

State of Nebraska, appellee, v.
Vinson Champ, appellant.

State v. Champ
(not designated for permanent publication)

Filed March 20, 2001. No. A-00-617.

Appeal from the District Court for Lancaster County: Paul D. Merritt, Jr., Judge.
Affirmed.

Dennis R. Keefe, Lancaster County Public Defender, and Shawn Elliott for appellant.

Don Stenberg, Attorney General, and Martin W. Swanson for appellee.

Irwin, Chief Judge, and Sievers and Moore, Judges.

Sievers, Judge.

On the evening of February 6, 1997, L.G., a female student at Union College in Lincoln, Nebraska, was sexually assaulted in a musicroom on that campus. Vinson Champ was charged with and convicted of that sexual assault by a Lancaster County District Court jury, although L.G. never saw her attacker's face and no other witness identified Champ directly as the perpetrator. The incriminating evidence against Champ consisted mainly of circumstantial evidence of his proximity at that time to the Lincoln area, DNA evidence, and evidence of a similar sexual assault a month later on the University of Nebraska at Omaha (UNO) campus. Because the trial record consists of 1,700 pages and numerous exhibits, we begin by setting forth Champ's assignments of error in order to more precisely focus our opinion.

I. ASSIGNMENTS OF ERROR

First, Champ asserts that the district court erred in admitting evidence of the sexual assault of H.H. occurring on March 5, 1997, on the UNO campus. Second, Champ asserts that the district court erred "in admitting the results of the DNA analysis, in particular, the probability of random match statistics." For his third assignment of error, Champ contends there was insufficient evidence to convict him. Fourth, he asserts that the sentence imposed, 30 to 40 years, was excessive.

II. DISCUSSION

1. Admissibility of Other Sexual Assault/ Similar Bad Acts Evidence

(a) Facts

To determine whether the evidence of the sexual assault of H.H. at the UNO campus on March 5, 1997, was admissible requires that we examine in some detail the facts surrounding the two sexual assaults.

On the evening of February 6, 1997, L.G. was on the Union College campus with her husband. They were in the A.B. Dick Building, and while her husband was located on another floor, L.G. was in a room where a piano was located. She was playing the piano and singing. She was in the room alone and did not hear anyone approach her, but was suddenly grabbed from behind, taken from the piano bench, and forced onto the floor on her stomach. The assailant told L.G. that he just wanted money, and somehow L.G. placed a dollar on the floor, although it was not taken. Her coat was placed over her head, and the perpetrator turned the lights off in the room. She was told she would be hurt if she resisted, which she did, causing her to be punched in the mouth. She was told that if she reported the crime, the perpetrator and his roommate, whom he claimed was a police officer, would "get her." While L.G. was on her stomach, her jeans, underwear, and shoes were removed and penetration was attempted, both anally and vaginally. These attempts were unsuccessful, and the assailant had L.G. go to her knees, but he was unsuccessful at penetration from this position as well. He then had L.G. roll over onto her back, and he covered her face with the hood of her jacket, eventually penetrated her vaginally, and ejaculated. He left, telling her to stay still for 5 minutes. L.G. immediately reported the assault to her husband, and they went to Bryan Memorial Hospital, where a "rape kit" was completed to gather trace evidence, including evidence of sperm from her vagina.

The State introduced detailed evidence concerning the March 5, 1997, sexual assault of H.H., after a pretrial hearing at which such evidence was determined to be admissible. On the evening of March 5, H.H. had taught a class at UNO and was alone in a computer lab using the Internet. She heard someone running up behind her, but was grabbed before she had a chance to turn around. The assailant grabbed her from behind with his left arm on her chest, under her throat, and his right hand over her mouth. He said that he would not hurt her and just wanted some money, and she relaxed. He then told her to stand up and maintained his hold on her while walking her to the corner of the room. She was told to lie down, which she did. She believed her attacker was Caucasian, because she was able to see a small area between his gloved hand and forearm. She noted the absence of any accent in his speech, which also sounded "cultured," and that he spoke in an intelligent manner. He told her to lie face down, which she did, and had her place a dark, knit cap over her head, causing her to be unable to see. Up to this point, she had never fully seen her attacker. He turned off the lights and one of the computers, which was playing music. He came back to her and asked her a number of sexually explicit questions, including when and how she lost her virginity, a question which had also been asked of L.G. While H.H. was on her stomach, the perpetrator spat upon her anus and digitally penetrated her. He then had her roll onto her back and continued asking her questions, including whether she liked men; and when she answered that question in the affirmative, he called her a "lying fucking whore," spat upon her vaginal area, and penetrated her. H.H. was wearing a long dress which was lifted up, and the perpetrator never touched her breasts under her clothing; nor did the assailant of L.G. H.H. immediately reported the sexual assault and was taken to Methodist Hospital by a police officer, where she underwent an examination by a nurse and a doctor, including vaginal swabs and having blood drawn.

