Michael K. Jeanes, Clerk of Court

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SUPERIOR COURT OF ARIZONA MARICOPA COUNTY

CR2010-126788-001 DT

08/21/2013

CLERK OF THE COURT

JUDGE PRO TEM JERRY BERNSTEIN

D. Pico Deputy

STATE OF ARIZONA

AARON HARDER

v.

DOREEN LYNN HERMAN (001)

W CLIFFORD GIRARD JR. LAWRENCE KOPLOW JOSEPH P ST LOUIS MARK D DUBIEL

UNDER ADVISEMENT RULING

<u>INTRODUCTION</u>

This matter concerns a total of 11 defendants, each charged with Driving under the Influence (DUI) in the City of Scottsdale, Arizona. Each defendant is pressing a series of related issues. Central to these claims is challenging a certain instrument, the Clarus 500 (hereinafter "2003 instrument") used by the Scottsdale Police Department Crime Lab (hereinafter "Scottsdale Crime Lab" or "Crime Lab") to process biological evidence for DUI cases. The State plans to introduce each defendant's biological evidence and test results in each individual case.

Since the challenges raised by each defendant are essentially the same, these 11 cases were joined for a consolidated hearing on these matters. This *Daubert*/Evidentiary hearing Docket Code 926 Form R000A Page 1

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commenced in the Courtroom in December 2012, and concluded in May, 2013. The hearing was conducted over multiple days, lasting a total of about 17 days. In addition, each side was permitted to submit a closing brief to the Court; these were filed on or about July 31, 2013.

ISSUES

- 1. Whether the policy, procedures, methods, instrumentation used and/or actions of the Crime Lab are sufficiently reliable and should therefore be admissible at trial.
- 2. Whether the "2003 instrument" and results from its use are reliable as it was used in the cases at bar and therefore admissible at trial.

FACTS

The Crime Lab routinely utilizes the Clarus 500 (hereinafter the "2003 instrument"), manufactured by Perkin Elmer to process biological samples in DUI cases. The "2003 instrument" is the device or instrument under attack in this matter. It has been identified by its serial number, 650N9042003. Although the Crime Lab also utilizes a different instrument referred to as the "2002 instrument", any information regarding the performance of the "2002 machine" is considered irrelevant for the purposes of this hearing.

Each of the 11 defendants in this matter has been individually charged with violating Arizona's DUI statute(s). Each had a biological sample taken and processed by the Crime Lab. The biological samples were processed by the Crime Lab using the "2003 instrument".

In addition, it should also be noted that testimony was elicited about a number of exhibits that were ultimately not proffered by either side for admittance into evidence or were denied admission into evidence by the Court. Therefore, in reaching this decision, this Court only

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considered those exhibits that were admitted into evidence or adopted by the Court after a Motion for Sanctions was filed by the defense. Exhibits not admitted could not be reviewed or considered.

DISCUSSION

Rule 702 of the Arizona Rules of Evidence states:

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.

Over the course of this hearing, the Court has heard from numerous witnesses, both from the state and defense. The Court has heard from criminalists: Jennifer Valdez, Vincent Villena, and Richard Bond. Also testifying on behalf of the State was Kris Whitman, the Scottsdale crime lab manager. Chester Flaxmeyer, Janine Vasquez, and Lonnie Dworkin also testified for the defense. It should be noted that the attorneys in this case have stipulated that gas chromatography is accepted within the scientific community.

This Court accepts the stipulation that gas chromatography is accepted within the scientific community. The use of gas chromatography is not the issue. In addition, there has Docket Code 926 Form R000A Page 3

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been sufficient testimony for the Court to find that the Crime Lab does have policies and procedures in effect that would be consistent or as a supplement with ISO standards. The issue is whether the methods or actions by the Crime Lab in its daily operations are sufficiently reliable to comply with Rule 702(d) of the Arizona Rules of Evidence.

