



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF FORENSIC SCIENCE

OFFICE OF THE DIRECTOR  
DEPARTMENT OF FORENSIC SCIENCE  
A Nationally Accredited Laboratory

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April 4, 2016

Daniel T. Satterberg, Prosecuting Attorney  
W554 King County Courthouse  
516 Third Avenue  
Seattle, Washington 98104

Re: *The Virginia Department of Forensic Science Validation of TrueAllele® Casework*

Dear Mr. Satterberg,

I am employed at the Virginia Department of Forensic Science (DFS) as a Forensic Molecular Biologist. TrueAllele® Casework was validated by our laboratory prior to its use on forensic casework. As part of my job responsibilities with DFS, I was the principal scientist on the validation study for TrueAllele®.

The validation of any new technology by a forensic laboratory is necessary and required prior to its implementation and use for analysis of evidence. The primary aims of validation work are to determine if the product performs as advertised, to develop an expertise in the use of the product, to assess the accuracy, precision and reproducibility (where applicable) of the technology, and to understand its limitations.

We have achieved these goals without the source code to TrueAllele® Casework, as is true for the many different technologies and products that we use daily in the laboratory. Testing TrueAllele® Casework using complex DNA profiles where we knew the answer (i.e., the genetic makeup of the contributors to the DNA profiles) provided invaluable information. Moreover, simple statistical calculations performed by TrueAllele® Casework were compared to values produced by another previously validated software program and the comparison aided our laboratory in the validation process. This internal validation work informed us as to the accuracy and reproducibility of the process, the limitations of the system, the ability of the technology to detect minor contributors to the DNA profiles (sensitivity) and perhaps most importantly, the ability to eliminate non-contributors to the DNA profiles (specificity).

Our ability to use a given technology for forensic DNA profiling is verified by thorough validation work, not studying the source code. We have never requested the source

code for the TrueAllele<sup>®</sup> Casework software because it was not necessary in order to determine the reliability of TrueAllele<sup>®</sup> Casework.

I have attached a copy of our published validation study for your reference.

Sincerely,

A handwritten signature in cursive script that reads "Susan A. Greenspoon".

Susan A. Greenspoon, Ph.D.  
Forensic Molecular Biologist