Grant Smith Ellis Court Log

USA v. Matthew Farwell — November 3, 2026

Day 17 · Witness Testimony Summary

Reporting source: Grant Smith Ellis (@GrantSmithEllis) · Contemporaneous courtroom posts

Court Proceedings Before Testimony

Ellis joined the hearing in progress from the overflow courtroom as the parties disputed slides proposed for defense DNA witness Dr. Maher ("Max") Nourredine. The government objected to slides concerning anal swabs collected twenty-one days after death, other testing not developed by prior witnesses, and paternity material based on a Bode report. Defense counsel characterized portions as an affirmative interpretation of laboratory data rather than a critique of an opinion the government had not introduced.

The defense withdrew paternity slides 106–107 and slides 45–48. Judge Casper indicated she was inclined to preclude slides 88–92 but reserved that ruling and the objection to slide 103. She cautioned that removing a slide did not necessarily resolve an objection to the underlying subject. The government separately objected to the first forty-seven teaching slides because they had been delivered only the preceding evening; Casper permitted general teaching material provisionally, with objections to be taken as individual points arose. The court also circulated revisions to the proposed jury charge.

Dr. Maher ("Max") Nourredine

Defense DNA/serology consultant with a background in molecular genetics and forensic molecular biology; testified about laboratory results, testing limitations and interpretation methods.

Testimony focus

Direct	Professional qualifications; serology screening; STR and Y-STR; mixture interpretation and transfer; swabs and underwear; packaging; ligature DNA and assumed contributors.
Cross	Credentials and independent testing; delayed collection; sperm versus DNA attribution; timing; mixture assumptions; alternative calculations; chain of custody; likelihood ratio and Y-STR.
Redirect / recross	Underwear custody, oral-sample questions, and the biological collection kit.

Qualifications and scope

Nourredine described academic study and research in genetics, a forensic molecular-biology certification and approximately fifteen years running a consulting company. He said he reviewed five DNA reports and one serology report spanning 2021–2026. Judge Casper reminded jurors that the visual aid was illustrative and not evidence. Much of his direct examination concerned general concepts: presumptive versus confirmatory serology, short tandem repeats, amplification artifacts, probabilistic software and the distinction between ordinary autosomal STR and paternal-line Y-STR testing.

He explained that acid phosphatase and alpha-amylase screening reactions may indicate, but do not necessarily establish, a particular bodily fluid. A laboratory fraction designated a "sperm fraction" does not itself establish that sperm cells were detected. He also stressed that a DNA profile cannot, by itself, explain how material reached a surface or when it was deposited. Questions about possible transfer from contact with carpet or movement of the body were general possibilities, not findings that a specific contamination event occurred.

Serology findings and evidence collection

Nourredine reviewed reports concerning vaginal, genital, oral and underwear samples. The results varied by item and location: some swabs had negative sperm or seminal-fluid findings while alpha-amylase screening was positive; underwear

stains E and J-2 featured in later examination. An image from oral sampling was difficult to interpret because the apparent cellular material was obstructed. The defense also showed the ligature packaged in plastic. Nourredine said breathable paper is typically preferable for biological material and that touching portions of a flexible item can allow material to transfer, without establishing that such transfer happened here.

Ligature DNA: assumptions, mixtures and likelihood calculations

The ligature STR result was described as a complex mixture of at least four contributors, with a large female component. Nourredine said STRmix modeled Sandra Birchmore as an assumed contributor and that the likelihood statistic concerning Matthew Farwell was conditional on that assumption. He discussed roughly ninety percent assigned to Birchmore, about five percent to a component consistent with Farwell, and smaller unresolved components. These modeled proportions do not independently identify each contributor.

> "Yes, she was assumed, which is different than included. If someone is assumed you are literally telling their software the DNA is there for that person as a fact."
>
> — Nourredine testimony as reported by Ellis, 10:38:48 AM ET · X post ID 2117642660420755496 · Source

Y-STR analysis was reported as indicating multiple male contributors with a proposed major component consistent with Matthew Farwell's paternal line. Nourredine disputed aspects of interpretation, but when he began offering an apparently unnoticed affirmative opinion, the prosecution objected and the court sustained the objection. During the ensuing break, the judge distinguished permissible methodological critique from an opinion outside the disclosed expert report. Such excluded or stricken material should not be treated as admitted contrary findings.

