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IN THE CIRCUIT COURT OF THE FIRST CIRCUIT

STATE OF HAWAII

STATE OF HAWAII

v.

XAVIER A.P. SWOFFORD,

Defendant.

CASE NO. 1CPC-22-0000996

COUNT 1:

ATTEMPTED SEXUAL ASSAULT IN
THE FIRST DEGREE

(§707-500 & 707-730(1)(a) HRS)

COUNT 2:

ATTEMPTED SEXUAL ASSAULT IN
THE FIRST DEGREE

(§705-500 & 707-730(1)(a) HRS)

COUNT 3:

KIDNAPPING

(§707-720(1)(d) HRS)

COUNT 4:

BURGLARY IN THE FIRST DEGREE
(§708-810(1)(c) HRS)

COUNT 5:

SEXUAL ASSAULT IN THE THIRD
DEGREE

(§707-732(1)(f) HRS)

COUNT 6:

SEXUAL ASSAULT IN THE THIRD
DEGREE

(§707-732(1)(f) HRS)

FINDINGS OF FACT, CONCLUSIONS
OF LAW, AND ORDER GRANTING
MOTION TO DETERMINE
ADMISSIBILITY OF “TRUEALLELE”
EXPERT TESTIMONY PURSUANT TO
HRE 104(A)

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER GRANTING MOTION
TO DETERMINE ADMISSIBILITY OF “TRUEALLELE” EXPERT TESTIMONY
PURSUANT TO HRE 104(A)

Defendant’s Motion to Determine Admissibility of “Trueallele” Expert Testimony Pursuant to HRE 104(A), having come on for hearing on January 22, 2025, before the Honorable Kevin A. Souza, the State being represented by Deputy Prosecuting Attorney’s Ayla Weiss and Chase Sakai and Defendant Swofford being represented by, Victor Bakke, Esq., and the Court having received evidence, heard argument of counsel, and being fully advised in the premises, makes the following findings of fact and conclusions of law:

FINDINGS OF FACT

1. The Court finds that the Defendant Xavier Swofford is charged with the following offenses:
 - a. Count 1 – Attempted Sexual Assault in the First Degree
 - b. Count 2 – Attempted Sexual Assault in the First Degree
 - c. Count 3 – Kidnapping
 - d. Count 4 – Burglary in the First Degree
 - e. Count 5 – Sexual Assault in the Third Degree
 - f. Count 6 – Sexual Assault in the Third Degree
2. The allegations against the Defendant are in short, that on July 18, 2022, shortly after the Complainant arrived at home, the Defendant entered her residence without permission, held a knife to her throat and told her to put her hands behind her back. Defendant then zip-tied her wrists together and touched her breasts. Defendant

removed her pants and underwear, where he touched her genitals. Defendant then took off his pants, exposing his genitals, asking the Complainant to perform fellatio on him. Defendant pushed the Complainant on the bed and told her to spread her legs. Complainant was able to break free from the zip-ties and grab a hold of the knife, where she was able to flee.

3. The central issue for jury determination at this trial will likely be, was the Defendant (Xavier Swofford) the assailant who attacked and assaulted the Complainant on July 18, 2022. The central trial issue will be identification.
4. TrueAllele is a software program that helps to analyze DNA samples using a procedure called probabilistic genotyping. The Sixth Circuit Court of Appeals provided an overview of this technology in *U.S. v. Gissantaner*, 990 F.3d 457 (6th Cir. 2021). As the *Gissantaner* court summarized, “the idea is to combine the tools of DNA science, statistics, and computer programming to mitigate the risks from subjective assessments of multi-person DNA samples. The software in the end helps measure the probability that a mixture of DNA includes a given individual’s DNA. In addition to mitigating the risks of human error, the software processes more potential interpretations of a mixture in less time. The software also mitigates the effect of cognitive bias as the software does not know the other facts of the case.” at 461. In more detail TrueAllele and other probabilistic genotyping software apply the data collected from the DNA profiles to algorithms that follow a statistical model that “weighs the probability that the model matches the data.” The specific underlying principle that TrueAllele uses is a class of algorithm called Monte Carlo-Markov Chain modeling, which is a type of Bayesian statistical

analysis that has been used in many applications.