(b) DNA Evidence

While we will more fully discuss the DNA evidence in the section of our opinion dealing with its admissibility, we state here our conclusion that such evidence was properly admitted. Without detailing the methodology, which is not challenged, the evidence reveals that material from the vaginal swab of L.G., a known sample of her blood, and a known sample of Champ's blood were sent to Cellmark Laboratories (Cellmark), located in Germantown, Maryland, for DNA testing. Material from the vaginal swab of H.H. and known blood samples from H.H. and Champ were sent to the University of Nebraska Medical Center (UNMC) for DNA testing. In both cases, the vaginal swabs revealed the presence of male and female cells. In each case, the sperm fraction, obviously contributed by a male, was separated out, and DNA testing was done on it and compared to DNA from the known sample of Champ's blood. There was a genetic match in both cases.

At UNMC, Champ's DNA profile was derived from 12 genetic markers, often called loci, and the evidence revealed that the odds of obtaining a like DNA profile in a random population of unrelated men were 1 in 7.77 trillion for Caucasians, 1 in 57.46 billion for African-Americans, and 1 in 13.98 trillion for American-Hispanics. With respect to the Cellmark results concerning the L.G. sexual assault, DNA from male cells found on the vaginal swab were tested for nine genetic markers after it was determined that DNA from Champ's blood matched DNA from those male cells. Cellmark concluded that the odds of obtaining a like DNA profile were 1 in 920 million for Caucasians; 1 in 11 million for African-Americans; and 1 in 230 million for Hispanics. Champ is African-American. The DNA testing by two different laboratories, as expressed by the expert witnesses, revealed (1) that Champ could not be excluded as the source of the DNA found in both victims and (2) that the likelihood of another African-American unrelated to Champ being the source of the male DNA was 1 in 11 million in the L.G. sexual assault and 1 in 57.5 billion in the H.H. sexual assault.

(c) Admissibility

With this factual background in place, we turn to the admissibility of the "similar bad acts" evidence. Champ contends that the trial court erred in admitting evidence of the sexual assault of H.H. occurring in Omaha on March 5, 1997. Evidence of that crime was said by the State to be admissible under Neb. Rev. Stat. § 27-404(2) (Reissue 1995) for the purpose of establishing proof of preparation, plan, and identity. The district court held a pretrial hearing with respect to the similar acts evidence and in a comprehensive order determined that the sexual assault of H.H. was admissible "for the limited purpose of establishing identity." In reaching that conclusion, the court found that the facts of the L.G. sexual assault and those of the H.H. sexual assault were "so similar, unusual and distinctive" that they bear the same signature and that thus, the evidence relating "to the [H.H.] sexual assault is probative on the issue of the identity of [L.G.]'s assailant." The court found that the probative value of such evidence was not outweighed by its potential for unfair prejudice.

The operative statutory provision, § 27-404(2), provides:

Evidence of other crimes, wrongs, or acts is not admissible to prove the character of a person in order to show that he or she acted in conformity

therewith. It may, however, be admissible for other purposes, such as proof of motive, opportunity, intent, preparation, plan, knowledge, identity, or absence of mistake or accident.

Section 27-404(3) requires that similar acts evidence be established as admissible in a hearing outside the presence of the jury by "clear and convincing evidence that the accused committed the crime, wrong, or act." In *State v. Sanchez*, 257 Neb. 291, 597 N.W.2d 361 (1999), the Supreme Court articulated that the "clear and convincing" standard means that there is sufficient evidence that the similar act was actually committed and that the defendant committed it so as to warrant submission to a jury if the other crime had been charged.

