Smith

IN THE MARIETTA MUNICIPAL COURT
MARIETTA, OHIO

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MUNICIPAL COURT
MARIETTA, OHIO

State of Ohio
Plaintiff,

v.

Chelsea Lancaster	CASE NOS. 12 TRC 1615
Nathan Heiss	12 TRC 3301
Molly Korn	12 TRC 2317
Scott Masa	12 TRC 3165
Wayne Miller	12 TRC 2368
Anthony Molden	12 TRC 2689
John O'Brien	12 TRC 1919
Jessse Shafer	12 TRC 3334
Brian Miller	12 TRC 1422

Defendants.

DECISION AND ENTRY

By agreement of the parties, the above-styled matters have been consolidated solely for the purpose of determining the admissibility of the results of chemical tests administered to each defendant utilizing the Intoxilyzer 8000 ("I8000") after their arrests for violations of R.C. 4511.19. Defendants seek to exclude evidence of the test results on the basis that the results are unreliable.

Based upon evidence adduced at hearing through sworn testimony and exhibits duly admitted, and for the reasons set forth herein, Defendants" motion is **GRANTED** and Plaintiff is prohibited from introducing into evidence at trial the results of tests administered to Defendants utilizing the Intoxilyzer 8000.

This court finds that Plaintiff does not bear an initial burden to establish general scientific reliability of the I8000 because such "gatekeeping" function has been legislatively delegated to the Director of Health. However, this general determination of scientific reliability

is subject to attack by Defendants through specific allegations which go to the ability of the I8000, as designed, to correctly implement the general scientific principals upon which it is based in order to satisfy the requirement under *Vega* that the test of Defendants must be performed using "proper equipment".

Reading together the clear and unambiguous permissive language of R.C. 4511.19 with the holdings in *State v. Vega*, 12 Ohio St.3d 185, 465 N.E.2d 1303 (1984), and *State v. French*, 72 Ohio St.3d 446, 449, 650 N.E.2d 887 (1995), and in consideration of fundamental principles of substantive due process, Defendants are not summarily denied the ability to challenge the specific admissibility of these test results. Defendants are permitted to challenge the ability of the testing device to correctly implement the scientific principals upon which it is based. Once such specific issues are raised by Defendants, this court is required to apply the standard for admissibility set forth in Evid.R. 702 and it is Defendants, not Plaintiff, who bear the burden of demonstrating that the evidence is inadmissible.

Applying Evid.R. 702, and holding Defendants to the burden of overcoming the presumption of reliability granted to the I8000 by virtue of its adoption by the Director of Health, the court finds that the expert testimony presented in this hearing clearly demonstrated that the I8000, *as it existed at the time the tests were administered to Defendants,* did not implement the firmly established scientific principles necessary to yield scientifically reliable results and was not the "proper equipment" contemplated by *Vega*.

However, due to ongoing software changes and with additional research and testing, this decision does not preclude the possibility that the I8000 could, with modifications, meet the standard of reliability necessary for its admission in future cases.

ARGUMENTS OF THE PARTIES

Relying on *State v. Vega*, 12 Ohio St.3d 185, 465 N.E.2d 1303 (1984), Plaintiff argues that a defendant charged under R.C. 4511.19 may seek to suppress the results of a breath-alcohol concentration ("BAC") test only by asserting that Ohio Department of Health ("ODH") procedures were not followed or that the test operator did not have proper ODH authorization. Thus, Plaintiff argues *Vega* to mean that all other attacks against the admissibility of BAC test results are prohibited. Furthermore, Plaintiff argues that the Fourth Appellate District's recent opinion in *State v. Reid*, 4th Dist. No. 12CA3, 2013-Ohio-562, prohibits this court's consideration of the reliability of the chemical test results obtained by use of the I8000 in the instant cases. For these reasons, Plaintiff contends that Defendants' motion to exclude the I8000 test results from being introduced into evidence in this case is impermissible as a matter of law because the attacks asserted therein are strictly forbidden.

Defendants argue that Plaintiff's position is contrary to law because, pursuant to Evid.R. 702 and *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), the Court has a duty to function as the gatekeeper in order to guard against un-scientific evidence, and such duty requires this court to consider Defendants' specific attacks against the I8000.

