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Criminal Procedure - New Mexico Accepts Forensic DNA Evidence under Rule of Evidence 11-702: State v. Anderson

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CRIMINAL PROCEDURE—New Mexico Accepts Forensic DNA Evidence Under Rule of Evidence 11-702: *State v. Anderson*

I. INTRODUCTION

In *State v. Anderson*,[1] the New Mexico Supreme Court held that deoxyribonucleic acid (DNA) evidence[2] is admissible under the New Mexico Rules of Evidence.[3] In *Anderson*, the court applied the test for admissibility for scientific evidence adopted in *State v. Alberico*.[4] Under the requirements set forth in *Alberico*,[5] the procedures and calculations used to produce scientific evidence must meet the standards of the rules of evidence concerning: 1) whether expert testimony should be permitted,[6] 2) what that testimony can be,[7] and 3) whether it should be excluded as unfairly prejudicial.[8] In *Anderson*, the court held that the Federal Bureau of Investigation's (FBI) DNA typing methods meet these evidentiary standards.[9] This Note will examine case law from other jurisdictions regarding the admissibility of forensic DNA evidence, analyze the rationale in *Anderson*, and discuss the implications of the decision.

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1. 118 N.M. 284, 881 P.2d 29 (1994).

2. DNA evidence is commonly referred to as DNA typing or DNA profiling. For an explanation of the mechanics of DNA testing, *see* United States v. Bonds, 12 F.3d 540, 550-51 (6th Cir. 1993); United States v. Jakobetz, 955 F.2d 786, 791-93 (2d Cir.), *cert. denied*, ___ U.S. ___, 113 S. Ct. 104 (1992); Government of the Virgin Islands v. Penn, 838 F. Supp. 1054, 1056-57 (D.V.I. 1993).

3. *Anderson*, 118 N.M. at 285, 881 P.2d at 31. Specifically, the Court found DNA evidence admissible under N.M. R. EVID. 11-702, 11-703, and 11-403. *Id.* New Mexico has adopted the majority of the Federal Rules of Evidence. *See generally* Compiler's Notes under the New Mexico Rules of Evidence. For the purposes of this Note, the New Mexico rules will be referred to as "702," "703," and "403." *See infra* notes 6-8 for the language of these rules.

4. 116 N.M. 156, 861 P.2d 192 (1993). Prior to *Anderson*, the *Alberico* court rejected the test set out in Frye v. United States, 293 F. 1013 (D.C. Cir. 1923). The *Alberico* court held that the New Mexico Rules of Evidence did not incorporate *Frye*. *Alberico*, 116 N.M. at 166-67, 881 P.2d at 202-03. In rejecting *Frye*, the *Alberico* court relied on Daubert v. Merrell Dow Pharmaceuticals, Inc., ___ U.S. ___, 113 S. Ct. 2786, 2793 (1993).

5. *See Alberico*, 116 N.M. at 166, 861 P.2d at 202.

6. *Id.* N.M. R. EVID. 11-702 reads as follows:

> If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of an opinion or otherwise.

7. *Alberico*, 116 N.M. at 166, 861 P.2d at 202. N.M. R. EVID. 11-703 reads as follows:

> 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.

8. *Alberico*, 116 N.M. at 168-70, 861 P.2d at 204-06 N.M. R. EVID. 11-403 reads as follows:

> Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues or misleading the jury, or by considerations of undue delay, waste of time or needless presentation of cumulative evidence.

9. *Anderson*, 118 N.M. at 303, 881 P.2d at 47.