Champ first contends that the State failed to establish that he was the assailant in the H.H. sexual assault. In his argument, he references testimony by H.H. that she initially held the opinion that the assailant must have known her. Her conclusion derived from the dialog between herself and the assailant during the assault, which led her to believe that the assailant knew she was a lesbian, a well-known fact on the UNO campus. Champ then points to H.H.'s initial report that her assailant was Caucasian. While there is no evidence as to whether Champ was aware of H.H.'s sexual orientation, and while he is African-American, not Caucasian, H.H.'s initial impressions and opinions, by themselves, do not determine whether there was proof by the clear and convincing standard that Champ sexually assaulted H.H.

While we will discuss the probative value of the DNA evidence more extensively later in our opinion, we can shortcut the question of whether there was clear and convincing proof that Champ sexually assaulted H.H. by examining the DNA test results. The vaginal swabs of H.H. contained a male sperm fraction. DNA from this sperm was then compared to DNA from a sample of Champ's blood, which comparison resulted in the conclusion that he could not be excluded as the source of the male DNA found in her vagina and that the probability was 1 in 57 billion that another African-American male, unrelated to Champ, would have the DNA profile found to exist in the male DNA from the vaginal swab of H.H. Thus, while in theory it is possible that Champ did not sexually assault H.H., the DNA evidence easily satisfies the requirement that he be shown by clear and convincing evidence to have committed that crime.

The admissibility of other crimes or similar acts evidence under § 27-404(2) is determined upon the facts of each case and is within the discretion of the trial court. See *State v. Maggard*, 1 Neb. App. 529, 502 N.W.2d 493 (1993). There was no abuse of discretion when the trial court found that there was clear and convincing evidence that Champ was H.H.'s assailant. We hold that the DNA evidence provides clear and convincing proof that H.H. was sexually assaulted by Champ. The next issue is whether the crimes are sufficiently similar so that the fact that Champ sexually assaulted H.H. constitutes evidence that he was also L.G.'s assailant.

In both sexual assaults, the evidence established that the assaults occurred in the evening in deserted rooms on college campuses. In each case, the assailant grabbed the victim from behind, demanded money, covered the victim's head, turned off the lights in the room, and made the victim lie face down. The assailant performed digital anal penetration of H.H. and attempted penile anal penetration of L.G., and in both cases the

assailant used saliva or another lubricant. Ultimately, both victims were required to roll over onto their backs, at which point they were penetrated vaginally until the assailant ejaculated. Sexual questions were posed to both victims, including how they had lost their virginity, and both described their assailant as having good usage of the English language and sounding intelligent and educated. In summary, the two assaults are remarkably similar.

(d) Proper Purpose of Evidence

While the State wanted to use the evidence concerning H.H. for proof of preparation, plan, and identity, the trial court's order limited its use to proving identity. We need not discuss whether the trial court's limitation of the evidence to establishing identity was proper. We confine ourselves to whether the evidence of the H.H. sexual assault by Champ was probative to establish the identity of L.G.'s assailant.

Champ argues that there was not a proper purpose for admitting the evidence of H.H.'s sexual assault because when the two sexual assaults are compared, the similarities are simply not distinctive and indeed the two assaults are "very different." Brief for appellant at 21. When Champ's argument is examined, it is apparent that he would have us convert § 27-404(2) into a statute dealing with the admissibility of evidence of "exactly identical acts," rather than "similar acts." See *State v. Sanchez*, 257 Neb. 291, 597 N.W.2d 361 (1999). Champ claims that the similarities are neither unusual nor distinctive, because sexual assaults on college campuses during evening hours are not unusual, nor are assaults involving lewd comments or sexual questions. Champ argues that sexual assaults where the assailant takes a victim by surprise, conceals his identity, and makes threats of force are likewise neither unusual nor distinctive. Champ then points to differences in the precise sexual activity which the assailant perpetrated on L.G. and H.H. Champ concludes his argument by asserting, "This Court must insist that other crimes evidence bear an overwhelming factual similarity if the accused's presumption of innocence is to be protected." Brief for appellant at 26.

Our initial reaction to Champ's argument is that of necessity, he incorrectly focuses on only the superficial aspects of the crimes in order to say that they are not distinctive. Other crimes evidence does not have to be identical to be admissible. *State v. Freeman*, 253 Neb. 385, 571 N.W.2d 276 (1997). Rather, the test is whether there are overwhelming similarities between the other crime and the charged crime such that "the crimes are so similar, unusual, and distinctive that the trial judge could reasonably find that they bear the same signature." *State v. Sanchez*, 257 Neb. at 311, 597 N.W.2d at 376. The argument made by Champ addresses only the obvious generalities that sexual assaults occur on college campuses, that assailants may talk about sex to their victims, and that assailants attempt to conceal their identity. However, when we recounted above the similarities between the L.G. and H.H. sexual assaults, we focused on the specifics of locating the victim, approaching the victim, how the victim was positioned, what was said, the particular methods used to conceal identity, and the details of the sexual invasions. We find these aspects of the two crimes to be overwhelmingly similar. In fact, the assailant in each case operated in a number of distinct and particular ways which, when taken together, constitute his signature. Thus, the sexual assault of H.H., clearly and convincingly proved to have been committed by Champ, has the same signature as

the sexual assault of L.G.--which in turn tends to prove that L.G. was sexually assaulted by Champ.

