

STATE OF MICHIGAN
IN THE COURT OF APPEALS

People of the State of Michigan,

Plaintiff-Appellee,

v

Cara Christine Bowden,

Defendant-Appellant.

COA Case No. 357976

Ottawa County Circuit Court
Case No. 21-44535-AR

58th District Court (Hudsonville)
Case No. HU-20-89672-SD

**AMICUS CURIAE BRIEF OF THE AMERICAN CIVIL LIBERTIES UNION
OF MICHIGAN AND THE STATE APPELLATE DEFENDER OFFICE**

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STATEMENT OF QUESTION PRESENTED

This Court invited amici to “address whether there is sufficient scientific evidence to support the conclusion that a properly trained and certified drug recognition evaluation officer is able to accurately determine whether an individual is impaired by the ingestion of marijuana or narcotics to a degree that makes it unsafe and unlawful for the individual to operate a motor vehicle.” *People v Bowden*, unpublished order of Court of Appeals, entered February 9, 2022 (Docket No. 357976).

Amici Curiae’s answer: No. There is no peer-reviewed research concluding that the Drug Recognition Expert (DRE) protocol employed in this case is a scientifically valid tool for determining whether a driver is impaired by a drug. Even the non-peer-reviewed and flawed research cited by the prosecution concludes that the protocol’s ability to identify the mere *presence* of a drug does not strongly correlate with *impairment* by that drug. As a result, drug recognition evaluation officers cannot be qualified as experts in identifying drug impairment under MRE 702.

INTEREST OF AMICI CURIAE¹

The American Civil Liberties Union of Michigan (“ACLU”) is the Michigan affiliate of a nationwide, nonpartisan organization with over 1.5 million members dedicated to protecting civil rights and civil liberties. The ACLU has litigated extensively, as well as filed amicus briefs, in state and federal cases pertaining to the rights of persons accused of criminal wrongdoing including cases specifically relating to the over-criminalization of illegal drugs. See, e.g., *Ter Beek v City of Wyoming*, 495 Mich 1; 846 NW2d 531 (2014); *People v Kolanek*, 491 Mich 382; 817 NW2d 528 (2012); *Braska v Challenge Mfg Co*, 307 Mich App 340; 861 NW2d 289 (2014); *People v Redden*, 290 Mich App 65; 799 NW2d 184 (2010); *Casias v Wal-Mart Stores, Inc*, 695 F3d 428 (CA 6, 2012); *Platte v Thomas Twp*, 504 F Supp 2d 227 (ED Mich, 2007); *Spencer v Bay City*, 292 F Supp 2d 932 (ED Mich, 2003); *Marchwinski v Howard*, 113 F Supp 2d 1134 (ED Mich, 2000).

This Court invited the State Appellate Defender Office (“SADO”) to file an amicus brief. SADO regularly participates in state court litigation both through direct representation and amicus advocacy to ensure the rights of people in the criminal legal system are protected.

BACKGROUND REGARDING THE HISTORY AND PURPOSE OF THE DRE PROTOCOL

The Drug Recognition Expert (“DRE”) protocol² allows police officers around the nation to attend short trainings to purportedly become experts in identifying which intoxicating

¹ No party authored this brief in whole or in part, nor contributed financially to support the submission of this brief.

² This protocol is also known as the Drug Evaluation and Classification Program. Officers trained in the protocol are referred to as Drug Recognition Experts. For simplicity, this brief uses “DRE” to refer to both the protocol (i.e., the DRE protocol) and the officers trained to use it (i.e., DRE officers).

substance is responsible for causing the impairment of drivers who are exhibiting signs of erratic driving. After a driver is arrested under suspicion that they have been operating while intoxicated (“OWI”) by alcohol or a drug, a DRE officer administers a 12-step protocol (the “DRE protocol”) to identify the class of drug that may be causing the impairment.³

According to the International Association of Chiefs of Police (“IACP”), the DRE protocol’s standard-setting body, the DRE protocol consists of a “compilation of tests that physicians have used for decades to identify and assess alcohol- and/or drug-induced impairment.”⁴ But the protocol’s history reveals that it was developed primarily by police officers with no medical background, and not by medical or scientific experts. It was developed in the early 1970s by a group of Los Angeles Police Department (“LAPD”) traffic enforcement officers who found it difficult to obtain convictions on non-alcohol OWI arrests.⁵ Although an LAPD officer described the protocol as “borrow[ing] extensively from existing bodies of knowledge,”⁶

³ Today, the 12-step protocol includes: (1) a breath alcohol concentration (BrAC) test to discount the influence of alcohol; (2) an interview of the arresting officer; (3) a preliminary physical examination of the person arrested; (4) three standard eye examinations; (5) four field sobriety tests; (6) a vital signs check; (7) pupil size measurements; (8) muscle tone examination; (9) inspection for possible injection sites; (10) interrogation of the person regarding their drug use; (11) a formal opinion as to impairment and the drug responsible; and (12) toxicological examination to confirm the formal opinion. Int’l Ass’n of Chiefs of Police, *12 Step Process* <<https://www.theiacp.org/12-step-process>> (accessed April 5, 2022).

⁴ *Id.*

⁵ Page, *The Drug Recognition Expert (DRE) Response to the Drug Impaired Driver: An Overview of the DRE Program, Officer, and Procedures* <<https://www.massdre.org/drgdrv.htm>> (accessed April 5, 2022) (“They could arrest the drug-impaired driver, but were unable to obtain a conviction. Frustrated officers, problem-solvers by training and avocation, sought out solutions.”).

⁶ *Id.*

the protocol they ultimately assembled consisted of observational techniques employed by LAPD officers and field sobriety tests that were developed for use in assessing *alcohol* impairment.⁷

Despite the lack of a medical basis for using the protocol to assess drug-induced impairment, the LAPD formally adopted it in 1979. It quickly grew in popularity, soon attracting the attention of the National Highway Traffic Safety Administration (“NHTSA”). In the mid-1980s, NHTSA funded a pair of non-peer-reviewed studies to test the scientific validity of the DRE protocol as a tool for assessing drug-induced impairment.⁸ However, the studies only involved a much more limited test: whether the DRE protocol was a scientifically valid way to identify the type of drug *present* in a subject’s body. See *infra* Section IV.B (discussing the relevant studies). Those studies also indicated that the mere presence of a drug does not easily correlate to impairment by that drug.⁹ This outcome is not surprising, given that the DRE protocol was not designed by medical or scientific professionals in the first place.

Apparently concluding that the DRE protocol was still helpful to law enforcement agencies as a tool for detecting the type of drug consumed by a driver, NHTSA subsequently collaborated with the IACP to expand the use of the DRE protocol nationwide.¹⁰ Police

⁷ *Id.*

⁸ *Id.*

⁹ This was especially so, according to the studies, for marijuana (the drug at issue in this case), the possession and consumption of which became legal for adults 21 years of age or older under Michigan law in 2018. See 2018 IL 1. The mere fact that a driver has recently used marijuana is no longer evidence of a crime. Instead, what must be proven to support a conviction under MCL 257.625 is that the driver is actually *intoxicated or impaired by* marijuana. See *People v Koon*, 494 Mich 1; 832 NW2d 724 (2013) (per curiam). Thus, the DRE protocol’s purported ability to detect the presence of marijuana has little to no bearing on MCL 257.625 today.

