

State failed to prove that defendant was guilty of possession of cocaine with intent to deliver; because testimony of crime lab technician with regards to machine analyses of sample lacked proper foundation. She failed to present any testimony with regards to how the information from gas chromatography mass spectrometer (GCMS) machine was recorded; or how she ascertained that machine was performing accurately when she performed test on sample to determine it contained cocaine.

Here the expert testimony of forensic scientist Bethea was based upon test results from operation of an electronic or mechanical device, specifically the GCMS machine. Bethea did not provide any foundation proof as to the method of recording the information provided by the GCMS machine. More importantly, Bethea did not provide any foundation proof that the GCMS machine was functioning properly at the time it was used. The expert witness failed to explain how the machine was calibrated or why she knew the results were accurate. Thus, the State failed to establish the necessary foundation proof for admitting the expert opinion.

2001 Ill. App. LEXIS 658

THE PEOPLE OF THE STATE OF ILLINOIS, Plaintiff-Appellee v. DAN RANEY,  
Defendant-Appellant

No. 1-00-0061

APPELLATE COURT OF ILLINOIS, FIRST DISTRICT, FIRST DIVISION

2001 Ill. App. LEXIS 658

August 27, 2001, Decided

NOTICE: THIS DECISION IS NOT FINAL UNTIL EXPIRATION OF THE  
21 DAY PETITION FOR REHEARING PERIOD.

PRIOR HISTORY: Appeal from the Circuit Court of Cook County.  
Honorable Preston L. Bowie, Judge Presiding.

DISPOSITION: Reversed.

COUNSEL: For APPELLANT: Rita A. Fry, Cook County Public Defender,  
Chicago, IL. OF COUNSEL: Renee C. Norris.

For APPELLEE: Richard A. Devine, Cook County State's Attorney,  
Chicago, IL. OF COUNSEL: Renee Goldfarb, Annette Collins and David  
C. Herrera.

JUDGES: Justice Margaret O'Mara Frossard authored the opinion of

the court. Presiding Justice McNulty and Justice Cohen concur.

OPINIONBY: Margaret O'Mara Frossard

OPINION: JUSTICE O'MARA FROSSARD delivered the opinion of the court:

Following a bench trial, defendant Dan Raney was convicted of possession of a controlled substance with intent to deliver (1.349 grams cocaine) and sentenced to eight years in prison. Defendant contends on appeal that the State failed to prove him guilty beyond a reasonable doubt of possession of a controlled substance with intent to deliver because the State failed to establish a proper foundation for the admission of the scientific results from the gas chromatography mass spectrometer (GCMS) machine. Defendant also contends, and the State concedes, that the mittimus incorrectly states that defendant was sentenced to nine years in prison and must be corrected to reflect the eight-year sentence of the court. We reverse.

## I. BACKGROUND

On June 29, 1999, Officer Spanos and his partner were stopped by a citizen on Walnut and Kedzie in Chicago. The citizen gave them a description of a man allegedly selling drugs in the area. The officers began a surveillance of 3359 West Walnut. Officer Spanos testified that he saw the defendant engage in two drug transactions. The alleged buyer would approach the defendant, give him money and defendant would walk down a gangway to a plastic bag on a windowsill from which he obtained a small bag which he gave to the buyer. Officer Spanos then approached the defendant, who was engaged in a third sale, detained the defendant, and retrieved the 14 smaller bags from the windowsill containing a white, rock-like substance, suspect cocaine. During a custodial search, \$ 50 was recovered from the defendant. Officer Spanos testified that the 14 bags were inventoried and sent to the Illinois State Crime Laboratory for analysis and testing.

Webelene Bethea, a forensic scientist at the Illinois State Crime Laboratory, tested the contents of People's exhibit No. 1, the 14 small plastic bags delivered to her in a sealed evidence envelope. Bethea first weighed the evidence and then conducted a cobalt thiocyanate color test. According to Bethea, this preliminary test is similar to a field test. Bethea then performed a test with the GCMS machine and concluded that the substance in the 14 packets contained cocaine.

The defendant contested Bethea's expertise because "she's not a member of any forensic chemistry organization \* \* \* [;] she didn't even get a degree in chemistry." Over the defense objection, the trial court found that she was qualified as an expert and allowed

her to testify. After the State rested its case, defendant moved for a directed finding based upon the chain of custody and lack of proper foundation for Bethea's opinion that the substance contained cocaine. The motion for directed finding was denied. Defendant rested. During closing argument defense counsel reiterated his contention that the State failed to prove defendant guilty beyond a reasonable doubt based on the lack of proper foundation for Bethea's opinion that the substance in the 14 packets contained cocaine. The trial court found defendant guilty of possession of a controlled substance with intent to deliver and sentenced defendant to eight years in prison.

