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Affidavit of Michael J. Spence, Ph.D. (January 30, 2017), filed with the Oklahoma Court of Criminal Appeals

Ten-page notarized affidavit of a forensic DNA consultant (former Indiana State Police forensic biologist; over 800 cases reviewed). Paragraph 7: the laboratory's own quantification report shows male DNA on swabs 17Q3 and 17Q4, contrary to the analyst's testimony that there was none. Paragraph 8: the analyst testified Mr. Holtzclaw was excluded from all four fly swabs, while her own report called the 17Q2 comparison inconclusive. Paragraph 15: the pants and belt were packaged in one bag, and the collecting detective placed his bare hand inside the bag on video.

Source: Exhibit to Appellant's filing in Holtzclaw v. State, No. F-2016-62 (Okla. Crim. App.). Public court record.

County of Dona Ana

State of New Mexico

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AFFIDAVIT OF MICHAEL J. SPENCE, PH.D.

I, Michael J. Spence, Ph.D., declare and state as follows:

I. Introduction and Summary of Qualifications

1. I received my Bachelors of Science and Masters of Science degrees from the University of Texas at El Paso in 1983 and 1985, respectively. In December 1990, I earned my doctorate degree in Molecular Biology from New Mexico State University. My postdoctoral work focused on areas of cancer research, conducted at the University of Vermont, Department of Molecular Genetics, in Burlington, Vermont, and the Boise V.A. Medical Center, in Boise, Idaho.
2. From May 2003 through May 2007, I trained and worked as a Forensic Biologist with the Indiana State Police (ISP), Evansville Regional Laboratory. Working for the ISP, I examined over 100 criminal cases involving DNA. I departed Indiana and returned home to Las Cruces, New Mexico. For the next eight months, I served as the interim Technical Manager of Forensic Testing Laboratories, a start-up forensic DNA analysis company.
3. In February 2008, I launched my consulting company—Spence Forensic Resources. During my nine years of service as an independent forensic DNA consultant, and my four-year tenure at the ISP, I have reviewed over 800 cases involving the investigation of forensic biology and DNA. These cases have originated from over sixty different forensic DNA laboratories located in twenty-seven U.S. states. I have been qualified and I have testified as an expert DNA witness, both for the prosecution and the defense, in eighty-three trials and other proceedings in New Mexico, Arizona, Indiana, Maryland, Colorado, Florida, South Carolina, Michigan, and Texas. My Curriculum Vitae has been provided.
4. In April 2016, this case, *Daniel Holtzclaw v. State of Oklahoma*, was first brought to my attention. Appellate counsel representing Officer Holtzclaw expressed an interest in utilizing my expertise in forensic biology/DNA to examine various documents. These documents included, but were not limited to the following: Forensic Examination Reports—released by the Oklahoma City Police Department (OCPD) Crime Laboratory, analyst bench notes, worksheets from evidence examination, DNA extraction and quantification, electropherograms—which are graphical printouts of the DNA data, population statistical calculations, law enforcement investigative reports, and trial testimony transcripts and evidence. After completing my examination of these documents, I was asked by counsel for

the defense if I had an opinion as to whether the State's DNA analyst had testified in a manner which was consistent with the forensic biology DNA data. Also, in recognition of the fact that no DNA expert testified for the defense, I was asked whether or not additional facts could have been presented, for clarifying the position of the defense. My assessments are summarized below.

II. Essential scientific components facilitating the conviction of Officer Holtzclaw

5. The scientific results promoting the conviction of the defendant, Officer Daniel Holtzclaw, are composed of data that have been reported from four evidence items. **Item 17Q1, Item 17Q2, Item 17Q3, and Item 17Q4**, were all swabs collected from the inner and outer surfaces of the fly located on the dark blue uniform pants collected from Officer Holtzclaw. A complaining witness, Ms. Adaira Gardner, made a statement to investigators, alleging that she had been digitally and vaginally assaulted by the defendant—at about 9:00 p.m., on June 17, 2014. The alleged vaginal assault last for approximately 10 minutes. The presence of DNA from Ms. Gardner within the results from the above-listed evidence swabs is not in dispute. Beyond the presence of her DNA, a multitude of perplexing observations were also made. Meanwhile, the scientific inaccuracy of the courtroom representations of those results was even more troubling.

