

COÖS, SS.

SUPERIOR COURT

State of New Hampshire

v.

Volodymyr Zhukovskyy

214-2019-CR-078

Motion in Limine RE: NH State Lab 6-Monoacetylmorphine Finding Below Reporting

Limit

The Defendant Volodymyr Zhukovskyy, by and through counsel, Jay Duguay and Steve Mirkin, Esq., respectfully requests this Honorable Court exclude any evidence or testimony related to supposed finding by the NH State Forensic Lab related to 6-monoacetylmorphin (6-MAM)..

In support of this motion the Defendant States the following:

1. On June 21, 2019, Albert Mazza caused a motor vehicle collision when he lost control of his motorcycle while under the influence of alcohol and slid into an oncoming truck operated by Mr. Zhukovskyy. The collision resulted in the deaths of seven motorcyclists, including Mr. Mazza, and the serious injury to another.
2. Mr. Zhukovskyy voluntarily provided blood samples for analysis on the evening of the accident. Those samples were tested first at the NH State Forensic Lab and then aliquots were sent to NMS Labs in Pennsylvania for further testing.
3. The State Police Forensic Lab reported a negative finding for 6-MAM. The aliquots were sent to NMS Labs specifically for additional testing for 6-MAM because NMS Labs supposedly has a more sensitive testing protocol which would be able to detect smaller amounts of 6-MAM in the blood samples.

4. On July 16, 2022, the State provided a *Zwicker* letter with the following additional information in reference to an interview with NH State Forensic Lab criminalist Lynn

Casey:

Ms. Casey stated that in all three of defendant's blood samples that she did testing on, she saw visible peaks that were consistent with the presence of 6-monacetylmorphine (6-MAM) below the reporting limit. She stated that it is uncommon for her to see 6-MAM in blood analyses because it metabolizes quickly, but that it is not as uncommon to see 6-MAM in vitreous fluid samples from autopsy samples. She most commonly sees 6-MAM in overdose cases.

Evidence of supposed findings consistent with 6-MAM below the Lab's reporting Limit are unreliable and inadmissible under NHRE 702.

5. A witness who is qualified as an expert by knowledge, skill, experience, training, or education, may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case. Rule 702.
6. Assuming that Lynn Casey is qualified for the purposes of this motion, the testimony fails because it is not the product of sufficient data or facts, is not the product of reliable scientific principle or methods, and Criminalist Casey has not reliably applied the principle and methods to the facts of the case.
7. According to Criminalist Casey, the method detection limit for the lab's testing protocol for 6-MAM is 2.5 ng/ml. That is the lowest concentration that the lab can reliably detected.

8. Criminalist Casey is claiming to have identified “peaks that were consistent with 6-MAM” at a level that is below the lab’s limit of detection. However, during her deposition she admitted that the lab’s protocol cannot reliably detect 6-MAM at that level. The following is an excerpt of the deposition of Criminalist Casey.

Q. So “MDL” is method detection limit?

A. Yes.

Q. And that’s a representation of the lowest amount that your equipment and procedures allows you to reliably detect?

A. Correct.

Q. And you said 2.5 for codeine. What is it for 6-MAM?

A. 2.5, also.

9. Any claim that Criminalist Casey makes regarding identifying 6-MAM below the method detection limit is inherently unreliable and not based on sound scientific method or principles. That is why the State Lab report is negative for 6-MAM. Had the lab been able to reliably identify 6-MAM it would not have been necessary to send the samples to NMS for further testing on a more sensitive testing protocol.

10. Additionally, Criminalist Casey testified further about the lab’s standards for reporting positive results. She spoke specifically about the Q value assigned to a particular result. According to Criminalist Casey, the Q value represents how closely the tested sample matches with a known drug sample expressed as a percentage. She testified that the Lab looks for a Q value of 80 or better (80% match) to report a positive finding.

11. Here, the three samples tested for 6-MAM had Q values of 66, 59, and 47, well below the threshold for reporting a positive.

Conclusion

12. Testimony by Criminalist Casey regarding 6-MAM findings in the samples tested at the State lab are not based on sufficient facts or data, the testimony is not the product of reliable principles and methods; and the Criminalist Casey has not reliably applied the principles and methods to the facts of the case. Accordingly, the testimony cannot be admitted as it would only serve to confuse the jury to the prejudice of Mr. Zhukovskyy.

Wherefore, Mr. Zhukovskyy Respectfully requests this Honorable Court:

- A. Exclude testimony regarding 6-MAM findings from the NH State Lab; and,
- B. All other relief deemed just.

Respectfully submitted,

/s/Jay Duguay _____
Jay Duguay
NH Bar Id #20347
NH Public Defender
134 Main St.
Littleton, NH 03561
603 444-1185

Steve Mirkin
NH Bar Id #1771
NH Public Defender
485 Rte 10
Orford, NH 03777
603 3834440

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing has been forwarded this 22nd day of July, 2022, to John G. McCormack, Esq., Coös County Attorney, and Scott Chase, Esq. and Josh Speicher, Esq., Assistant Attorneys General.

/s/Jay Duguay _____
Jay Duguay