' scientists firstly advised retaining the remains of the microscope slides pending more advanced DNA techniques which were in development at Eurofins. In the meantime, steps were made to recreate the very first DNA profiling technique ever used, in order to generate a new reference MLP-DNA profile from the suspect to compare with the original 1988 DNA results.

In conjunction with the police and Eurofins, scientists at Leicester University painstakingly rebuilt, tested and validated the original DNA process; including locating the original scientist from 30 years previously whose samples had been used as an internal control, to ensure reproducibility of the results.

By the time the University had completed their testing of the newly resurrected historic MLP process, Eurofins too, were ready to use their latest DNA technology (which included LiRa - their specialist statistical tool, and Y-STR analysis) on the previously retained microscope slides.

In 2017 officers from Nottinghamshire Police visited the victim, who by now was living in Florida, USA, to update her on the case, take a new statement from her, provide support and care, and take new reference samples; Whitehead was arrested a week later.

The final sets of forensic tests were subsequently undertaken by scientists at both Eurofins Forensic Services and Leicester University, the results of which provided compelling scientific evidence.

Whitehead pleaded guilty on the first day of his trial in November 2018 and was sentenced to nearly ten years for rape and aggravated burglary.

Links to Media Coverage:

<https://www.nottinghampost.com/news/nottingham-news/rapist-brought-justice-30-years-2264229>

<https://www.bbc.co.uk/news/uk-england-nottinghamshire-46361749>

<https://www.dailymail.co.uk/news/article-6434651/Rapist-brought-justice-30-years-terrifying-knifepoint-attack-woman-bedroom.html>

<http://www.7br.co.uk/2018/11/gordon-aspden-secures-conviction-in-historic-rape-case/>

<https://westbridgfordwire.com/groundbreaking-investigation-convicts-nottingham-rapist-after-30-years/>

<https://le.ac.uk/news/2018/november/28-university-of-leicester-helps-bring-justice-after-30-years>

<https://www.eurofins.co.uk/forensic-services/case-studies/new-and-old-forensic-techniques-bring-rapist-to-justice-after-30-years/>

16. Marlon M. Alexander

Country/State: Montgomery County, Maryland

Executive Summary: After a string of six residential burglaries and rapes between June 19, 2010 to September 2, 2012, authorities believed one man was responsible. DNA samples retrieved from the scene yielded no match with CODIS so investigators turned to Parabon NanoLabs to produce a DNA phenotype and a DNA profile that was then submitted to a public genealogy database, leading to a familial match. Using traditional investigative methods and genealogy research, investigators arrived at a suspect. A search warrant was obtained, the suspect's DNA sample extracted, and a match obtained within 6 hours of testing.

Scientific Importance: This case involved using Parabon NanoLabs to produce a DNA phenotype and their genealogy research expertise.

Investigative Importance: Once Parabon had produced a DNA phenotype and possible relatives, detectives used Census Bureau and obituary information to backward in time from two names. They then went forward in time to locate the likely suspect.

Other: The offender had a particular focus on elder women. His modus operandi was to crawl a window and then rape the victim under threat of weapon.

Submitted Story:

On August 11, 2007, during the nighttime hours, an unknown male entered a victim's residence in Gaithersburg, Maryland, and attempted to sexually assault her. The victim was able to defend herself and the suspect fled the scene. As he left, the suspect dropped an article of clothing that was later collected as evidence. A DNA profile was obtained from the clothing.

On June 19, 2010, an elderly female was at her residence located in Germantown, Maryland. During the nighttime hours, a suspect entered her residence and sexually assaulted her and robbed her of her belongings before fleeing the scene. A DNA profile was obtained and was found to match the DNA profile of the suspect who attacked the victim in Gaithersburg in August 2007.