III. Flaws in the scientific information presented during the trial of Officer Holtzclaw

6. **Potential for DNA Transfer:** The OCPD Crime Lab analyst, Ms. Elaine Taylor, was questioned about the potential for biological material transfer to the fly on the uniform pants. During cross examination, Ms. Taylor was specifically asked about incidental, non-sexual DNA transfer events. She responded as follows (at pg. 4078, lns. 4-9): **"...anything is possible and that what I found was biological material on Mr. Holtzclaw's pants that was consistent with Ms. Gardner. And how it was put there or how it got there. I wasn't there. I didn't see what happened, so I can't really tell you exactly what happened."** Further into her testimony, counsel for the defense—again— was very specific in asking (at pg. 4082, ln. 25 and pg. 4083, ln. 1): **"But certainly you agree with me that it could have been a secondary transfer."** Ms. Taylor responded by stating (at pg. 4083, ln. 6): **"I can't disagree with that."** Beyond this brief exchange, defense counsel representing Officer Holtzclaw made little effort to emphasize the pivotal reality of DNA transfer events. Instead, Ms. Taylor was allowed—without objections—to elaborate on a multitude of flawed, illogical commentaries. These commentaries contradicted the findings from a multitude of peer-reviewed, published research efforts—centering on secondary and tertiary DNA transfer events. Selected review articles and other specific publications are cited in this affidavit (**See Section 18**). During Officer Holtzclaw's trial, Ms. Taylor's testimony also repeatedly misrepresented the scientific evidence and distorted the scope of the actual results. These issues are summarized below.

7. **Inaccurate Testimony, Suggesting the Absence of Male DNA:** The OCPD analyst was allowed—without challenges from the defense—to testify that male DNA was absent from **Item 17Q3** and **Item 17Q4**. The trial transcript shows (at pg. 4072, lns. 19-25) that Ms. Taylor was asked by the prosecution: **“Did you find evidence of male DNA at either one of those locations...?”** Ms. Taylor: **“There’s no Y so the answer is no.”** The prosecution: **“There’s none there. So even though Officer Holtzclaw was wearing these pants, his DNA is not inside them; correct?”** Ms. Taylor: **“That is correct.”** This testimony was inaccurate and prejudicial. First, refer to the data sheet entitled: **“qPCR Report For SD14-273”**. This document reveals the fact that 0.0102 nanograms/microliter male DNA was recovered from **Item 17Q3**. The data sheet also reveals that 0.0117 nanograms/microliter male DNA was recovered from **Item 17Q4**. Thus, Ms. Taylor’s testimony to the jury, suggesting the presence of only female DNA, was entirely inaccurate.
8. **Inaccurate Testimony, Excluding Officer Holtzclaw, and Misrepresented Claims of Vaginal Secretions:** In addition to the incorrect statements regarding the female/male DNA ratios on **Item 17Q3** and **Item 17Q4**, Ms. Taylor was allowed—without challenges—to testify that Officer Holtzclaw was excluded as a possible contributor to all four evidence swabs—**Items 17Q1, 17Q2, 17Q3, and 17Q4**. Refer to the trial transcript—direct examination testimony from Ms. Taylor (Beginning on Pg. 4058, Ln. 10, through the end of Pg. 4073). Referring specifically to Page 4073 Lines 5-24—the transcript reads: Prosecutor: **“Does that surprise you as a DNA forensic analyst, that the person actually wearing the clothes, their own DNA is not on them?”** Ms. Taylor: **“It does, but contact DNA is very tricky sometimes. And sometimes the individual that is the wearer of the item of clothing, they give it to someone else to wear. And either one of those people could potentially be the major person in that profile.”** Prosecutor: **“And to be clear, you don’t have any evidence that Officer Hol—somebody else was wearing Officer Holtzclaw’s pants?”** Ms. Taylor: **“I do not.”** Prosecutor: **“All we know is he was wearing these pants and his DNA is not on his pants?”** Ms. Taylor: **“Yes, which is very difficult to try and explain.”** Prosecutor: **“Does the fact and this evidence also contribute to your opinion about when discussing contact DNA, it is much more likely for it to be transferred if the epithelial cells are contained in a liquid such as vaginal fluid?”** Ms. Taylor: **“That’s a very good possibility.”** These assessments of the scientific results were enormously inaccurate and prejudicial. For starters, this testimony contradicts the **Forensic Examination Report**, prepared and released by Ms. Taylor on November 12, 2014. Refer to the section entitled **“Results of Analysis”**, **Page 7 of 15**. The 8th paragraph begins as follows: **“The DNA profile obtained from Item #17Q2A (pants, right fly swab) is a mixture.”** Further into the 8th paragraph Ms. Taylor reveals that: **“The minor component is not suitable for comparison purposes due to insufficient data.”** When comparing DNA from a known person to a DNA mixture profile, four possible outcomes can be reported: 1) A DNA match. 2) The known person cannot be excluded. 3) The known person is excluded. 4) The DNA results

