

**On January 14, 2021, Shelby Houlihan was notified via email that her drug testing sample obtained on December 15, 2020, had come back positive for 19-norandrosterone, the metabolite produced by the substance Nandrolone.**

**This is a timeline of everything that happened from the day of notification to sentencing:**

**January 14, 2021:**

- Immediately began googling 19-norandrosterone, nandrolone, and meat contamination cases.
- Called Jerry and Shalane about receiving the notification.
- We got in touch with Paul Greene and set up a call with him that evening. After the call, I got started on recreating the week of that test. I created a food log and a complete recount by memory, receipts, bank statements, text messages and iPhone locations of everything that happened the day before that test.

**January 15th:**

- We notify the AIU that Global Sports Advocates is representing me and request that the B-Sample be tested.
- We ask for discretion and to not publicly disclose until B-sample results.
- We request the opening and analysis of B-Sample with a copy of the lab package.
- We request a copy of the A-sample laboratory documentation package that supports the AAF.
- We request an extension of 14 days until Feb. 4th to provide our initial written explanation for the AAF.
- We request a complete copy of the 15 December doping control form inclusive of my declarations.
- We request a timetable for when the results of my pending November 2020 doping controls will be reported and that I be provided complete doping control forms for each Nov test.
- We request a complete history of my doping control tests to date.
- We receive email back that the B-Sample will be tested on January 19th.
- Received test result for November 11th drug test which was negative for prohibited substances.
- Finished food log complete with receipts dating from December 10th to December 14th.
- We think the burrito consumed the night before the test is the potential source.
- Scheduled hair sample for January 22nd.
- We hire a private investigator to investigate food truck.

**January 16th:**

- Recorded my iPhone locations and emailed to Paul and his associate Matthew Kaiser

**January 17th:**

- I finished my recap of the entire day of December 14th.

**January 18th:**

- We receive email from AIU confirming B-Sample to be tested with an independent witness and receive the doping control declaration form from December 15th test and a list of my drug testing history.
- Have an initial draft of my statement, revised food log and exhibits.

**January 19th:**

- Email AIU asking again for confidentiality and notifying them of the new version of the WADA technical document governing the analysis and reporting of 19-Norsteroids related to nandrolone published on 20 December 2020 that specifically states that the consumption of boar offal can lead to levels of 19-norandrosterone identical to the levels detected in my urine.

### **January 20th:**

-Follow up email to AIU stating we believe the source of nandrolone was from pig offal. We also believe that the new WADA technical document that goes into effect on April 1, 2021 governing the analysis and reporting of 19-Norsteroids related to nandrolone must apply in my case. Specifically, the following section:

**Following consumption of the edible parts of non-castrated male pigs, concentrations of excreted 19-NA in urine are usually in the low ng/mL range (< 10 ng/mL), although higher concentrations have been exceptionally reported. The origin of the urinary 19-NA may not be established by GC/C/IRMS analysis, since the varying diets of migrating wild boars lead to dissimilar  $\delta^{13}C$  values which may range between -15 ‰ and -25 ‰. Therefore, if the consumption of edible parts of intact pigs is invoked by an Athlete as the unlikely origin of a 19-NA finding, this may be established based on the pharmacokinetics of 19-NA excretion. Profiles of 19-NA and 19-NE excretion following oral ingestion will have a different time course than following an injection of 19-norsteroids.**

-We asked that the laboratory be notified of this and do the required analysis prior to reporting the B-Sample results.

-Receive email from private investigator: Burritos were purchased at 6:58 pm PST. They were photographed and meats packaged as instructed and put in the freezer. The meats will ship to the lab tomorrow morning via UPS express same day and should arrive tomorrow afternoon.

### **January 21st:**

-All vitamins and supplements sent to the lab for testing.

-Private Investigator sent us pictures and videos of the burritos purchased from the food truck.

-USADA informed Paul that my 11/22 urine sample is negative.