II. STATEMENT OF THE CASE

Jay Allen Anderson and Joni Hertz met at a convenience store in Albuquerque.[10] Hertz told Anderson that she was driving from Oklahoma to California. She had been following a friend's car but she had become separated from her group. Hertz also told Anderson that she had misplaced her wallet. Anderson offered Hertz ten dollars in exchange for a ride home. When they arrived at a field outside of a trailer park, Anderson forced Hertz to perform oral sex. He then beat her and left her unconscious.[11]

Anderson was arrested after Hertz identified him. The FBI determined that a match[12] existed between semen recovered from Hertz's vomit and Anderson's DNA profile.[13] The FBI also found a DNA match between blood found on Anderson's jacket and Hertz's DNA profile.[14] After a hearing,[15] the trial court ruled that the DNA typing evidence was admissible.[16] After the ruling, Anderson entered into a plea bargain with the State, while reserving his right to appeal.[17]

Anderson appealed, arguing that the trial court committed reversible error by admitting the DNA typing evidence.[18] The court of appeals reversed the trial court,[19] finding that the scientific community did not generally accept the FBI's method for computing population frequency statistics for DNA typing comparisons.[20] After examining the evidence under the New Mexico Rules of Evidence, as interpreted in *Alberico*,

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10. Unless otherwise noted, all subsequent factual references refer to *Anderson*, 118 N.M. at 286, 881 P.2d at 31.

11. "The plea and disposition agreement states that [Anderson] beat Hertz with 'a block of wood and/or a steel barbell rendering her unconscious and causing injuries to her head requiring over 200 stitches.'" *Id.*

12. "Match" is "a term of art used in the scientific community to describe positive testing results." United States v. Martinez, 3 F.3d 1191, 1193 (8th Cir. 1993), *cert. denied*, ___ U.S. ___, 114 S. Ct. 734 (1994).

13. *Anderson*, 118 N.M. at 286, 881 P.2d at 31. *See also* Government of the Virgin Islands v. Penn, 838 F. Supp. 1054, 1059-65 (D.V.I. 1993) (explaining the FBI's testing procedures for DNA profiling); Springfield v. State, 860 P.2d 435, 444-45 (Wyo. 1993) (summarizing the method of FBI statistical probability determination called "binning").

14. *Anderson*, 118 N.M. at 286, 881 P.2d at 31.

15. *Id.* At the hearing, the trial court ordered the State to disclose all of its evidence relating to the DNA typing in order to determine if the FBI's testing methods met the "generally accepted" test from *Frye*. *Id.*

16. *Id.* The trial court concluded that "by a preponderance of the evidence . . . the FBI's method for computing the statistical frequency of DNA pairings is a valid procedure and is generally accepted in the relevant scientific community." *Id.*

17. *Id.* at 286-87, 881 P.2d at 31-32. Anderson pled no contest to one count each of kidnapping, second degree criminal sexual penetration, aggravated battery and extortion, and two counts of first degree criminal sexual penetration. State v. Anderson, 115 N.M. 433, 434, 853 P.2d 135, 136 (Ct. App. 1993), *rev'd*, 118 N.M. 284, 881 P.2d 29 (1994). The plea agreement included the defendant's admissions of his criminal sexual acts as well as the FBI evidence of the DNA typing match between semen found on Hertz and Anderson's DNA profile. *Anderson*, 118 N.M. at 287, 881 P.2d at 32.

18. *Anderson*, 118 N.M. at 287, 881 P.2d at 32.

19. *State v. Anderson*, 115 N.M. 433, 434, 853 P.2d 135, 136 (Ct. App. 1993), *rev'd*, 118 N.M. 284, 881 P.2d 29 (1994).

20. *Id.* at 436-37, 444, 853 P.2d at 138-39, 146.

the New Mexico Supreme Court reversed the court of appeals and held that the DNA typing was admissible.[21]

III. HISTORY OF THE ISSUE

The use of DNA typing evidence has created controversy: "Courts, attorneys, scientists, statisticians, journalists, and government agencies have been explaining, examining, promoting, proselytizing, denigrating, and otherwise struggling with DNA identification evidence at least since 1985."[22] Opponents of DNA evidence argue that the statistical outcome of DNA typing is unreliable[23] and lures jurors into believing that the DNA evidence is conclusive of a defendant's guilt.[24] Furthermore, they assert that DNA matches are inaccurate and affected by "population structure."[25] Advocates of DNA evidence contend that the matching process uses the "most 'conservative' procedures" in order to make up for any deficiencies in the statistics.[26] They also assert that "DNA evidence merely provides corroborative evidence in all but a handful of cases."[27]