¹⁰ Int’l Ass’n of Chiefs of Police, *Drug Evaluation & Classification Program: 2020 Annual Report* (2021), p 1, available at <<https://www.theiacp.org/sites/default/files/DEC%20Annual%20Reports/2020%20Annual%20Report.pdf>> (accessed April 5, 2022).

departments in Michigan began participating in the DRE program relatively recently, in 2010.¹¹ Today, there are 128 DRE officers across Michigan.¹²

The proliferation of this protocol has occurred without much scrutiny of the program’s scientific validity or its proper scope. As the prosecution did in this case, many prosecutors attempt to rely upon the pair of NHTSA studies (which are now several decades old) to support the validity of the DRE protocol as a tool for assessing *impairment*. But as mentioned above, and as discussed in detail below in Section IV.B, these studies only examined the ability of the DRE protocol to identify the *presence* of a particular drug in the body of a person who was already exhibiting symptoms of impairment (e.g., erratic driving). Meanwhile, as discussed in Section IV.B below, subsequent peer-reviewed research from the twenty-first century has pointed out significant methodological weaknesses in these initial non-peer-reviewed NHTSA studies—even as it pertains to the DRE protocol’s ability to detect the presence of drugs in a person’s system.

This appeal presents the Court with a critical opportunity to acknowledge that the DRE program was not designed to, nor does it have the ability to, determine whether a driver is too impaired to drive because of drugs.

ARGUMENT

I. MRE 702 requires courts to play a rigorous gatekeeping role in preventing the admission of unreliable expert testimony.

Michigan Rule of Evidence (“MRE”) 702 governs the admissibility of expert testimony:

If the court determines that scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of

¹¹ Int’l Ass’n of Chiefs of Police, *States and Countries with DREs* <<https://www.theiacp.org/states-and-countries-with-dres>> (accessed April 5, 2022).

¹² *Id.*

reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. [MRE 702.]

This language mirrors the corresponding federal rule. FRE 702. Our Supreme Court has adopted the test for reliability of expert testimony articulated in *Daubert v Merrell Dow Pharm, Inc*, 509 US 579; 113 S Ct 2786; 125 L Ed 2d 469 (1993). See *Gilbert v DaimlerChrysler Corp*, 470 Mich 749, 779–781 & n 44; 685 NW2d 391 (2004). *Daubert* requires that the trial court assume a “gatekeeper role” in assessing the reliability of expert testimony. *Gen Electric Co v Joiner*, 522 US 136, 142; 118 S Ct 512; 139 L Ed 2d 508 (1997) (quotation marks omitted).

MRE 702 has established a three-part test for admissibility, which involves two threshold inquiries. First, the trial court must ensure that the testimony “will assist the trier of fact to understand a fact in issue.” *People v Kowalski*, 492 Mich 106, 120; 821 NW2d 14 (2012) (lead opinion by KELLY, J.).¹³ Second, the court must find that the testimony “is provided by an expert qualified in the relevant field of knowledge.” *Id.* After these two prerequisites have been satisfied, the court then must determine that the testimony “is based on reliable data, principles, and methodologies that are applied reliably to the facts of the case.” *Id.* Testimony is admissible under MRE 702 only if all three requirements are satisfied. *Id.* at 120–121. “[T]he proponent of evidence ‘bears the burden of establishing relevance and admissibility.’” *Gilbert*, 470 Mich at 781, quoting *People v Crawford*, 458 Mich 376, 388 n 6; 582 NW2d 785 (1998).

The court’s gatekeeper role “applies to *all stages* of expert analysis.” *Id.* at 782. Although the exercise of this role is within the trial court’s discretion, “the court may neither abandon this obligation nor perform the function inadequately.” *People v Dobek*, 274 Mich App 58, 94; 732

¹³ Both the concurring opinion and the dissent in *Kowalski* agree with all the propositions for which *Kowalski* is cited in this brief, differing only in their application to the facts of that case. See *Kowalski*, 492 Mich at 144–145 (CAVANAGH, J., concurring); *id.* at 148–150 (MARKMAN, J., concurring in part and dissenting in part).

NW2d 546 (2007); see also *Gay v Select Specialty Hosp*, 295 Mich App 284, 292; 813 NW2d 354 (2012) (“[W]hen a trial court admits or excludes evidence on the basis of an erroneous interpretation or application of law, it *necessarily* abuses its discretion.”). “MRE 702 mandates a searching inquiry, not just of the data underlying expert testimony, but also of the manner in which the expert interprets and extrapolates from those data.” *Gilbert*, 470 Mich at 782. “Careful vetting of all aspects of expert testimony is especially important when an expert provides testimony about causation.” *Id.* There is always the concern that “ostensibly legitimate data may serve as a Trojan horse that facilitates the surreptitious advance of junk science and spurious, unreliable opinions.” *Id.* at 783.

II. MRE 702’s first threshold inquiry—helpfulness to the trier of fact—is not met here because the DRE protocol does not offer any specialized information about impairment that is not within the common understanding of an average juror.

The requirement that expert testimony assist the trier of fact “goes primarily to relevance.” *Daubert*, 509 US at 591. This criterion “requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility.” *Id.* at 592. Critically, it also necessitates that the testimony “involve a matter that is beyond the common understanding of the average juror.” *Kowalski*, 492 Mich at 121 (lead opinion by KELLY, J.). The DRE protocol does not meet this requirement, because it is simply a series of individual tests and observations about drug use that are not connected in any scientific or technical way to determining whether an individual is too impaired to drive. See *infra* Section IV.

It could be helpful to a jury to have a scientifically grounded basis for measuring a driver’s impairment from drug usage *if such a basis existed*. But in the absence of such a basis, trial courts are not given more leeway under MRE 702 based on how helpful evidence might be. “[P]roposed expert testimony must meet all the other requirements of MRE 702 in order to assist the trier of fact” *Kowalski*, 492 Mich at 120–121 (quotation marks and citation omitted).

MRE 702's rigorous gatekeeping requirements exist because an expert, unlike an ordinary witness, "is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation." *Daubert*, 509 US at 592. Because expert testimony often purports to answer the ultimate question posed, there is always the danger it "could be given disproportionate weight by the jury and considered conclusive proof of guilt or innocence." *Dobek*, 274 Mich App at 97. "Evidence perceived by lay jurors to be scientific in nature possesses an unusually high degree of persuasive power." *State v O'Key*, 321 Or 285, 291; 899 P2d 663 (1995) (collecting authorities). Thus, an expert witness may not be used to summarize factual evidence embellished with a legal conclusion and must "bring to the jury more than the lawyers can offer in argument." *In re Air Crash Disaster at New Orleans, La*, 795 F2d 1230, 1233 (CA 5, 1986).

The Legislature has not defined when a driver is impaired from marijuana usage. See *People v Koon*, 494 Mich 1, 8; 832 NW2d 724 (2013) (per curiam) (noting that the Legislature has not adopted a "legal limit" for marijuana usage "like that applicable to alcohol"). Jurors have a common understanding regarding how to drive an automobile and the conditions under which it may be unsafe to drive. Accordingly, a police officer can testify, as a non-expert under MRE 701, to personal observations made by the arresting officer or during a DRE examination that might suggest that someone is impaired from marijuana usage, such as erratic driving, the odor of marijuana, diminished balance and coordination, and the inability to retain and follow directions. These are all "cues that laypersons, using ordinary experience" can associate with impaired driving. See *United States v Horn*, 185 F Supp 2d 530, 558 (D Md, 2002); see also *Commonwealth v Gerhardt*, 477 Mass 775, 783; 81 NE3d 751 (2017) (explaining that a police officer's observations of signs of impairment may be admissible as lay witness testimony).