5. In this case, the Court received testimony on how the DNA profiles were extracted and Sebastian Yuen followed all the Standard Operating Procedures established by HPD, which is an accredited body. Mr. Yuen used control samples, which all assured a proper extraction by the genetic analyzer, which in turn produced the profiles in the form of an HID file. The procedures of DNA extraction by Sebastian Yuen were generally accepted by the scientific community. Once the HID files were generated it was sent in whole to Cybergenetics to be run through a TrueAllele program. Ms. Jennifer Bracamontes testified regarding her experience in forensic DNA analysis and use of the TrueAllele program. She followed all Standard Operating Procedures in using TrueAllele, which followed the applicable standards for probabilistic genotyping under SWGDAM standards, ANSI/ASB standards, and FBI Quality Assurance Standards. Performance checks were done, which showed TrueAllele to be working properly as to the most recent software update and in this case as well. The samples were run through TrueAllele two times without any information regarding the identity of the profiles. In this case Ms. Bracamontes testified that these two independent runs were compared and showed the results were reproducible, which demonstrates the reliability that TrueAllele was applied properly in this case. Additionally, peeling was later performed which Ms. Bracamontes testified that allows TrueAllele to provide more accurate results the more information it is given, the more information is outputted through the program. In this case, TrueAllele concluded that “a match between the knife handle and Defendant Xavier Swofford is 13 billion times more probable than a

coincidental match. For a match strength of 13 billion of this evidence genotype only 1 in 3.49 trillion people would match as strong.”

CONCLUSIONS OF LAW

1. The admissibility of DNA evidence itself is not at issue, pursuant to *State v. Montalbo*, 73 Haw. 130 (1992) “it takes judicial notice that DNA evidence is not controversial and is widely accepted in the scientific community.
2. The Hawaii Supreme Court has held, “the touchstones of admissibility for expert testimony under HRE Rule 702 are relevance and reliability. *State v. Vliet*, 95 Hawaii 94 (2001). In *Montalbo*, which is the Seminole case for expert testimony in Hawaii, the Supreme Court has provided a general five-factor test under HRE 702 & 703 to determine the admissibility of scientific evidence such as DNA statistical evidence. These factors are whether (1) the evidence will assist the trier of fact to understand the evidence or to determine a fact in issue; (2) The evidence will add to the common understanding of the jury; (3) whether the underlying theory is generally accepted as valid; (4) whether the procedures used are generally accepted as reliable if performed properly; (5) The procedures were applied and conducted properly in the present instance. Finally, the Court under *Montalbo* should then consider whether admitting such evidence under HRE 403 would be more probative than prejudicial. *Montalbo* at 140.
3. An application of the five (5) *Montalbo* factors in this case yields the following results. (1) the proffered evidence will certainly assist the trier of fact to understand the evidence or to determine a fact in issue. The commonality and/or rarity of a persons DNA profile and whether or not it coincidentally matches the

sample taken from the item of evidence is highly probative of whether or not the defendant committed the charged offenses in this case. That is certainly the central issue in this case, where identification of the assailant is the crux of the matter. Ms. Bracamontes testimony will help the jury to determine the identity of the person whose DNA profile was obtained from the handle of the knife recovered from the scene. Accordingly, the probabilistic genotyping evidence being proffered by the state is both relevant and material to the issue of identification. (2) The probabilistic genotyping evidence will also assist the jury in understanding the evidence and add to the common understanding of the jury. Probabilistic genotyping is not common knowledge and Ms. Bracamontes testimony will help the jurors understand the evidence, including principals of DNA analysis which is high scientific and at times confusing to a lay person without expert testimony. As the Hawaii Supreme Court aptly put in *Montalbo*, “this information would certainly add to the common knowledge of the jury who would not ordinarily have knowledge of DNA analysis and would otherwise find it difficult to evaluate the significance of the observed matched between the Defendant’s DNA and that found at the scene of the crime.” *Montalbo* at 141. In this case Ms. Bracamontes testimony and probabilistic genotyping reports provides statistical likelihood ratios for DNA results, meaning how much more does the DNA sample obtained from an individual match the evidence versus that of a random person. Accordingly, the proffered evidence in this case will assist the trier of fact to understand the evidence and add to the common understanding of the jury. (3) TrueAllele and other probabilistic genotyping software use

continuous probabilistic genotyping to generate statistical likelihood ratios and this process is generally accepted as valid in the relevant scientific community. This case has been the conclusion in a number of cases nationwide, including *U.S. v. Gissantaner*, 990 F.3d 457 (6th Cir. 2021), *People v. Wakefield*, 38 N.Y.3d 367 (2022), *Commonwealth v. Foley*, 38 A.3d 882 (2012), and *U.S. v. Anderson*, 673 F.Supp 3d 671 (2023). The *Anderson* court concluded “given the forensic science community’s broad acceptance of TrueAllele and other probabilistic genotyping software programs and the widespread use of such programs in the legal context, the Court finds that Trueallele and the methods it employs is generally accepted by their relevant scientific communities.” 674 F.Supp 4d at 688. (4) The procedures by TrueAllele are generally accepted as reliable if performed properly. TrueAllele has been subject to over 40 validation studies of peer reviewed publications in scientific journals, 8 of which have been published, and all of which appear to validate TrueAllele’s methods including the underlying algorithm and mathematical theories of Markov Chain Monte-Carlo and Bayesian modeling methods. In *People v. Wakefield*, the court noted “as to general acceptance of the continuous probabilistic genotyping system, the testimony of witnesses established that PG methods have been recognized by their relevant scientific community such as SWGDAM, American National Standards Institute, National Institute of Standards and Technology, as a valid approach to DNA interpretations, including the fully continuous probabilistic genotyping approach used by TrueAllele.” 38 N.Y.3d at 376-377. The evidence presented in support of the instant motion supports the same conclusion that the