Ms. Kris Whitman, the Scottsdale Crime Lab Manager, testified during the hearing that the "2003 instrument" from Perkin Elmer was validated by Dr. Kosecki in July, 2009. They have never tried to return the instrument. No significant repairs needed to be done upon delivery and the initial validation. Ms. Whitman accepted or signed off on the validation of the "2003 machine" in 2009.

The 2003 instrument fails to analyze data completely from time to time. If problems arise, the samples are rerun. Mr. Richard Bond, a forensic scientist in the Crime Lab, testified that the instrument is calibrated during the running of each batch. Interestingly, Ms. Whitman, testified that she is not qualified to read chromatographs. Additionally, Ms. Jennifer Valdez indicated that she has no experience in installing software.

No testimony has shown that any of the consolidated defendants' tests were inaccurate. The State, in fact, presented evidence to the contrary. With one possible exception, the Court is not persuaded that any of the named defendants' tests were done improperly. The only possible exception is for defendant Herman. On March 10, 2010, her first test was not validated. A notation indicated that there was a loose cap during the analysis. At a later date, her sample was rerun.

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Ms. Janine Arvizu, an expert from New Mexico, testified for the defense. When questioned about the availability of a second sample that an independent expert could examine, she nevertheless expressed doubt about the reliability of those tests. This Court does not find that particular argument persuasive. She also stated that the ISO standards are not optional within the scientific community. She noted that it is a consensus standard. It is what scientists understand as being necessary to ensure consistent product of reliable worth. She also was skeptical of the shelf life of the calibrators and internal standards used by the Scottsdale crime lab.

The State has presented the argument that if the individual defendants had a basis for questioning the validity and reliability of their results, they could have had the second sample analyzed by an independent lab. The Court finds this argument compelling but for the other factors set forth in this opinion.

The question then becomes an issue of whether the Court can make a ruling on the admissibility of the results of the "2003 instrument" based upon Rule 702 of the Arizona Rules of Criminal Procedure. The Court is presented with the need to make a finding on the reliability of the instrument. The Court of Criminal Appeals of Texas in *Mata v. State*, 46 S.W. 3d 902, 908,(2001) stated:

A trial Court's responsibility under Rule 702 is to determine whether proffered scientific evidence is sufficiently reliable and relevant to assist the jury. The proponent of the scientific evidence must demonstrate by clear and convincing evidence that the evidence is reliable. This is accomplished by showing the validity of the underlying scientific theory, the validity of the technique applying the theory, and proper application of the technique on the occasion in question.

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All blood tests run in the Scottsdale Crime Lab are validated by a second criminalist. When a problem has been observed, the test is re-run and analyzed for accuracy. As was previously indicated, when the "2003 instrument" was put into service, it was validated by Dr. Kosecki, a criminalist in the Scottsdale Crime Lab. According to the testimony presented, the "2003 instrument" has never had to be revalidated.

Additionally, ASCLD Labs sends in people to labs, including the Scottsdale Crime Lab for inspection/audit. The Scottsdale Crime Lab has previously been found in compliance with ASCLD Labs requirements. The Crime Lab has asserted that their lab abides by ISO controls and ASCLD Labs. Ms. Jennifer Valdez testified that outside groups come in to ensure that the Crime Lab is meeting minimum levels of scientific standards for accreditation. On June 2, 2011, the Scottsdale Crime Lab was granted accreditation by ASCLAD/Lab-International. Some of the defendants who were consolidated for this hearing had their blood analysis done by the Scottsdale Crime Lab prior to that accreditation:

Shyla Rotmil August 3, 2010

Ramsey Tohnnie December 2, 2009

Mara Hall March 29, 2011

Doreen Herman (first test) March 10, 2010

Mr. Chester Flaxmeyer testified for the defense. He indicated that auditors do not look at all cases, data or procedures. The auditors are looking to make certain that a lab follows minimum criteria and have in place the information and procedures. The defense has called into

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question the reliability of the controls and calibrators. Although their experts have attempted to raise issues concerning controls and calibrations, the Court is not convinced that they are significant enough to justify suppression. On that issue, however, defendants would certainly be able to cross-examine and/or present evidence.