Despite the controversy over forensic DNA testing, several jurisdictions have allowed DNA evidence in criminal trials.[28] These courts have allowed DNA evidence under either the *Frye* test or via the admissibility of expert opinion testimony under rules similar to New Mexico's Rule 702.[29] The following is an analysis of how courts in federal jurisdictions, other state

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21. *Anderson*, 118 N.M. at 286, 302-3, 881 P.2d at 31, 47-8. *See also Alberico*, 116 N.M at 164-68, 861 P.2d at 200-04.

22. David H. Kaye, *DNA Evidence: Probability, Population Genetics, and the Courts*, 7 HARV. J.L. & TECH. 101 (1993) (citations omitted).

23. *See id.* at 102.

24. *See* Rockne P. Harmon, *Legal Criticisms of DNA Typing: Where's the Beef?*, 84 J. CRIM. L. & CRIMINOLOGY 175, 184-85 (1993).

25. Kaye, *supra* note 22, at 106.

26. *Cf. id.*

27. Harmon, *supra* note 24, at 175. *See also supra* note 2.

28. *See generally* Gordon Russell, *A Pathfinder on the Admissibility of Forensic DNA Evidence in Criminal Cases*, 19 LEGAL REFERENCE SERVS. Q., 13(3) (1994). This article surveys the most recent case law of every state and all the federal circuit courts regarding the admissibility of DNA evidence. The survey reflects the fact that most jurisdictions have accepted DNA evidence but under different tests. *Id.*

29. *See Anderson*, 118 N.M. at 295-96, 881 P.2d at 40-1. The *Anderson* court cited the following cases as having accepted DNA evidence under the evidentiary requirements of expert testimony: United States v. Bonds, 12 F.3d 540 (6th Cir. 1993); United States v. Martinez, 3 F.3d 1191 (8th Cir. 1993), *cert. denied*, ___ U.S. ___, 114 S. Ct. 734 (1994); United States v. Jakobetz, 955 F.2d 786 (2d Cir.), *cert. denied*, ___ U.S. ___, 113 S. Ct. 104 (1992); Government of the Virgin Islands v. Penn, 838 F. Supp. 1054 (D.V.I. 1993); Springfield v. State, 860 P.2d 435 (Wyo. 1993); State v. Pierce, 597 N.E.2d 107 (Ohio 1992); State v. Montalbo, 828 P.2d 1274 (Haw. 1992); State v. Brown, 470 N.W.2d 30 (Iowa 1991); State v. Woodall, 385 S.E.2d 253 (W. Va. 1989); Spencer v. Commonwealth, 384 S.E.2d 775 (Va. 1989), *cert. denied*, 493 U.S. 1036 (1990); State v. Futrell, 436 S.E.2d 884 (N.C. Ct. App. 1993); State v. Futch, 860 P.2d 264 (Or. Ct. App. 1993) (en banc); Kelly v. State, 824 S.W.2d 568 (Tex. Crim. App. 1992) (en banc); Andrews v. State, 533 So. 2d 841 (Fla. Dis. Ct. App. 1988), *review denied*, 542 So. 2d 1332 (Fla. 1989).

Examples of jurisdictions that hold DNA evidence admissible under *Frye* are as follows: Fishback v. People, 851 P.2d 884 (Colo. 1993) (en banc); Smith v. Deppish, 807 P.2d 144 (Kan. 1991); Polk v. State, 612 So. 2d 381 (Miss. 1992); People v. Wesley, 633 N.E.2d 451 (N.Y. 1994); State v. Ford, 392 S.E.2d 781 (S.C. 1990); State v. Kalakosky, 852 P.2d 1064 (Wash. 1993) (en banc).

jurisdictions, and New Mexico have handled the admissibility of DNA forensic evidence.