Admitting such evidence only under MRE 701 would ensure that the officer could *not* offer testimony about the DRE protocol itself, the very type of testimony that erroneously claims a scientific basis for determining impairment, as explained more fully below, and thus usurps the jury’s proper role in determining impairment.¹⁴ See *People v Leahy*, 8 Cal 4th 587, 606; 882 P2d 321 (1994) (observing that a jury could be “unduly swayed” by such evidence “solely by reason of its technical nomenclature”). Because an officer could not offer scientific conclusions, the defense could provide alternative factual explanations for the officer’s observations.

For these reasons, an officer’s individual observations when assessing whether a driver is impaired are likely admissible under MRE 701, but the officer is not able to offer a scientific opinion about impairment under MRE 702 because a juror is just as able as any DRE-trained police officer to determine impairment based on the observed facts.

III. Although the parties gloss over the second threshold inquiry—whether the putative expert is qualified—this factor is also not satisfied.

A witness may be qualified as an expert by their “knowledge, skill, experience, training, or education.” *Dep’t of Environmental Quality v Waterous Co*, 279 Mich App 346, 381; 760 NW2d 856 (2008). “The determinative inquiry in qualifying an expert is the nature and extent of knowledge and actual experience” *People v Christel*, 449 Mich 578, 592 n 25; 537 NW2d 194 (1995) (quotation marks and citation omitted). The expert’s qualifications must relate to the

¹⁴ Some steps of the protocol indisputably do not amount to scientific evidence on their own, such as questioning the person as to whether they have used drugs. An officer can testify under MRE 701 about the particular steps they took to assess the physical and mental state of the person, so long as the officer does not purport to talk about these steps as part of a scientific protocol that can assess impairment. That is because the DRE protocol claims to “blend[] scientific and observational techniques into a systematized and standardized, multi-step procedure” that “creates a substantial likelihood that a juror’s perception of the validity of each component will likely be enhanced by the scientific imprimatur of the whole.” *Bragaw v State*, 482 P3d 1023, 1029–1030 (Alas App, 2021) (quotation marks and citation omitted).

subject of their testimony, and therefore “[a]n expert who lacks ‘knowledge’ in the field at issue cannot ‘assist the trier of fact.’” *Gilbert*, 470 Mich at 789.

This requirement cannot be satisfied by the testimony of a DRE officer. A DRE officer in a case like this offers an opinion about the effect drugs have on a person’s body and the resulting ability to drive safely, and thus the relevant field of inquiry involves “medical, scientific, pharmacological, physiological, or biological training.” See *Commonwealth v Callahan*, unpublished opinion of the Pittsfield, Massachusetts District Court, issued March 30, 2019 (Case No. 16-cr-0789), pp 2 n 1, 9 (Appendix A at 3, 10). Basic law enforcement training does not train officers in any of these fields. See *State v Sampson*, 167 Or App 489, 552–553; 6 P3d 543 (2000). The DRE protocol is predicated on the idea that there are physiological signs that are indicative of drug use.¹⁵ Even veteran DRE officers who have extensive experience in conducting DRE evaluations do not have any scientific background on how the physiological effects that show drug use impact whether the driver is able to safely operate a vehicle. See, e.g., *Callahan*, unpub op at 9; *Maryland v Brightful*, unpublished opinion of the Carroll County Circuit Court, issued March 5, 2012 (Docket No. K-10-40259), p 35 (Appendix A at 47). Because the subject of the proffered testimony by a DRE officer is “far beyond the scope” of an individual officer’s purported expertise, that testimony is per se inadmissible under MRE 702. *Gilbert*, 470 Mich at 789.

In this case, it is likely that the DRE officer did little more than participate in a three-week training course to develop his purported “expertise.” Michigan’s DRE certification program

¹⁵ See Heishman et al., *Laboratory Validation Study of Drug Evaluation and Classification Program: Ethanol, Cocaine, and Marijuana*, 20 J Analytical Toxicology 468, 469, 480 (1996) (“Heishman I”) (Appendix B at 3, 14). Amici recognize the importance of scientific evidence to this Court’s briefing request; for this Court’s convenience, we attach all studies cited herein as Appendix B.

consists of 72 hours of classroom instruction over two weeks, followed by 40 hours of field training over one week.¹⁶ The classroom instruction phase consists of lectures on substantive topics, including “the seven drug categories [that the DRE protocol purports to be able to identify], human physiology and the signs and symptoms as they relate to the drug impaired driver.”¹⁷ Officers are taught how to conduct the 12-step DRE protocol, which they then apply to “subjects known to be under the influence of drugs [and/or] drug alcohol combinations” during the field training phase.¹⁸ Participating officers are not required to have *any* medical or scientific background or training. In fact, with few exceptions, even DRE program *instructors* need no relevant academic or medical background.¹⁹ Such a short course—taught by and for law enforcement officers—is, on its face, inadequate to turn law enforcement officers into certified experts in drug-related toxicology and physiology, fields that would typically require years of study to obtain professional certifications. Cf. *State v Ruthardt*, 680 A2d 349, 361 (Del Super, 1996) (finding that a multi-day DUI training was not sufficient to qualify police officers to testify as experts on how a driver’s performance on the “horizontal gaze nystagmus” test, one of the various tests performed as part of the DRE protocol, pertains to impairment).

¹⁶ Michigan State Police, *DRE - Drug Recognition Expert Program* <<https://www.michigan.gov/msp/divisions/ohsp/law-enforcement-programs/dre-drug-recognition-expert-program>> (accessed April 5, 2022).

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Int’l Ass’n of Chiefs of Police, *The International Standards of the Drug Evaluation and Classification Program* (April 2020), pp 19–21, available at <https://www.theiacp.org/sites/default/files/all/i-j/International_Standards_of_the_DECP.pdf> (accessed April 5, 2022).

IV. *Daubert*'s multifactor reliability inquiry plainly is not satisfied.

The final criterion to admit expert testimony requires “a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” *Daubert*, 509 US at 592–593. Several factors guide this inquiry, including:

(1) whether the scientific knowledge or technique can, and has been, tested, (2) “whether the theory or technique has been subjected to peer review and publication,” (3) “the known or potential rate of error,” (4) “the existence and maintenance of standards controlling the technique's operation,” and (5) whether there is “general acceptance” of the scientific technique. [*People v Muhammad*, 326 Mich App 40, 52; 931 NW2d 20 (2018), quoting *Daubert*, 509 US at 593–594.]

Every single reliability factor here weighs against the admissibility of DRE testimony.

A. The DRE Protocol Cannot Be, and Has Not Been, Meaningfully Tested In Any Rigorous Fashion as a Test for Impairment.

The first *Daubert* reliability factor concerns whether the expert's proposed methodology for arriving at an opinion can be tested for reliability. See *Daubert*, 509 US at 593. Testability is important, because it is otherwise impossible to determine whether the methodology works and can therefore be given scientific status. *United States v Gissantaner*, 990 F3d 457, 463–464 (CA 6, 2021). Testability also “assures the opponent of proffered evidence the possibility of meaningful cross-examination.” *United States v Mitchell*, 365 F3d 215, 238 (CA 3, 2004). Although this factor does not require “any particular *kind* of test,” it does require some ability to test the proposed methods to determine how the methodology performs empirically. See *Chapin v A & L Parts, Inc*, 274 Mich App 122, 136 n 7; 732 NW2d 578 (2007). Any testing must reflect how the methodology would operate in real world settings. See *United States v Semrau*, 693 F3d 510, 516, 522 (CA 6, 2012); see also *Muhammad*, 326 Mich App at 53 (emphasizing the importance of these tests to “account[] for ‘real world situations’”).

