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**IN THE SUPREME COURT OF INDIANA**

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JAMES TROXELL, )

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Appellant (Defendant Below), )

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v. ) Indiana Supreme Court

) Cause No. 69S00-0101-CR-2

STATE OF INDIANA, )

)

Appellee (Plaintiff Below). )

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APPEAL FROM THE RIPLEY CIRCUIT COURT

The Honorable Carl H. Taul, Judge

Cause No. 69C01-9809-CF-43

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**ON DIRECT APPEAL**

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**November 22, 2002**

BOEHM, Justice.

James Troxell was convicted of burglary, attempted rape, and battery and sentenced to eighty years imprisonment. In this direct appeal, Troxell challenges the chain of custody of DNA samples from him and the victim and also contends that because the conclusions as to DNA matches were derived by Short Tandem Repeat analysis they were not properly admitted under Evidence Rule 702(b). We affirm the trial court.

## **Factual and Procedural Background**

In the early morning of June 17, 1997, the victim was awakened in her bed by a punch in the face. After several blows, the attacker stopped, rose and walked to the hallway. The victim felt pain in her vagina, but did not know whether penetration had occurred. After she attempted to hide under the bed, her assailant returned and ordered oral sex, but left before the victim complied. The victim never saw the intruder's face. Police determined that her family room door had been kicked in, and collected her bedding and clothing, some hairs from the floor, and a few other items. The victim was taken to the hospital, where a sample of her blood, hair, and saliva were taken.

Police questioned Troxell, who lived nearby, and noticed suspicious marks on his hand. After further investigation, Troxell became a suspect. Subsequent DNA testing of the hair found in the bedroom determined that the likelihood of a white male other than Troxell as the source of the DNA was one in 230 trillion. The victim also testified that she had "never invited" Troxell into her home. A jury convicted Troxell of burglary as a Class A felony, burglary as a Class B felony, residential entry as a Class D felony, attempted rape as a Class B felony, and battery resulting in serious bodily injury as a Class C felony. The jury subsequently adjudicated Troxell a habitual offender. After merging the Class B felony burglary and the Class D felony residential entry into the Class A felony burglary, the trial court sentenced Troxell to a term of eighty years.

### **I. Chain of Custody**

Troxell claims error in the trial court's admission of the results from the DNA tests of both hair samples found in the bedroom. In particular, Troxell claims error with regard to the victim's rape kit, contending there was improper supervision when the rape kit was obtained and that no one responsible for collecting the victim's rape kit testified at trial. Troxell also contends that his own blood samples were admitted despite an improper chain of custody at the FBI laboratory.

#### *A. The Victim's Sample*

Troxell asserts error in the chain of custody of the victim's sample from the rape kit before it was placed in police custody. Troxell contends that because the DNA found at the crime scene must exclude the victim to be probative, the victim's DNA from the rape kit was subject to the same chain of custody required for the defendant's DNA. Whatever the merits of his challenge to the chain of custody, any error in the chain of custody of the victim's DNA was harmless. Troxell's DNA, not the victim's, supported Troxell's conviction. The identification of the perpetrator, not the victim, was the significance of this evidence. Any chain of custody issues related to the victim's DNA are irrelevant, as long as Troxell's own DNA was properly admitted and established to be from the crime scene.

#### *B. Troxell's Sample*

Troxell also challenges the chain of custody of his own DNA sample. Specifically he asserts that the State failed to establish a proper chain of custody within the FBI laboratory. Because there was no chain of custody objection to this evidence, this claim is not available on appeal unless it constituted fundamental error. *Cutter v. State*, 725 N.E.2d 401, 406 (Ind. 2000). The State bears a higher burden to establish the chain of custody of "fungible" evidence, such as blood and hair samples, whose appearance is indistinguishable to the naked eye. *Culver v. State*, 727 N.E.2d 1062, 1068 (Ind. 2000); see also *Bivins v. State*, 433 N.E.2d 387, 389 (Ind. 1982) (acknowledging that hair is characterized as fungible evidence). To establish a proper chain of

custody, the State must give reasonable assurances that the evidence remained in an undisturbed condition. *Cliver v. State*, 666 N.E.2d 59, 63 (Ind. 1996). However, the State need not establish a perfect chain of custody, and once the State “strongly suggests” the exact whereabouts of the evidence, any gaps go to the weight of the evidence and not to admissibility. *Wrinkles v. State*, 690 N.E.2d 1156, 1160 (Ind. 1997); *Jenkins v. State*, 627 N.E.2d 789, 793 (Ind. 1993) (noting that failure of FBI technician to testify did not create error). Moreover, there is a presumption of regularity in the handling of evidence by officers, and there is a presumption that officers exercise due care in handling their duties. *Wrinkles*, 690 N.E.2d at 1160; *Culver*, 727 N.E.2d at 1067. To mount a successful challenge to the chain of custody, one must present evidence that does more than raise a mere possibility that the evidence may have been tampered with. *Cliver*, 666 N.E.2d at 63.

