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Ms. King,

This formal complaint is written to Nicole Roehm who is the Administrator of the Division of Forensic Sciences (DFS) at the Wisconsin Department of Justice (DOJ) about the testimony of Lisa Treffinger in the case of WI v. Zachariah Anderson. This testimony is publicly available on YouTube (beginning around the 5:14:00 mark of [this video](#)) and the streaming of her testimony can, and should, be observed. It was provided to me by a lawyer/blogger who asked my opinion of the testimony for his research. After reviewing her videotaped testimony, I had several serious quality concerns which I determined needed to be reviewed by the laboratory quality team.

Normally, a complaint about quality concerns would be directed to the quality assurance manager at a specific crime laboratory. It is noted on the DOJ DFS website that there is a specific bureau in place to control and preserve efficient quality within the laboratory known as the Quality Assurance Bureau (QAB). However, the search for a direct name, phone number, and email for the QAB was unsuccessful. This bureau is meant to uphold their quality statement which is¹:

¹ [Quality | Wisconsin Department of Justice \(state.wi.us\)](#)

Division of Forensic Sciences Quality Statement

To achieve and maintain accreditation under the international standard "General Requirements for the Competence of Testing and Calibration Laboratories" (ISO/IEC 17025), a forensic science accrediting body's supplemental requirements, and all other statutory, regulatory standards required to provide forensic services, and to use and support technically sound standards and guidelines of the Organization of Scientific Area Committees (OSAC) registry as applicable.

Quality Support Goals

The QB works to uphold goals within the system of quality established by the DFS to:

- Provide high quality error-free forensic analysis which is able to withstand rigorous challenges;
- Provide impartial reporting of scientifically accepted forensic analyses;
- Maintain the integrity of submitted evidence by protecting it from loss, deterioration, and contamination;
- Provide timely forensic services to the criminal justice system in the State of Wisconsin;
- Ensure DFS employees are trained in the skills necessary to perform their work;
- Ensure continual improvement of the quality system;
- Fulfill the DFS quality statement.

The last two quality support goals listed are meant to make sure quality control and assurance are reviewed, maintained, and updated if required. Though, when I attempted to find contact information for this bureau, it was not publicly available which defeats the goal of continual improvement of the quality system if complainants have no direct line of communication on laboratory product. The only contact information available for the DFS are phone numbers for each laboratory location such as the Milwaukee laboratory, which number I called and was transferred between three different people over a 10-minute period of interrogation by laboratory staff. They asked me what my interest in the laboratory was, where I was located, what agency I worked for, and to what my complaint pertained. None of those questions were appropriate, warranted, or germane to the inquiry.

After 10 frustrating minutes, I was provided with the email address kingeml@doj.state.wi.us. I was provided the email, with no name of the person who would receive that email or what their title was within the laboratory. I had to investigate this, on my own, after the call. In my research, I discovered Ms. King is the Forensic Sciences Director and not the Quality Assurance Manager. The difficulty I had obtaining the information to submit a complaint is unacceptable and something that should be investigated in and of itself as a quality matter.

This complaint is about the testimony of Lisa Treffinger offered in the case of *Wisconsin v. Zachariah Anderson*. Upon review of her testimony, Lisa Treffinger reports she took a position in the quality assurance program as a specialist. With such a position, she should certainly be interviewed about her sworn statements in the above-mentioned case and should not be involved in the investigation of this quality complaint.

Ms. Treffinger made several misstatements and overstatements of the tests she performed and the data she reported in the Anderson case. She makes statements when prompted, that use the phrase, "reasonable degree of scientific certainty," which has no meaning in science and the

use of which has been recommended against.² She goes on to say she can determine the source of the DNA generally by completing testing and provided evidence though this is one of the first limitations addressed by Peter Gill in the publication *Misleading DNA Evidence: Reasons for Miscarriages of Justice*.³ The source of crime scene DNA is unknown and unknowable. Source attribution for crime scene samples has been largely abandoned in forensic DNA for more conservative methods such as Bayes Theorem and the likelihood ratio. Source attribution is a victim of the uniqueness fallacy and misconstrues the meaning of the weight of the comparison. The random match probability nor the likelihood ratio have any correlation between the number of people on the planet, and so when either number exceeds the number of people on the planet, that does not mean the DNA profile trait combination is unique to that person. Though we might expect a random match to an evidence DNA profile to be a rare event, rare events happen. Source attribution suggests the chance of a random match is zero, and that is not the case.