-We write a follow up email in regard to the emails on 19th and 20th that haven't been responded to stating that we believe a pharmacokinetics study of my 19-NA and 19-NE excretion profile must be performed in keeping with the new technical document that governs the analysis and reporting of 19-Norsteroids related to nandrolone before an adverse analytical finding can be reported pursuant to the new version of the technical document.

-We seek confirmation that the Laval Laboratory intends to perform this study as part of my B-sample confirmation testing.

-Receive results from 11/17 drug test that was negative.

-We go over burrito pictures that were taken by PI and establish that the carne asada burrito that I did order, was not greasy at all in the picture. The burritos that Courtney and I ate on 14 December were so extremely greasy that neither of us could even finish them. It's hard to say exactly because we were not examining the meat with each bite but the chorizo and the Maw (pig stomach) burritos were more reflective of how greasy our burritos were. Our thought is that they either cooked our burrito with other greasy meat, other meat was mixed in, or we were handed the wrong burritos entirely.

### **January 22nd:**

-Complete hair sample.

-We receive email back from AIU saying that the new technical document does not apply but they contacted WADA to clarify and will get back to us. They also state that the AIU does not agree to extend the deadline for us to gather all information and provide our written explanation for the AAF until Feb. 4th. The AIU may give us an opportunity to supplement our explanation following review of the A and B sample Laboratory Documentation Package.

-Receive a summary of the doping control tests in November.

**January 24th:**

- We have a draft of our submission that we will submit tomorrow (25th of January).
- Update from Private investigator: Attempted to contact owner of food truck but was unable to. Left his card and sent emails.

**January 25th:**

- We submit our initial submission to the AIU with exhibits attached and asked that the matter continue to be kept confidential until the AIU has had the opportunity to make a final determination.
- AIU emails back confirmation of receipt of email and enclosures.
- Confirmation for polygraph test on January 29th.

**January 26th:**

- Hair sample arrived in France for Dr. Pascal Kintz to analyze

**January 27th:**

- Receive email from AIU that the analysis of the B-sample has confirmed the finding in the A sample. Copy of the test report is enclosed. The requested analysis to account for the consumption of boar offal did not appear to have been done since there was nothing even mentioning that it was requested, let alone accounting for the fact that it was done.
- We email AIU back acknowledging receipt but note that it appears as if no pharmacokinetics study of my 19-NA excretion has been performed by the Laval Laboratory even though the consumption of edible parts of intact pigs was invoked as the origin of the 19-NA finding. Therefore, we maintain that an AAF cannot be established in my case solely on the basis of GC/C/IRMS analysis. Rather, a pharmacokinetics study of the 19-NA excretion must be done since profiles of 19-NA and 19-NE excretion following oral ingestion will have a different time course than following an injection of 19-norsteroids. In other words, the GC/C/IRMS analysis cannot distinguish between the oral consumption of boar offal and the oral consumption of synthetic nandrolone. Therefore, since the consumption of boar offal could account for the presence of 19-NA in my urine sample, the finding must be reported as atypical, which means it is not an anti-doping rule violation.

**January 29th:**

- Completed polygraph exam

**January 31st:**

- Receive polygraph report back showing that I was truthful and did not knowingly ingest nandrolone. The report showed that there was a 0.2% chance of deceit.
- Receive update from Private Investigator: He received a call from the wife of the food truck owner and briefly explained what we were hoping to get from her. She then asked for the PI to come to her house and she will try and help out with what she can if she gets permission from her husband.

**February 1st:**

- AIU replies back to email on 27 January that they consulted with WADA and it is their understanding that the new technical document does not require the laboratory to conduct a pharmacokinetic study, which seemed to confirm that the AIU never even asked the Laval Laboratory to do the pharmacokinetic study and that the new mandate in the WADA technical document was simply ignored.
- Receive A and B sample laboratory documentation package, which say nothing about the requested pharmacokinetic study let alone reflect that it was done on the B-Sample.
- We email back acknowledging receipt of their email.
- We tell them that it has been our position from the beginning that the unique and specific circumstances

of my case mandates the need to conduct a review of the pharmacokinetics of 19-NA excretion in my sample(s).