In terms of assessing whether a driver is *impaired* by a drug, the DRE protocol simply cannot be empirically tested. There are no independent objective criteria in Michigan (such as a legal THC limit) that establish what quantity of marijuana must be ingested or metabolized for someone to qualify as “intoxicated” or “impaired.” See MCL 257.625; *Koon*, 494 Mich at 8. Without those criteria, there are no known benchmarks against which to test the accuracy of a DRE officer’s ability to identify “impaired” drivers. In other words, without objective criteria that legally or scientifically define “impairment” in the first place, a DRE officer’s impairment-related conclusions amount to nothing more than subjective personal opinions. See *Callahan*, unpub op at 3 n 2 (Appendix A at 4) (“Without an objective means to assess the accuracy of the officers’ opinions of intoxication, this study [purporting to test whether the DRE protocol accurately detects the *presence* of a drug] is not relevant to the issue” of whether the DRE officer was qualified to opine on whether the defendant was impaired).²⁰

The Prosecuting Attorneys Association of Michigan (PAAM) amicus brief (hereinafter the “PAAM Brief”)²¹ claims there is an objective criterion for testing a DRE officer’s impairment-related conclusions, but confusingly identifies that criterion as performance on standardized field sobriety tests (SFSTs),²² a component of the DRE protocol initially developed to assess alcohol impairment.²³ See PAAM Brief, pp 14–27. PAAM misunderstands the word “objective.”

²⁰ This study discussed in *Callahan* is one of the non-peer-reviewed and flawed studies discussed further in Section IV.B. See also Heishman I (explaining that the existence of an independent criterion for testability is a hallmark of validating a scientific or technical methodology).

²¹ PAAM was joined in its position by Mothers Against Drunk Driving, the Michigan Sheriffs’ Association, and the Michigan Association of Chiefs of Police. We refer to this brief as “the PAAM Brief” in light of PAAM’s lead role in its preparation.

²² SFSTs include walking forward and turning around or balancing on one leg.

²³ PAAM claims that studies support the SFSTs’ sensitivity to drug ingestion, but PAAM itself admits that those studies “have produced conflicting results,” PAAM Brief, p 15, and have

Performance on SFSTs is not an objective criterion—it is an observation that must be empirically tested against *other objective criteria* to confirm its accuracy. To illustrate: the reason SFSTs can be tested as predictors of alcohol impairment is because scientists have been able to compare performance on SFSTs against an objective benchmark—the legal blood-alcohol concentration limit and how a driver acts at or above that limit. Without a similar objective benchmark in the drug context, PAAM is making the circular argument that the DRE protocol can be empirically tested against a component of the DRE protocol.

There have not been any published studies that have even attempted to empirically test a DRE officer’s ability to assess impairment. This makes sense given that it is not possible to do so. The only studies that purport to test the DRE protocol’s efficacy, as discussed below in Section IV.B, assess only whether the DRE protocol can accurately identify the *type of drug present* in a driver’s system. Those studies themselves make clear that they are not testing the DRE officer’s ability to assess whether the driver is *impaired* by that drug. And of course, a drug may be present in a driver’s system without causing impairment. See *Koon*, 494 Mich at 6.

In sum, the DRE program fails to satisfy the testability factor of *Daubert* because it is impossible to empirically test whether the protocol can accurately identify impaired drivers in the absence of objective criteria for defining drug impairment in the first place.

B. There are no peer-reviewed studies establishing that the DRE protocol reliably assesses impairment.

The second *Daubert* reliability factor considers “whether the methodology has been subjected to peer review.” *Muhammad*, 326 Mich App at 54. “That the research is accepted for

numerous methodological and design limits, PAAM Brief, pp 16–18. Thus, those studies do not strongly support an inference that SFSTs are an objective measure of drug impairment simply because SFSTs have been proven to predict alcohol impairment. See also *Gerhardt*, 477 Mass at 782 (“It is clear . . . that the scientific community has yet to reach a consensus on the reliability of [S]FSTs to assess whether a driver is under the influence of marijuana.”).

publication in a reputable scientific journal after being subjected to the usual rigors of peer review is a significant indication that it is taken seriously by other scientists, i.e., that it meets at least the minimal criteria of good science.” *Id.*, quoting *Daubert v Merrell Dow Pharm, Inc*, 43 F3d 1311, 1318 (CA 9, 1995); see also *Kowalski*, 492 Mich at 133 (highlighting “the rigorous standards of scientific peer-review”). Peer review also “increases the likelihood that substantive flaws in methodology will be detected” and is therefore an important consideration in assessing the validity of a particular methodology. *Daubert*, 509 US at 593–594. Simply put, “[p]eer review is an effective way for a [trial] court to weed out junk science.” *United States v LaVictor*, 848 F3d 428, 444 (CA 6, 2017).

Amici are not aware of, and neither the prosecution nor PAAM has identified, *any* peer-reviewed study that validates the DRE protocol for the prosecution’s purported purpose: measuring whether a driver is unsafe to drive due to being impaired by a drug.²⁴ The only peer-reviewed research that even addresses the subject expressly recognizes that no one has been able to validate the DRE protocol as a reliable test for drug-induced impairment, at least with regard to marijuana. See Karoly et al., *Effects of High-Potency Cannabis on Psychomotor Performance in Frequent Cannabis Users*, 7 *Cannabis & Cannabinoid Research* 107, 108 (2022) (Appendix B

²⁴ PAAM selectively quotes from two studies to briefly suggest that the DRE protocol is a scientifically valid way to detect drug impairment. See PAAM Brief, pp 49–50, quoting Heishman et al., *Laboratory Validation Study of Drug Evaluation and Classification Program: Alprazolam, d-Amphetamine, Codeine, and Marijuana*, 22 *J Analytical Toxicology* 503 (1998) (“Heishman II”) (Appendix B at 18), and Shinar & Schechtman, *Drug Identification Performance on the Basis of Observable Signs and Symptoms*, 37 *Accident Analysis & Prevention* 843 (2005) (Appendix B at 31). Those quotes, at best, amount to the scientific equivalent of dicta. An actual look at the studies reveals that Heishman II only set out to “determine the validity of the [DRE protocol] in predicting whether research volunteers had been *administered*” a particular drug, Heishman II at 512 (emphasis added), and that the Shinar & Schechtman study “is not an evaluation of the [DRE] program and the officers’ skills at using the program,” 37 *Accident Analysis & Prevention* at 844.

at 43). Summarizing existing scholarship, Karoly et al. explained that “Drug Recognition Expert evaluations have limited efficacy for assessing cannabis impairment.” *Id.*

PAAM points to some peer-reviewed literature that arguably supports the ability of the fifth step of the 12-step DRE protocol—SFSTs—to recognize drug impairment (e.g., by assessing which SFST in the protocol’s fifth step is most sensitive to drug ingestion). But the same research makes clear that such a limited inquiry has little bearing on the validity of the DRE protocol *as a whole*: “The problem with” inferring the validity of the DRE protocol from the validity of one step “is that the [DRE protocol] employs a much wider range of tests and measurements than the 3 [SFSTs] to identify drug impairment.”²⁵ That is, a DRE officer’s conclusions are based on a synthesis of the 12 DRE steps; by the DRE protocol’s own design, no one isolated step is meant to generate an accurate conclusion.

