

IN THE COURT OF APPEALS OF NORTH CAROLINA

No. COA17-508

Filed: 1 May 2018

Mecklenburg County, Nos. 14-CRS-234553, 15-CRS-5432

STATE OF NORTH CAROLINA

v.

PAUL ARNOLD GRAY, Defendant.

Appeal by Defendant from judgment entered 13 December 2016 by Judge Linwood O. Foust in Mecklenburg County Superior Court. Heard in the Court of Appeals 31 October 2017.

*Attorney General Joshua H. Stein, by Assistant Attorney General Lauren Tally Earnhardt, for the State.*

*Appellate Defender Glenn Gerding, by Assistant Appellate Defender Aaron Thomas Johnson, for defendant-appellant.*

MURPHY, Judge.

In a criminal prosecution for possession of a controlled substance, when an expert in forensic chemistry provides testimony that establishes a proper foundation under Rule 702(a) of the Rules of Evidence, the expert's opinion is otherwise admissible, and any unpreserved assignments of error related to the trial court's "gatekeeping" function is only reviewed for plain error. Furthermore, when plain error is assigned to a trial court's admission of expert testimony on the grounds that the testimony is not "reliable," we do not consider data or theories advanced in a

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defendant's appellate brief which were neither before the trial court when the expert opinion was admitted nor made part of the record on appeal.

Paul Arnold Gray ("Defendant") appeals his 13 December 2016 conviction for felony possession of cocaine in violation of N.C.G.S § 90-95(d)(2). On appeal, he argues that the trial court committed plain error by admitting the expert opinion of a forensic chemist because her testimony failed to demonstrate that the methods she used were "reliable" under the current version of Rule 702. Defendant specifically maintains that the particular testing process used by the Charlotte-Mecklenburg Police Department Crime Lab ("CMPD Crime Lab") to identify cocaine creates an unacceptable risk of a false positive, and, this risk, standing alone, renders expert testimony based on the results of this testing process inherently unreliable under Rule 702(a). We do not consider this theory as it goes beyond the record and conclude that Defendant received a trial free from error.

**BACKGROUND**

On 30 August 2014, Defendant was arrested for possession of a stolen motor vehicle. After placing Defendant under arrest, Sergeant Rollin Mackel ("Sergeant Mackel") searched Defendant, and found two small "rocks" in Defendant's pants pocket. Sergeant Mackel believed the "rocks" were crack cocaine, so he seized them and placed them in an evidence envelope for storage and later testing. Lillian Ngong ("Ngong"), a forensic chemist with the CMPD Crime Lab, performed a chemical

analysis on the substance in the envelope. Defendant was indicted for felony possession of cocaine in violation of N.C.G.S. § 90-95.

At trial, the State tendered Ngong as an expert in the field of forensic chemistry without objection. During direct examination, Ngong testified that she was employed by the CMPD Crime Lab and that she was the analyst who tested the substance in the evidence envelope. Ngong then described the methods the CMPD Crime Lab uses to identify controlled substances:

- First, the substance is weighed.
- Then, a presumptive test is performed by dropping an indicator chemical on a sample of the substance and observing if the sample changes color. For a presumptive test for cocaine, if the sample turns blue, the analyst performs additional testing on the substance with a gas chromatography mass spectrometer (“GCMS”) to confirm the result of the presumptive test.
- Next, to ensure that the GCMS is in working condition, analysts first run a chemical solvent that does not contain any prohibited substances through the instrument. This is called a “blank.”
- After running the “blank” through the GCMS, the subject substance, which is believed to contain a controlled substance (such as cocaine or heroin), is tested with the GCMS.

- Finally, CMPD Crime Lab analysts evaluate the results of the test and determine whether or not the substance tested is a controlled substance.<sup>1</sup>

After explaining the CMPD Crime Lab’s drug identification methods without objection, Ngong testified to how she tested and identified the substance seized from Defendant. She weighed the substance and conducted the presumptive test for cocaine. She then analyzed the substance seized from Defendant in the GCMS. Ngong also testified that the GCMS was working properly the day she analyzed the substance. Based on her analysis, Ngong testified that it was her opinion that the substance she tested contained cocaine, and Defendant did not object to her expert opinion.