Indiana State Police Sergeant Lewis collected the evidence at the crime scene, including the bedding and the carpet sweepings that contained the hairs, locked it in his van, and transported it to the Versailles Indiana State Police Post. At the post, Sergeant Lewis locked the evidence in the evidence locker until it was shipped to Special Agent Douglas Deedrick at the FBI laboratory. At trial, Deedrick explained the protocol that the Bureau follows upon the receipt of items of evidence for analysis. He testified that the evidence first goes through an X-ray facility to make sure that the evidence is safe. From there, the evidence is sent to an information center where information about the case and the evidence, including an inventory of the evidence, is entered into a computer. The items are then sent for processing and analysis. Special Agent Guerrieri testified to the FBI’s quality control processes. Guerrieri also noted that the FBI rechecks its results to further ensure accuracy.

Additionally, two agents completed three tests comparing the DNA from hair and blood samples collected from the victim and Troxell to the DNA from hair found in the victim’s bedroom. All of the test results were consistent. Although the record contains no specific dates and times documenting the movement of Troxell’s samples within the FBI processes, the absence of this information goes to the weight of the evidence and not to its admissibility. *Jenkins*, 627 N.E.2d at 793 (Ind. 1993). In sum, Troxell points to the possibility that his DNA sample may have been the subject of tampering but he points to no evidence in support of the allegation. Because of the presumption of regularity in handling evidence, there was no error in admitting this evidence, let alone fundamental error.

## **II. Short Tandem Repeat DNA Analysis**

Troxell last claims that the trial court erred in admitting the DNA test results from the FBI laboratory, which used Short Tandem Repeat analysis to establish the minuscule probability of error in identifying samples from both the victim and Troxell. A number of courts have set forth the science underlying STR analysis. A more complete explanation is provided in *United States v. Trala*, 162 F. Supp. 2d 336 (D. Del. 2001). In simplified terms, STR provides a more statistically reliable result by comparing more loci among the huge number comprising a strand of one human’s DNA with that of another. *Id.* at 340-41. The results from the STR analysis in this case indicated that the chance that a white male other than Troxell was the source of the hair found in the victim’s room was one in 230 trillion. Troxell argues that STR is too new to be reliable or accepted in the relevant scientific community and that evidence based upon STR analysis was unduly prejudicial. This Court has noted that “the words ‘DNA test results’ are not magic words which, once uttered, cause the doors of admissibility to open.” *Smith v. State*, 702 N.E.2d 668, 672 (Ind. 1998) (quoting *Harrison v. State*, 644 N.E.2d 1243, 1251 (Ind. 1995)).

Rather, DNA testing is admissible if the trial court is satisfied that: (1) the scientific principles upon which the expert testimony rests are reliable; (2) the witness is qualified; and (3) the testimony's probative value is not substantially outweighed by the dangers of unfair prejudice. *Ingram v. State*, 699 N.E.2d 261, 262 (Ind. 1998). Under Indiana Evidence Rule 702, no specific test is required to establish the reliability of a scientific process. *McGrew v. State*, 682 N.E.2d 1289, 1292 (Ind. 1997). Rather we have permitted trial courts to consider: (1) whether the technique has been or can be empirically tested; (2) whether the technique has been subjected to peer review and publication; (3) the known or potential rate of error, as well as the existence and maintenance of standards controlling the technique's operation; and (4) general acceptance within the relevant scientific community. We review the trial court's determination to admit evidence based on a scientific process under an abuse of discretion standard. *Ingram*, 699 N.E.2d at 263.

The trial court conducted a hearing as to the admissibility of the STR test results. Special Agent Guerrieri noted that after the development of the STR test, the test underwent a thorough validation process before being put into service by the FBI in the late 1990s, before Troxell's samples were analyzed. He also stated that the protocol used by the FBI has been subjected to technical review by its own scientists and by outside experts. The State introduced several articles in peer review journals that validated the STR testing process. Special Agent Guerrieri also noted that at the time of trial, over 140 laboratories performed STR testing. He explained that STR testing is replacing other forms of testing because it is more efficient and effective. He also described the lab's processes to avoid contamination and testified that the lab regularly tests the proficiency of its own analysts. Finally, Guerrieri stated that STR analysis is generally accepted in the relevant scientific community.

Other courts have reached the same conclusion. See *Trala*, 162 F. Supp. 2d. at 336; *State v. Allen*, 85 Cal. Rptr. 2d 655 (Cal. Ct. App. 1999); *State v. Schreck*, 22 P.3d 68 (Colo. 2001); *Lemour v. State*, 802 So. 2d 402 (Fla. Dist. Ct. App. 2001); *Commonwealth v. Rosier*, 685 N.E.2d 739 (Mass. 1997); *State v. Jackson*, 582 N.W.2d 317 (Neb. 1998); *State v. Deloatch*, 804 A.2d 604 (N.J. Super. Ct. Law Div. 2002); *New York v. Owens*, 725 N.Y.S.2d 178 (N.Y. Sup. Ct. 2001); *Fanniel v. State*, No. 01-00-00732-CR, 2002 Tex. App. LEXIS 2260 at \*1 (Tex. Crim. App. March 28, 2002) (unpublished); *State v. Butterfield*, 27 P.3d 1133 (Utah 2001). Based on the testimony of Special Agent Guerrieri, the reported decisions in other jurisdictions, and what seems to us to be the clear weight of scientific opinion that STR is now refined and reliable technology, we conclude that the trial court was well within its discretion in finding the scientific principles of STR testing to be reliable and generally accepted in the relevant scientific community.

### **Conclusion**

The judgment of the trial court is affirmed.

SHEPARD, C.J., and DICKSON, SULLIVAN, and RUCKER, JJ., concur.

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