Here, the Ottawa County prosecutor’s office itself does not rely on any peer-reviewed research. The only studies relied upon by the prosecution are two non-peer-reviewed NHTSA studies: a 1985 laboratory study commonly known as the “Bigelow Study” and a 1986 field study commonly known as the “Compton Study.”²⁶ The prosecution and PAAM rely on both studies as evidence that the DRE program has been scientifically validated as a tool for assessing

²⁵ Porath-Waller & Beirness, *An Examination of the Validity of the Standardized Field Sobriety Test in Detecting Drug Impairment Using Data from the Drug Evaluation and Classification Program*, 15 *Traffic Injury Prevention* 125, 126 (2014) (Appendix B at 53). See also Hartman et al., *Drug Recognition Expert (DRE) Examination Characteristics of Cannabis Impairment*, 90 *Accident Analysis & Prevention* 219, 227 (2016) (Appendix B at 68) (noting that it is difficult for psychophysical tests to identify cannabis impairment “in the absence of other observations” in the DRE protocol).

²⁶ NHTSA, *Identifying Types of Drug Intoxication: Laboratory Evaluation of a Subject-Examination Procedure*, DOT HS 806 753 (May 1985) (the “Bigelow Study”) (Appendix B at 71); NHTSA, *Field Evaluation of the Los Angeles Police Department Drug Detection Procedure*, DOT HS 807 012 (February 1986) (the “Compton Study”) (Appendix B at 92).

impairment. Appellee Brief, pp 9–11, 16; PAAM Brief, pp 33, 35. Not only do those studies stand for a much more limited proposition than the prosecution and PAAM claim, but their methodologies have also been undermined by subsequent peer-reviewed research.²⁷ Most fundamentally, both studies expressly admit that their conclusions are limited to the DRE program’s ability to “correctly identify[] the drug classes”²⁸ present in a person’s body or, at best, to “accurately recognize the symptoms of” various drugs.²⁹ They do not even purport to make any conclusions as to the DRE program’s ability to identify whether a driver is unsafe to drive and thus impaired. In fact, the Compton Study expressly acknowledges that “[t]here is no way to determine objectively whether the suspects were actually too ‘impaired’ to drive safely. The fact that drugs were found in a suspect’s blood does not necessarily mean the suspect was too impaired to drive safely.”³⁰ The Bigelow Study similarly prefaces its conclusions by clarifying that it “does not represent a direct test of the validity of [the LAPD’s DRE program] or related behavioral examination procedures for detecting and identifying drug intoxication in field situations.”³¹ These preliminary studies do not establish a scientific basis for the DRE program.

²⁷ Prosecutors in other cases also commonly rely on a 1994 study conducted by the Arizona Department of Transportation. See Arizona Governor’s Office of Highway Safety, *Drug Recognition Expert (DRE) Validation Study*, PSP 93-410-05 (June 4, 1994) (the “Adler Study”) (Appendix B at 146). This study is not peer-reviewed and, like the Compton and Bigelow Studies, has been found to be deeply flawed methodologically by subsequent peer-reviewed literature. See Kane, *The Methodological Quality of Three Foundational Law Enforcement Drug Influence Evaluation Validation Studies*, 12 J Negative Results in BioMedicine 1, 4 (2013) (Appendix B at 256).

²⁸ Bigelow Study at 16.

²⁹ Compton Study at 24.

³⁰ *Id.* at 15.

³¹ Bigelow Study at 16.

Moreover, relatively recent peer-reviewed research has identified substantial methodological flaws in the Bigelow and Compton Studies with respect to whether they even show that the DRE protocol accurately tests for the presence or type of drugs in a person's body. A 2013 peer-reviewed article published in the *Journal of Negative Results in Biomedicine* applied the popular QUADAS (Quality Assessment of Diagnostic Accuracy Studies) framework—used to test the quality of a diagnostic study's design and methodology—to the Bigelow and Compton Studies and identified numerous methodological biases.³² The Bigelow study satisfied only five of the fourteen QUADAS standards, and the Compton study satisfied only one of them.³³ Among those many deficiencies were failures to satisfy even the basic requirements of the scientific process: sample groups were preselected and skewed to the point of producing systematic errors in test results, such as spectrum bias (the improper selection of a sample group only exhibiting severe impairment) and selection bias (the improper selection of a sample group whose demographics do not reflect real-world demographics); accuracy rates were significantly inflated by improperly removing partially- or wholly-incorrect drug identifications by a DRE officer from its accuracy calculations; and variations on the DRE protocol that do not nearly reflect the real-world DRE protocol were tested.³⁴ In light of these flaws, the article's conclusion could not have been more clear: "These validation studies do not validate current [DRE] practice."³⁵

There has been some subsequent peer-reviewed research that suggests that the DRE protocol could perform better than random chance at identifying the *type of drug present* in the

³² Kane, *The Methodological Quality*, 12 *J Negative Results in BioMedicine* at 1-2.

³³ *Id.* at 4.

³⁴ *Id.* at 3–8.

³⁵ *Id.* at 9.

system of a person whose driving behavior the arresting officer has already observed as possibly indicating impairment.³⁶ The prosecution does not cite any of these studies, and PAAM erroneously cites some of them as evidence that the DRE protocol can assess impairment. See PAAM Brief, pp 35–37. Crucially, those articles continue to make two things clear: (1) the DRE protocol does not test for impairment or unsafe driving and (2) there is no correlation, or at *best* a very weak one, between the presence of a drug and impairment caused by that drug.³⁷ Furthermore, as discussed in the next section, many of these studies demonstrate strikingly high error rates in even determining the presence and type of drug in a driver’s body. See *infra* Section IV.C.

If there were any doubt about the current science regarding the reliability of the DRE protocol for determining impairment, NHTSA (which sponsored the Bigelow and Compton studies and has promoted the DRE protocol) recently recognized the poor correlation between presence of and impairment by marijuana, informing Congress in 2017 that “[t]he psychoactive

³⁶ See, e.g., Heishman I; Beirness et al., *Evaluation of the Drug Evaluation and Classification Program: A Critical Review of the Evidence*, 8 Traffic Injury Prevention 368 (2007) (Appendix B at 265).

³⁷ See, e.g., Heishman I at 479 (explaining that the DRE program does not test for impairment and that the mere presence of a “parent drug or metabolite . . . provides little, if any, information concerning behavioral impairment”); Kane, *The Methodological Quality*, 12 J Negative Results in BioMedicine at 5 (“[T]he theory [the DRE officers can detect impairment] conflates side effects with impairment. The mere fact the presence of a drug may be identified by stereotypic physical side effects need not indicate the drug is causing mental impairment.”); Chow et al., *Driving Under the Influence of Cannabis: A Framework for Future Policy*, 128 Anesthesia & Analgesia 1300, 1302 (2019) (Appendix B at 279) (“Notably, the degree of impairment does not necessarily correlate with one’s level of intoxication [defined as the amount of THC in the blood] because occasional users are more affected at lower plasma levels of THC and for longer durations of time.”); Marcotte et al., *Driving Performance and Cannabis Users’ Perception of Safety: A Randomized Clinical Trial*, 2022 JAMA Psychiatry E1, E7 (Appendix B at 293) (concluding that “one cannot infer the level of impairment based on” the presence or level of THC).

ingredient in marijuana, delta-9-tetrahydrocannabinol (THC), does not correlate well with impairment.”³⁸

Roughly three decades of research shows that there is no direct or indirect scientific basis, let alone a peer-reviewed basis, for the position that the DRE protocol has the ability to assess drug-induced impairment.

