Cybergenetics

TrueAllele® Newsletter

Better Justice Through Better Science™

TrueAllele News

Better science leads to better justice. But the science must be reliable for courts to accept it as admissible evidence. The reliability of TrueAllele's more informative DNA analysis is supported by dozens of validation studies and the system is widely accepted by courts. TrueAllele science is at the cutting edge of science and law.

This month's Newsletter features criminal cases where TrueAllele made a difference. We show higher court decisions affirming TrueAllele reliability. A new *Forensic Magazine* article about court acceptance, and a game-changing *Heliyon* scientific paper on reporting complex DNA. We report on conference talks about TrueAllele's new investigative database, and how TrueAllele science is used in Africa.

Case Highlights

Tennessee v. Bean

"Obsession which led to murder"
– District Attorney General Robert Nash

This Montgomery County Tennessee homicide case found critical DNA in highly probative evidence. A cell phone taken from the crime scene and left on the highway. A black ski mask seen on the intruder by the victim's girlfriend. A knife used in the stabbing and shooting.

The crime lab couldn't solve the DNA mixtures. But TrueAllele easily did. It found DNA from both defendant John Bean and his victim mixed together

on the abandoned cell phone. And they were both on the knife. Bean was on the ski mask.

Finding defendant and victim together on the same items can be compelling criminal evidence. On April 7, 2026, having heard Cybergenetics casework supervisor William Allan testify the previous day, the jury convicted Bean of first-degree murder.

Trial Page

Pennsylvania v. Ransom-Nelson

"The gun match is 651 thousand times more probable than coincidence."
– TrueAllele

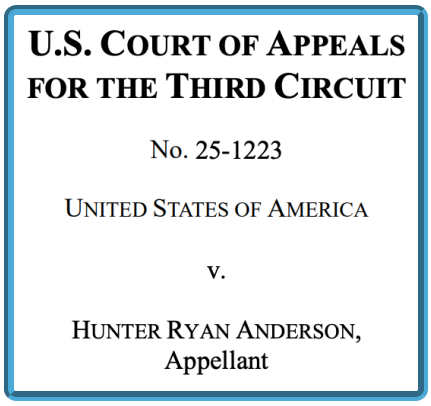
Days before Christmas 2024 in Montgomery County Pennsylvania, an off-duty police detective was shopping with his family at Kohl's when two men robbed the store at gunpoint. The detective thwarted the robbery. The robbers fled; one dropped his gun. It was analyzed for DNA.

To the county's database, the gun DNA was just another "unsearchable mixture" that gave no leads. But the county was also using Cybergenetics' more informative *TrueAllele Investigative Database (ID)*. On the same DNA data, our TrueAllele ID process can unmix the mixtures, preserve all DNA information, and make connections.

The TrueAllele database connected the gun and magazine to suspect Zaire Ransom-Nelson. On April 8, 2026, Cybergenetics analyst Kari Danser testified about the TrueAllele findings. The jury found Ransom-Nelson guilty of armed robbery. It was TrueAllele ID's first time in court.

Trial Page

Appellate Decisions


U.S. COURT OF APPEALS
FOR THE THIRD CIRCUIT

No. 25-1223

UNITED STATES OF AMERICA

v.

HUNTER RYAN ANDERSON,
Appellant

The courts allow an opponent to challenge the reliability of scientific evidence. After such challenge, judges have admitted TrueAllele as reliable technology over *fifty times* across seventeen states and five federal districts.

The losing party can appeal the judge's admissibility decision. In all nine appellate decisions, higher state and federal courts have affirmed TrueAllele reliability.

Louisiana v. Dyson

Louisiana has seen ten favorable TrueAllele decisions in state and federal court. In *Louisiana v. Corlious Dyson*, the defendant appealed the trial court's TrueAllele admissibility ruling up to the state Supreme Court; six months ago, they upheld the reliability decision.