are insufficient. Thus, the comparison is inconclusive. Although Ms. Taylor's inconclusive—assessment for **Item 17Q2A**, was documented in her report, she testified to the jury with a different assessment—excluding Officer Holtzclaw. In order to assure clarity, a match confirms the presence of DNA originated from a known source. Clearly, Officer Holtzclaw's DNA does not qualify as a match to the DNA from any of the above-listed swab from the pants. Similarly, it would have been inappropriate to report the 2nd possible outcome—that that the accused cannot be excluded as a contributor to any of the DNA mixtures. Through sworn testimony—documented on **Page 4073** of the trial transcript, Ms. Taylor stated—unconditionally—that Officer Holtzclaw was excluded as a possible contributor to all four evidence swabs—**Items 17Q1, 17Q2, 17Q3, and 17Q4**. This testimony solidified her opinion that none of the genetic material within any of the observed DNA mixtures could have come from the accused man. In doing so, Ms. Taylor contradicted her correct assessment of an inconclusive DNA comparison—which was documented in her November 12, 2014 report. Any statement that a DNA comparison is inconclusive merely acknowledges that genetic information is present—but the specific comparison does not yield a scientifically reliable conclusion. Perhaps more alarming than Ms. Taylor's contradictory reversal, during testimony, was her added claim of: **“...a very good possibility”** regarding **“...transfer of epithelial cells contained in a liquid, such as vaginal fluid...”** (refer to the end of **Page 4073**). Such statements exemplify the interpretive by-product of junk science (For clarification, refer to the observed allele descriptions in **Sections 10-13 of this affidavit**).

9. **No Vaginal Secretions on the Key Evidence Items:** In forensic biology/DNA testing facilities across the U.S., there is only one routinely employed, presumptive approach toward assessing the potential presence of vaginal secretions. Crime lab analysts can assess the surfaces of various evidence items, using multiple-wavelength light sources. Alternate Light Source (ALS) instruments are routinely used to provide clues (visible fluorescence), signaling the presence of stains that might be seminal material, saliva, vaginal secretions, other body fluids, or other substances. During the investigation of Officer Holtzclaw's uniform pants, the OCPD analyst closely inspected the fly area of those pants, utilizing nothing more than an ambient light source. It is important to note that the jury was repeatedly presented with speculation that vaginal secretions existed in this precise location of interest. In front of the jury, Ms. Taylor testified as follows (at Pg. 4066, lns 18-19): **“A young woman of her age would be very likely to have quite a bit of lubrication”**, and **“...that lubrication could transfer cells”** during a rape. Within the trial transcript, it was astounding to see Officer Holtzclaw's defense counsel offer no objection to this ill-conceived testimony. Furthermore, defense counsel made no tangible effort to emphasize the glaring lack of resources utilized by the analyst to detect remnants of vaginal fluids. Most important, defense counsel chose not to question Ms. Taylor's failure to identify the vaguest hint of any staining at or near the fly/crotch area of Officer Holtzclaw's uniform pants—using the lab's ambient light source. Note that Ms. Taylor did not utilize any reliable method for