> "I think so far he has been giving a critique, but to the extent there was an unnoticed opinion, I sustain the objection."
>
> — Judge Casper as reported by Ellis, 11:01:54 AM ET · X post ID 2117648473801564628 · Source

After the break, defense counsel worked from the expert report rather than the slides. Nourredine said the four-person count was a minimum and a fifth contributor could not be categorically excluded; no fifth profile had been identified. He stated that fraternal twins Matthew and William Farwell would be expected to share a Y-STR paternal-line profile, while their autosomal profiles are distinct. He did not know of a comparison sample for William.

Cross-examination: qualifications, sampling and attribution

Assistant U.S. Attorney Liz Riley established that Nourredine was not working in an accredited forensic DNA laboratory, had not independently tested the underwear or ligature and had not performed the laboratory analysis. He would refer items to a separate laboratory for physical testing. The government established that body swabs were collected February 26, 2021—twenty-one days after autopsy and after extensive postmortem processing. Those facts bear on foundation and interpretation, not proof of an identified contamination event.

Riley pressed the difference between DNA detected in a sperm fraction and the identification of a sperm cell from a specific person. Nourredine acknowledged statistical support for Farwell's DNA in an underwear mixture but said mixed DNA results could not attribute a particular sperm cell to him. He also could not date the placement of DNA on the garment. He agreed that January 31 or February 1 was possible without making either an established deposition date; questions about earlier alleged encounters drew sustained objections.

> "This is a mixture of multiple people so to attribute sperm to an individual is beyond the realm of this type of testing."
>
> — Nourredine testimony as reported by Ellis, 12:14:14 PM ET · X post ID 2117666674354884770 · Source

Cross-examination: assumed contributors and calculations

Nourredine acknowledged that laboratories may assume contributors in accordance with approved procedures and that the MSP laboratory had such policies. Riley used stain E to develop that an assumed-contributor approach could be followed by an empirical calculation that excluded Birchmore from that sperm-fraction mixture. Nourredine did not assert that removing the Birchmore assumption would cause the 6.2-trillion statistic regarding Farwell to become an exclusion.

He acknowledged technical-lead authorization of interpretation involving the complex ligature mixture, while continuing to question aspects of the interpretation.

> “You’re not telling the jury that had Ms. Birchmore not been assumed the numbers for Mr. Farwell would have gone from 6.2 trillion to exclusion, are you?”
>
> — Riley question as reported by Ellis, 12:24:39 PM ET · X post ID 2117669299233886688 · Source

> “I am not saying that.”
>
> — Nourredine response as reported by Ellis, 12:24:39 PM ET · X post ID 2117669299233886688 · Source

Riley challenged an earlier “slight exclusion” characterization concerning Jason Pickard by referring to actual STRmix results. Nourredine agreed in the reported exchange that Pickard was not excluded in the mixtures Riley identified. The apparent tension between shorthand descriptions and underlying calculations remains for laboratory-record review rather than editorial resolution. Y-STR questions likewise distinguished the proportion of Farwell-consistent DNA in the entire sample from relative proportion of the male component after female DNA is not amplified.

Cross-examination: custody, likelihood ratio and transfer

Nourredine initially believed Birchmore’s underwear had traveled with other garments, then reviewed a custody record and agreed it had traveled in the sexual-assault/biological collection kit. The judge cautioned that jurors’ memory of prior testimony controlled. Riley confronted him with a likelihood ratio reported in court as approximately 6.2 trillion; Nourredine accepted the number but characterized it as moderate relative to much larger ratios. The withdrawn lottery analogy and question phrasing should not be mistaken for a mathematical definition: an LR compares the probability of evidence under specified competing hypotheses, not the probability of guilt or a direct probability of presence.

> “Yes, it traveled in the sexual assault kit. It was not with the other clothing.”
>
> — Nourredine testimony as reported by Ellis, 12:30:52 PM ET · X post ID 2117670859993403796 · Source

Riley also explored William Farwell’s possible genetic relationship and the physical characteristics of a ligature compared with smooth surfaces. Nourredine had not visited the apartment and could not confirm the nearest doorknob’s characteristics. At the end of cross, he did not exclude the possibility that Farwell-consistent DNA reached the ligature by contact on February 1, but did not independently establish that mechanism or date.

Redirect and recross

On redirect, defense counsel revisited whether underwear had at some stage been with other garments before placement in the collection kit; Nourredine said a report appeared to support that chronology. He also agreed with a question about oral-sample material and a profile consistent with Jason Pickard; this should not be expanded into proof that a particular sperm cell was individually attributed to Pickard. On recross, the government revisited the medical examiner’s account of placement in the biological collection kit. Nourredine was excused.

Dr. Angie Christensen

Retired FBI forensic anthropologist; examined preserved hyoid evidence using CT imaging and testified about the fracture and specialized timing terminology.