LAW AND ANALYSIS

Application of State v. Vega

R.C. 4511.19(A)(1)(a) prohibits a person from operating a vehicle if the person is "under the influence of alcohol, a drug of abuse, or a combination of them." R.C. 4511.19(A)(1)(b)-(j) prohibit a person from operating a vehicle if the person has a prohibited concentration of alcohol or drugs of abuse in the person's whole blood or a prescribed sample quantity of the person's breath, urine, blood serum or blood plasma. R.C. 4511.19(D)(1)(b)

states that

> [i]n any criminal prosecution * * * for a violation of division (A) or (B) of this section * * * the court may admit evidence on the concentration of alcohol, drugs of abuse, controlled substances, metabolites of a controlled substance, or a combination of them in the defendant's whole blood, blood serum or plasma, breath, urine, or other bodily substance at the time of the alleged violation as shown by chemical analysis of the substance withdrawn within three hours of the time of the alleged violation. * * * The court may admit evidence on the concentration of alcohol, drugs of abuse, or a combination of them as described in this division when a person submits to a blood, breath, urine, or other bodily substance test at the request of a law enforcement officer under section 4511.191 of the Revised Code or a blood or urine sample is obtained pursuant to a search warrant.

R.C. 4511.19(D)(1)(b) further provides that "[t]he bodily substance withdrawn under division (D)(1)(b) of this section shall be analyzed in accordance with methods approved by the director of health by an individual possessing a valid permit issued by the director pursuant to section 3701.143 of the Revised Code." R.C. 3701.143 states that for purposes of R.C. 4511.19,

> the director of health shall determine, or cause to be determined, techniques or methods for chemically analyzing a person's whole blood, blood serum or plasma, urine, breath, or other bodily substance in order to ascertain the amount of alcohol, a drug of abuse, controlled substance, metabolite of a controlled substance, or combination of them in the person's whole blood, blood serum or plasma, urine, breath, or other bodily substance. The director shall approve satisfactory techniques or methods, ascertain the qualifications of individuals to conduct such analyses, and issue permits to qualified persons authorizing them to perform such analyses. Such permits shall be subject to termination or revocation at the discretion of the director.

Pursuant to the authority delegated to it by R.C. 3701.143, ODH has promulgated regulations pertaining to alcohol testing in OAC 3701-53. Under the heading "methods and techniques," the regulations describe the manner in which BAC test results are to be expressed. OAC 3701-53-01. Under OAC 3701-53-02(A)(3), the I8000 is one of three instruments "approved as evidential breath testing instruments for use in determining whether a person's breath contains a concentration of alcohol prohibited or defined by sections

4511.19."

Plaintiff emphasizes that Ohio appellate courts have "traditionally" understood *Vega*, and its progeny, as having interpreted the statutory scheme detailed above to mean that OVI defendants may never attack the reliability of a BAC testing instrument in any fashion.

Because this Court is bound to apply the rule of *Vega* as articulated by the *Vega* court itself, and not the ostensible or purported rule of *Vega*, a close reading of *Vega* is appropriate, and indeed required. In *Vega*, Pete A. Vega was charged with driving while under the influence of alcohol under R.C. 4511.19 as it existed before prohibited alcohol concentration offenses were enacted. The trial court excluded Mr. Vega's proposed expert testimony, ruling that, as quoted by the Fifth Appellate District on appeal, Mr. Vega's expert had "no personal knowledge of the particular intoxilyzer instrument utilized in the administration of the breath test to the Defendant, Mr. *Vega*, on the evening in question and, consequently, [the expert's] testimony would have been relating, generally, to the reliability of the intoxilyzer and as such must be excluded * * *." *State v. Vega*, 5th Dist. No. CA-1766, 2-3 (Nov. 22, 1983).

The language quoted above contains the initial seed of ambiguity that sprouted into nearly 30 years of controversy, notwithstanding that a "traditional" understanding of *Vega* has indeed been commonly argued. When the trial court stated that Mr. Vega's expert witness would have testified as to the general reliability of the intoxilyzer, did it mean the general reliability of the particular model of alcohol concentration testing instrument used in the case, or the reliability of alcohol concentration instruments in general? That is, did Mr. Vega's expert intend to attack the reliability of alcohol concentration testing, conceptually, in terms of whether methods of chemical analysis may be implemented, in theory, to scientifically and reliably measure the alcohol content of a given sample of bodily substance? Resolution of this ambiguity is critical to an accurate understanding of *Vega* because, today, courts regularly

distinguish between the general concept of breath testing and specific breath testing instruments such as the BAC DataMaster, the Intoxilyzer 5000, and the Intoxilyzer 8000.