A. Federal Jurisdictions

The United States Supreme Court recently abandoned the *Frye* test in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*[30] While the *Frye* test focused on whether the scientific method is generally accepted,[31] *Daubert* held that the Federal Rules of Evidence control admissibility of scientific evidence.[32] Under Rule 702, scientific evidence must be both relevant and reliable.[33] The *Daubert* court presented four factors to help courts determine the reliability and validity of scientific evidence: 1) the testability of the theory or technique; 2) colleague review and publication of the theory or technique; 3) the consideration of rate of error in the theory or technique; and 4) acceptance of the theory or technique in the relevant scientific community.[34] Although the *Daubert* court addressed the admissibility of scientific evidence, it did not specifically address whether DNA evidence is admissible.[35]

Nevertheless, several circuit courts have confronted the admissibility of forensic DNA evidence and concluded that it is admissible.[36] In *United States v. Martinez*,[37] the Eighth Circuit adopted *Daubert*'s four factors to determine whether DNA evidence is admissible.[38] The court stressed, however, that DNA evidence is not automatically admissible; rather, an inquiry into the performance of the experts' use of the testing methods

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30. ___ U.S. ___, 113 S. Ct. 2786 (1993).

31. *Frye* concerned the admissibility of a systolic blood pressure deception test. *Frye*, 293 F. 1013 (D.C. Cir. 1923). The court stated:

> Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be *sufficiently established to have gained general acceptance* in the particular field in which it belongs.

Id. at 1014 (emphasis added).

32. *Daubert*, ___ U.S. at ___, 113 S. Ct. at 2793.

33. *See supra* note 6.

34. *Daubert*, ___ U.S. at ___, 113 S. Ct. at 2796-97 (quoting United States v. Downing, 753 F.2d 1224, 1238 (3d Cir. 1985)).

35. *Id.*

36. The first circuit case involving DNA profiling was a pre-*Daubert* case, United States v. Two Bulls, 918 F.2d 56 (8th Cir. 1990). In *Two Bulls*, the court held that both Rule 702 and *Frye* require the "same general approach to the admissibility of new scientific evidence" and adopted a hybrid of the two. *Id.* at 60. The court adopted a three-prong test from People v. Castro, 545 N.Y.S.2d 985, 987 (N.Y. Sup. Ct. 1989), to determine the admissibility of DNA evidence. The *Two Bulls* court held that "[t]he trial court is to decide (1) whether DNA evidence is generally accepted by the scientific community, (2) whether the testing procedures used in this case are generally accepted as reliable if performed properly, [and] (3) whether the test was performed properly in this case . . . ." *Two Bulls*, 918 F.2d at 61. Additionally, the trial court must make a determination, under a Rule 403 application, on the evidence and on the "statistics used to determine the probability of someone else having the same genetic characteristics . . . ." *Id.*

37. 3 F.3d 1191 (8th Cir. 1993), *cert. denied*, ___ U.S. ___, 114 S. Ct. 734 (1994).

38. *Id.* at 1196-97.

would be determinative of admissibility under *Daubert*.[39] The Second Circuit, in *United States v. Jakobetz*,[40] held that DNA evidence is admissible if it complies with the relevant rules of evidence.[41] *Jakobetz* illustrates the rejection of *Frye* and the use of a *Daubert*-like analysis[42] to determine admissibility.[43]

The Sixth Circuit adopted the *Daubert* standard of admissibility for DNA evidence in *United States v. Bonds*.[44] The *Bonds* court found that "the FBI's principles and methodology have in fact been tested;"[45] that "flaws" uncovered by peer review and publication "do not necessarily equate to a lack of scientific validity;"[46] and that although the inaccuracy of the rate of error is "troubling," this factor is but "one in a list of nonexclusive factors."[47] The court concluded that DNA profiling and the FBI's methodology for conducting DNA testing meet *Daubert*'s general acceptance requirement.[48] The Sixth Circuit found that under *Daubert*, "general acceptance" does not mean unanimous support from the scientific community, but rather a majority of support.[49] Although the

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39. *Id.* at 1197. The Eighth Circuit recommended that the courts inquire "into the particular expert's application of the scientific principle or methodology in question . . . ," to determine whether the application of the testing protocol was sufficient. *Id.* at 1198.