This elderly rape and robbery was the first in a series of nighttime violent home invasion sexual assaults targeting elderly females within Montgomery

County. Four separate incidents were subsequently linked by DNA evidence from 2007 through 2011. The suspect's DNA was entered into a national DNA database (Combined DNA Index System – CODIS) but there was no match. Despite extensive investigative efforts, these cases remained unsolved.

These cases generated much fear in the community due to the violence involved, randomness, age of the victims, and the fact that one elderly victim was victimized twice. Officers and Cold Case detectives vigorously investigated these cases with the hope of identifying a suspect. At least a dozen potential suspects were identified throughout the years and their DNA was obtained. The Montgomery County Police Crime Lab was able to eliminate each of these individuals as a suspect.

In 2017, Cold Case detectives obtained the assistance of Parabon NanoLabs to generate additional leads and further analyze the suspect DNA. Initially, Parabon was able to complete DNA Phenotyping and produce a “snapshot” composite predicting the suspects physical appearance. More recently, Parabon submitted a genetic data profile created from the unknown crime scene DNA to a public genetic genealogy database, in order to potentially find individuals who shared a significant amount of DNA with the unknown contributor.

Detectives were able to use this new information to further a case that had no other investigate leads. Additional investigation, which included genealogy research, was then conducted by Cold Case investigators and led to the identification of a suspect in these crimes, Marlon M. Alexander. On September 13, 2018, his DNA was obtained through a Circuit Court search warrant and his buccal swab was entered into evidence at police headquarters. Within 6 hours, the sample was tested and analyzed by the Montgomery County Police Crime Lab Biology Unit and found to be a positive match to the crime scene DNA. An arrest warrant was obtained, charging the suspect with multiple counts of rape, robbery, burglary and assault. The suspect pleaded guilty and will be sentenced soon.

These cases would have remained unsolved and the community, especially the elderly citizens of Montgomery County, would have remained in fear if not for the use of DNA analysis, DNA phenotyping and genetic genealogy.

Links:

<http://www.mymcpnews.com/2017/06/22/dna-evidence-left-at-scene-used-to-create-suspect-composite-in-series-of-unsolved-rapes/>

<http://www.mymcpnews.com/2018/09/14/cold-case-detectives-arrest-suspect-for-series-of-rapes-press-conference-to-be-held-today/>

https://www.washingtonpost.com/local/public-safety/md-detectives-say-theyve-solved-7-year-old-rapes-of-2-elderly-women/2018/09/14/98d0d914-b838-11e8-a2c5-3187f427e253_story.html?utm_term=.7270a5084efb

<https://baltimore.cbslocal.com/2011/02/19/police-search-for-suspect-in-germantown-rapes/>

<https://www.nbcwashington.com/news/local/Arrested-Made-in-Series-of-Rapes-in-Montgomery-County-Police-Say-493301721.html>

17. *Washington, D.C. Mansion Murders*

Country/State: Washington, District of Columbia

Executive Summary: Amy and Savvas Savopoulos, their son Philip, and housekeeper Veralica Figueroa were killed in May 2015 in the family's multimillion-dollar home in an elite neighborhood in Washington D.C. Their home was set on fire and their Porsche found burning in a nearby parking lot. The murderer, Darrell Wint, was linked to the scene after police found a sample of his DNA left on a half-eaten pizza in the burned home. He was later arrested and convicted for their murders and the accompanying arson.

Scientific Importance: The suspect's DNA sample was retrieved off a half-eaten pizza.

Investigative Importance: Despite a massive burning of the victims' home, police recover DNA off half-eaten pizza and are able identify the bodies of the victims.

Other: The murder was particularly heinous, with the murderer attempting to extort the family before killing them. He restrained with duct tape, beating them with a baseball bat, stabbing them, pouring gasoline on their bodies, and setting them on fire. The murderer broke into the home with the wife home and even had her call Savvas to lure him home earlier. The murderer was a former employee of Savvas Savopoulos, the father, and went to Savopoulos' home after Wint had been kicked out of his residence. After the murders, Wint researched on the Internet how to evade lie detector tests, top ten hideout cities for fugitives, and five countries with no extradition treaties with the United States. Wint had an extensive history of violence and a long rap sheet. Even his own father was afraid of him.