-Received update from Private Investigator: He met with the wife and she was helpful in providing him the names of the companies where they obtained the meats for the food truck in December 2020.

### **February 3rd:**

-Receive update from Private Investigator: He got a statement from the wife and purchase invoices from the food truck owner for December 2020.

-Polygraph team had an independent evaluator examine the test. He submitted his report and further solidified "no deception detected".

### **February 4th:**

-I email my legal team that I have been drug tested 3 times now since the December 15 test. The testing dates were January 23rd for blood and urine (USADA), January 29th for blood and January 31st for urine (Clearidium/WADA. They were supposed to take blood and urine on the 29th but the doping control officer forgot the urine sample cups at his house in Phoenix so they just took blood and then had to come back for the urine sample), and February 4th for urine (USADA).

-Receive update from Private Investigator: He spoke with the food truck owner again and submitted a document with the answers to all of our questions.

### **February 9th:**

-Hair sample was 100% clean, not even the detection of nandrolone in a very low amount. This proves it could not have been an injection and shows it had to be a single oral exposure to nandrolone.

### **February 15th:**

-I receive email from Paul that USADA just called to inform him that my 1/23 and 2/4 drug tests were negative. These negative tests prove without any doubt that the source had to be oral and could not have been in injection.

-We email AIU informing them that both my 1/23 and 2/4 drug test were negative which would scientifically eliminate any possibility that an injection of 19-norsteroids was the potential source and we hope that the AIU reconsiders its determination of the AAF as part of the results management process. At the very least, we ask that the AIU confirm that it had conducted a review of the pharmacokinetics of 19- NA excretion in the sample(s) based on the unique and specific circumstances of the case.

### **February 17th:**

-We receive email from AIU confirming receipt of our email on 2/15

### **February 18th:**

-Update from Private investigator: He traveled to Portland Quality Meats and spoke with the office manager. He obtained invoice copies from the food truck. The pork stomach was from IBP and the pork butts boneless are from Farmland Foodservices. He was told that both of the meats are shipped by a Northwest meat distributor. The office manager was not aware if the pork meat he receives are from castrated or intact pigs. He stated the only way to know this was probably to communicate with the meatpacking facility where the meats are cut and packaged. He did not know where these were located. He said that where the animals are actually slaughtered can be almost anywhere.

-We receive email from AIU basically stating that it will be up to them to decide whether my negative tests on 23 January and 4 February eliminate the possibility of an injection as the potential source and that they will be the ones to determine whether the new WADA Technical Document applies and what follow up testing is necessary. They also ask for any test results or further information on the food truck.

**February 19th:**

-Private investigator found that 30lbs of pork stomach was purchased and was produced by IBP (Iowa Beef Processors), which is a subsidiary of Tyson Foods, but found that the food truck owner had no label or box from the meat used in December that would have allowed us to trace it back to a specific processing plant. It now seems nearly impossible that we would be able to track down whether the burrito contained meat from an intact pig.

-Checked in with SMRTL and confirmed they should have test results on the burritos purchased by the PI in January and the supplements sent for testing next week.

-We respond to AIU's 2/18 email acknowledging receipt of their email and told them we should receive official results from SMRTL lab next week on burritos and supplements submitted. We also filed a second submission providing all new information that was acquired since making the first submission on 25 January 2021.

**February 20th:**

-AIU acknowledged receipt of email on 2/19.

**February 23rd:**

-Received results from SMRTL lab. Everything is negative for nandrolone, including all the supplements I ingested in the lead up to the test on 15 December 2020 . But since the burritos purchased in January were from an entirely different shipment of meat, it unfortunately did not tell us anything about whether the meat I ate in December contained nandrolone.

-We email AIU with SMRTL lab results and note that the negative results don't shed any light on the nandrolone levels in the meat ingested on 14 December. They were purchased on 19 January and were from an entirely different shipment of meat.