Finally, Champ submits that the potential for unfair prejudice in admitting the other crimes evidence outweighs the probative value of that evidence. Champ concedes that the trial court gave a limiting instruction on the purpose of the evidence concerning H.H., but says that the prejudicial effect created "was to invite the jury to find Mr. Champ guilty of the [L.G.] sexual assault because of the allegation made against him in Omaha." Brief for appellant at 30. However, the real issue is not whether there is an invitation to convict, but whether the evidence is unfairly prejudicial. *State v. Freeman, supra*. Whether called an invitation to convict or something else, the evidence had a proper purpose in that it tended to prove the identity of L.G.'s assailant. Therefore, the evidence was properly admitted even though it was obviously prejudicial to Champ. The evidence helped the jury determine whether Champ was the assailant of L.G. by showing that Champ was the perpetrator of the overwhelmingly similar crime against H.H. Accordingly, the evidence was not unfairly prejudicial.

2. Admissibility of DNA Evidence

The argument advanced by Champ in his assignment of error about the DNA evidence's admissibility is extremely narrow, because he concedes that the State's experts are experts in the DNA field and that the method of analysis, including the probability calculations, is generally accepted by the scientific community. Champ argues that the probative value of the probability calculations is outweighed by their prejudicial effect. The basis for his argument is that jurors cannot learn enough about DNA science and statistical probability science to make a meaningful assessment of the reliability of the scientific evidence. Thus, while acknowledging that *State v. Carter*, 255 Neb. 591, 586 N.W.2d 818 (1998) (*Carter II*), holds otherwise, Champ submits that

the State should have been allowed only to offer evidence of the actual match of [Champ's] genetic markers to the genetic markers found in the evidentiary semen sample. The State's experts could then have testified as to the significance of a match or matches without the use of statistical probability. There is no question that DNA evidence has a place in the courtroom and in the justice system. However, there must be a limit so the function of the jury to be a fact finder is not supplanted by a State's expert in a white lab coat who spews out a number of a billion to one while offering a completely unintelligible explanation for that number.

Brief for appellant at 36.

In dealing with this assignment of error and the basis for it under Neb. Rev. Stat. § 27-403 (Reissue 1995), we initially note that Champ introduced no evidence to dispute the accuracy of the statistical and probability calculations used by the State. Moreover, Champ does not cite any authority from this jurisdiction or any other which supports the limitations he proposes on the use of DNA evidence, or which has held that the prejudicial effect of properly gathered and analyzed DNA evidence outweighs its probative value. The initial answer to Champ's argument is that DNA evidence, including probability calculations, is clearly admissible, and it is therefore up to the jury to decide

the import of such evidence. Champ's argument ultimately comes down to "the jury isn't smart enough," and our rejection of that argument needs no explanation. Nonetheless, we want to be thorough in our assessment of the DNA evidence.

The Nebraska Supreme Court has recently said that there is "nothing controversial about the theory underlying DNA typing, for there is a general scientific acceptance of the theory underlying DNA identification." *State v. Freeman*, 253 Neb. 385, 401, 571 N.W.2d 276, 287 (1997). In *Freeman*, Justice Wright wrote a concise but detailed explanation of the science behind DNA testing and its use in the field of criminal forensics, and we refer the interested reader to the *Freeman* opinion.