The defense has presented several issues that call into question the reliability of the "2003 instrument". There have been a number of dropped data instances. At first, the lab thought that the data drops were due to loose caps. They later altered their conclusion. In exhibit #57, Ms. Jennifer Valdez signed off on an August 6, 2009 loose cap report. It was believed at the time that the issue/problem must have been a loose cap. The remedy was to re-prepare, recap and reanalyze. The re-run checked out "okay". A memo was created when this issue came up. The thought was that perhaps this was a mechanical issue. However, by the end of 2010, Ms. Valdez changed her opinion that this was a loose cap issue. According to Ms. Valdez's testimony, Perkin Elmer, the manufacturer of the "2003 instrument", advised it was a communication error. Evidence at the hearing indicated that a completely loose cap results in a flat line, not a shut down.

Mr. David Nash from Perkin Elmer installed a software patch which was installed on the "2003 instrument" to address these problems with the "2003 instrument". However, even after this repair was completed, the same issues of dropped data recurred on more than one occasion. The instrument was not taken out of service. Mr. Albert Barckhoff, an engineer in the area of software at Perkin Elmer, was deposed by the defense on January 25, 2013 (Exhibit 165). He

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indicated that Perkin Elmer did a root cause analysis. Mr. Barckhoff was asked about the misnumbered vials. He responded:

That could be a consequence of this problem and not an issue that was fixed specifically.

The underlying cause of the problem is what this rapid remedy would have addressed.

(Exhibit 165 at p. 56).

However, any analysis or testing was done in house and not at the Scottsdale Crime Lab. He stated:

I said that this rapid remedy was not specifically about fixing a problem with misnumbered vials. I'm saying that this is a possible symptom of this problem and that we fixed the underlying problem, which was this timing issue between the instrument and the software. And fixing that problem would make the symptom of the misnumbered vials go away.

Mr. Barckhoff continued as follows:

We understood the problem to be the instrument did not start sometimes. And when we investigated the part of the software in the system where that occurs, we knew exactly the area of the software that was affected, and the patch that we put in place addressed that issue. The testing that we performed would have been surrounding the application of that patch in that limited functionality, and if that problem was resolved, it should eliminate the problem of the misnumbered vials.

(Exhibit 165 at p. 57). However, he advised that he didn't know anything about misnumbered vials. (*Id.* at p.46). During his deposition, he further testified that the problem identified was that the instrument sometimes didn't start and collect data. According to the testimony of Ms. Jennifer Valdez, Perkin Elmer wanted to install a second patch at a later time, but the Crime Lab declined. Ms. Valdez felt that the dropped data was an inconvenience since it occurred so infrequently. Ms. Valdez also testified that after the patch was installed by Mr. Nash, the Docket Code 926

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problem recurred on May 12, 2011, in a batch that was run by Mr. Vincent Villena. The detector shut off at vial number 64. A non-conforming memo was prepared. No reason was given for the shutoff.

Ms. Arvizu indicated that with the dropped data, the machine should have been taken out of service. She felt that there should have been an investigation to avoid a recurrence and to determine what caused the problem, otherwise, no one would know the scope of the problem.

Mr. Flaxmeyer stated that data drops create non-conforming work. He also stated that based upon his review, the cause for the data drops has never been fixed. He felt that the "2003 instrument" should have been taken out of service based on ISO standards.

Mr. Lonnie Dworkin, a software engineer, was called to testify by the defendants. Mr. Dworkin opined that from his perspective, the findings are not scientifically reliable if there are data drops, mislabeling, and if the machine stops securing data.

A one-page document dated January 7, 2011, was marked as Exhibit 96 and received into evidence. On the document, it indicated that the run involved 28 subjects. It was rerun because the original run didn't contain sufficient information required for the labeling of the vials. This included the departmental report number and/or the subject name and/or the vial number. One cannot overlook the question: "Why was the initial run conducted without all that relevant information?"