C. The DRE protocol’s rate of falsely detecting impairment is unknown, and its rate of falsely determining even the mere presence of a drug demonstrates that the test is riddled with errors.

The third *Daubert* reliability factor requires the court to consider “the known or potential error rate of the method or theory.” *Muhammad*, 326 Mich App at 55. The failure of a methodology to even identify the accuracy rate of the relevant inquiry strongly weighs against its admissibility. See *United States v Lea*, 249 F3d 632, 640 (CA 7, 2001). Courts have rejected expert evidence that carried a low accuracy rate or high error rate. See, e.g., *State v Victor O*, 301 Conn 163, 175; 20 A3d 669 (2011) (concluding that the trial court reasonably rejected expert evidence that had error rate as low 20% and as high as 64%); *In re Ready*, 63 Mass App 171, 178; 824 NE2d 474 (2005) (upholding the trial court’s decision to find error rates ranging from 21 to 32% unacceptable); *In re Commitment of Burton*, 884 So 2d 1112, 1119 (Fla App, 2004) (Altenbernd, J., concurring) (noting that an error rate of around 20% is unacceptable “to deprive citizens of their constitutional liberties”).

Here, there is currently no documented rate of error for the “method or theory” being presented by the prosecution—i.e., that the DRE protocol can assess whether a driver is impaired by a drug. As explained previously, it is not possible to test the DRE protocol’s ability to assess drug impairment; accordingly, no study has been able to assess the accuracy of DRE officers’

³⁸ NHTSA, *Marijuana-Impaired Driving – A Report to Congress*, DOT HS 812 440 (July 2017), p 13.

impairment-related conclusions. See *supra* Section IV.A. Thus, the DRE protocol necessarily cannot satisfy the *Daubert* error-rate factor in a case like this one, where the prosecution seeks to admit a DRE officer as an expert on the subject of impairment.

Unlike testing for impairment, objective criteria exist for testing the protocol's more limited (and, for purposes of this case, irrelevant) ability to merely assess the presence of a particular drug in a person's body. This can be done by comparing a DRE officer's conclusion after performing the protocol to a toxicology result (for field studies) or to known controlled drug administration results (for laboratory studies). But even though researchers have been able to calculate the rate of error for a DRE officer's presence conclusions, the rates of error for even this irrelevant inquiry fluctuate to the point of being unreliable. Amici reviewed nine commonly cited studies (publication dates ranging from 1985 to 2021) that assess the protocol's overall accuracy in identifying the presence of a particular drug in a person's body, and those studies report accuracy rates ranging between 32.1% and 91.7%.³⁹ Limited to just peer-reviewed studies, the accuracy rates still fluctuate between 32.1% and 86.5%.⁴⁰ The results are similar with respect to

³⁹ Bigelow Study (reported accuracy rate: 91.7%); Compton Study (reported accuracy rate: 87.2%); Adler Study (reported accuracy rate: 83.5%); NHTSA, *Evaluation of the Impact of the Drug Evaluation and Classification Program on Enforcement and Adjudication*, DOT HS 808058 (December 1992) (Appendix B at 296) (reported accuracy rate: 64.1%); Heishman I (reported accuracy rate: 34.9%); Heishman II (reported accuracy rate: 32.1%); Smith et al., *Drug Recognition Expert Evaluations Made Using Limited Data*, 130 *Forensic Science International* 167 (2002) (Appendix B at 357) (reported accuracy rate: 78.9%); Porath & Beirness, *Predicting Categories of Drugs Used By Suspected Drug-Impaired Drivers Using the Drug Evaluation and Classification Program Tests*, 20 *Traffic Injury Prevention* 255 (2019) (Appendix B at 365) (reported accuracy rate: 86.5%); NHTSA, *Exploring the Predictive Validity of Drug Evaluation And Classification Program Evaluations*, DOT HS 812 959 (May 2021) (Appendix B at 376) (reported accuracy rate: 86.3%).

⁴⁰ Compare Heishman II at 512, with Porath & Beirness, *Predicting Categories*, 20 *Traffic Injury Prevention* at 259.

marijuana specifically, for which studies have reported accuracy rates ranging between 27.5% and 91.8%.⁴¹ Limited to just peer-reviewed studies, the marijuana-specific accuracy rates increase slightly but still fluctuate between 45.2% and 91.8%.⁴² These inconsistent results are likely the result of a general difficulty in designing a reliable sample group of DRE cases, which many studies have identified as a significant methodological limit.⁴³

In sum, a relevant rate of error does not exist for the DRE program’s impairment-related conclusions. And even the DRE protocol’s presence-related conclusions demonstrate an error rate that is inconsistent and perilously high in many studies. Existing literature does not support the conclusion that the DRE program is a reliably accurate method that satisfies *Daubert*.

D. No technical experts have established standards for the DRE protocol.

The fourth *Daubert* reliability factor involves “the existence and maintenance of standards controlling the technique’s operation.” *Daubert*, 509 US at 594. This inquiry concerns whether the relevant community and professional organizations have established guidelines that practitioners can use to mitigate the risk of error. *Gissantaner*, 990 F3d at 465. It also places special emphasis on the extent to which the standards are uniform and well-established in the relevant field. See *United States v Crisp*, 324 F3d 261, 269 (CA 4, 2003); *Muhammad*, 326 Mich App at 56. The absence of accepted standards weighs strongly against admissibility of the evidence. See *Doe ex rel Rudy-Glanzer v Glanzer*, 232 F3d 1258, 1266 (CA 9, 2000).

⁴¹ Compare Bigelow Study at 10, with Porath & Beirness, *Predicting Categories*, 20 Traffic Injury Prevention at 259.

⁴² Compare Heishman II at 512, with Porath & Beirness, *Predicting Categories*, 20 Traffic Injury Prevention at 259.

⁴³ See, e.g., Heishman I at 480–481 (discussing the difficulty of laboratory studies to construct a sample group whose controlled drug intake reflects real-world intake levels).

Although the IACP does publish uniform “international standards” for the DRE program,⁴⁴ these standards do not satisfy *Daubert* for two reasons. First, the international standards only provide “minimum standards” for the *certification* of DRE officers and DRE instructors (e.g., employment at a law enforcement agency, experience preparing investigative reports, completion of the training course, etc.). They do not set any standards “controlling the technique’s operation.” *Daubert*, 509 US at 594. Second, to the extent that the IACP’s 12-step DRE protocol or training program is a set of “standards” controlling the DRE protocol’s operation, those standards have been promulgated by a police association that is unqualified to set standards governing a scientific inquiry that purports to test the biophysical impact of drugs on a driver’s ability to drive.⁴⁵ The IACP acknowledges this in its own trademark filings for the DRE protocol: instead of asserting that the protocol meets any standards—as trademark filings typically would—the IACP only claims that the protocol involves “educational services . . . in the field of drug *identification*” (emphasis added).⁴⁶ The fact that the IACP provides “educational services” under the DRE banner does not demonstrate that they have developed an established (and thus, trademarkable) standard for the DRE protocol. And in any event, the IACP only claims to provide education about drug identification, not impairment. In *Gissantaner*, for example, the Sixth Circuit credited the fact that the guidelines for the DNA technology utilized by the Michigan

⁴⁴ Int’l Ass’n of Chiefs of Police, *The International Standards of the Drug Evaluation and Classification Program* (April 2020), available at <https://www.theiacp.org/sites/default/files/all/i-j/International_Standards_of_the_DECP.pdf> (accessed April 5, 2022).