identifying bodily fluids on Officer Holtzclaw's uniform pants. Consequently, when the OCPD analyst stated that the source of DNA was probably vaginal fluids, this was speculation well beyond the capabilities of the available scientific tools. Due to the fact that these enormous misrepresentations of the science were not challenged by contrary testimony from a defense expert, the prosecution was able to capitalize on these misrepresentations. During closing arguments (at page 4037, lns.10-13), the prosecutor brazenly speculated that biological material from Ms. Gardner: **"...from the walls of her vagina was transferred in vaginal fluids onto the outside and inside—not of his pockets, not of his cuff, not where he sits, but of the exact location she says his penis came in contact."** Again, this commentary was presented in the absence of any scientific support. Furthermore, such unsupported claims would not have been exposed to the jury—had the defense countered the prosecution's misstatements with accurate rebuttal testimony.

10. **Alleles Observed Within the Item 17Q1 DNA Mixture:** The DNA mixture profiles from each evidence item were worthy of scrutiny—but were never adequately clarified for the jury. **Item 17Q1** was comprised of 65 genetic markers (alleles). Interestingly, only five of Officer Holtzclaw's 30 alleles had dropped out, to a level below the limits of detection. In the event that we assume the presence of DNA from both Adaira Gardner and Daniel Holtzclaw on this swab, 23 unaccounted for alleles were observed—alleles that could not have originated from either Gardner or Holtzclaw. This observation begs the question: From whom did these stray alleles originate? A logical answer to this question could have been Officer Holtzclaw's confirmed female companion—Ms. Kerri Hunt. Alternatively, note that the dark blue uniform pants were collected at 6:00 p.m. on June 18, 2014. This was after Officer Holtzclaw had allegedly assaulted Adaira Gardner the previous night, raped and orally sodomized a 2nd female victim, and then orally sodomized yet another female victim. Note that all of this activity reportedly occurred across the surface of the unzipped fly, on a pair of pants. It is beyond comprehension that the 23 unaccounted for alleles observed on **Item 17Q1** exclude the girlfriend—Kerri Hunt. They also exclude the alleged 2nd victim. Similarly, this collection of stray alleles excludes the alleged 3rd victim of the day. Despite the allegations that this abundance of criminal activity occurred over the course of just five hours, defense counsel for Officer Holtzclaw did little to emphasize the gravity of these improbable events to the jury. Furthermore, little effort was made to demand reasonable scientific explanations from the OCPD analyst. In addition to the fact that the presence of male DNA contradicted Ms. Taylor's sworn testimony, the opportunity was lost to ask: **"From whom did these stray alleles originate?"** Indeed, at least one entirely unknown contributor was present on **Item 17Q1**. The circumstances described above created an enormous counter-argument to the prosecution's misguided assessments that secondary DNA transfer events were unlikely—coupled with the misguided conclusion that Ms. Gardner's contribution to the DNA mixture ***must*** have originated from vaginal secretions. Mr. Holtzclaw's jury would have benefitted from hearing these issues addressed by a credible DNA expert, or at least through vigorous cross examination of Ms. Taylor.