Exhibit 73 documented an initial sequence acquired on September 2, 2009. The "2003 instrument" experienced a communication failure at vial 80. The notes indicate that after vial 82,

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all the vials were assigned the correct number, but incorrect names. Another error was documented in Exhibit 91, where on January 7, 2010 the "2003 instrument" mislabeled all the chromatograms in the run as vial #100.

Exhibit 170 involved a run conducted on March 28, 2011. There were 32 subjects. The instrument missed the injection of the .040 quality control sample. The vial was recapped and rerun with a freshly pipetted .040 sample.

Exhibit 97 concerns two sets of tests. One was run on February 8, 2011. There were 45 subjects. A loose cap was reported at vial 16. Vials 15 and 16 were re-pipetted and the run was resumed at vial 15. Additionally a loose cap was indicated at vial 51. However the instrument skipped vial 51.

No testimony was elicited to show that the "2003 instrument" was taken out of service after any of these occasions to determine the reasons for these malfunctions.

There have been several instances where there was a jam resulting in the sample not being analyzed. Evidence was also brought forth showing that on more than one occasion, vials were mislabeled.

Ms. Kris Whitman testified that the Gas Chromatograph 2003 fails to analyze data completely from time to time. If problems develop, the samples are re-run. She further stated that there was some non-conformance, but it was corrected. However, she stated that it didn't affect the quality of the work product.

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ISO 17025 requirements need to be followed by crime labs. The Scottsdale Crime Lab has adopted methods and procedures that they believe are consistent with those requirements. ISO standards provide that if an instrument is non-conforming, it should be taken out of service. Ms. Whitman testified that non-conforming work means work outside of protocol. There was a problem with the analysis, but not so significant as to affect the result. The Scottsdale Police Department Forensic Service Blood Alcohol Analysis Procedure Manual III.2. Methods, defines what it considers to be nonconforming work. It cites as an example a situation where there is an insufficient volume received for the sample for testing. The manual prescribes the steps to be taken when there is a nonconformance.

The ISO standards appear to be more definitive in regard to nonconformance. ISO 17025 is the guidebook for crime labs. Section 4.9 is entitled "Control of nonconforming testing and/or calibration work". In Section 4.9.1 there is a note which states that "identification of nonconforming work or problems including with testing can take place at various places within the management system and technical operation. Included are quality control and staff observations or supervision." Section 4.9.2 states: "Where the evaluation indicates that the nonconforming work could recur or that there is doubt about the compliance of the laboratory's operations with its own policies and proceedings, the correction action procedures given in 4.11 shall be promptly followed."

Section 4.11 of the ISO standards is entitled, "Corrective Action." Section 4.11.1 gets more specific:

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The laboratory shall establish a policy and procedure and shall designate appropriate authorities for implementing corrective action when nonconforming work or departures from the policy and procedures in the management system or technical operations have been identified.

Section 4.11.2 states: "the procedure for corrective action shall start with an investigation to determine the root cause(s) of the problem". A footnote to that section states:

Cause analysis is the key and sometimes the most difficult part in the corrective action procedure. Often the root cause is not obvious and thus a careful analysis of all potential causes of the problem is required. Potential causes could include customer requirements, the samples, sample specifications, methods and procedures, staff skills and training, consumables or equipment and its calibration.

Therefore, it is important to analyze what non-conformance means. If it is determined that the instrument is non-conforming, is reliability called into question? Further, what steps should a crime lab take in such a situation?

It is significant that the "2003 instrument" has never been taken out of service after these issues or problems developed. The errors have not been corrected. Other than initial attempts by manufacturer Perkin Elmer, no root cause analysis has been conducted to determine the reason for the problems exhibited by the instrument. Mr. Flaxmeyer defined "non-conforming work" as a problem with the work or procedure. However, because it is non-conforming doesn't necessarily mean the results are inaccurate. He agreed that scientists are in the position to render an opinion based upon the data that they review.

Apparently, not all errors or irregularities were discovered by the criminalists in the lab.