The nuances of the Ohio Supreme Court's opinion in *Vega* ultimately reveal that when the court characterized the issue presented as "whether an accused may use expert testimony to attack the general reliability of intoxilyzers as valid, reliable testing machines," the court was referring to the latter interpretation articulated above, that is, whether an accused may attack the reliability of testing for alcohol concentration in a bodily substance as a general, conceptual and scientific matter. *Vega*, 12 Ohio St.3d at 186. This is so because the court stated at the outset that "[t]he wide acceptance by courts of alcohol breath tests in 'drunk driving' cases is well-documented," and that "such tests are today generally recognized as being reasonably reliable on the issue of intoxication when conducted **with proper equipment** and **by competent operators**." (Emphasis added.) *Id.*, quoting *Westerville v. Cunningham*, 15 Ohio St.2d 121, 123, 239 N.E.2d 40 (1968).

The court went on to acknowledge that, under R.C. 4511.19, the General Assembly has delegated to ODH "the determination as to the mechanism which would be used for measuring blood alcohol content of an individual." *Id.* at 188. Quoting Professor McCormick, the court stated that "the prescription for test procedures adopted by Plaintiff health agency has been taken as acceptance of the general reliability of such procedures [i.e., alcohol concentration tests in general] in showing blood-alcohol content." *Id.*, quoting Evidence (2 Ed. Cleary Ed. 1972) 513, Section 209. The distinction in the text of *Vega* between attacking the general reliability of breath tests as a scientific concept and specifically attacking the reliability of a particular testing instrument as not being "proper equipment" is further manifested in the fact that while the court held that "an accused may not make a general attack upon the reliability and validity of the breath testing instrument," the court also noted

that the accused may "attack the reliability of the **specific testing procedure**." (Emphasis added.) *Id.* at 190, 188.

While appellate courts have routinely applied the purported rule of *Vega* to be that ODH's approval of a particular testing instrument renders it impervious to any reliability attack, the Fourth Appellate District's recent opinion in *Reid*, 4th Dist. No. 12CA3, 2013-Ohio-562, incisively stressed that "part of the problem in interpreting the true meaning of the *Vega* language is that it is not clear what the terms 'general attack' and 'specific testing procedure' mean. The 'general attack' language seems to indicate that a defendant cannot generally attack the reliability of approved breath testing instruments, but may specifically attack a particular instrument's reliability." *Reid* at ¶ 13.

The *Reid* court astutely pointed to the significant issues raised by the language of *Vega*. On the one hand, the court stated that *Vega* and its progeny have been understood by appellate courts to mean that "the Ohio General Assembly has rendered the ODH's approval of the Intoxilyzer 8000 ostensibly impervious to general reliability and admissibility challenges during a criminal trial." Id. at ¶ 10. On the other, the court emphasized that "a close reading of Vega arguably leaves room for debate about whether a trial court must admit Intoxilyzer 8000 results into evidence." Id at ¶ 12.

Thus, closely reading *Vega* to permit Defendants to specifically attack a particular instrument as not being "proper equipment" comports with the specific language of the decision, as well as applies its holding as intended. ***Application of R.C. 4511.19(D)(1)(b)***

Additionally, this reading of *Vega* upholds the plain meaning of the permissive language in R.C. 4511.19(D)(1)(b) which states that

> [i]n any criminal prosecution * * * for a violation of division (A) or (B) of this section * * * the court **may** admit evidence on the concentration of alcohol, drugs of abuse, controlled substances, metabolites of a controlled substance, or

> a combination of them in the defendant's whole blood, blood serum or plasma, breath, urine, or other bodily substance at the time of the alleged violation as shown by chemical analysis of the substance withdrawn within three hours of the time of the alleged violation. (Emphasis added)

If the General Assembly had desired to mandate that a trial court *shall* admit the results of an alcohol concentration test administered by a properly credentialed operator in compliance with ODH procedures, it could have done so. Indeed, the statutory and regulatory framework associated with the admissibility of chemical tests resulting in prosecutions for violations of R.C. 4511.19 is replete with use of the word "shall," e.g., "[t]he bodily substance withdrawn under division (D)(1)(b) of this section ***shall*** be analyzed * * *," "the director of health ***shall*** determine, or cause to be determined, techniques or methods * * *," and "breath samples withdrawn using an I8000 "***shall*** be analyzed according to the instrument display for the instrument being used." (Emphasis added.) R.C. 4511.19(D)(1)(b); R.C. 3701.143; OAC 3701-53-02(E). Thus, where R.C. 4511.19(D)(1)(b) states that a trial court "***may*** admit evidence of concentration of alcohol," the use of the word "may" is all the more conspicuous and meaningful.