While there are several earlier cases concerning DNA evidence, we begin with *State v. Carter*, 246 Neb. 953, 524 N.W.2d 763 (1994) (*Carter I*), *overruled on other grounds*, *State v. Freeman*, *supra*. In *Carter I*, a jury found Asa Carter guilty of first degree murder after hearing, along with other circumstantial evidence, results of DNA tests performed on Carter and the victim, a 9-year-old girl whom Carter was alleged to have killed while sexually assaulting her. As occurred in the case at hand, Carter's DNA was typed using polymerase chain reaction (PCR) DQ Alpha DNA typing. Carter's DNA was compared to that found in sperm located on the victim's blue jeans and on an anal swab taken from the victim. After a match was found between the two DNA samples, Carter's DNA was compared to databases of African-American and Caucasian genetic profiles. Based on the comparison, the laboratory approximated that 10 percent of the black population and 7 percent of the white population would have a genetic profile matching Carter's and that 7.6 percent of the U.S. population, 6.9 percent of the Nebraska population, and 7.3 percent of the Omaha population would have a genetic profile matching Carter's.

In arriving at these probabilities, the laboratory in *Carter I* relied on a population genetics theory named the "Hardy-Weinberg equilibrium" and a methodology for calculating the probabilities of someone other than the suspect's being the source of the DNA designated the "product rule." This theory and methodology were "at the center of a current dispute within the scientific community" and "under considerable attack by the scientific community." *Carter I*, 246 Neb. at 978, 524 N.W.2d at 780. The court in *Carter I* reaffirmed the six-part *Frye-Houser* "general acceptance" test, enunciated in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), for determining the admissibility of DNA evidence. In holding that the underlying method of arriving at the statistical probability calculation must also meet the *Frye-Houser* general acceptance test because that calculation is an "essential part of the process used in determining the significance of a DNA match," 246 Neb. at 981, 524 N.W.2d at 782, the *Carter I* court reasoned as follows:

The evidence produced by DNA analysis is not merely . . . raw data . . . but encompasses the ultimate expression of the statistical significance of a match, in the same way that polygraph evidence is not merely the raw data produced by a polygraph machine but encompasses the operator's ultimate expression of opinion whether the subject is telling the truth.

246 Neb. at 981, 524 N.W.2d at 782, quoting *People v. Barney*, 8 Cal. App. 4th 798, 10 Cal. Rptr. 2d 731 (1992), *abrogated*, *People v. Wilds*, 37 Cal. Rptr. 2d 351 (Cal. App.

1995). Consequently, the *Carter I* court held that evidence of a DNA match is inadmissible if unaccompanied by statistical probability evidence calculated from a generally accepted method. Therefore, as the methodology used to calculate statistical probabilities had not yet gained general scientific acceptance, the DNA evidence in *Carter I* was inadmissible. Because the court found prejudicial the fact that the statistical frequency evidence was limited to only two racial groups, African-American and Caucasian, and because the racial background of the perpetrator was unknown, Carter's conviction was reversed and remanded for a new trial.

Three years later in *State v. Freeman*, 253 Neb. 385, 571 N.W.2d 276 (1997), after recognizing the current consensus in the scientific community affirming the use of the Hardy-Weinberg equilibrium and product rule to assess the probability of finding matching DNA profiles, the Supreme Court overruled *Carter I* "[t]o the extent that [*Carter I*] is based on an outdated level of acceptance of [DNA] evidence by the relevant scientific community." 253 Neb at 413, 571 N.W.2d at 293. In *Freeman*, the defendant was convicted of eight counts of sexual assault, on multiple victims. The FBI laboratory found that DNA taken from the defendant's blood matched DNA in swabs taken from each victim. As a result of *Freeman*, DNA evidence and the accompanying probability statistics are admissible as long as the proponent of the DNA evidence satisfies the *Frye-Houser* general acceptance test in a hearing outside the jury's presence. There was evidence of such general acceptance in the present case, and Champ does not challenge in any way the accuracy or general acceptance of the DNA science used in the investigations of the crimes against L.G. and H.H.

In the next DNA case we consider, *State v. Jackson*, 255 Neb. 68, 582 N.W.2d 317 (1998), Michael Jackson was convicted of murder, attempted murder, and use of a deadly weapon to commit a felony. The UNMC, using PCR DNA testing of short tandem repeats (STR) (the same DNA testing method used in the case at hand), found that the victim's DNA matched that found in bloodstains on Jackson's coat. The UNMC used the product rule to calculate the probability of randomly finding a match between the DNA in the bloodstains on Jackson's clothes and the DNA of the victim.

Jackson argued that under the *Frye-Houser* general acceptance test, neither PCR STR DNA analysis nor the probability analysis used was generally accepted in the scientific community. The court rejected Jackson's complaint about the raw DNA data, as the State's DNA scientist testified that PCR STR testing was "reliable, accurate, precise," and generally accepted within the scientific community. *State v. Jackson*, 255 Neb. at 80, 582 N.W.2d at 325. Without discussion and citing *State v. Freeman, supra*, the court rejected Jackson's complaint about the State's probability analysis, which was calculated using the product rule.