⁴⁵ PAAM mentions that the IACP has a technical advisory panel, of which some members are medical professionals. But this panel only helps IACP set training and certification standards, not standards “controlling the technique’s operation.” See PAAM Brief, pp 8–9.

⁴⁶ The IACP’s trademark filing for the DRE protocol is attached as Appendix C.

State Police were promulgated not by a police organization or the Michigan State Police itself, but by a national association of forensic laboratories. 990 F3d at 465. By contrast here, no scientific or medical body has issued guidelines governing the operation of the DRE protocol. The mere existence of standards promulgated by an organization of police officers lacking the necessary technical expertise cannot elevate the DRE protocol to a sufficiently scientific status that would satisfy *Daubert*.

E. The DRE protocol is not widely accepted by technical experts for determining impairment.

The fifth *Daubert* reliability factor asks whether the technique is generally accepted in the relevant scientific community. *Daubert*, 509 US at 594. This inquiry requires “explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community.” *Id.*, quoting *United States v Downing*, 753 F2d 1224, 1238 (CA 3, 1985). “Widespread acceptance can be an important factor in ruling particular evidence admissible, and a known technique which has been able to attract only minimal support within the community may properly be viewed with skepticism.” *Id.* (quotation marks and citation omitted). It is especially relevant if the methodology has received endorsement from “disinterested and impartial experts” in the relevant field. See *People v Barbara*, 400 Mich 352, 358; 255 NW2d 171 (1977).

The DRE protocol has existed for over forty years. In that long period of time, despite the protocol’s adoption by law enforcement agencies, it has not garnered the level of support from the scientific or medical community that *Daubert* requires. Amici are aware of only one significant scientific or medical body that has endorsed the DRE program: the American Optometric Association (whose expertise is limited to the few subcomponents of the DRE protocol related to eye movements). See PAAM Brief, p 42. And while PAAM notes that a small

handful of local medical organizations have endorsed their respective locality’s DRE program, this lukewarm acceptance from the scientific and medical community amounts, at best, to “only minimal support” for the protocol. *Downing*, 753 F2d at 1238.

The scientific literature confirms the lack of generalized acceptance. Just two months ago, a peer-reviewed research article by a group of nine cognitive scientists, criminologists, and public health experts summarized that “presently there is no reliable tool for” detecting whether “drivers suspected of driving under the influence are experiencing cannabis-associated impairment.”⁴⁷ The research group went on to specifically note that “[b]oth the Standard Field Sobriety Test and Drug Recognition Expert evaluations have limited efficacy for assessing cannabis impairment, and there are no biochemical (e.g., blood, saliva) THC tests that can reliably identify either recent use or impairment.”⁴⁸ The absence of *any* peer-reviewed study that validates the DRE protocol as a tool for assessing drug impairment underscores the lack of support the protocol has received from the scientific community. See *supra* Section IV.B; *Muhammad*, 326 Mich App at 57 (explaining that the existence (or lack thereof) of peer-reviewed studies often bears on the “widely accepted” prong).

PAAM attempts to shift the goalposts of this reliability inquiry by arguing that “traffic safety and law enforcement agencies” are the relevant scientific community. PAAM Brief, pp 41–42. This cannot be so. *Daubert* and its progeny emphasize that expert testimony founded on scientific principles must be widely accepted by the relevant *scientific* community. Moreover, in Michigan it is especially important for “disinterested and impartial experts” to endorse the method

⁴⁷ Karoly et al., *Effects of High-Potency Cannabis*, 7 *Cannabis & Cannabinoid Research* at 108. See also Chow et al., *Driving Under the Influence of Cannabis*, 128 *Anesthesia & Analgesia* at 1303 (“Currently, there is no noninvasive test to measure the level of marijuana intoxication.”).

⁴⁸ *Id.*

or theory. *Barbara*, 400 Mich at 358. Law enforcement agencies, as non-scientific bodies, cannot purport to validate the scientific basis for the DRE protocol. See *Sampson*, 167 Or App at 552–553 (explaining that the law enforcement community is not the relevant community for purposes of this *Daubert* analysis because law enforcement organizations cannot validate the DRE protocol’s purported scientific basis); *Brightful*, unpub op at 27–28, 35 (same). More importantly, as the same agencies responsible for the administration of the DRE protocol, law enforcement agencies are clearly biased in favor of its validity and admissibility. Crediting the law enforcement community’s acceptance of a protocol they developed and continue to administer would defeat the purpose of *Daubert*’s rigorous gatekeeping standard.

Nor does support from other non-scientific bodies bear on this inquiry. In its brief, PAAM grossly mischaracterizes an outdated ACLU webpage’s passing reference to drug recognition experts as the ACLU’s “implicit expression[] of support” for the protocol. PAAM Brief, p 45. This bad-faith distortion could not be further from the truth. The referenced webpage includes portions of a 1991 briefing kit on workplace rights.⁴⁹ The briefing kit calls on employers to take all available confirmatory steps before subjecting an employee to a drug test. Among those confirmatory steps is a drug recognition evaluation to confirm that a drug may actually be present in the employee’s system. Notwithstanding the fact that this recommendation is from an outdated 1991 briefing kit, the drug evaluation proposed in the kit relates to the DRE protocol *in name only*. It does not employ the 12-step DRE protocol used in law enforcement settings today. Moreover—and as PAAM admits—the use of drug evaluations in the workplace is drastically different than its use to support expert testimony in criminal prosecutions. Despite all of these distinctions, PAAM inappropriately stretches an outdated reference to a DRE-type evaluation into

⁴⁹ The full briefing kit in question is attached as Appendix D.

an endorsement of the DRE protocol. To avoid any confusion: the ACLU does not implicitly or explicitly endorse the DRE protocol as a scientific tool to determine drug impairment—especially in criminal prosecutions—and never has.

In sum, the DRE protocol fails this reliability inquiry because the protocol has not been widely accepted by the scientific and medical community.

V. Cases in other jurisdictions admitting DRE expert testimony are unpersuasive and not informed by the peer-reviewed literature.

The prosecution and PAAM cite several out-of-jurisdiction cases in support of the admissibility of DRE testimony. See Appellee Brief, pp 11–13; PAAM Brief, pp 43–45. None are persuasive.

None of these cases address that there is not a single study showing that the DRE protocol can accurately test for whether a driver is unsafe, and therefore impaired, because of having consumed a certain drug. Instead, every single case either cites no studies about the DRE protocol at all, see, e.g., *State v Kanamu*, 107 Hawaii 268, 271; 112 P3d 754 (App, 2005), or cites only the studies discussed above that address the DRE protocol’s ability to detect the presence or type of drugs a person may have consumed, see, e.g., *State v Chitwood*, 369 Wis 2d 132, 155–161; 879 NW2d 786 (2016).

That alone is a compelling reason for distinguishing each of the cases. But each of the cases also suffers from at least one of three additional defects.

First, several of these cases are inapposite because they primarily analyze the expert admissibility of HGN testing, which concerns the inability of the eyes to maintain visual fixation as they move from left to right. See, e.g., *State v Fincher*, 259 NC App 159, 163–165; 814 SE2d 606 (2018); *State v Baity*, 140 Wash 2d 1, 7–14 & n 3; 991 P2d 1151 (2000); *Williams v State*, 710 So 2d 24, 29–32 (Fla App, 1998); *State v Klawitter*, 518 NW2d 577, 584–586 (Minn, 1994).