"[W]here a statute contains the word 'shall,' the provision will generally be construed as mandatory," unless there is clear legislative intent to the contrary. *In re Davis*, 84 Ohio St.3d 520, 522, 705 N.E.2d 1219 (1999). "'The statutory use of the word 'may' is generally construed to make the provision in which it is contained optional, permissive, or discretionary.'" *State v. Bergman*, 11th Dist. No. 2012-P-0124, 2013-Ohio-3073, ¶ 23, quoting *State v. Davie*, 11th Dist. No. 2000-T-0104, 2001-Ohio-8813, 16 (Dec. 21, 2001). Furthermore, use of the words "shall" and "may" within the same statute "clearly reflect[s] a legislative intent that the two words be given their usual statutory construction." *Dorrian v. Scioto Conservancy Dist.*, 27 Ohio St.2d 102, 108, 271 N.E.2d 834 (1971).

In light of the clear facial meaning of the statute, resort to principles of interpretation to enable reading "may" to mean "shall," as Plaintiff would have this court do, is not only unnecessary, but inappropriate. "Thus, R.C. 4511.19(D)(1)(b) does not mandate admissibility of the results of the breath test. Rather, "the statute vests the trial court with discretion in making a determination with respect to admissibility, notwithstanding approval from the director of health." *Bergman*, at p. 23. The use of may recognizes the court's important role in applying rules and principals of evidence in individual cases, while simultaneously acknowledging the legislature's ability to properly delegate the more general "gatekeeping" when determining which "methods or techniques" to adopt in all testing.

Applicability of Rules of Evidence

Thirdly, this reading of *Vega* gives effect to the language in *State v. French* explicitly authorizing evidentiary challenges to the admissibility of chemical tests. In *State v. French*, 72 Ohio St.3d 446, 449, 650 N.E.2d 887 (1995), the court held that challenges to the admissibility of BAC test results based on non-compliance with ODH procedures must be raised prior to trial in the form of a motion to suppress or else they are waived. In so holding, the court was careful to note, in no uncertain terms, that the holding "does not mean * * * that the defendant may not challenge the chemical test results at trial under the Rules of Evidence. Evidentiary objections challenging the competency, ***admissibility***, relevancy, authenticity, and credibility of the chemical test results may still be raised." (Emphasis added.) *Id.* at 452. Furthermore, in *State v. Burnside*, 100 Ohio St.3d 152, 2003-Ohio-5372, 797 N.E.2d 71, the court determined whether the plaintiff could demonstrate that a blood-alcohol test was performed in substantial compliance with ODH procedures where a particular procedure was not followed. In holding that the plaintiff was required to show the particular

procedure had been complied with before the test results could be admitted, the court stated that "[t]he General Assembly established the **threshold** criteria for the admissibility of alcohol-test results in prosecutions for driving under the influence and driving with a prohibited concentration of alcohol in R.C. 4511.19(D)." (Emphasis added.) *Id.* at ¶ 9.

Thus, ODH approval of a particular instrument creates a threshold presumption of reliability that a defendant may rebut through application of Evid.R. 702. This approach is faithful not only to the text of *Vega*, but also to the *Vega* court's insistence that trial courts "afford the legislative determination that intoxilyzer tests are proper detective devices the respect it deserves" while at the same time preserving trial courts' mandatory role as the gate-keepers against un-scientific evidence. *Vega*, 12 Ohio St.3d at 188.

The Eleventh Appellate District recently adopted this approach, stating "*Vega* prohibits blanket attacks on the reliability of breath analysis machines generally, and premises this upon the use of 'proper equipment.' *Vega*, 12 Ohio St.3d at 186. * * * A breath analysis machine could only be 'proper equipment' if it is reliable." *Bergman*, 11th Dist. No. 2012-P-0124, 2013-Ohio-3073, at ¶ 25.