40. 955 F.2d 786 (2d Cir.), *cert. denied*, ____U.S. ____, 113 S. Ct. 104 (1992).

41. *Id.* at 794. The Second Circuit followed *Jakobetz* in United States v. Williams, 583 F.2d 1194, 1198 (2d Cir. 1978) (rejecting the *Frye* test and applying the Federal Rules of Evidence), *cert. denied*, 439 U.S. 1117 (1979).

42. *Jakobetz*, 955 F.2d at 794. The five factors adopted in *Williams* are similar to *Daubert*'s four factors. The five factors in *Williams* are as follows:

> (1) the potential rate of error; (2) the existence and maintenance of standards; (3) the care and concern with which a scientific technique has been employed, and whether it appears to lend itself to abuse; (4) the existence of an analogous relationship with other types of scientific techniques and results that are routinely admitted into evidence; and (5) the presence of "'fail-safe'" characteristics or the likelihood that potential inaccuracies will rebound to the defendant's benefit rather than his detriment.

Id. (quoting United States v. Williams, 583 F.2d 1194, 1198-99 (2d Cir. 1978), *cert. denied*, 439 U.S. 1117 (1979)).

The *Daubert* court cites *Williams* in its four criteria. *Daubert*, ____U.S. at ____, 113 S. Ct. at 2797.

43. *Jakobetz*, 955 F.2d at 798. The Second Circuit also found that in future cases with similar DNA evidentiary issues, courts could take "judicial notice" of the general acceptability of DNA testing techniques. *Id.* at 799.

44. 12 F.3d 540, 554-56 (6th Cir. 1993). The *Bonds* court attempted to clarify the meaning of "scientific validity" in *Daubert*. *Id.* at 555-56. *See Daubert*, ____U.S. at ____, 113 S. Ct. at 2796-97 (discussing the principle of scientific validity). The *Bonds* court concluded that "[i]f the principles, methodology and reasoning are scientifically valid then it follows that the inferences, assertions and conclusions derived therefrom are scientifically valid as well. Such reliable evidence is admissible under Rule 702, so long as it is relevant." *Bonds*, 12 F.3d at 556.

45. *Bonds*, 12 F.3d at 558.

46. *Id.* at 559.

47. *Id.* at 560.

48. *Id.* at 562.

49. *Id.* The *Bonds* court held:

> [T]he absence of a majority does not necessarily rule out general acceptance . . . . Only when a theory or procedure does not have the acceptance of most of the pertinent scientific community, and in fact a substantial part of the scientific community disfavors the principle or procedure, will it not be generally accepted. *Id.*

Supreme Court has not yet specifically addressed whether forensic DNA evidence is admissible under the factors of *Daubert*, a number of the circuit courts hold that forensic DNA evidence is admissible if the Federal Rules of Evidence are satisfied.

B. The State Courts

Several states have held DNA typing evidence admissible under Rule 702.[50] After most states adopted the Federal Rules of Evidence, they, like the federal courts, tried to reconcile *Frye* and Rule 702 by concluding either that the *Frye* test was part of determining the admissibility of evidence under Rule 702 or by rejecting *Frye* in favor of the rules of evidence.[51]

In *State v. Woodall*,[52] a pre-*Daubert* case, West Virginia held that DNA evidence is admissible under Rule 702, not *Frye*.[53] The *Woodall* court attempted to reconcile *Frye* with the West Virginia Rules of Evidence by finding that "Rules 702 and 403, taken together, preserve the policies underlying the *Frye* rule."[54] Therefore, *Frye* is unnecessary so long as Rules 702 and 403 are applied. In a post-*Daubert* case, *Springfield v. State*,[55] Wyoming held DNA evidence admissible under the rules of evidence. The court reasoned that the jury must be allowed to "discharge its duties of weighing the evidence, making credibility determinations, and ultimately deciding the facts."[56] In *State v. Montalbo*,[57] Hawaii upheld the admissibility of DNA evidence under the Rules of Evidence, finding, like the *Woodall* court, that both Rules 702 and 403 encompass the *Frye* test.[58] The *Montalbo* court stated that in addition to an analysis under Rules 702 and 403, a court should consider the general acceptance of

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50. *See supra* notes 6 & 29.