On cross and re-direct examinations, Ngong testified about another step of testing utilized by the CMPD Crime Lab. Specifically, after testing the sample, the lab analysts test a “standard,” which is a substance known to contain cocaine (or another relevant drug) in the GCMS. Ngong testified that “before we put out any conclusion” the results of the sample test are compared to the test results of the

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<sup>1</sup> Ngong provided testimony that demonstrated how CMPD Crime Lab analysts identify specific drugs using the GCMS. Generally speaking, each drug has a unique molecular signature, like a fingerprint, that is revealed during testing. Ngong testified that “[w]hen it gets to the end of the gas chromatography it is introduced into the mass [spectrometer] . . . It breaks down into ions . . . And each ion is unique to the drug. It’s like a fingerprint. Cocaine will break up in a different way. Marijuana or THC . . . will break up in a different way . . . Heroin will break up in a different way. That’s how we identify.”

known standard. She also testified that she tested a “standard” that was cocaine after testing the “sample” (the substance seized from Defendant) and that this was standard practice in forensic chemistry.

Ngong’s opinion testimony was the only evidence that established that the substance seized from Defendant contained a controlled substance. On appeal, Defendant contends that Ngong’s expert testimony was unreliable, and therefore inadmissible under Rule 702(a). However, Defendant did not object to Ngong’s testimony during trial on these grounds and now requests that this court review this issue for plain error. On appeal, Defendant argues that the CMPD Crime Lab’s GCMS process is flawed because it requires an analyst to test the “sample” (which is believed to contain cocaine) and then test a “standard” (which is known to contain cocaine) without running another blank to clean out the GCMS and remove any residue possibly left by the “sample.”<sup>2</sup> According to Defendant, by not running another blank before testing the standard, the CMPD Crime Lab’s drug identification process creates an unacceptable risk of a false positive, and renders Ngong’s methods inherently unreliable under Rule 702(a).

### **STANDARD OF REVIEW**

Defendant’s issue on appeal is that the trial court erred in admitting Ngong’s expert opinion testimony because her “testimony showed that scientific principles

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<sup>2</sup> However, CMPD Crime Lab analysts do run a blank before testing the sample to make sure the GCMS is in working condition.

and methods were not reliably applied” as required by Rule 702(a). Since Defendant failed to object to Ngong’s testimony during trial, this issue is unpreserved. *See* N.C. R. App. P. 10(a)(1). However, we recently held that an unpreserved challenge to the performance of a trial court's gatekeeping function under Rule 702 in a criminal trial is subject to plain error review. *State v. Hunt*, \_\_\_ N.C. App. \_\_\_, \_\_\_, 792 S.E.2d 552, 559 (2016). We review the admission of Ngong’s expert opinion testimony for plain error.

To establish plain error, a defendant must show that the error “was a fundamental error—that the error had a probable impact on the jury verdict.” *State v. Lawrence*, 365 N.C. 506, 518, 723 S.E.2d 326, 334 (2012). “Moreover, because plain error is to be applied cautiously and only in the exceptional case, the error will often be one that seriously affects the fairness, integrity or public reputation of judicial proceedings.” *Id.* (internal citations, quotation marks, and alterations omitted).