Moreover, in previously holding that the state must show at least substantial compliance with ODH procedures regarding blood-alcohol testing before the results are admissible, the Ohio Supreme Court characterized R.C. 4511.19(D)(1) as "a three-paragraph gate-keeping statute." *State v. Mayl*, 106 Ohio St.3d 207, 833 N.E.2d 1216, 2005-Ohio-4629, ¶ 20. Thus, R.C. 4511.19(D)(1)(b) necessarily calls upon the trial court to apply the Rules of Evidence regarding alcohol concentration tests, particularly Evid.R. 702, because by using the term "gate-keeping," the court in *Mayl* was certainly alluding to the US Supreme Court's holding in *Daubert* inasmuch as that seminal case introduced the term "gate-keeping" into the lexicon of the law of evidence. Thus, the "traditional" interpretation of *Vega* appears to

directly conflict with the permissive language of R.C. 4511.19(D)(1)(b) as well as the mandate arising out of the Rules of Evidence that a trial court must function as the gate-keeper against un-scientific evidence.

Application of State v. Reid

Finally, this approach also follows the holding in *Reid*, which is the direct precedent binding upon this court. In *Reid*, the appellate court found that the trial court committed error in placing the **initial burden** of demonstrating the reliability of the I8000 on the state and by conducting a *Daubert* analysis of "the principles and methods upon which the Intoxilyzer 8000 breath test results are based." The approach taken by this court does neither.

In *Reid*, the defendants filed a motion to suppress the results of their I8000 test results, arguing that the I8000 is "unreliable and inaccurate as an alcohol breath testing mechanism." *State v. Reid*, Circleville M.C. No. TRC1100716, 2 (June 2, 2011). Notably, the defendants in *Reid* challenged the reliability of the I8000 without articulating specific issues or attacks against the instrument. Rather, the defendants merely raised the subject of reliability via a motion to suppress, whereupon the trial court placed the burden on the state, under Evid.R. 702 and *Daubert*, to demonstrate by expert testimony that the I8000 is "an accurate and reliable instrument for breath testing in OVI cases." The trial court in *Reid* not only placed the burden of proving threshold reliability on the state, it specifically demanded expert testimony from ODH prior to allowing admission of the evidence. After the state presented the testimony of Mary Martin, Program Administrator for ODH, Drug and Alcohol Administration, but otherwise failed to present specific testimony from ODH witnesses explaining how the reliability of the I8000 was determined, the trial court ruled that "the test results in the within cases are held inadmissible for trial purposes * * * until such time as ODH can present testimony of the scientific principles that support its use and insure the accuracy and reliability

of the instrument." *Id.* at 10. After an apparent re-hearing of these issues, in which stipulated testimony was presented, the trial court adhered to its original ruling, holding that Plaintiff had again failed to meet its threshold burden of proving reliability because "too many questions" remained regarding various aspects of the I8000's design.

On appeal, the Fourth Appellate District addressed two of Plaintiff's assignments of error:

> 1) Whether the trial court erred by placing the burden on Plaintiff to prove by way of expert testimony that the I8000 is accurate and reliable despite ODH's approval of the instrument and the fact that the defendants' tests had been properly administered under ODH procedures, and
>
> 2) Whether the trial court erred by performing a Daubert analysis of "the reliability of the principles and methods upon which the Intoxilyzer 8000 breath test results are based, in view of the legislative mandate providing for admission of breath tests if analyzed in accordance with the methods approved by the Ohio Director of Health. Reid, 2013-Ohio-562 at ¶ 2.

These assignments of error were sustained with the court concluding that this initial burden has been eliminated by the legislative delegation of the initial gate-keeping function to the Director of Health, and thus it is improper for a trial court to conduct a *Daubert* analysis in abrogation of the rebuttable presumption of reliability that has attached to the instrument due to its approval by ODH.

Applying the holding of *Reid*, this court has permitted Defendants to mount what can only be described as very specific attacks against the design of the I8000 and has placed the burden on Defendants to rebut the legislatively-created presumption that the instrument is reliable. Furthermore, this court is specifically not conducting a *Daubert* analysis of the principles and methods upon which the I8000 test results are based. Such an analysis is impermissible pursuant to the holdings in both *Vega* and *Reid*. Rather, this court is

conducting a *Daubert* analysis in regards to whether the design of the I8000 has **properly implemented** those unassailable principles and whether the I8000 is therefore "proper equipment" that yields scientifically reliable results.