They were brought to light by defense attorneys during interviews with members of the Crime

Lab. Mr. Rick Bond, a forensic scientist for the Crime Lab, stated that in regard to Exhibit 54,

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he hadn't observed errors during his review. This run was conducted on or about September 26, 2012. For the "A" chromatograph, there were two peaks. In the "B" chromatograph, there was only one peak. This fact was brought to his attention by the defense attorney who was interviewing him. He confessed that he missed it. He doesn't know why the error occurred. The batch was rerun, but no root cause analysis was done.

Ms. Valdez stated during her testimony on April 24, 2013, that since the evidentiary hearing began, she had been made aware that the 2003 machine in other cases had labeled the "B" column as an "A" column.(Valdez transcript at page 57).

Ms. Arvizu brought up an issue in regard to Exhibit 99. There, a non-conformance memo was prepared by the Crime Lab. The detector shut off at vial 64. Mr. Villena sent memorandum to Ms. Whitman indicating that the detector ceased to collect data during its analysis of vial 64. Ms. Arvizu felt that a root cause analysis should have been done and that the lab was not in compliance with ISO Standards 4.9 and 4.11. Ms. Arvizu further opined that the Scottsdale Crime Lab is not capable of producing scientifically reliable results.

Incidences of loose caps were previously cited in this decision. Other difficulties or errors were noted during the evidentiary hearing. For example, on September 2, 2009, there was a communication error at vial 80. The vials after 82 were assigned the correct number, but the incorrect name. A firmware update was performed by a factory technician to cure the problem. On other occasions, there were reports of jams, missed injections and/or mislabeling. Although the Scottsdale Crime Lab would routinely re-run batches when a problem was observed, at some

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point, it seems it would have been completely appropriate to subject the "2003 instrument" to a complete evaluation to determine its reliability. However, there is no evidence that any such evaluation was ever conducted.

Inherent in the concept of reliability is confidence. Was there confidence in the procedures, supervision and maintenance of the gas chromatograph instrument ("2003 instrument")? Was there proper guidance and supervision in the Scottsdale Crime Lab when errors or problems involving the "2003 instrument" occurred or became known?

On November 13, 2012, Ms. Kris Whitman sent an email to supervisor Ms. Melinda Raines. The email, in part, stated:

Let me ponder this one if I can...how long can we live with one GC instrument? I am inclined to say a full validation in light of the Court issues. At a minimum sensitivity, reproducibility, and precision. David Nash + Jennifer does not equal super confidence...

This statement was in response to an email where Ms. Raines was speaking about running a validation on the 2002 machine by running a batch by the 2003 machine. Ms. Raines stated in her email that: "The only problem I see in comparing one to other is if it came up we are now comparing 2002 to 2003 which was the problem instrument."

What is so troubling about these exchanges is that Ms. Whitman never revealed them when she was testifying. It only came to light after the <u>Arizona Republic</u> discovered them after filing a freedom of information request with the Scottsdale Crime Lab. The Court only became aware of those emails when the defense filed a motion to review the email that had been

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redacted. After an *in camera* review, the Court ordered that most of the redacted part be revealed.

Subsequent emails have come to light more than two months after the conclusion of the hearings. The Court was presented with a series of emails and letters by the defense when they filed a Motion for Sanctions, a week before the closing memoranda were due. The Court became aware of an email dated May 9, 2012, from Mr. Anatoly Chlenov of Perkin Elmer and Scottsdale Crime Lab criminalist Mr. Vincent Villena, which states in part:

It was very nice meeting you today at CAC! Thank you very much for sharing your concerns about our HS-GC you have in your lab. Let's work on resolving the issue quickly so you don't have to face defense attorney's challenges in Court related to our **malfunctioning instrument**. (Emphasis added.)