court in *Wakefield* reached. Accordingly, the procedures used by HPD and TrueAllele are generally accepted as reliable if performed properly. (5) The procedures were applied and conducted properly in the present instance. In this case, the court received testimony on how the DNA profiles were extracted and Sebastian Yuen followed all Standard Operating Procedures established by HPD, which is accredited. Mr. Yuen used control samples, which all assured a proper extraction by the genetic analyzer which in turn produced the profiles in the form of an HID file. The Procedures of DNA extraction by Sebastian Yuen are generally accepted in the scientific community. Once the HID files were generated it was sent in whole to CyberGenetics to run through the TrueAllele program. Ms. Bracamontes testified regarding her experience in forensic DNA analysis as well as using TrueAllele. She followed all standard operating procedures using TrueAllele, which follow the applicable standards from probabilistic genotyping under all standards produced under SWGDAM, ANSI/ASB, and the FBI Quality Assurance Standards. Performance checks were done which showed TrueAllele to be working properly as to its most recent software update as well as the procedures used in this case. The Samples were run through TrueAllele two times without any information regarding the identity of the profiles. In the instant case, Ms. Bracamontes testified these two independent runs were compared and showed the results were reproducible which demonstrates reliability that TrueAllele was applied properly in this case. Additionally, peeling was performed which added to not only the type of information, but also the quality of information that was outputted. TrueAllele

concluded a match between the knife handle and Xavier Swofford is 13 billion times more probable than a coincidental match. For a match strength of 13 billion on this type of evidence only 1 in 3.49 trillion people would match as strongly. Accordingly, based on the procedures adhered to in this case by HPD and TrueAllele, the methodology used by TrueAllele is generally accepted as reliable if performed properly.

4. Therefore, after weighing all of the factors set forth in *State v. Montalbo* all support the conclusion that the proffered evidence is both relevant and reliable, and does favor admissibility of the TrueAllele evidence in this case.
5. Although not necessary the Court also does consider the *Daubert* factors following the Hawaii Supreme Court guidance in *State v. Escobido-Ortiz*, 109 Hawaii 359 (2005). In *Escobido-Ortiz*, the Hawaii Supreme Court indicated that the *Daubert* factors could also be instructive when determining issues of novel scientific admissibility. The *Daubert* factors include: (1) Whether the theory or technique has been tested. (2) Whether it has been subject to peer review and publication (3) whether in respect to a particular technology there is a high known or potential error rate or existence and maintenance of standards controlling the techniques operation. (4) Whether the theory or technique enjoys general acceptance in the relevant scientific communities. *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993).
6. As to the *Daubert* factors, TrueAllele has been tested thoroughly, it has been subject to peer review publication, it has a low error rate, and Cybergentics/TrueAllele has adhered to proper controls and standard operating

procedures. TrueAllele enjoys general acceptance in the relevant scientific community. *U.S. v. Anderson*, 673 F.Supp3d 671; *Daniels v. State*, 312 S.3d 926 (2021); *State v. Simmer*, 304 Neb. 369 (2019). All of these cases cited by the Court have reviewed evidence similar to that presented in this case and have concluded the TrueAllele program and methodology meet the *Daubert* factors for relevance and reliability. Similarly, the Court does find that the *Daubert* factors are met. Even when applying the *Daubert* factors to this case, the TrueAllele evidence is admissible.

7. Given the Court's analysis as to the *Montalbo* and *Daubert* factors this courts finds that TrueAllele evidence is probative under HRE 402 and 403; also proper under HRE 702. All of that left to determine is whether it passes the gatekeeping function of HRE 403. This Court notes the value of identification of identification evidence in this case is extremely high and exceedingly probative. Consequently, it outweighs any danger of unfair prejudice to the Defendant, Xavier Swofford. As such, HRE 403 also does not preclude admissibility in this case.
8. The Court hereby grants the State's Motion to determine admissibility of TrueAllele testimony pursuant to HRE 104, filed on November 19, 2024.

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9. This court also adopts the State’s motion, both facts and arguments contained therein, as well as the State’s exhibits for the purposes of this Findings of Fact and Conclusion of Law.

ACCORDINGLY IT IS HEREBY ORDERED that the State’s Motion to Determine Admissibility of “TrueAllele” Expert Testimony Pursuant to HRE 104(A) is hereby GRANTED.

Dated at Honolulu, Hawaii: July 22, 2025.

/s/ Kevin A. Souza



KEVIN A. SOUZA
Judge of the above-entitled court

REFUSED
Victor Bakke, Esq.
Attorney for Defendant