After *Freeman* and *Jackson* were decided, both of which recognized the general acceptance within the scientific community of raw DNA evidence and probability statistics flowing therefrom, Asa Carter, whose first appeal is discussed above in *Carter I*, appealed again in *Carter II* after a jury had found him guilty of murder for a second time in his retrial. *Carter II*. In *Carter II*, Carter again challenged the reliability and admissibility of DNA testing procedures under the *Frye-Houser* general acceptance test. DNA tests had shown a match at six different genetic markers between Carter's DNA and

the DNA in sperm found on the victim. Using the product rule and population databases, the evidence was that such a match was likely to occur in approximately 1 in 15,000 Caucasians, 1 in 1,200 African-Americans, and 1 in 5,500 Mexican-Americans.

Relying on *Freeman's* general acceptance of DNA evidence, the court in *Carter II* held that the "debate [over the accuracy of statistical probability data] is now over, and the opinion of the relevant scientific community is that population genetics, the process of compiling databases of genetic statistics regarding various racial groups for comparison with DNA test results, is generally accepted." 255 Neb. at 601, 586 N.W.2d at 828. The court concluded that the DNA evidence had been properly admitted because the uncontradicted testimony of the State's experts established the general acceptance of the statistical analysis used. We have a similar situation here, where the DNA evidence is not challenged by any other evidence.

Nonetheless, it is worth observing that DNA matches mean little without the statistical probability component, which relies on the Hardy-Weinberg equilibrium and product rule. See *Carter I* and cases cited therein. "'Without the probability assessment, the jury does not know what to make of the fact that the patterns match: the jury does not know whether the patterns are as common as pictures with two eyes, or as unique as the Mona Lisa.'" *Carter I*, 246 Neb. at 984, 524 N.W.2d at 783, quoting *U.S. v. Yee*, 134 F.R.D. 161 (N.D. Ohio 1991). For this reason, the rule in Nebraska is that DNA evidence is inadmissible if unaccompanied by statistical probability evidence calculated from a generally accepted method. *Carter I*. As has been shown, the Hardy-Weinberg equilibrium and product rule are not only generally accepted, but now seem to be universally applied in forensic DNA cases when calculating statistical probabilities.

State v. Freeman, 253 Neb. 385, 571 N.W.2d 276 (1997), articulates key principles of DNA science which are also found in the testimony in this case. The essence of DNA forensics is that the DNA profile of a body fluid sample taken from a crime scene is compared to the DNA profile of a known body fluid sample taken from a suspect, resulting in three possible conclusions: (1) The DNA profiles are a match; (2) the DNA profiles do not match, in which case the suspect may be eliminated as the source; or (3) the comparison is inconclusive. In the instant case, Champ's DNA matched that of the male DNA found on both L.G. and H.H. But, as outlined in *Freeman* and in the evidence here, such a match does not equal 100-percent proof that Champ was the source of the male DNA found in the vaginal swabs because of the millions of loci on the DNA chain which are not examined.

Under the methods used, individuals are distinguished for forensic DNA testing purposes by variations in the number of short, repeating sequences of protein building blocks packed together at a given location (locus) along the DNA; hence the name "variable number tandem repeats" (VNTR) or "short tandem repeats" (STR) to describe the testing method. While scientists test polymorphic loci (those specific locations along the DNA chain which are highly variable between individuals, as opposed to those locations which determine that humans have two arms, for example), it is nonetheless conceivable that two unrelated people could have the same number of tandem repeats at particular loci, i.e., the same number of repeating sequences of protein building blocks found along the strands of DNA. Thus, in order for there to be an absolute match, all of

the millions of loci on the DNA strand would have to be tested. Since this is not done, a practical DNA match is given meaning by the expression of a degree of probability using population genetics.

The statistical significance of a DNA match is measured by the frequency with which particular *patterns* of repeating sequences (or alleles) at particular loci occur within an ethnic population, such as African-American or Hispanic. Different patterns in the number of repeating sequences found at particular loci are named "allele patterns." Race-exclusive DNA databases illuminate the frequency (expressed as a probability) at which a particular allele pattern exists within an ethnic population. In this case, Cellmark's database for African-Americans, used in the L.G. sexual assault investigation, comprised the DNA profiles of 100 African-Americans. UNMC's database for African-Americans, used in the H.H. sexual assault investigation, comprised the DNA profiles of approximately 200 African-Americans.