This Court finds it incredible that neither Ms. Whitman nor Ms. Valdez were unaware of the email, or made mention of it during their testimony. On February 14, 2013, Ms. Jennifer Valdez sent an email to the Perkin Elmer Gas Chromatography Tech Support. She noted:

The report we are using prints correctly most of the time, but will sometimes print wrong file information or vial numbers. This is something we have never discussed with PE since you did not provide the program to us. I'm attaching an example for you to look at. What we would like is a program that essentially does the same thing but is maintained by you since no one here is a programmer and cannot fix it when it has issues. This has caused us a lot of problems in Court lately and we'd like to have it corrected.

A couple of hours early on that same date, Ms. Valdez sent another email to Perkin Elmer Tech Support. There, she stated:

Here is the report and an example of the data not printing properly. Thank you for your assistance. The raw data and rst files are attached as well what publisher

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actually prints out. You can see the data is correct but all the file information is incorrect.

The Court is given pause that these emails about concerns that the Scottsdale Crime Lab was having with the instrument occurred during the pendency of evidentiary hearing. During her testimony, Ms. Valdez never revealed any of these concerns that she revealed to Perkin Elmer. Given the emails set forth above, confidence in the reliability of the 2003 instrument (the Clarus 500) is certainly undermined.

The Court looks to supervision and oversight in making its evaluation. The email sent by Ms. Whitman is telling, given her responsibilities as crime lab manager. When questioned about her responsibilities, Ms. Whitman stated: "I am in an administrative role with Ms. Valdez, so in 2009, I was her direct supervisor at the time, and now I'm a laboratory manager, so I really serve in an administrative function in a management role. I do not. I'm not involved in the day to day scientific analysis of this discipline." (p.66, transcript, 12/18/2012).

The defense, in its closing brief, included in its argument several items that were not elicited during the hearings and/or in their Motion for Sanctions. Therefore, those arguments and/or items were not considered by the Court. Additionally, not all items set forth in the Motion for Sanctions were considered due to their lack of relevance. In evaluating whether any of the emails or information set forth in that motion should be considered, the Court looked more at relevance than a Brady analysis. In addition, the Court did not consider any arguments contained in the Motion for Sanctions. The parties had been ordered by the Court to limit their closing briefs to sixty pages and not to file additional memoranda in regard to their positions. Docket Code 926 Form R000A Page 16

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The defense's closing memorandum was in fact sixty pages in length. The Court only reviewed that Motion for any items that were relevant and not revealed by the crime lab during or prior to the hearings conducted in this matter.

Mr. Chester Flaxmeyer, a forensic scientist called to the stand by the defense, suggested that if there is an error on the first run and it is due to human error, then a second test would be acceptable. However, if the error is attributable to the instrument, such as dropped data, then attempts should be made to determine why there was an error. He qualified this by noting his opinion was being made from a science perspective. He also opined that he did not believe that the Scottsdale Crime Lab was complying with the requirements of ASCLD LAB. He further stated that from the data he was provided, he couldn't determine if the results were accurate. He didn't have sufficient data for confidence in its accuracy. He was unable to render an opinion as to whether the results for the 11 consolidated for this hearing were accurate or not, due to the problems with the instrument. To determine if results are reliable, Mr. Flaxmeyer asserted that it is necessary to look at three things:

- (1) look at the controls;
- (2) look at the results of individual sample and chromatograms; and
- (3) review of maintenance issues or problems at or near the time of test.

Mr. Flaxmeyer, on cross-examination, admitted that other people can look at the same data and have a different opinion. He agreed that reasonable minds can differ. He also believes that the gas chromatograph instrument should be calibrated every time that it is used. The

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Scottsdale Crime Lab utilizes that procedure and he regards that as appropriate. He testified that having a second person review a batch is a form of peer review.

Mr. Vincent Villena, a Scottsdale Crime Lab criminalist admitted that the gas chromatographs are not self-repairing. It was during his testimony concerning Exhibit 170, that he first became aware of the error listing both chromatograms as the "A" column. This failure to detect errors concerns the Court, as it shows improper monitoring of results from the criminalists and the validating criminalist.