Appellate Decision

United States v. Anderson

In March 2026, the Third Circuit affirmed TrueAllele reliability in *United States v. Hunter Anderson*. The higher federal court's ruling is both entertaining and instructive. And is the subject of a recent *Forensic Magazine* article.

Magazine Article

Publications

Forensic Magazine

In his May 2026 *Forensic Magazine* article, Cybergenetics chief scientist Dr. Mark Perlin explains "How Courts Decide When Computer DNA Evidence is Reliable." Using the *US v. Anderson* appellate ruling, he explores scientific admissibility in this illustrative TrueAllele case.

The magazine article engagingly illuminates all five *Daubert* prongs. For each reliability prong, Dr. Perlin asks the court's key question, describes how the defense challenged TrueAllele, why their argument was unpersuasive, and gives the court's answer.

Magazine Article

Heliyon Journal

In March 2026, Cybergenetics published their breakthrough *Heliyon* paper, "The reliability and reporting of DNA match strength for uncertain genotype evidence." Highlights of the open-access article include:

- Why TrueAllele can always report results, no matter how complex the DNA
- A new and powerful way to measure genotype DNA match accuracy
- How TrueAllele uses all the DNA data to get all the identification information
- Why inclusion and exclusion answers are two sides of the same DNA coin
- How to validate DNA methods without using “ground truth” samples

The paper’s *new match accuracy method* uses genotype **outputs**, instead of software **inputs**. This novel idea shifts probabilistic genotyping discussion away from “who is right” opinion to objective “match outcome accuracy.” A genotype’s match accuracy can be determined before it is ever compared with a reference profile.

Journal Article

Presentations

TrueAllele ID at AAFS

Imagine an investigative DNA database for property crime that eliminated “unsearchable mixtures.” That improvement would *double* evidence leads from 40% to 80%. And that’s exactly the increase seen with the TrueAllele Investigative Database (TA-ID) in a Montgomery County, Pennsylvania pilot study.

In February 2026, Lt. Edward Schikel and Dr. Mark Perlin presented a talk on “Turning unsearchable mixtures into actionable intelligence for reliable DNA evidence” at the *American Academy of Forensic Sciences* (AAFS) meeting in New Orleans, LA. Their twenty-minute narrated PowerPoint presentation is publicly available.

DNA should not just solve crimes after the fact. The science should help police identify patterns earlier, intervene sooner, and better protect the communities they serve. By uniquely using all the DNA data, TrueAllele databases can help prevent crime.

AAFS Presentation

TrueAllele for Africa

In March 2026, the *Sixth African Forensic Forum* was held in Cape Town, South Africa. Four talks discussed TrueAllele applications. In his “TrueAllele for Africa” talk Dr. Mark Perlin addressed three questions:

- What is TrueAllele?
- How is TrueAllele uniquely powerful?
- Why is TrueAllele the only scalable DNA solution for Africa?

The talk’s twenty-minute narrated PowerPoint presentation provides a clear introduction to audiences unfamiliar with forensic DNA interpretation. And presents compelling new methods and data for the expert scientist as well.

Africa Presentation

Dr. Perlin also gave a three-hour TrueAllele workshop on “Unlocking DNA profile interpretation for Africa.” Using real African case examples, he showed how the system can:

- Solve complex DNA mixtures that traditional methods cannot
- Deliver accurate, objective results even with limited or degraded samples
- Strengthen forensic capabilities across the continent
- Support justice systems with science-driven, defensible evidence

Africa Workshop

Upcoming Conferences

August

- IHIA - International Homicide Investigators Association - 2026 Annual Conference
  - Location: Marriott Warehouse Arts District, New Orleans, LA
  - Exhibit Dates: August 9-12
- CHIA - California Homicide Investigators Association - 57th Annual Conference
  - Location: The Red Rock Casino Resort and Spa, Las Vegas, NV
  - Exhibit Dates: August 18-20

Stop by our trade booth to learn how TrueAllele technology can help you solve your most complex DNA cases.

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