**February 24th:**

-AIU acknowledges receipt of email on 2/23

**March 3rd:**

-Paul and Matt have a Zoom call with a highly-regarded expert from Switzerland who worked at the WADA lab in Stockholm and has co-authored articles with experts currently in the WADA labs on the subject of nandrolone detection in the context of doping tests. He is impressed with our work and believes that my levels are consistent with the ingestion of pig offal and that the science cannot definitively prove otherwise (it cannot distinguish whether the levels were due to exogenous ingestion of nandrolone or endogenous consumption of pig offal). He agrees to write a letter explaining his independent thoughts on the matter, specifically that the science shows my levels could be due to the consumption of pig offal and that there is insufficient evidence to show it came from an exogenous source.

**March 11th:**

-Receive letter from Swiss expert supporting our explanation.

-Email AIU informing that we hired a Swiss expert to perform an independent scientific review of the case and provided the results of his review.

**March 12th:**

-AIU responds acknowledging receipt of the email on 3/11.

**March 24th:**

-We email AIU asking for a substantive update since April is approaching.

**March 30th:**

- We email AIU a formal letter asking for any sort of update. The US Olympic Trials are less than 3 months away and I can't properly train, compete, or prepare while I am provisionally suspended and will be forced to request a lifting of the provisional suspension.
- The AIU acknowledges receipt of our email.

**April 12th:**

- We email the AIU following up with our March 30th email. Because they have not communicated any sort of timeline or update, we formally ask the AIU to lift the Provisional Suspension so I have the opportunity to compete and prepare properly for the Olympic Trials. We ask that they provide a swift response so that if denied, we can appeal to the Court of Arbitration for Sport (CAS).
- The AIU emails back acknowledging receipt of the email.

**April 28th:**

- Still no reply from the AIU
- We email CAS and file a confidential urgent Statement of Appeal against the AIU for failure to comply with World Athletics Anti-Doping Rule 7.4, pursuant to Rules 47 and 48 of the Code of Sports-related Arbitration for the CAS, by failing to provide me with an expedited provisional hearing and failing to issue a decision to impose (or lift) the provisional suspension in response to my request to lift filed on 12 April. AIU, USADA, and WADA are copied on this appeal. We ask them to make an expedited decision on the request to lift the provisional suspension.

**April 29th:**

- CAS emailed back. The appeal is accepted and given a case number. We uploaded all documents and the AIU is formally notified in the next 24 hours.

**April 30th:**

- CAS emailed back. The AIU has been notified. The AIU has a deadline of 5 May to inform the CAS Court Office whether it agrees with the request for an expedited procedure.

**May 5th:**

- AIU does not agree to an expedited procedure. They refuse to agree to anything and they blame us for the delay. The AIU claims this is a complex case that must be decided on a normal timetable by a 3-member Panel.

**May 7th:**

- We email CAS to try to get the AIU to reconsider and to request again an expedited process.
- CAS emails that the AIU is invited to indicate by 10 May whether it would agree to reconsider conducting the above-referenced proceeding in an expedited manner and referring the dispute to a sole arbitrator rather than a 3-member panel.

**May 10th:**

- CAS sets a deadline for tomorrow for the AIU to respond to our application.

**May 11th:**

- The AIU has now hired an outside lawyer to handle the case. They asked for an extension until tomorrow to respond, which was granted.

**May 12th:**

- I receive an email from the AIU with a Notice of Charge which confirms that I am officially charged with committing anti-doping rule violations pursuant to the WADA Rules.

- The AIU denies the request to lift the provisional suspension.
- The AIU agrees to an expedited single hearing before CAS so that a decision can be made by the CAS in time for the US Olympic Trials to begin on 18 June.
- We file a new request to the CAS for emergency provisional relief on the grounds that we intend to file a new appeal challenging the decision issued by the AIU. I'm trying to run a 10k in CA on Friday in order to get an Olympic Trials time qualifier in the hopes that I can run the 10k and either 1500 or 5k at the Olympic Trials and this is one of the last racing opportunities to try to get the 10k qualifier. We ask that they reply by the end of the day since the race in CA is on the 14th.
- CAS acknowledged receipt of the new request and gave the AIU less than an hour to respond.
- The CAS denies the emergency request to lift the provisional suspension on the same day.