Knowing the frequency at which a particular allele pattern occurs in a particular ethnic population allows a DNA scientist to calculate the probability of finding a match between a suspect's DNA and that from an unrelated, randomly-chosen person within the relevant ethnic population. To determine the aggregate probability of finding a multiple-loci (or multiple-allele pattern) match, the probabilities of finding a particular allele pattern at each of the loci examined are multiplied together. This is the method underlying the product rule, which, as outline above, determines the probability that the DNA profile of a person picked at random from a specific population group, such as African-American, who is unrelated to the suspect, would match the DNA profile of the suspect.

In the case at hand, the odds of randomly finding a person with the same DNA profile as that of Champ and of H.H.'s assailant (given that 12 loci were tested) were 1 in 7.77 trillion for Caucasians, 1 in 57.46 billion for African-Americans, and 1 in 13.98 trillion for American-Hispanics. With respect to the L.G. sexual assault, Cellmark concluded that the odds on the same question were 1 in 920 million for Caucasians, 1 in 11 million for African-Americans, and 1 in 230 million for Hispanics. Unlike UNMC's 12-locus test, Cellmark's calculations were based on the testing of only 9 loci. The more loci which are tested, the more precise the test and the less likely it will be that two individuals will express the same DNA profile.

Champ's brief to this court poses the question of how to explain the disparity between the odds calculated by two different laboratories which identify the same individual, Champ. As said above, DNA test results and probability calculations become more precise as more loci are tested because it becomes increasingly less likely that a match will be found at all loci. More precise test results are expressed by lower odds of finding a match between a suspect's DNA and that of a randomly chosen individual of the suspect's ethnic group. In short, the product rule, which is used to determine the aggregate probability for the existence of a multiple loci match, is what explains this disparity, in that the greater the number of variables in a sequence, the lower the odds will be of replicating that sequence, i.e., of finding the same DNA profile. Thus, while Champ complains that the population databases are too small to generate such extremely low odds of randomly obtaining a match between the male DNA found on L.G. and H.H. and DNA from a person other than Champ, he offers no evidence or authority showing

that Cellmark's or UNMC's "small" databases have skewed the odds. The evidence was that the geneticists determined the frequency with which a specific allele pattern occurs within a given human racial group. The alleles used occur in polymorphic (variable) sections of an individual's genome (total genetic information). Thus, as the probabilities showed, the likelihood that the samples would match was much smaller. This reduced likelihood of finding matches at polymorphic loci is what gives DNA identification technology its value for forensic purposes. *State v. Freeman*, 253 Neb. 385, 571 N.W.2d 276 (1997).

Furthermore, while the *Frye-Houser* test does not require proof that a set number of alleles be examined or proof that the database used for the probability calculation be composed of the genetic profiles of a certain number of individuals, we note that the Nebraska Supreme Court has upheld the admission of probability statistics based on the examination of 4 (*Freeman*) and 6 (*Carter II*) alleles, whereas in the case at hand, UNMC examined 9 and Cellmark examined 12. We also note that the Supreme Court has upheld probabilities of a DNA match in the range of 1 in 15 million Caucasians, 1 in 6 million African-Americans, and 1 in 2 million Hispanics (*Freeman*) and in the range of 1 in 15,000 Caucasians, 1 in 1,200 African-Americans, and 1 in 5,500 Mexican-Americans (*Carter II*). We compare these probabilities to those of the case at hand, wherein UNMC concluded that the odds of randomly finding a match between Champ's DNA and that found on L.G. were 1 in 7.7 trillion Caucasians, 1 in 57.45 billion African-Americans, and 1 in 13.98 trillion Hispanics and Cellmark concluded that the odds of randomly finding a match between Champ's DNA and that found on H.H. were 1 in 970 million Caucasians, 1 in 11 million African-Americans, and 1 in 230 million Hispanics.

We summarize the DNA evidence here by finding that the testing was standardized using generally accepted methods, including the method of calculating probabilities, but further noting that the number of alleles analyzed was larger than that in any other reported Nebraska case. Thus, the accuracy, reliability, and indication of guilt of the DNA evidence concerning Champ exceed those found in any of the earlier cases involving DNA which have been before the appellate courts.