Applying the holdings in both *Vega* and *Reid*, and in applying the plain meaning of R.C. 4511.19, this court concludes that Defendants are not prohibited from raising specific attacks on reliability where those attacks are based upon design deficiencies which render the device incapable of properly implementing the firmly established scientific principles necessary to yield scientifically reliable results. For if such design deficiencies exist, the Intoxilyzer 8000 is not the "proper equipment" contemplated by *Vega* when the court relied upon the scientific principles it so strongly embraced.

Plaintiff urges that allowing OVI defendants to make specific attacks against the reliability of the I8000 "would bring prosecution of OVI cases in Ohio to a screeching halt, result in clogged dockets and dismissals of cases which would have previously been 'slam-dunk' convictions." While considerations of judicial economy are certainly relevant to the instant discussion, this line of reasoning elevates judicial economy above fundamental fairness and subordinates the substantive due process rights of defendants. Indeed, the essential role of the judiciary is not to facilitate "slam-dunk" prosecutions for Plaintiff, but rather to see that substantial justice is done. *Jaminet v. Medical Center Real Estate Developers, Inc.*, 7th Dist. No. 87 CA9, 9 (Apr. 25, 1988). The court in *Bergman* aptly summarized the substantive due process implications of Plaintiff's position as follows:

> [T]he determination of evidential reliability necessarily implicates the defendant's substantive due process rights.
>
> 'Substantive due process, (although an) ephemeral concept, protects specific fundamental rights of individual freedom and liberty from deprivation at the hands of arbitrary and capricious government action. The fundamental rights protected by substantive due process arise from the Constitution itself and have

been defined as those rights which are "implicit in the concept of ordered liberty." (* * *) While this is admittedly a somewhat vague definition, it is generally held that an interest in liberty or property must be impaired before the protections of substantive due process become available.' State v. Small, 162 Ohio App.3d. 375, 2005 Ohio 3813, ¶11, 833 N.E.2d 774, * * * (10th Dist.), quoting *Gutzwiller v. Fenik*, 860 F.2d. 1317, 1328 (6th Cir. 1989).

However vague the conceptual parameters of one's substantive due process guarantees may be, the following principle is clear; '(substantive) * * * due process is violated by the introduction of seemingly conclusive, but actually unreliable evidence.' *Barefoot v. Estelle*, 463 U.S. 880, 931, fn. 10, 103 S. Ct. 3383, 77 L. Ed. 2d 1090, * * *." (Parallel citations omitted.) *Collazo*, 11th Dist. No. 2012-L-067, 2013 Ohio 439, ¶41-44.

As the Court of Appeals, Tenth Appellate District has observed:

'Substantive due process prohibits the government from infringing upon fundamental liberty interests in any manner, regardless of the procedure provided, unless the infringement survives strict scrutiny; i.e., the government's infringement must be "narrowly tailored to serve a compelling state interest." *Reno v. Flores* (1993), 507 U.S. 292, 302, 113 S. Ct. 1439, 123 L. Ed. 2d 1, * * *.' *In re M.D.*, 10th Dist. No. 07AP-954, 2008. *Bergman* at ¶ 28-32.

Defendants' Specific Attacks against Statutory Presumption of I8000 Reliability

Under Evid.R. 702, a witness may testify as an expert, and may give testimony that reports the result of a procedure, test, or experiment, when all of the following apply:

(A) The witness' testimony either relates to matters beyond the knowledge or experience possessed by lay persons or dispels a misconception common among lay persons;
(B) The witness is qualified as an expert by specialized knowledge, skill, experience, training, or education regarding the subject matter of the testimony;
(C) The witness' testimony is based on reliable scientific, technical, or other specialized information. To the extent that the testimony reports the result of a procedure, test, or experiment, the testimony is reliable only if all of the following apply:
(1) The theory upon which the procedure, test, or experiment is based is objectively verifiable or is validly derived from widely accepted knowledge, facts, or principles;
(2) The design of the procedure, test, or experiment reliably implements the theory;
(3) The particular procedure, test, or experiment was conducted in a way that will yield an accurate result.