This test is only one part of the 12-step DRE protocol, see *State v Aman*, 194 Or App 463, 465 n 2; 95 P3d 244, and, as explained previously, is primarily used as an indicator for alcohol intoxication, see *People v Berger*, 217 Mich App 213, 215–218; 551 NW2d 421 (1996). Indeed, the DRE officer here did not even perform this test, because he conceded that “[HGN] is not an indicator of cannabis impairment.” Appellant Brief, Appendix D, p 58.

Some of the cases that purport to analyze the admissibility of the entire DRE protocol rely exclusively on the cases that focus on HGN testimony, without any discussion of this critical difference. See, e.g., *State v Daly*, 278 Neb 903, 912 n 7; 775 NW2d 47 (2009), citing *Baity*, *Williams*, and *Klawitter*; *State v Aleman*, 145 NM 79, 84; 2008 -NMCA- 137; 194 P3d 110 (NM App, 2008), citing *Williams* and *Klawitter*; *United States v Everett*, 972 F Supp 1313, 1319–1320 (D Nev, 1997), citing *Klawitter*.

Second, many of the cases also employ a different standard for the admissibility of expert testimony.⁵⁰ In these jurisdictions, the test set forth in *Frye v United States*, 54 App DC 46; 293 F 1013 (1923) still governs the admissibility of expert testimony. See, e.g., *Baity*, 140 Wash 2d at 10–12; *Williams*, 710 So 2d at 31–32; *Klawitter*, 518 NW2d at 584–586. Under *Frye*,

⁵⁰ Many of the cases referenced in the PAAM Brief are even further afield. Some cases conduct no expert admissibility analysis at all. See *State v Guerra*, 497 P3d 1106, 1113–1114 (Idaho, 2021); *State v Atkins*, 129 A3d 952, 956–957; 2015 ME 162 (2015); *State v Layman*, 953 P2d 782, 786 (Utah, 1998). Others analyze admissibility under a standard entirely different than *Daubert*. See *United States v Engle*, 428 F Supp 3d 1259, 1280–1281 (D Wy, 2019); *Bingley v Her Majesty the Queen*, opinion of the Supreme Court of Canada, issued February 23, 2018 (Case No. 2017 SCC 12); *United States v Gonzales*, unpublished opinion of the United States District Court for the District of Arizona, issued December 28, 2010 (Case No. 09-1786), p 4 (Appendix A at 54). In fact, two of PAAM’s cases even *cast doubt* on the admissibility or weight of the DRE testimony without squarely reaching the question. See *Burton v Commonwealth*, 300 SW3d 126, 140–141 (Ky, 2009); *United States v Fields*, unpublished opinion of the United States District for the Eastern District of North Carolina, issued September 21, 2009 (Case No. 5:08-CR-395), pp 8–9 (Appendix A at 64).

specialized evidence need only achieve “general acceptance in the particular field in which it belongs” to be admissible. 54 App DC at 47. *Daubert*, however, involves a more robust inquiry, requiring the analysis of several additional factors that probe the reliability of the relevant methodology. “The principle shortcoming of *Frye* was that it excused the court from even having to try to understand the evidence at issue.” See *Horn*, 185 F Supp 2d at 554, citing 2 Weinstein & Berger, *Evidence* (2d ed), § 702.05[1]. Courts have therefore recognized that *Daubert* “results in the exclusion of evidence that might otherwise have been admitted under *Frye*.”⁵¹ *Id.* at 553; see also *Allison v McGhan Med Corp*, 184 F3d 1300, 1312 (CA 11, 1999) (describing *Daubert* as imposing “stricter admissibility standards”).

Third, many of the cases fail to “undertake an independent evaluation of the admissibility” of this evidence and instead simply cite “to the decisions of other state courts.” *Horn*, 185 F Supp 2d at 553 (collecting cases). Some cases, for example, focus only on whether the officer completed a DRE class and fail to analyze the reliability of the underlying DRE protocol in any detail. See *State v Jones*, 148 Hawaii 152, 172; 468 P3d 166 (2020); *State v Brewer*, unpublished opinion of the Tennessee Court of Criminal Appeals, issued April 6, 2020 (Case No. E2019-00355), p 12 (Appendix A at 77–78); *People v Bahena*, unpublished opinion of the Illinois Appellate Court, issued July 15, 2019 (Case No. 2019 IL App (1st) 171338-U), p 4 (Appendix A at 84–85); *State v Vazquez*, unpublished per curiam opinion of the Superior Court of New Jersey, Appellate Division, issued October 29, 2015 (Case No. A-3444-13T3), pp 5–6 (Appendix A at 92–93); *State v Pulliam*, 378 Mont 537; 2015 MT 11N; 348 P3d 670 (2015) (unpublished) (Appendix A at 94); *Repinec v State*, 130 Nev 1234 (2014) (unpublished) (Appendix A at 97);

⁵¹ For the reasons provided throughout this brief, the DRE protocol would not survive *Frye* either. See *supra* Section IV.E.

Wooten v State, 267 SW3d 289, 301–303 (Tex App, 2008); *Kanamu*, 107 Hawaii at 271; *Mace v State*, 328 Ark 536, 541–542; 944 SW2d 830 (1997); *People v Villeneuve*, 232 App Div 2d 892, 895; 649 NYS2d 80 (1996). These cases also assume that any objections to the protocol “go to the weight, and not the admissibility” of the evidence. See *Kanamu*, 107 Hawaii at 271. But the proper “searching inquiry” under *Daubert* is designed to require the court to serve as a gatekeeper to prevent “junk science” from being presented to a jury precisely because of the risk that they will fail to properly weigh evidence that is presented with a false scientific or technical sheen. *Gilbert*, 470 Mich at 782.

The few cases that do perform a more robust inquiry rely on studies that are either inapposite or have since been significantly undermined. See, e.g., *Chitwood*, 369 Wis 2d at 155–161; *Daly*, 278 Neb at 909–918; *Aleman*, 145 NM at 117–120; *Sampson*, 167 Or App at 500–511. These four cases rely on the Bigelow Study and the Compton Study, which, for the reasons discussed in Section IV.B, do not validate the DRE program as a tool for assessing impairment.⁵² As discussed earlier, subsequent peer-reviewed research has identified substantial methodological flaws in those studies and in the Adler Study, on which *Chitwood* and *Aleman* also rely. *Chitwood*, *Daly*, and *Aleman* do rely on one peer-reviewed study—Heishman I—but again, as explained in Section IV.B, Heishman I (like every other study ever done about the DRE protocol) speaks to the DRE protocol’s ability to identify the presence of a particular drug—not whether the subject is impaired by that drug. Neither *Chitwood* nor *Aleman*—nor any of the prosecution’s other cases—analyze or acknowledge that critical difference.

⁵² *Aleman* does not explicitly name the studies proffered by the prosecution, but contextual information (such as the reported error rates, the date of the decision, and the discussion of peer review) suggests that the *Aleman* court was certainly considering at least the Alder Study, and likely also the Bigelow Study, the Compton Study, and Heishman I.

This Court can and should avoid that pitfall. When it comes to the use of the DRE as a basis to establish impairment, the DRE protocol is not even supported by junk science; it is not supported by any science at all.

CONCLUSION

The Court should hold that the lower court abused its discretion in failing to properly undertake its gatekeeping role pursuant to *Daubert*. If the lower court played its proper role, it would be clear that there is not sufficient scientific evidence to support the conclusion that a properly trained and certified Drug Recognition Expert is able to accurately determine whether an individual is impaired by the ingestion of marijuana (or other drug) to a degree that makes it unsafe and unlawful for the individual to operate a motor vehicle.

Respectfully submitted,

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