## II. ANALYSIS

In a controlled substance prosecution, the State must present sufficient evidence that the substance at issue is in fact a controlled substance. *People v. Hagberg*, 192 Ill. 2d 29, 34, 248 Ill. Dec. 273, 733 N.E.2d 1271 (2000). A reviewing court may not substitute its judgment for that of the trier of fact on questions of the weight of the evidence, the credibility of the witnesses, or resolution of conflicting testimony. *People v. Kotlarz*, 193 Ill. 2d 272, 298, 250 Ill. Dec. 437, 738 N.E.2d 906 (2000). The defendant has the burden to demonstrate that the State's evidence is "so improbable or unsatisfactory that it creates a reasonable doubt of the defendant's guilt." *People v. Collins*, 106 Ill. 2d 237, 261, 87 Ill. Dec. 910, 478 N.E.2d 267 (1985); *People v. Jones*, 295 Ill. App. 3d 444, 452, 229 Ill. Dec. 773, 692 N.E.2d 762 (1998). The relevant inquiry is whether, after reviewing the evidence in the light most favorable to the prosecution, any rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt. *Jackson v. Virginia*, 443 U.S. 307, 318-19, 61 L. Ed. 2d 560, 573, 99 S. Ct. 2781, 2788-89 (1979); *People v. Sanchez*, 115 Ill. 2d 238, 261, 104 Ill. Dec. 720, 503 N.E.2d 277 (1986). We find that the State failed to prove defendant guilty beyond a reasonable doubt based on the lack of proper foundation for expert Bethea's opinion that the substance in the 14 packets contained cocaine.

Defendant relies on *People v. Bynum*, 257 Ill. App. 3d 502, 196 Ill. Dec. 179, 629 N.E.2d 724 (1994), to support his contention that this court should find an insufficient foundation for the expert testimony of State forensic scientist Bethea. The defendant in *Bynum*, after being convicted of possession of 10 grams or less of a controlled substance, argued on appeal that the State failed to provide a proper foundation for the State's expert witness under Federal Rule of Evidence 703. *Bynum*, 257 Ill. App. 3d at 504, 513. The Illinois Supreme Court adopted Rule 703 of the Federal Rules of Evidence regarding expert testimony in *Wilson v. Clark*, 84 Ill. 2d 186, 193-95, 49 Ill. Dec. 308, 417 N.E.2d 1322 (1981). Rule 703 states:

"The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence." Fed. R. Evid. 703.

In adopting Rule 703, Wilson held that an expert may give his opinion based upon facts that are not in evidence if those facts are of a type reasonably relied upon by experts in the particular field. Wilson, 84 Ill. 2d at 193.

In Bynum, the State's expert did not testify that the GCMS machine was generally relied upon by experts in her field, failed to explain how the machine was calibrated, and did not testify how she knew the results from the GCMS machine were accurate. Bynum, 257 Ill. App. 3d at 514. Bynum concluded that the State failed to provide a sufficient foundation for the opinion of the expert witness under Rule 703. Bynum, 257 Ill. App. 3d at 514. The Bynum court noted that under Rule 703 an adequate foundation requires a showing that the facts relied upon by an expert are of a type reasonably relied upon by experts in the field. Bynum, 257 Ill. App. 3d at 513.

The Bynum court, further recognizing the need for reliable scientific testimony, identified an additional foundation requirement when expert testimony is based upon an electronic or mechanical device. Bynum, 257 Ill. App. 3d at 513-14, citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993). The electronic or mechanical device used in Bynum was the GCMS machine and the court indicated, "when expert testimony is based upon an electronic or mechanical device such as that used here, the expert must offer some foundation proof as to the method of recording the information and proof that the device was functioning properly at the time it was used." Bynum, 257 Ill. App. 3d at 514. The court noted that the expert failed to explain how the machine was calibrated or why she knew its results were accurate and concluded the State's failure to establish the necessary foundation proof was therefore sufficient to preclude the expert's testimony from being accepted into evidence under Rule 703. Bynum, 257 Ill. App. 3d at 514. However, because the defendant failed to object at trial, the Bynum court found that the issue regarding lack of proper foundation was waived. Bynum, 257 Ill. App. 3d at 514.