"[E]xpert scientific testimony is admissible if it is reliable and relevant to the task at hand." *Miller v. Bike Ath. Co.*, 80 Ohio St.3d 607, 740, 687 N.E.2d 735 (1998), citing *Daubert*, 509 U.S. at 589. Furthermore, "[t]o determine reliability, the *Daubert* court stated that a court must assess whether the reasoning or methodology underlying the testimony is scientifically valid." *Id.*, citing *Daubert* at 592-93. Thus,

> [i]n evaluating the reliability of scientific evidence, several factors are to be considered: (1) whether the theory or technique has been tested, (2) whether it has been subjected to peer review, (3) whether there is a known or potential rate of error, and (4) whether the methodology has gained general acceptance. Although these factors may aid in determining reliability, the inquiry is flexible. The focus is 'solely on principles and methodology, not on the conclusions that they generate.'

(Citations omitted.) *Id.*

The ultimate admissibility of the I8000 results in this case hinges on whether the I8000 meets the requirements of Evid.R. 702(C), and the parties focused particularly on the second and third factors, that is, whether the I8000's design and the manner in which it purports to measure breath-alcohol reliably yields scientifically accurate results.

This court held an evidentiary hearing on Defendants' motion to exclude that lasted for many days, non-consecutively, over the course several months. Each side introduced evidence in the form of reports, exhibits, and expert testimony regarding the reliability and accuracy of the I8000. Plaintiff offered the testimony of Dr. John Wyman, Mr. Brian Faulkner, Ms. Mary Martin and Mr. Craig Yanni. Defendants offered the expert testimony of Dr. Alfred Staubus, Dr. Michael Hlastala, and Mr. Thomas Workman. In their post-hearing briefs, Defendants argue that the "defense expert witnesses demonstrated breath testing on the Intoxilyzer 8000 in Ohio is conducted in a way that does not yield accurate results." Plaintiff argues that the evidence showed conclusively that the I8000 is an accurate and reliable

breath-testing instrument and that the Court should "take judicial notice of its general reliability."

Among myriad others, Defendants focused their attacks on the following specific reliability issues: 1) whether the I8000 has been tested for and designed to address radio frequency interference ("RFI") from devices such as smartphones, 2) whether the I8000 is subject to operator manipulation in a manner that can yield incorrect results, and 3) whether the I8000 yields inaccurate results because it fails to filter substances similar to ethanol out of breath samples, such as mouth alcohol.

Mr. Faulkner, the Manager of Engineering at the company that manufactures the I8000, testified that the I8000 can be affected by RFI. While the I8000 has been tested regarding interferences from certain frequencies, such as police radios, Mr. Faulkner testified that the instrument has not been tested regarding devices that produce similar frequencies, such as smart phones. Dr. Staubus, a breath-testing expert who has been trained regarding the I8000 and who owns and regularly experiments with breath-testing instruments, also testified that it is unknown whether the I8000 is able to detect RFI from devices such as smart phones and wireless networks. Mr. Workman, an expert in high technology, stated that while breath-testing instruments historically have been designed to detect RFI from devices such as police radios, the RFI detector on the I8000 has not been tested regarding digital assistants, smart phones, and other recently-developed, frequency-emitting devices.

Next, the evidence showed that the I8000 requires a subject to submit two separate breath samples, and that the samples must have a .02 agreement. Furthermore, the evidence showed that although the display on the I8000 indicates when the instrument has taken in a complete, 100% sample, it also then allows for taking sample quantities above and beyond a 100% sample. According to Dr. Staubus, the longer a subject blows into the

instrument past 100%, the higher the breath-alcohol concentration measured. Thus, the instrument appears deficient, in terms of reliability, in that the operator of the machine may manipulate the result by requiring a subject to blow beyond a 100% sample. Dr. Hlastala, an expert on the physiology of the human lungs, agreed that results of the I8000 are subject to manipulation by the operator, and he testified that such a deficiency undercuts the reliability of the results because the result will reflect an inflated breath-alcohol concentration. For example, if an operator stops collecting the sample at 100% on the first test and the result is .09, and during the second test the subject's result is only .06 upon reaching 100%, the operator can instruct the subject to continue blowing into the instrument so that the result will increase to within the .02 margin of error. Mr. Yanni, who trains operators on how to administer tests on the I8000, testified that he teaches operators to instruct subjects to take a deep breath and blow into the instrument for as long as they can without reference to the 100% sample display on the instrument. On cross examination, Mr. Faulkner conceded that the design of the I8000 permits operator manipulation of the results. Dr. Wyman, too, acknowledged that it is "theoretically" possible that an operator could manipulate the two I8000 results so that they would be within the .02 margin of error.