11. **Alleles Observed Within the Item 17Q2 DNA Mixture:** In the event that we assume the presence of both Adaira Gardner and Daniel Holtzclaw on **Item 17Q2**, **14** unaccounted for alleles were present—alleles that could not have originated from either Gardner or Holtzclaw. Again, emphasis on this fact would have encouraged the jury to inquire: “**Who contributed these unaccounted for alleles?**” They were not from Kerri Hunt. Nor were they from either the 2nd or 3rd alleged victims. The question was never addressed.
12. **Alleles Observed Within the Item 17Q3 DNA Mixture:** In contradiction to Ms. Taylor’s testimony, the genetic material from **Item 17Q3** included male DNA. In addition to the presence of a small quantity of DNA from Ms. Gardner, seven alleles could not have originated from her. All but one of these allelic signals was classified by the OCPD analyst as ‘**below threshold**’, indicating very weak allelic signals. Interestingly, all but one of these weak signals were consistent with the DNA profile from Officer Holtzclaw. This fact—again—exposes the disingenuous testimony that the results qualify as an outright exclusion, rather than inconclusive data.
13. **Alleles Observed Within the Item 17Q4 DNA Mixture:** The DNA mixture observed on this item also included a male contribution. In addition to the presence of a small quantity of DNA from Ms. Gardner, ten alleles could not have originated from her. Interestingly, all but one of these allelic signals were consistent with the DNA profile from Officer Holtzclaw. This fact—again—exposes the disingenuous suggestion that the results qualify as an outright exclusion of the defendant.
14. **Quantifying the Recovery of DNA From the Evidence:** Although no preliminary test results support the presence of vaginal secretions, perhaps a substantial yield of female DNA could justify speculation that vaginal secretions might be genuinely present. However, only modest quantities of DNA from Ms. Gardner were observed on the fly swabs. Although it is true that relatively low volumes of vaginal secretions can indeed provide an abundance of cells—and high-yields of DNA—no such DNA yield results were reported from **Item 17Q1**, **Item 17Q2**, **Item 17Q3**, or **Item 17Q4**. During the investigation targeting Officer Holtzclaw, **Item 6A**, a swab from a car door handle, provided a DNA yield that was relatively equal to that observed for **Item 17Q1**. Meanwhile, the **Item 6A** DNA yield was actually 4 to 4.5 times greater than the DNA recovered from the other three fly swabs. Logic clearly dictates that the DNA yield from **Item 6A** originated from handling/contact activity that is typical of door handles on vehicles. My experience from the examination of over 800 DNA cases supports that fact. Again, without the benefit of expert forensic biology/DNA testimony on behalf of the defendant, the State’s lab analyst was never compelled to report to the jury the DNA yield results from the various items tested throughout the course of the Holtzclaw investigation. Furthermore, the jury never heard any references to DNA yield issues at all—relevant to the prosecution’s misguided arguments that vaginal secretions may have been present near the crotch/fly area of the uniform pants.

15. **Mishandling of the Uniform Pants:** At the June 18, 2014, interrogation of Officer Holtzclaw, investigators secured the uniform pants at about 6:00 p.m. At the beginning of this process, video footage showed Detective Gregory placing his bare hand into the evidence bag. The detective proceeded to push on the bottom of the bag—in order to fully open it. Officer Holtzclaw could then be seen handling his utility belt, his cell phone, his pockets, his wallet, and his keys—all prior to unclasping his belt, unzipping his fly, and removing his pants. In addition to the obvious DNA transfer issues associated with this order of events, both the belt and the pants collected from Officer Holtzclaw were placed in one bag. Consequently, these items were stored together, transported together, and remained together, until the moment that the lab analyst accessed the contents of the evidence bag. When Ms. Taylor removed the items for testing, she failed to collect any ‘**substrate control**’ samples from either the uniform pants or the belt. Substrate controls involve analysis of surfaces where—based upon the allegations that have been described—there are no expectations of incriminating biological materials, and no expectations of incriminating DNA. Referring only to the pants as an example, one substrate control sample could have been collected from the waistband—where the wearer might grasp them to pull them off. A second and a third substrate control could have been collected from each of the two front pockets. It is certainly troubling to find DNA—even such a small quantity of DNA—from an alleged victim, on the fly area of pants collected from a suspect. However, if remnants of her DNA are also found in relatively incidental areas, such as the waistband and pockets, this supports the probability of inadvertent transfer events.