#### **ADMISSIBILITY OF EXPERT TESTIMONY UNDER RULE 702**

“Whether expert witness testimony is admissible under Rule 702(a) is a preliminary question that a trial judge decides pursuant to Rule 104(a).” *State v. McGrady*, 368 N.C. 880, 892, 787 S.E.2d 1, 10 (2016). In 2011, the General Assembly amended Rule 702 of the Rules of Evidence and adopted the Federal *Daubert* standard, which gives trial court judges a “gatekeeping” role when admitting expert opinion testimony. *See id.* at 885-89, 787 S.E.2d at 8-11. However, the 2011

amendment did not categorically overrule all judicial precedents interpreting Rule 702, and “[o]ur previous cases are still good law if they do not conflict with the *Daubert* standard.” *Id.* at 888, 787 S.E.2d at 8. Rule 702 does not “mandate particular procedural requirements,” *id.* at 893, 787 S.E.2d at 11, and its gatekeeping obligation was “not intended to serve as a replacement for the adversary system.” *Hunt*, \_\_\_ N.C. App. at \_\_\_, 792 S.E.2d at 559. Rather, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof” continue as the “traditional and appropriate means of attacking shaky but admissible evidence.” *Howerton v. Arai Helmet, Ltd.*, 358 N.C. 440, 461, 597 S.E.2d 674, 688 (2004) (quoting *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 596, 113 S. Ct. 2786, 2798 (1993)).

Additionally, since the 2011 amendment became effective, we have observed that:

[w]e can envision few, if any, cases in which an appellate court would venture to superimpose a *Daubert* ruling on a cold, poorly developed record when neither the parties nor the . . . court has had a meaningful opportunity to mull the question.

*Hunt*, \_\_\_ N.C. App. at \_\_\_, 792 S.E.2d at 560 (internal citations and quotation marks omitted). Our jurisprudence wisely warns against imposing a *Daubert* ruling on a cold record, and we limit our plain error review of the trial court’s gatekeeping function to the evidence and “material included in the record on appeal and the verbatim transcript of proceedings[.]” *See State v. Fair*, 354

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N.C. 131, 166, 557 S.E.2d 500, 524-25 (2001) (quotations omitted) (“on direct appeal, the reviewing court ordinarily limits its review to material included in the record on appeal and the verbatim transcript of proceedings, if one is designated.”); *see also* N.C. R. App. P. 9(a) (“ . . . review is solely upon the record on appeal[.]”).

The burden of satisfying Rule 702(a) rests on the proponent of the evidence, and the testimony must satisfy three general requirements to be admissible. *See McGrady*, 368 N.C. at 889, 787 S.E.2d at 8 (citing N.C. R. Evid. 702(a)). “[T]he area of proposed testimony must be based on scientific, technical or other specialized knowledge that will assist the trier of fact to understand the evidence or to determine a fact in issue.” *Id.* at 889, 787 S.E.2d at 6 (internal quotations omitted). The witness must also be “qualified as an expert by knowledge, skill, experience, training, or education.” *Id.* “Third, the testimony must meet the three-pronged reliability test . . . : ‘(1) The testimony [must be] based upon sufficient facts or data. (2) The testimony [must be] the product of reliable principles and methods. (3) The witness [must have] applied the principles and methods reliably to the facts of the case.’” *Id.* at 890, 787 S.E.2d at 9 (citing N.C. R. Evid. 702(a)(1)–(3)). “The precise nature of the reliability inquiry will vary from case to case depending on the nature of the

proposed testimony [and] . . . the trial court has discretion in determining how to address the three prongs of the reliability test.” *Id.*

**ANALYSIS**

Defendant argues that the process used by Ngong and the CMPD Crime Lab to identify drugs using a GCMS is unreliable under Rule 702(a) because it creates an unacceptable risk of a false positive. However, this specific argument is based on documents, data, and theories that were neither presented to the trial court nor included in the record on appeal. They are only raised in Defendant’s brief.<sup>3</sup> Therefore, our plain error review of Defendant’s Rule 702 argument is limited solely to the record on appeal and the question of whether or not an adequate foundation was laid before Ngong’s expert opinion was admitted.