51. *See, e.g.*, State v. Pierce, 597 N.E.2d 107 (Ohio 1992) (holding that the proper test for admitting DNA evidence is found under Rules 402, 403, and 702); State v. Brown, 470 N.W.2d 30 (Iowa 1991) (holding that under Iowa Rule of Evidence 702 and 703 the test of admissibility of scientific evidence is whether it will assist the trier of fact and whether the evidence is reliable); Spencer v. Commonwealth, 384 S.E.2d 775 (Va. 1989), *cert. denied*, 493 U.S. 1093 (1990) (holding that the DNA testing techniques were reliable and that the tests were properly conducted); State v. Futrell, 436 S.E.2d 884 (N.C. Ct. App. 1993) (holding that the DNA evidence was properly admitted and the jury had the duty to weigh the evidence and the credibility of the experts); State v. Futch, 860 P.2d 264 (Or. Ct. App. 1993) (en banc) (holding that DNA evidence is generally admissible under Oregon Rules of Evidence 401, 702 and 403 and that the DNA evidence is this case was admissible); Kelly v. State, 824 S.W.2d 568 (Tex. Crim. App. 1992) (en banc) (holding that Rule 702 of the Texas Rules of Evidence supersedes the *Frye* test, and that the DNA evidence was admissible under three criteria for scientific evidence reliability).

52. 385 S.E.2d 253 (W. Va. 1989).

53. *Id.* at 259.

54. *Id.*

55. 860 P.2d 435 (Wyo. 1993). The court followed its earlier decision in Rivera v. State, 840 P.2d 933 (Wyo. 1992), in which it rejected *Frye* in favor of Rule 702 of the Wyoming Rules of Evidence.

56. *Id.* at 443 (quoting United States v. Jakobetz, 955 F.2d 786, 797 (2d Cir.), *cert. denied*, ___ U.S. ___, 113 S. Ct. 104 (1992)).

57. 828 P.2d 1274 (Haw. 1992).

58. *Id.* at 1280. The court relied on State v. Kim, 645 P.2d 1330, 1336 (Haw. 1982) (holding that Rule 702 of the Hawaii Rules of Evidence superseded the *Frye* test).

the scientific evidence.[59] In sum, it appears that many state courts found *Frye* redundant in relation to their rules of evidence.

C. *Admissibility of DNA Evidence in New Mexico Prior to Anderson*

In *Alberico*, the New Mexico Supreme Court held that scientific evidence is admissible if it meets the tenets of Rule 702.[60] Three requirements must be met before expert testimony is admissible under Rule 702: 1) the expert must be qualified, 2) the testimony must assist the trier of fact, and 3) the expert must testify to "scientific, technical or other specialized knowledge."[61] The *Alberico* court stated that courts should focus on "the validity and the soundness of the scientific method used to generate the evidence."[62] The court noted that the concept of validity encompasses both the concept of reliability and the techniques' ability to bring about consistent results.[63] Although *Alberico* did not fashion a particular list of factors to be considered in "assessing the validity of a particular technique,"[64] it cited *Daubert* as guidance.[65] Thus, New Mexico rejected the *Frye* test and adopted an analysis similar to *Daubert* for the admissibility of scientific evidence. It is in this context that the *Anderson* court analyzed the admissibility of forensic DNA evidence.