IV. Scientific Support That Went Unutilized, During the Defense of Officer Holtzclaw

16. **Principles of DNA Transfer:** Trace DNA, or low copy number (LCN) DNA—is found everywhere. Today’s remarkably sensitive technology can detect trace quantities of DNA on a multitude of surfaces found within any crime scene. The same holds true, regarding surfaces within any residence, or workplace—where no crime has occurred. Over a century ago, Professor Edmond Locard established the world’s first forensic science lab for the Lyons Police Department. Dr. Locard postulated the importance of transfer events, in the context of criminal case investigations. Dr. Locard’s ideas evolved into the **Locard Exchange Principal**—stating that “**Every contact leaves a trace.**” Locard’s time-tested Principal became universally accepted forty years before James Watson and Francis Crick first described the accurate structure of DNA. Locard’s Principal applies more appropriately to modern DNA analysis than its application toward the detection of any other form of trace evidence. Consider the quantities of recovered DNA. Today’s state-of-the-art DNA detection technology can produce a full DNA profile from less than ½ of one billionth of a gram of DNA. In order to recover this much DNA, a crime lab analyst needs fewer than 100 cells. A single drop of human blood contains approximately 400,000 DNA-containing cells. A single drop of saliva contains approximately 500,000 salivary epithelial cells. A single drop of semen

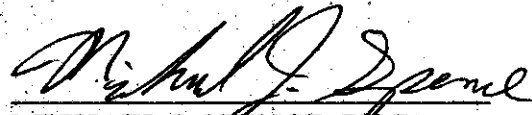
contains approximately 3 million spermatozoa. Most applicable to the investigation into allegations targeting Officer Holtzclaw, the average human being, head-to-toe, sheds approximately 36,000 skin cells, during the course of a single minute.

17. **The Remarkable Sensitivity of DNA Testing:** A jury of non-scientists might inquire: Exactly how much is 1 ng (nanogram)? Visualize the amount of material in a small packet of artificial sweetener. This is one gram of material. Imagine setting aside $1/1000^{\text{th}}$ of this material and disposing of the remainder. The tiny pile of material set aside would weigh one milligram. Now imagine setting aside $1/1000^{\text{th}}$ of this milligram and discarding the remainder. You now have one microgram of material, which is 1 million times less than the contents of the original sweetener packet. This amount of material cannot be seen without the use of a microscope. By some means, you must now set aside $1/1000^{\text{th}}$ of your microgram of artificial sweetener, and discard the remainder. This results in one nanogram of material, or one billion times less than the packet. It is important to keep in mind that the astonishing sensitivity of this technology does not diminish the fact that we are indeed working with a remarkably tiny mass of DNA. Such small quantities of DNA can be inadvertently transferred through a multitude of casual, incidental, every-day events.
18. **Scientific Literature Supporting the Reality of DNA Transfer Events:** It is important to recognize that DNA typing, by itself, can never tell us how the DNA arrived where it was detected. In a 2009 article, "Transfer Theory in Forensic DNA Analysis" published in *Law Officer* (a journal for individuals dedicated to law enforcement) forensic biologist Suzanna Ryan instructed as follows: "Obviously, the inadvertent transfer of DNA is an area that should be further studied. Since so many of the available journal articles present conflicting information, more work is needed to see how likely it is to both transfer and detect DNA in a secondary or even a tertiary fashion, especially considering the sensitivity of modern forensic DNA analysis." In December 2010, world renowned authorities on forensic trace DNA—van Oorschot, Ballantyne, and Mitchell—published a review in the journal, *Investigative Genetics*. In the section on "Transfer Issues" they argued: "Greater effort needs to be made by police/crime investigators to investigate how a DNA sample arrived at the location where it was found, as well as by scientists to better understand the impact of activities on the relative amounts of DNA from particular sources at a crime scene. In some instances, it is possible to derive the chain of events that led to a trace DNA sample being present at a crime scene - for example, prior visits to the scene or the known use of an item. Awareness of these variables, and their impact on transfer events, will assist in weighting the likelihood of proposed alternative scenarios." Also in 2010, Allan Jamieson and Georgina Meakin of The Forensic Institute in Glasgow, UK, published an article in *The Barrister Magazine* entitled "Experience is the Name That Everyone Gives to Their Mistakes" in which they cautioned us as follows: "The examination of

