

THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION
No. 75-CR-26-3
No. 5:06-CV-24-F

UNITED STATES OF AMERICA,)
Plaintiff,)
)
v.)
)
JEFFREY R. MacDONALD,)
Defendant.)

AFFIDAVIT

Meghan E. Clement, being duly sworn and under penalty of perjury, attests to the following:

1. My name is Meghan E. Clement and I am employed as the Technical Director in the Forensic Identity laboratory at Laboratory Corporation of America, Holdings (LabCorp).
2. I have been employed at LabCorp in the Forensic Identity Department since November 1994. Prior to that, I was employed by the Tarrant County Medical Examiner's Office in Fort Worth, Texas in the Forensic Biology laboratory from March 1991 to November 1994 and before that at the Albuquerque City Police Department in Albuquerque, New Mexico in the Serology section from March 1985 through March 1994.
3. I have been working with DNA in the Forensic arena since its introduction to the field in the late 1980's and have performed and/or participated in the analysis of samples including every type of DNA analysis throughout the years. This includes analysis using restriction fragment length polymorphism (RFLP) testing as well as polymerase chain reaction (PCR) testing. Using PCR testing I have reported results using DQ Alpha/Polymarker kits, VNTR (Variable Number Tandem Repeat) loci, short tandem repeat (STR) loci, including ABI Profiler Plus/Cofiler kits, ABI Identifiler kits, ABI Identifiler Plus kits, ABI Minifiler kits and ABI YFiler kits, as well as analyzing mitochondrial DNA (mtDNA).
4. I have read the affidavit of Tina Delgado, Technical Leader from the Biometrics Analysis Section of the Federal Bureau of Investigation (FBI) as well as having been provided a list of the possible evidence available for DNA testing.
5. I agree with most of the affidavit of Ms. Delgado but feel there is need for additional clarification of a few points raised. First, with the newer kits that have become available over the last 5-6 years; Minifiler, Y Filer and Identifiler Plus, the sensitivity as well as the ability to develop a profile from older and degraded samples has greatly increased. For this reason, it may not be necessary to employ the techniques she describes as low copy number (LCN).
6. Contamination (or a mixture result-DNA from more than one individual) is always a possibility when analyzing evidence, whether it is evidence for touch DNA, old evidence

or new evidence. The validation tests and resulting publications clearly show that even if a mixture is obtained, it may be possible to discern a major profile (major contributor) from a minor profile (minor contributor). It is also possible to subtract out a known profile of a victim from a mixture to deduce an unknown profile.

7. Regarding her statement in ¶10 regarding low copy number (LCN), "Because of these limitations, any results not matching a reference sample cannot be assumed to be exclusionary in the context of a case." is actually true in any case using any type of analysis without further knowledge of the circumstances of the case. Regardless of the analysis performed the results ultimately must be compared to the 'story' or what was reported in the investigation. An unknown profile in and of itself may not be meaningful, but if the investigation shows that an offender was in different locations of a scene and an unknown profile is found in multiple samples from a scene or at multiple locations at a scene it could be extremely meaningful.
8. In assessing the possible evidence available for DNA testing I feel the best approach to examination would be the following: 1) inventory all items to determine if samples and/or stains still remain, 2) attempt to extract DNA from the samples (the extraction method is the same regardless of what kit is used for analysis), 3) quantify the extract to determine a) how much total DNA was recovered and b) if there is indication of male DNA. At this point an assessment can be made and consultations can occur to decide which kit would be the best to use for developing profiles. Since all the victims in this case are female, it may be probative to use Y Filer, which ignores all female DNA, if a sample indicates the presence of male DNA. If upon quantification there is very little DNA present it may be best to utilize the Minifiler kit.

Further, Affiant says not.

Meghan E. Clement
Meghan E. Clement

Sworn to and subscribed before me this, the 16 day of Feb., 2012.

Saintto H. Jones
NOTARY PUBLIC
My Commission Expires: 10-3-15