In this case, the testimony of State forensic expert Bethea satisfied the foundation requirement regarding proof that the facts or data relied upon by expert Bethea were of a type reasonably relied upon by experts in the field. Specifically,

expert Bethea testified that the data generated by the GCMS testing device is generally relied upon by experts in her field. She also testified that the testing she performed is generally accepted in the scientific community. However, expert Bethea failed to offer any evidence that the GCMS machine was functioning properly at the time it was used to test the suspected controlled substance in this case.

After describing the procedures used to obtain the net weight of the suspected controlled substance, Bethea testified as follows:

"THE STATE: Tell the judge what the GCMS is?

EXPERT WITNESS: It's gas chromatography mass spectrometer. It's an instrument basically that is geared to detect as well as inject minute or microliter substances of what you have added. That's why I had to - where there's a solid, I have to put it in a liquid form; hence that's why I added methanol. THE STATE: And prior to doing that GCMS test, did you do anything to the machine?

EXPERT WITNESS: Well, usually you go over there and put the pertinent information, such as I have to load the program that I wanted to run, as well as put the information in such as identification of what the substance is that I'm running such as its RD number, or I would put in this case the case number.

THE STATE: And did you do anything else with the machine?

EXPERT WITNESS: Nothing else with the instrument.

THE STATE: Okay, and is the data generated by the gas chromatographic -- chromatographic -- chromatographic mass spectrometer testing device generally relied upon by experts in your field?

EXPERT WITNESS: Yes, it's accepted.

THE STATE: And do you have an opinion based on your education, training, background, and testing as to what the substance contained in People's Exhibit No. 1 for identification is?

EXPERT WITNESS: Yes, I do.

THE STATE: And what is that opinion?

EXPERT WITNESS: Is that 14 packets contained cocaine. THE

STATE: And would any other substance give you the same positive results you obtained?

EXPERT WITNESS: No.

THE STATE: Is the testing you performed generally accepted in the scientific community?

EXPERT WITNESS: Yes, it is.

THE STATE: And while analyzing the contents of People's Exhibit No. 1 for identification, the substance was in your continuous care, custody, and control?

EXPERT WITNESS: Yes, it was."

Expert Bethea was never asked whether the GCMS machine was functioning properly at the time it was used to test the substance contained in People's exhibit No. 1, the 14 packets of suspected cocaine. While she is not personally required to test the accuracy of the machine, at the very least she should be able to offer some testimony that the GCMS machine was functioning properly at the time it was used. There was no testimony verifying the accuracy of the GCMS machine. There was no evidence as to the policy or procedures maintained by her department regarding that specific GCMS machine to ensure that it was properly maintained in working order and would thereby provide accurate results. We note the State repeatedly tried to elicit what expert Bethea did to the machine before conducting the GCMS test by asking, "And prior to doing that GCMS test, did you do anything to the machine?" In response Bethea indicated that she had to load the program and put in pertinent identification information. However, the State followed that answer with another attempt to elicit the proper foundation, "And did you do anything else with the machine?" To which Bethea answered, "Nothing else with the instrument."

Expert Bethea failed to testify that before conducting the GCMS test of the suspected controlled substance the GCMS machine was working properly. She failed to indicate whether, for example, any testing was done to assess the operating condition of the GCMS machine. She also failed to indicate whether standards were run to test the accuracy of the GCMS machine. As a result, this record contains no evidence regarding whether the GCMS machine was functioning properly at the time it was used to analyze the substance in this case.

In *People v. Payne*, 239 Ill. App. 3d 698, 709, 180 Ill. Dec. 481, 607 N.E.2d 375 (1993), the defendant was convicted of unlawful possession of more than 30 grams but not more than 500 grams of cannabis. The defendant argued that there was an insufficient foundation regarding the weight of the substance and

urged the court to reduce his conviction to possession of less than 2.5 grams of cannabis. The State provided evidence verifying the accuracy of the scale used and the court concluded that the foundation regarding the weight of the substance was sufficient. *Payne*, 239 Ill. App. 3d at 709. The court in *Payne* noted that the foundation regarding weight of a substance is sufficiently proved if there is testimony verifying the accuracy of the scale used. *Payne*, 239 Ill. App. 3d at 709. In *Payne* there was testimony that the scale used was checked by a drug inspector and was accurate. *Payne*, 239 Ill. App. 3d at 709. Unlike *Payne*, in this case no evidence regarding the accuracy of the GCMS machine was provided.