evidence for handler DNA can reveal DNA of people who have, or have not, handled the item; the stronger profile may, or may not, be the person who last handled the item; an inference of direct contact between an individual and the item may or may not be supportable, depending on the circumstances of the case. In other words, we did not know enough to make any sensible scientific judgments as to how DNA came to be on an item.” Later, in their article, Jamieson and Meakin pointed out the following: “Frequently, the underlying hypothesis is that touching, or direct contact, is a more likely scientific explanation for the finding of a DNA profile on an item than indirect contact. This is to the extent that it may be described as providing ‘extremely strong’ support for direct versus indirect transfer. In our view, such an opinion on DNA transfer is not supportable based on case experience or on the available scientific research.” In July 2013, Jamieson and Meakin published a more recent review on this vital area of forensic biology/DNA. In *Forensic Science International: Genetics*, the article was entitled: “DNA transfer: review and implications for casework”. In their article’s abstract they write: “DNA-bearing cellular material can come to be on a surface by either direct or indirect transfer. Direct transfer includes contact, but also includes activities within the vicinity of an item that may result in the transfer of DNA directly from an individual without any contact, such as speaking, coughing, and sneezing. Indirect transfer of DNA is when DNA from an individual comes to be on an item via an intermediary surface. It is important to consider indirect transfer in the evaluation of trace DNA in casework.” In the article section entitled Introduction to ‘trace DNA, Jamieson and Meakin continue: “Several different terms have been coined to describe such DNA. For example, the term ‘touch DNA’ has been used, but this can be misleading in two ways: Firstly, such a term infers that the DNA recovered from a surface got there via that surface being touched, but this is usually not known, and secondly, there is a misconception that ‘touch DNA’ can only be detected by LT-DNA (low-template-DNA) techniques.”

19. **In Summary:** During the trial of Officer Daniel Holtzclaw, defense counsel did not question the fact that the sworn testimony from Ms. Taylor contradicted her own case records. The OCPD analyst testified that no male DNA was found on either **Item 17Q3** or **Item 17Q4**. Her records revealed otherwise. The OCPD analyst testified that Officer Holtzclaw was excluded, and could not have contributed DNA to any of the surfaces on the fly of his own uniform pants. This contradicted her inconclusive assessment—regarding **Item 17Q2**—documented in her November 12, 2014 report. These vital contradictions served as a precursor for an illogical and disingenuous assessment of the DNA mixture results—during the prosecution’s closing arguments. The argument emphasized doubts that Officer Holtzclaw could have inadvertently facilitated any secondary transfer of Ms. Gardner’s DNA onto the fly of his uniform pants. The rationale for these doubts was the imaginary absence of male DNA on the fly surfaces, in addition to the reversal from inconclusive to the inaccurate assertion that Officer Holtzclaw should be excluded.

The OCPD analyst and the prosecution collaborated in emphasizing that the source of Ms. Gardner's DNA was most likely from the transfer of vaginal secretions during an alleged penile/vaginal sexual assault. These summarized instances of speculation not only contradicted the scientific results, they defied the logic that wearers typically leave DNA on their frequently used garments. Defense counsel did not question Ms. Taylor—regarding the remarkably modest quantities of DNA recovered from **Items 17Q1, 17Q2, 17Q3, and 17Q4**. This was despite the fact that the analyst testified to the jury, as follows: **"I quantitate it after it's extracted so I don't overload our system. And I can tell you a quantity."** In the event that a forensic DNA expert had been consulted to assist with the scientific defense of Officer Holtzclaw, the jury would have experienced a balance of viewpoints. For example, the jury would have understood that—based upon the scientific literature—the quantities of DNA observed within the samples from the fly of the pants were quite consistent with the expected transfer of epithelial cells during incidental handling events. It is profoundly irresponsible for any scientist to testify that the transfer of vaginal secretions from an alleged victim, to the fly on a pair of pants, is somehow more probable than other mechanisms of DNA transfer. This is especially true when that same scientist offers this speculation—without the benefit of any scientific hint that such secretions might actually be present, and no DNA quantitative data are available to support such questionable forms of speculation.


MICHAEL J. SPENCE, Ph.D.

STATE OF NEW MEXICO)
) ss.
COUNTY OF DONA ANA)

SUBSCRIBED AND SWORN TO before me by Michael J. Spence, Ph.D., on this 30th day of January, 2017.



OFFICIAL SEAL
Irma Blanco
NOTARY PUBLIC State of New Mexico
My Commission Expires 1/7/2019


NOTARY PUBLIC

My Commission Expires: Jan. 7, 2019