In conclusion, DNA science is accepted and admissible, there was no challenge to the methodology, and the evidence was that the DNA analysis was done in accordance with generally accepted scientific principles. Thus, while the evidence is obviously highly prejudicial to Champ, it is not unfairly so, and its probative value is great. There was no error in the use of the DNA evidence.

3. Sufficiency of Evidence

Champ asserts that the evidence is insufficient to sustain the conviction. However, we give him credit for candor because he concedes in his brief that if his assignments of error concerning similar acts evidence and DNA evidence fail, then this assignment of error has little hope of success. His assessment of his chances for success is correct. When reviewing a criminal conviction, it is not the province of an appellate court to resolve conflicts in the evidence, pass on the credibility of witnesses, determine the plausibility of explanations, or reweigh the evidence, as such matters are for the finder of fact, and the verdict of the jury must be sustained if, taking the view most favorable to the State,

there is sufficient evidence to support it. *State v. Marks*, 248 Neb. 592, 537 N.W.2d 339 (1995).

We have already determined that the DNA evidence was properly admitted, as was the similar acts evidence involving the sexual assault of H.H. on the UNO campus. The DNA evidence alone provides sufficient evidence to support the conviction. This assignment of error is without merit.

4. Excessive Sentence

As his final assignment of error, Champ contends that the sentence imposed was excessive. The predatory attack on L.G. while she peacefully practiced her music at Union College has forever changed her world, and we find that the 30- to 40-year sentence imposed on Champ is not excessive. The applicable law is that a sentence within statutory limits will not be disturbed upon appeal absent an abuse of discretion by the sentencing court. *State v. Hill*, 255 Neb. 173, 583 N.W.2d 20 (1998). The power to impose sentences is entrusted to the sentencing court and not to the appellate court, and the judgment of the sentencing court cannot be interfered with in the absence of an abuse of discretion. *State v. Philipps*, 242 Neb. 894, 496 N.W.2d 874 (1993). An abuse of discretion occurs when the sentencing court's reasons or rulings are clearly untenable and unfairly deprive a litigant of a substantial right and a just result. *Id.*

In *State v. Hopkins*, 7 Neb. App. 895, 901, 587 N.W.2d 408, 413 (1998), this court said that "an appellate court . . . has an extremely limited review of sentences, and sentences within statutory limits are uniformly and routinely affirmed despite the appellate court's opinion of the sentence."

At the time of sentencing for the sexual assault of L.G., Champ stood convicted of sexually assaulting H.H., but unsentenced for that crime, as a result of his no contest plea to that charge. Today, we have also decided a separate appeal wherein Champ complains that his sentence of 25 to 30 years' imprisonment for the sexual assault of H.H., to be served after the sentence in this case, was excessive. We have upheld that sentence (see *State v. Champ*, 10 Neb. App. ____ (case No. A-00-803, Mar. 27, 2001), which we affirmed without opinion). While the presentence report for this case measures three large volumes and clearly suggests that Champ is a serial rapist preying upon female students at a number of small midwestern colleges, the Lancaster County Attorney's office asked that the sentencing judge in this case not consider the other crimes detailed in the presentence report which occurred in Iowa, Wisconsin, Illinois, and California, nor any Nebraska matters other than the assaults upon L.G. and H.H. The sentencing judge stated for the record that notwithstanding the inclusion of information about those other incidents in the presentence report, they were not considered except to the extent to which Champ had subsequent contacts with law enforcement officials. The court did consider that Champ pled no contest and was found guilty of the first degree sexual assault of H.H. in Douglas County.

Having reviewed the presentence report in detail, it is obvious that the sentencing judge's limited consideration of other assaults attributed to Champ in other states could only inure to Champ's benefit, but it is also obvious that this crime warrants significant

incarceration, without consideration of what else Champ may have done outside of Nebraska. The conviction here for first degree sexual assault is one for a Class II felony, and the sentence of not less than 30 nor more than 40 years is well within the statutory limits for such a crime. Recalling the violence inflicted, both physical and psychological, upon L.G. at Union College as well as upon H.H. at UNO, there is little for us to say about the sentence except that Champ is a violent and dangerous criminal who has been properly removed from free society by a lawful and appropriate sentence.

III. CONCLUSION

Finding no merit to the errors complained of by Champ on appeal and finding the sentence to be appropriate, we affirm the conviction and sentence.

Affirmed