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SUPERIOR COURT OF WASHINGTON FOR KING COUNTY

STATE OF WASHINGTON,)	
)	
)	Plaintiff,
)	No. 10-1-09274-5 SEA
vs.)	
)	DECLARATION OF DR. MICHAEL
EMANUEL FAIR,)	GORIN
)	
)	Defendant.
)	
)	
)	

I, Michael Gorin, hereby declare as follows:

1. I am over 18 years of age and I am competent to make this declaration.
2. I hold the following academic degrees: M.D. Ph.D. - Biochemistry
3. I am currently employed as Professor of Ophthalmology and Human Genetics at David Geffen School of Medicine – UCLA.
4. I am familiar with Cybergenetics, and its TrueAllele software. I participated with Cybergenetics at the inception of the TrueAllele software and was the first client to use the software for genotyping analysis. I have informally consulted for the company since its creation and have watched and studied the evolution of the TrueAllele software as a forensic DNA tool.

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5. I (my lab) was the first to use TrueAllele to deconvolve microsatellite genotyping data for molecular genetic studies of age-related macular degeneration. During that time, we were intimately involved in the initial user interface design as well as participated in the validation and quality control methods employed to test the software.
6. I understand that the defendant in this case has asserted that he needs the source code for the TrueAllele in order to determine its reliability. I do not believe an examination of the source code is necessary to make such a determination based upon my use of genotyping and molecular genotyping analysis software for complex genetic disorders. This experience reflects a 30 year research program that has included the development and software implementation of numerous analytical tools for complex and large-scale genetic datasets. In no instance, has a new method or software been assessed by scientific experts based on direct comparison or investigation of the source code. New computing technologies are developed on theoretical frameworks that have undergone careful peer review (as has all of TrueAllele's methods). Validation and comparisons are made with compiled programs that are applied to predictable simulated and/or actual datasets. When a method is completely novel, the simulation sets and actual datasets are usually extensive and the behavior of the results and resulting statistics are methodically presented. If the method is being compared to other existing systems, ideally the same datasets are employed for multiple software tools. Direct comparisons of the statistics as well as the performance (e.g. computing time) of the software are presented. The use of simulated and known data samples allows one to accurately establish the dynamic range of analysis of the software, as well as identify instances in which the software is either unreliable or has limited utility. TrueAllele has been subjected to this type of analyses on

1 multiple occasions and the results have been presented in both the peer-review literature
2 as well as in the judicial setting.

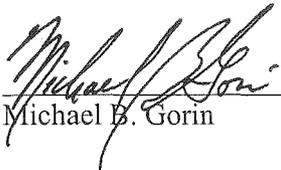
3 7. If an individual or group questions the accuracy and precision of a software-based
4 analytical tool, then those concerns should be first addressed towards the theoretical
5 framework of that software (which in the case of TrueAllele has been subjected to peer
6 review through scientific publications) and then by a systematic evaluation of the
7 software implementation of those models. The testing of software implementation is by
8 case use, not by evaluation of the source code itself. This is true for both open source as
9 well as proprietary software. The testing of the software requires a compiled source code
10 that is run on the appropriate operating platform. Even if one found no discernable errors
11 in the outward appearance of the code, that would not be an adequate nor appropriate
12 assessment of the validity and functionality of the software. Disputes over specific code
13 are often much like disagreements over the wording of a document. As long as the
14 meaning and intent are clear, the differences are stylistic, not substantive. Since there are
15 frequent subroutines run in reiterative fashion, one usually can't say that a specific line of
16 code is problematic without knowing its context to the rest of the software. This is the
17 challenge that one faces when one has to debug software. However even in those
18 instances, one starts by looking at the functionality of the entire system and the detection
19 of a flaw or error before delving into the specific code. Since it is essential that one
20 conducts testing with a compiled and operational version of the software, there is no
21 benefit (nor justification) in providing individuals with the source code unless they intend
22 to modify it. This is not one of the stated purposes provided by those experts who are
23 requesting access to the TrueAllele software. Such modifications would potentially
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nullify the validity of their analyses of the software as it is currently configured and employed for legal cases.

Under penalty of perjury under the laws of the State of Washington, I certify that the foregoing is true and correct to the best of my knowledge and belief.

Signed and dated by me this 1st day of April, 2016, at Los Angeles, CA.


Michael B. Gorin