Story:

Savvas Savopoulos was the CEO of a lucrative construction firm. He, his wife, and son lived in a \$4.5 million mansion near the National Cathedral in Washington, D.C. They had a housekeeper named Veralicia Figueroa who was often at the home. But on May 14, 2015, firefighters responded to a massive fire at the Savopoulos mansion. They were able to control the fire only to find the three dead bodies of the family and of their housekeeper.

As investigators began to search the wreckage, it became clear that the murderer was particularly heinous and cruel in nature, sparking concerns this crime was not money-related but driven by revenge or anger. It was determined that the victims were held captive for more than 18 hours, starting on May 13. The 10-year-old son was tortured in order to coerce a \$40,000 cash payment from the family, having been stabbed multiple times. In the end, they were all found with stab wounds, indicating torture. They all had been restrained with duct tape, beaten with a baseball bat, stabbed multiple times, gasoline poured on them, and then set on fire with the home. The home's sophisticated security system had not been triggered, suggesting the murderer had knowledge of the house or had been willingly let in, perhaps by the housekeeper or the wife.

Because of the fire, investigators struggled to find substantial evidence. But through all the fire's destruction, left intact was a half-eaten Domino's pizza. Investigators probed the pizza for DNA evidence, extracting a male DNA profile. Apparently, this led to an immediate match, to Daron Wint, a former welder fired from Savvas' construction company. Daron Wint had a previous criminal record filled with violent crimes. He is originally from Guyana and immigrated to the U.S. in 2000. He was also a former U.S. Marine Corps recruit but was discharged before completing training for medical reasons.

Investigators quickly found Wint nearby. On October 25, 2018, Daron Wint was convicted largely based on DNA evidence. He was found guilty of 20 counts of kidnapping, extortion, and murder. He was sentenced to four consecutive life-without-release terms.

[Timeline](#)

MAY 13 - 5:30 p.m.

Amy Savopoulos calls her husband, Savvas, telling him to come home to watch their son Philip because she has plans, according to housekeeper Nelitza Gutierrez.

9:14 p.m.

Someone in the house places an order to Domino's pizza, paying with the Savopouloses' credit card, according to court documents.

9:30 p.m.

Savvas leaves a message for Gutierrez telling her not to come in the next day. He says Amy is sick and that another housekeeper, Verelicia Figueroa, is spending the night.

MAY 14 - MORNING

Figueroa's husband, Bernardo Alfaro, goes to the house looking for his wife. He sees Savvas's Porsche parked outside but gets no answer when he knocks. He then gets a call from Savvas, who says that Amy had gone to the hospital and Figueroa had accompanied her. "My feeling was that somebody was inside," Alfaro later told the local ABC News affiliate. "He said ... 'My wife was feeling bad and asked Vera to go with her.'"

9:30 a.m.

Gutierrez receives a text from Amy saying, "I am making sure you do not come today." Gutierrez says she calls Amy back but the call goes to voicemail. "I texted her, 'I hope everything is okay,'" says Gutierrez, who got no reply.

MORNING: An employee of American Iron Works drops off \$40,000 in cash to the Savopoulos home.

1:24 p.m.

The D.C. fire department answers a call for a blaze on Woodland Drive. Fire fighters find the bodies inside the home.

Links to Media Coverage and Sources:

<https://abcnews.go.com/US/dc-mansion-murders-evidence-helped-convict-killer/story?id=58775381>

<https://www.nbcnews.com/news/us-news/defendant-d-c-mansion-murders-convicted-20-counts-n924631>

<https://people.com/crime/dc-mansion-murders-people-magazine-story/>

https://en.wikipedia.org/wiki/2015_Washington,_D.C.,_quadruple_murder_incident