Last, according to Dr. Staubus, the I8000 is deficient because the filters and bandwidth the instrument uses make it vulnerable to artificially increasing ethanol measurements when chemical substances similar to ethanol, such as mouth alcohol, are present. As stated by Defendants, Dr. Staubus explained that "[w]hen mouth alcohol is not detected and is instead added to the breath alcohol, the breath alcohol concentration is falsely elevated and is an inaccurate result." Furthermore, Dr. Hlastala agreed that the design of the I8000 is deficient in this manner, because the instrument uses inferior measuring technology that increases the likelihood that a given sample is tainted by the presence of mouth alcohol or other similar

substances. Mr. Workman's testimony also supported the notion that the I8000's design is deficient because the inferior measuring technology it uses gathers far fewer data points than other breath-testing instruments (four points per second instead of forty) and, therefore, the contaminating presence of substances similar to ethanol is more difficult for the instrument to recognize. "Peaks" or "spikes", in the gathered data that would indicate the presence of substances similar to ethanol are, mathematically, more difficult to recognize because with less data, the peaks or spikes will be far less pronounced.

Evaluating whether results produced by the I8000 are reliable under Evid.R. 702(C), this court finds that the guiding factors of whether the instrument has been tested and subjected to peer review also weigh against concluding the I8000 is reliable. Ms. Martin testified that the I8000 was subjected to scientific testing by ODH itself, but she did not produce any test results or data during the hearing relating to that purported testing, and was ultimately unable to substantiate the assertion. Otherwise, the evidence showed that it remains unclear whether and to what extent the I8000 has ever been subjected to any scientific reliability review by CMI, Inc., ODH, or anyone else. Furthermore, in terms of the third factor regarding known or potential rates of error, the evidence showed that the I8000 has at least three critical deficiencies that seriously undermine the reliability and accuracy of its results: 1) whether it has been tested and designed to detect RFI from smartphones, which have become ubiquitous today, 2) the fact that the machine allows for taking breath sample quantities above 100% such that the longer a subject blows, the higher the result, and the potential for operator manipulation of the instrument to thwart the check of the purported .02 margin of error, and 3) the instrument's deficient ability to detect and alert to the presence of contaminating substances in the sample, such as mouth alcohol.

Additionally, this Court is hard pressed to find that the I8000 has achieved general

acceptance as a scientifically reliable breath-testing instrument in light of the specific deficiencies demonstrated by the testimony. The unrebutted evidence is that the only scientific testing of the I8000 has been done by law enforcement. The manufacturer has not engaged in independent scientific testing of its reliability even though the design defects have been the subject of extensive litigation. It refuses to provide a means by which the scientific community at large can review, let alone test, its reliability in light of these serious problems with the current design of the device.

In light of the above, while the I8000 is entitled to a presumption of reliability because ODH has approved it as an evidential breath-testing instrument, Defendants have met their burden of rebutting that presumption. The results of the I8000 are not scientifically reliable and the Court, as the gate-keeper against un-scientific evidence, must prohibit them from being introduced into evidence in this case.

Software Changes and Limited Holding

Both Ms. Martin and Mr. Faulkner testified that there have been numerous software changes made to the I8000 and more changes are ongoing. When ODH approved the I8000, the software version was No.7 and, subsequent to its approval, there have been at least three changes to that software resulting, at the time of the hearing, in software version No. 11. Moreover, the evidence showed that the I8000 software is subject to unilateral, remote modification by its manufacturer, CMI, Inc.

So many changes have been made that Defendants have even argued that the device used in the testing of these defendants is not even the same device approved by ODH, let alone the same device which is currently in use. For these reasons, the court cannot conclude that the deficiencies demonstrated by Defendants continue to exist or will exist in

the future. Additionally, during the course of the hearing on this matter, experts in breath-testing presented by Defendants acknowledged that the current deficiencies in design could be rectified, thus making the device capable of rendering a scientifically accurate result.

In light of the above, this court specifically limits the applicability of its ruling to the particular I8000 instruments employed in this case at the time that Defendants were tested.

Teresa L Liston

Judge Teresa L. Liston, ret.
By assignment pursuant to Sup.R. 17(A)