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TS Area 015

7340 Blanco Rd., STE #600
San Antonio, Texas 78216
(210) 348 - 8148
www.alamoforensicservices.com

December 13, 2016

Rosemary Lehmberg, District Attorney
Travis County District Attorney's Office
509 West 11th Street, Suite 1100
Austin, TX 78701

Ms. Lehmberg,

I feel that I must bring an issue of scientific integrity to the attention of your office for the fair and equitable prosecution of cases within your jurisdiction. The Austin Police Department Crime Laboratory has come under review for issues associated with their analyses of DNA samples. However, there are other issues that should be investigated and brought to the attention of the district attorney's office.

During the review of a recent blood alcohol analysis performed by the Austin Police Department Crime Laboratory, I found several scientifically indefensible errors. The laboratory is incorrectly reporting results using a statistical approach not used by other forensic laboratories. I believe their method validation procedure and estimation of measurement uncertainty has been incorrectly determined and reported.

The American Society of Crime Laboratory Directors – Laboratory Accreditation Board (ASCLD-LAB) has recommended an approach to the determinations of measurement uncertainty, called the GUM approach. The GUM defines measurement uncertainty as a "parameter, associated with the result of a measurement, that characterizes the dispersion of the values that could reasonably be attributed to the measurand". The VIM defines it as a "non-negative parameter characterizing the dispersion of the quantity values being attributed to a measurand, based on the information used".

The Austin Police Department's application of measurement uncertainty does not follow the guidelines recommended and they are incorrectly reporting analytical results used in the prosecution of thousands of cases. They routinely apply a measurement uncertainty value of 9% to all results. However, they allow the values of some results to exceed this by up to 100%. On the analytical report titled, "Quality Assurance Checkout Sheet (unknowns)", there is a footnote which states "Values less than 0.100 must

be within ± 0.010 of the average and values of 0.100 or greater must be within ± 5% of the average in order to pass." This acceptance criteria allows for samples below 0.100, which includes the legislatively defined legal limit of 0.080, to be off by as much as 100% for a value of 0.01 g/100mL.

In fact, they simply are not following acceptable scientific protocol in their procedures for reviewing and accepting analytical results. Once the analytical range has been determined, the measurement uncertainty must cover that same range for the reporting of all analytical results.

As has been determined previously for the statistical approach to the reporting of DNA results, the blood alcohol procedure should be reviewed and updated to follow current scientific techniques. Obviously, the personnel assigned to this section of the laboratory should undergo training to become acquainted with current methodologies and acceptance criteria. Perhaps this section of the laboratory should also be shutdown until they can review and modify their procedures.

I wanted to bring these issues to your attention before they are revealed in trial. However, I will be releasing my report to several defense attorneys in the Travis County area with whom I am currently working.

Please contact me with any additional questions you might have.

Sincerely,

Debra L. Stephens

Debra L. Stephens
Laboratory Director