### **May 13th:**

-Paul finds a boar meat article quoting one of the AIU's witnesses, Dr. McGlone, that food in the US can contain Boar taint. "Dr. McGlone observes that some mammals are Cryptorchid (meaning they have hidden or undescended testicles). "This means that even if outwardly castrated, the animal can still be an intact male internally, and boar taint will occur", explains Dr. McGlone."

### **May 15th:**

-Paul finds another Nandrolone case from an Irish Athlete. Paul believes the lab messed up and falsely charged me with an Adverse Analytical Finding when it should have been reported as an Atypical Finding. Paul and Matt found an almost identical case from an Irish weightlifting athlete that was handled properly by a German lab. The way it should've been handled in my case by the Laval lab: this athlete had a positive test for nandrolone. Roughly similar levels as mine, slightly higher but still in the same ranges. Because it's impossible to determine if it's exogenous or endogenous, he believes they're required to report it as an Atypical finding and no anti-doping rule violation charge is brought. The athlete is not notified of this and it is kept confidential and they will then test the athlete 7 times over the next roughly 6 months to determine a ratio of those positive tests. In the case of the Irish athlete, that athlete had high levels of nandrolone in 4 out of his 7 tests and was therefore then charged with an Adverse Analytical Finding and banned. In my case, they found one positive test and immediately notified me of an Adverse Analytical Finding and suspended me which we don't believe they should have done. I was tested roughly two weeks before that test and four times since that test and they have all been clean which would've then exonerated me if an Atypical finding had been reported, proving it came from one endogenous source of meat and that one positive test would've been just classified as an Atypical finding and never been made public.

### **May 18th:**

- The AIU filed with CAS and named their appointed arbitrator.
- A final decision deadline is June 12th (the Trials 1500m prelims is the 18th).
- Procedural Timetable published.

### **May 20th:**

- Receive expert report from Professor Hope Jahren

### **May 26th:**

- Hearing scheduled for June 4th with June 10th held in reserve

### **May 27th:**

-USADA emailed offering its Chief Science Officer and/or another US scientific expert to testify as independent witnesses. Paul responds and states our position that we would welcome the testimony of the USADA witnesses. The AIU opposes the USADA witnesses.

**May 31st:**

-Arbitrator Panel appointed this morning.

**June 1st:**

-CAS decides to not hear from the USADA independent experts, who would have provided the second opinion that the WADA technical documents strongly encourages but was never sought by the Laval lab and its director, Dr. Ayotte, who also testified as an expert witness on behalf of the AIU to defend her own analysis. The panel also decides it is unnecessary for many of our fact witnesses to testify. Our witnesses are now Courtney and our 4 expert witnesses.

-Email from Paul: In reviewing the Guay study (Dr. Ayotte's study), the study measured specimens from 3 different volunteers who consumed uncastrated pig offal by GC/C/IRMS analysis.

The results of the analyses were as follows:

The delta 13C Values of the six samples from 3 different people of 19-NA ranged from 19.77 to -22.43. That means that one of the 3 subjects involved in Ayotte's study from Canada had a Delta 13C Value of -22.43, which would have led to an AAF on both my A-Sample and B-Sample:

A-Sample: -22.43 would have led to values greater than 3 Androsterone (-19.0‰) and pregnanediol (-19.3‰).

B-Sample: -22.43 would have led to values greater than 3 Androsterone (-18.7‰) and pregnanediol (-19.2‰).

That means Ayotte's own study supports the idea that North American boar meat leads to false positives for 19-NA.

**June 4th:**

-World Athletics vs Shelby Houlihan hearing from 4am- approx. 11:30am PDT (5am-12:30 MST for me)

**June 11th:**

-Jerry tells me we lost and I am banned for 4 years.