It is significant to note that this Court is not making its ruling based upon one single error over the particular time period that is in issue in this inquiry. Rather, a great deal of information was presented showing numerous errors occurring over time. The Scottsdale Crime Lab never took the 2003 machine out of service to do a root cause analysis of the various problems.

ANALYSIS

Daubert set forth the principle that the trial Court should not engage in the weighing of experts against each other. A battle of experts should be for the jury to determine. Cf. State v. Burgess, 188 Vt. 239, 5 A. 3d 311 (2010).

The Rules-especially Rule 702-place appropriate limits on the admissibility of purportedly scientific evidence by assigning to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.

Daubert v. Merrell Dow Pharmaceuticals, Inc. 509 U. S. 579, 113 S.Ct. 2786 (1983). The U.S. Supreme Court continued on by noting that there are different factors to be utilized in making a

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determination, including, "its known or potential error rate and the existence and maintenance of standards controlling its operation..." *Daubert* 509 U.S. at 580.

"The test under *Daubert* is not the correctness of the expert's conclusions but the soundness of the methodology...." *Primiano v. Cook*, 598 F.3d 558, 564 (9th Cir. 2002)

However, this Court in making its decision is not relying on the opinions of the defense experts. Although this opinion makes reference to their testimony, the Court is basing its decision more on the inadequacies and unreliability of the 2003 machine. Merely because experts may differ in their opinions, does not create a *Daubert* issue.

Most of the arguments made by the defense are not persuasive under the *Daubert* standard. Questioning the integrity of the samples and the shelf life of samples or solutions, would certainly be issues that a jury could consider. The Court has focused on reliability in making its determination.

The Court is charged with being a gatekeeper. If the results of the blood analysis are allowed into evidence in a particular case, then it would be incumbent upon the jury to determine its weight. If this is merely an issue of credibility or a "battle of the experts", then potentially, every trial for every defendant whose sample was run through the 2003 machine might expect a presentation of least 17 days of technical testimony involving the practices, procedures and errors associated with the 2003 machine.

However, the Court finds this is no mere issue of credibility and is no "battle of the experts". Ultimately, if the Court is the gatekeeper, then it acts as a filter to allow in scientific

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evidence that is ruled to be reliable as per Rule 702 of the Arizona Rules of Criminal Procedure. The Court heard a large amount of technical and scientific data. The parties' briefs were very technical.

On several occasions in its brief, the State has submitted that the defendants are attempting to "subvert the adversary system". The Court disagrees with that premise. In its role as gatekeeper, the Court is obligated to ensure that testimony is sufficiently reliable. The State, in its brief, claims: "Even if a methodology relies on a 'shaky basis' the opposing party is free to challenge the State's expert as to any alleged deficiency in its calculations." The Court is not inclined to agree with that premise, as per Rule 702(d) of the Arizona Rules of Evidence.

The Court has heard a great detail in regard to irregularities with the "2003 instrument". Most of the problems were discovered by the criminalists themselves. However, as was noted earlier, some were brought to the attention of the Crime Lab by defense attorneys during defense interviews. Some concerns were brought to light via emails resulting in the response to the request for information by the <u>Arizona Republic</u>.

RULING

Given the errors or problems, and the refusal to determine the why or the basis for them, significant questions arise as to the reliability and confidence in this gas chromatography instrument. Although there are policies and procedures that purport to act as safeguards, it is apparent that they haven't been sufficient. The Court makes the following findings as to Rule 702:

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In regard to subsection (a), the criminalist's scientific and technical knowledge is relevant and would assist the trier of fact in understanding the evidence. As to subsection (b), the testimony of the criminalist is based on sufficient facts or data.

As indicated previously, the parties have stipulated that gas chromatography is accepted within the scientific community. Therefore, the Court rules that the proposed testimony is based on reliable principles and methods. However, based upon the evidence presenting during the course of these proceedings, the Court is convinced that the principles and in particular, the methods were not properly applied, as required under subsection (d).

THEREFORE,

IT IS ORDERED GRANTING the Motion to Suppress the blood tests and results as to each of the 11 consolidated defendants.