1.2.1 "Trace-DNA" Evidence: Statement of Limitations (Gill, 2001)

This is the "starting" position:

1. Although a DNA profile has been obtained, it is possible neither to identify the type of cells from which the DNA originated, nor to state *when* the cells were deposited.
2. It is not possible to make any conclusion about *transfer and persistence* of DNA in this case. It is not possible to estimate when the suspect last wore the [watch],² if it is his DNA.
3. Because the DNA test is very sensitive, it is not unexpected to find mixtures. If the potential origins of DNA profiles cannot be identified, it does not necessarily follow that they are relevant to this case, since transfer of cells can occur as a result of casual contact.

The definition of "trace-DNA" will encompass a large proportion of crime samples that are currently processed within DNA laboratories. It will include

²This statement was originally used in relation to DNA evidence found on a watch found at a crime scene.

² National Institute for Standards and Technology. National Commission on Forensic Science. *Recommendations on Use of the Term "Reasonable Scientific Certainty" (Adopted at NCFs Meeting #9 – March 22, 2016)*.

³ Gill, P. (2014) *Misleading DNA evidence: Reasons for miscarriages of justice*. Amsterdam etc.: Elsevier.

Lisa Treffinger fails to correct, and in fact confirms with the prosecuting attorney, that her results can be stated within “the standard of scientific certainty” in the event a question is asked, and her scientific opinion aligns with what is being implied or questioned. From the National Commission on Forensic Science (NCFS) within NIST (National Institute of Standards and Technology), a paper titled "Testing Using the Term Reasonable Scientific Certainty" was released⁴. This paper discussed the many issues involved when using this blanket term such as its misleading guidance, non-scientific foundation, lack of specificity, and the term’s criticism from academic and policy writing. This terminology is outdated and was not originally intended to be within the court system to verify scientific knowledge in expertise within criminal cases.

The words “reasonable” degree and scientific “certainty” should not be part of any scientific explanation or presentation. These are words suggested to scientists for lawyers as part of legal advocacy. Nothing is 100% in science and therefore using phrases like “scientific certainty” are misleading to jurors and laypeople who are unaware of the limitations and error rate of the science being questioned. No human endeavor is without error and without limitations. Not correcting the attorney when she he stated that the term a reasonable degree of certainty was a “standard” was error. “Reasonable degree of scientific certainty” has no meaning in science. It may very well be a legal standard, but not a scientific standard, and Treffinger is not a lawyer at liberty to comment on legal standards.

For all the pieces of hair evidence tested, she stated that they matched Rosalio Gutierrez without providing a statistic or likelihood ratio to give weight to the comparison. This makes the jury believe the hairs, toothbrush, and other items of evidence where source is attributed are undoubtedly belonging to a specific person because they are unaware of any statistics that state otherwise. Even if we believe that random matching of attributes would be rare, we never rule out that the DNA profile could be from a randomly selected unrelated person.

The piece of evidence referred to as W1 was known to be the swabbing of a doorknob and when questioned by the attorney about the source-level attribution of the DNA from the swab, Lise Treffinger said “I believe this was a touch DNA swab”, this testimony also exceeds the limits of the testing performed by Treffinger, as stated by Gill more than 20 years ago. The cellular source of the DNA profile recovered from an item is unknown and unknowable. On several occasions, Treffinger refers to the source of the DNA profile as “skin cells”, or in the case of the cell phone swab, Z1 “touch swab” of cell phone as “skin cells.” First, based on the testing that was performed in this case, they offer no information regarding whether the DNA from item Z1 is the result of a “touch” or a sneeze or some other means of transfer. Second, the testing performed in this case cannot provide information regarding the cellular source of a DNA profile, even when serological results are considered. A telltale sign that this is not a scientific opinion based on sufficient facts or data is that it is not contained in the written report Treffinger produced. Opinions included in the report and notes from her testing would be technically reviewed, administratively reviewed, and subject to the quality requirements of accreditation and the Federal Bureau of Investigation. Opinions not included in the report are not subject to quality

⁴ [Testimony Using the Term “Reasonable Scientific Certainty” \(justice.gov\)](https://www.justice.gov/ncfs/testimony-using-the-term-reasonable-scientific-certainty)

review. As such, they should not be offered as evidence. In this instance, Treffinger's opinion was pure speculation.