In *Martin v. Thompson*, 195 Ill. App. 3d 43, 44, 141 Ill. Dec. 739, 551 N.E.2d 1082 (1990), the defendant was discharged from her employment with the Chicago police department for her alleged use of cocaine. The defendant contested whether the test results admitted into evidence were in fact related to her urine specimen. *Martin*, 195 Ill. App. 3d at 49. While the accuracy of the test results were not challenged, the court noted that a GCMS testing machine used by an expert witness had been checked by running an "Autotune," which is a test performed on a known compound to assess the operating condition of the GCMS machine. *Martin*, 195 Ill. App. 3d at 46. A "standard run" and a "blank run" had been made by the expert before processing the sample at issue. Additionally, a senior supervisor and toxicologist rendered his opinion that the tests were run properly and that the lab equipment had been calibrated and was operating correctly. *Martin*, 195 Ill. App. 3d at 47.

We are mindful that under *People v. Hill*, it is not required that the chemical analyst determine for himself or herself the reliability of the instrument being used in the evaluation of the suspected controlled substance. *People v. Hill*, 169 Ill. App. 3d 901, 911, 524 N.E.2d 604, 120 Ill. Dec. 574 (1988), citing *People v. Brannon*, 59 Ill. App. 3d 531, 534, 16 Ill. Dec. 733, 375 N.E.2d 840 (1978), citing 2 [\*14] J. Wigmore, *Evidence* § 665a (3d ed. 1940). Professor Wigmore in discussing scientific testing states that the expert, of necessity, relies on the accuracy of instruments used, and notes that it is not "feasible for the professional man to test every instrument himself" 2 J. Wigmore, *Evidence* § 665a, at 917 (3d ed. 1940).

However, we note that *Hill* predates *Bynum* and *Payne*. In the more recent cases where expert testimony is based upon test results using an electronic or mechanical device such as the GCMS machine used here, the court recognized the need for the expert to offer some foundation proof as to the fact that the instrument was functioning properly at the time it was used. It may not be feasible for each expert to personally test the instrument relied upon for purposes of determining what is a suspected controlled substance. However, a proper foundation for admitting the expert

opinion regarding the nature of the substance based on the test results requires evidence that the test instrument is functioning properly before the test results are admitted into evidence. Bynum, 257 Ill. App. 3d 502, 514, 196 Ill. Dec. 179, 629 N.E.2d 724 (1994). In Bynum, the court noted that because the expert failed to explain how the GCMS machine was calibrated or why she knew the results were accurate, the State failed to establish the necessary foundation proof for admitting the expert opinion. Bynum, 257 Ill. App. 3d at 514.

### III. CONCLUSION

Here the expert testimony of forensic scientist Bethea was based upon test results from operation of an electronic or mechanical device, specifically the GCMS machine. Bethea did not provide any foundation proof as to the method of recording the information provided by the GCMS machine. More importantly, Bethea did not provide any foundation proof that the GCMS machine was functioning properly at the time it was used. The expert witness failed to explain how the machine was calibrated or why she knew the results were accurate. Thus, the State failed to establish the necessary foundation proof for admitting the expert opinion. Bynum, 257 Ill. App. 3d at 514.

Regarding the necessary foundation for admitting the GCMS results, we find Bynum instructive:

"An adequate foundation under Rule 703 requires that the proponent of the expert's testimony show that the facts or data relied upon by the expert are of a type reasonably relied upon by experts in that particular field in forming opinions or inferences. (See Wilson, 84 Ill. 2d at 193.) In addition, when expert testimony is based upon an electronic or mechanical device such as that used here, the expert must offer some foundation proof as to the method of recording the information and proof that the device was functioning properly at the time it was used. (Cf. Payne, 239 Ill. App. 3d at 709 \*\*\*; [citation].)

\*\*\* Foundation proof is necessary under Rule 703 because the trial court must ensure that the admission of any scientific evidence, including expert scientific testimony based upon a testing device such as that used here, is both relevant and reliable." (Emphasis in original.) Bynum, 257 Ill. App. 3d at 513-14, citing Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993).

For the reasons previously discussed we conclude that the State failed to prove defendant guilty beyond a reasonable doubt of



possession of a controlled substance with intent to deliver  
based on the lack of proper foundation for Bethea's  
opinion that the substance in the 14 packets contained cocaine.

Reversed.

McNULTY, P.J., and COHEN, J., concur.