Testimony focus

Direct	FBI lab experience; preserved hyoid specimen; reasons for CT examination; right greater-horn fracture; force and age considerations; “perimortem.”
Cross	Fracture visibility; unfused bone; fracture timing and literature relating to strangulation.
Redirect / recross	Fractures in hanging and younger persons; limitations of studies concerning seated hanging.

FBI examination and choice of imaging

Christensen testified to approximately twenty-five years at the FBI laboratory, retirement in 2025 and continuing certification. FBI Boston requested an assessment of possible trauma to Birchmore's hyoid. The specimen arrived at Quantico in formalin with soft tissue attached. Christensen considered removal of the tissue problematic because of preservation-related damage risk and instead used CT imaging. The scan showed a fracture near the midpoint of the right greater horn. She said there was no universal established force threshold for fracturing a hyoid, and fractures tend to be more common among older people, although they can occur in younger individuals.

The specialized meaning of "perimortem"

Christensen classified the fracture as perimortem but explained that forensic anthropology uses this term to describe a bone that was mechanically fresh at the time it fractured. Collagen and moisture permitting living-bone fracture characteristics can persist after death depending on preservation. Consequently the classification alone does not fix the fracture to the precise moment of death, nor does it determine cause or manner.

> "We can only tell whether a fracture occurred when the bone was in a biomechanically fresh state, when it has collagen and moisture, the same fracture properties as a living person. Those can exist for a significant time after the death event depending on the preservation of the body."
>
> — Christensen testimony as reported by Ellis, 1:12:11 PM ET · X post ID 2117681257446322514 · Source

Cross-examination: fracture, fusion and literature

On cross, Christensen said the fracture was readily visible on CT and the hyoid was unfused. Unfused bones are generally more flexible and less likely to fracture. She saw no indicators of an old, healed fracture, and reiterated the particular limits of the term perimortem. Asked about the cause most often associated with hyoid fractures in literature she had reviewed, she identified strangulation; that research association is not a case-specific determination of homicide.

> "No, but perimortem is less specific in my field. Not post mortem though."
>
> — Christensen testimony as reported by Ellis, 1:16:24 PM ET · X post ID 2117682320819798255 · Source

Redirect and recross

On redirect, Christensen acknowledged that hyoid fractures may occur in hangings and in younger people. The defense also confirmed CT was used because the adhering preserved tissue limited direct examination. On recross, asked specifically whether she had identified a study of a young person with a fractured hyoid from a seated hanging, Christensen said she had not reviewed that precise literature question and could not answer it. She was excused.

> "I didn't specifically review the literature so I don't know."
>
> — Christensen testimony as reported by Ellis, 1:20:22 PM ET · X post ID 2117683320427270174 · Source

Court Proceedings After Witness Testimony

Schedule, jury charge and close of evidence

After Christensen, Judge Casper excused the jury and said she expected the evidence to close Wednesday, November 4, with no court on Thursday and jury deliberations beginning Friday, November 6. Counsel were instructed to verify exhibits for distribution. The judge anticipated a colloquy before the defense rested concerning Farwell's personal choice whether to testify; no such decision was announced November 3. Earlier, the parties had debated wording drawn from Fowler and an Eighth Circuit decision referred to as United States v. Elk. The judge reserved some proposed charge language pending review; it was not yet the final instruction delivered to jurors.

Motion to reconsider and Rule 106 completeness

The judge denied the defense motion to reconsider to the extent it sought to revisit her Rule 804(b)(6) forfeiture-by-wrongdoing ruling, preserving the objection. Defense counsel then argued for admitting additional messages or surrounding exchanges under Rule 106, suggesting other hearsay exceptions might apply. The government stressed the absence of identified passages for decision, the limits of Rule 804(b)(6) and potential Rule 412 issues relating to sexual history. Casper distinguished genuinely contextual portions of an existing statement from independent statements offered for their truth, requested specific exhibits and reserved unresolved matters. She allowed illustrative exhibit S-14 into the appellate record without admitting it as trial evidence, and court recessed.

Source & Editorial Note

This witness summary is an editorial reading aid reconstructed from Grant Smith Ellis's contemporaneous November 3, 2026 X reporting, not a verbatim or official court transcript. The source pack reported 230 captured posts and a continuous selected trial thread of 195 posts; that internal reconciliation does not certify completeness of courtroom testimony. Reporting began after morning argument was underway, and overflow-room exhibits were temporarily unavailable. The account compresses teaching material and repeated foundation, while preserving important qualifications, contested claims, objections, rulings and uncertainties. Quoted excerpts are attributed to the live reporting and may contain transcription imperfections. The canonical JSONL remains the underlying source.