Treffinger also answers in an affirmative about events that could have caused someone's DNA to be on an item. While it may be appropriate to educate the jury on research regarding transfer, persistence, prevalence and recovery of DNA, those descriptions should not be case specific circumstances or evidence. Treffinger confirms she believes that the cells which are responsible for the DNA are "skin cells" or "blood" but does not provide the basis for her opinion. In fact, no serological data or result can inform a DNA analyst of these things. Her casework training and experience would not be sufficient to inform on such an opinion as the one offered here. She makes statements for several items that, "Rosalio Gutierrez is the source of the blood," on those items. She is connecting dots and making associations that are the province of the trier of fact. Screening tests indicate the presence of peroxidase activity, not blood. The HemaTrace test detects the presence of human hemoglobin but also reacts with ferret blood. Lisa Treffinger performed a comparison of DNA profiles from several items of evidence to the DNA profile of Rosalio Gutierrez, but opining on the source of the DNA profile as blood and opining that the source of the blood was Rosalio Gutierrez was completely improper. I would ask the lab to review what actually is reported in her report to see how the statements made in testimony differ. The reason these statements aren't included in the report is because it's an opinion that goes a step too far and exceeds the information modern testing can provide. The inclusion of source attribution statements in her report is problematic enough, but this coupled with the attribution of the blood to Rosalio Gutierrez is egregious. The reason this opinion was not included in her report, not reviewed by her peers, and not consistent with the quality standards of the FBI is because these are not scientifically supported statements.

She makes other statements that exceed her expertise, like using bleach to clean a car. Her responses to that line of question were purely speculative and based on no scientific evidence, tests, or data.

The most serious misstatement during the DNA testimony were related to item A1. First, she states that what was observed for item A1 was so small, it was the size of a pinhead, so no serological testing of any kind was performed on that item. She speculates that "given the color, I would say that it would be blood." This is completely inappropriate knowing the extensive number of substances that can react with a screening test for blood which can also have the same color and appearance as blood. Second, there are many kinds of "blood" that don't come from human people that would react with a screening test for blood. If this were sufficient scientifically to opine that a stain is blood, there would be no need for serological testing in any case. Scientists can provide opinions using reliable methods and based on sufficient facts or data to case evidence. Treffinger's opinion that A1 was blood was based on no scientific tests, no scientific data, it was pure opinion and would never satisfy the legal standards that govern scientific evidence in US courts. She appeared to use a process of elimination approach along with the physical appearance of A1, and proceeded to offer the opinion that the DNA on item A1 came from the blood of Rosalio Gutierrez. In an email with Angelina Gabriel (spelling unknown, I do not have a transcript) she previously recognizes, in writing, that she "could not

confirm A1 was blood.” The prosecutor asks her why her opinion here today differs from what she expressed in her email and her justification was that Ms. Gabraille “didn’t ask my opinion.” In science, an analyst's personal opinion does not matter. Under Wisconsin Law, an expert can offer an opinion under 907.02,

(1) If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if the testimony is based upon sufficient facts or data, the testimony is the product of reliable principles and methods, and the witness has applied the principles and methods reliably to the facts of the case.

(2) Notwithstanding sub. (1), the testimony of an expert witness may not be admitted if the expert witness is entitled to receive any compensation contingent on the outcome of any claim or case with respect to which the testimony is being offered.

Treffinger testified that “My opinion is that it was blood,” when describing the possible cellular origins of item A1. This was based on no testing, no facts, no data. It was based only on the appearance of the stain. That is pure speculation. She further stated that, “skin cells don’t give a robust profile,” which is completely, scientifically untrue and that as to item A1, “It is my opinion that it was blood.” I have never, in my 16-year career, witnessed a DNA analyst extend so far outside of their expertise. The renown scientist [Dr. Henry Lee](#) was just personally sued in the state of Connecticut for offering an opinion that a particular stain was blood without any proof that he performed any testing to support that opinion. Here, this witness freely admits it. This is certainly a violation of the ANAB Guiding Principles and any other ethical codes this analyst may be bound by. The evidence presented at the trial of Zachariah Anderson was misstated and overstated in a very serious and unscientific manner.

Immediate steps should be taken by this laboratory to review the testimony of Lisa Treffinger in this case and other cases. Retraining should be required for this analyst and any other analyst from the State of Wisconsin laboratory system laboring under these misconceptions. Attorneys for both parties should be notified of the substance of this complaint, the subsequent investigation and remedial actions taken.

Sincerely,

Tiffany A. Roy