After careful review, we conclude that a proper Rule 702(a) foundation was established at the time Ngong provided her opinion because her testimony demonstrated that she was a qualified expert and that her opinion was the product of reliable principles and methods which she reliably applied to the facts of the case. Ngong was tendered as an expert in the field of forensic chemistry and testified that she had a degree in Chemistry with over 20 years of experience in the field of drug identification. She also testified about the type of testing conducted on the substance seized from Defendant and the methods used by the CMPD Crime Lab to identify

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<sup>3</sup> For example, Defendant’s brief claims that “after considerable legal research” he has concluded that no other crime lab uses the exact process for testing substances in a GCMS.

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controlled substances. Ngong then testified that she was the analyst who tested the substance seized from Defendant, that she used a properly functioning GCMS, and that the results from that test provided the basis for her opinion. Furthermore, her testimony indicates that she complied with CMPD Crime Lab procedures and the methods she used were “standard practice in forensic chemistry.” Ngong’s testimony demonstrated that she was an experienced forensic chemist who competently performed a chemical analysis using a properly functioning GCMS to determine if the two “rocks” seized from Defendant contained cocaine. This testimony was sufficient to establish a foundation for admitting her expert opinion testimony under Rule 702.

Defendant also maintains that the trial court erred “by failing to conduct any further inquiry” when Ngong’s testimony showed Ngong used scientifically unreliable methods. We disagree. While in some instances a trial court’s gatekeeping obligation may require the judge to question an expert witness to ensure his or her testimony is reliable, *sua sponte* judicial inquiry is not a prerequisite to the admission of expert opinion testimony. *See McGrady*, 368 N.C. at 893, 787 S.E.2d at 11 (“[t]he trial court has the discretion to determine whether or when special briefing or other proceedings are needed to investigate reliability.”); *see also Hunt*, \_\_\_ N.C. App. at \_\_\_, 792 S.E.2d at 560 (“*Daubert* did not work a seachange [sic] over . . . evidence law, and the trial court’s role as gatekeeper is not intended to serve as a replacement for the adversary

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system.”). Moreover, “[i]n simpler cases . . . the area of testimony may be sufficiently common or easily understood that the testimony's foundation can be laid with a few questions in the presence of the jury.” *Id.* Here, in the presence of the jury, Ngong’s testimony adequately established a Rule 702(a) foundation for her opinion that the rocks seized from Defendant contained cocaine. Therefore, the trial court was not required to conduct further inquiry into the reliability of her testimony.

Finally, we note that Defendant’s argument does not claim that Ngong’s testimony is unreliable because GCMS is an inherently unreliable method for identifying controlled substances.<sup>4</sup> Defendant attacks the particular GCMS testing process used by the CMPD Crime Lab. However, because a proper Rule 702(a) foundation was established, any procedural shortcomings of the CMPD Crime Lab, had they been raised during trial, would go to the weight of Ngong’s expert opinion, not its admissibility. *See State v. Hunt*, \_\_\_ N.C. App. at \_\_\_, 790 S.E.2d at 880 (holding that when a qualified expert witness relies on chemical analysis to identify a controlled substance, any deviation the expert “might have taken from the *established methodology* went to the weight of his testimony, not the admissibility of the testimony” (emphasis added)), *review denied*, 369 N.C. 197, 795 S.E.2d 206 (2016).

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<sup>4</sup> Defendant admits that using GCMS to identify controlled substances is considered to be a scientifically valid method. Under *Daubert* “[w]idespread acceptance can be an important factor in ruling particular evidence admissible[.]” *Daubert*, 509 U.S. at 594, 113 S. Ct. at 2797.

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Based upon the evidence presented through the adversarial process, the trial court did not err by admitting Ngong's expert testimony. Since there was no error in admitting Ngong's testimony, Defendant is unable to show plain error. *State v. Baker*, 338 N.C. 526, 554, 451 S.E.2d 574, 591 (1994) ("Since there was no error, there could be no plain error.").

**CONCLUSION**

The trial court did not commit error by admitting Ngong's expert opinion testimony under Rule 702.

NO ERROR.

Judges BRYANT and ARROWOOD concur.