IV. RATIONALE OF THE *ANDERSON* COURT

In *Anderson*, the New Mexico Supreme Court addressed the admissibility of DNA forensic evidence for the first time. The court applied Rule 702 and, relying on *Alberico*, looked to the four *Daubert* factors to assess the reliability and validity of the scientific technique used in the DNA typing.[66]

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59. *Montalbo*, 828 P.2d at 1280. The other weighing factors listed were:

> 1) the evidence will assist the trier of fact to understand the evidence or to determine a fact in issue; 2) the evidence will add to the common understanding of the jury; 3) the underlying theory is generally accepted as valid; 4) the procedures used are generally accepted as reliable if performed properly; 5) the procedures were applied and conducted properly in the present instance.

Id. at 1280-81.

60. *Alberico*, 116 N.M. at 168, 861 P.2d at 204 (1993). Before *Alberico*, New Mexico applied the *Frye* test to determine whether scientific evidence was admissible. *Id.* at 158, 161, 861 P.2d at 194, 197. *See supra* notes 5 & 6.

61. *See* N.M. R. EVID. 11-702; *Alberico*, 116 N.M. at 165, 861 P.2d at 201. As to the general acceptance of the scientific technique, the court stated that the "degree of acceptance . . . is neither a necessary nor a sufficient condition for admissibility; it is, however, one factor a . . . court normally should consider . . . ." *Id.* at 167, 861 P.2d at 203 (quoting United States v. Downing, 753 F.2d 1224, 1237 (3d Cir. 1985)).

62. *Alberico*, 116 N.M. at 167, 861 P.2d at 203.

63. *Id.*

64. *Id.* at 168, 861 P.2d at 203.

65. *Id. See Daubert*, ____ U.S. at ____, 113 S. Ct. at 2790; *see also supra* notes 32 & 34 and accompanying text.

66. The four *Daubert* factors are: 1) whether the technique can be tested, 2) whether the technique has been subjected to peer review and publication, 3) whether there is a known or potential rate of error, and 4) the degree of acceptance in the scientific community. *Daubert*, ____ U.S. at

A. *Alberico and Daubert Applied*

The New Mexico Supreme Court found that the experts the State used to present the DNA evidence were qualified under Rule 702, and that the DNA profile of Anderson was relevant.[67] The court then examined the evidence under the four *Daubert* factors[68] to determine the reliability of the scientific technique of the DNA testing.

First, the New Mexico Supreme Court examined whether the FBI's DNA testing techniques had been and can be tested.[69] Ironically, the court found that in Anderson's attempt "to refute the FBI's theory and methods with evidence about deficiencies in both the results and the testing of the results, . . . [he] conceded that the theory and methods [could] be tested."[70] Second, the court looked to see if the scientific community had reviewed the FBI's DNA profiling methods through articles published on the subject.[71] The court found that the FBI's testing methods had received "adequate scrutiny through 'presentations at scientific conferences, workshops and other forums for the exchange of ideas.'"[72] The court further found that the FBI had published many articles regarding its DNA typing methodology.[73] The court noted that the "debate over the accuracy of the FBI's methods . . . [was] a question of weight and not of admissibility."[74]

In accordance with the third *Daubert* factor, the *Anderson* court studied the known or potential rate of error of the FBI's techniques. For guidance, the court looked to the District Court of the Virgin Islands which had subdivided the third *Daubert* factor into two parts:

> "[T]he means by which the FBI prevents both potential sources of human error in the execution of the process and potential error caused

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____, 113 S. Ct. at 2796-97; *see supra* notes 32 & 34 and accompanying text. The New Mexico Court of Appeals stated that while some "DNA identification techniques [do not] fail to meet the required standard of general acceptance in the scientific community . . . based on the record before [the court], the State failed to meet its burden of proving the current FBI database and binning methodology is generally accepted among respected scientists." *Anderson*, 115 N.M. at 444, 853 P.2d at 146. The New Mexico Supreme Court, however, found that the court of appeals had applied the wrong standard of admissibility since *Alberico* rejected *Frye*. *Anderson*, 118 N.M. at 286, 881 P.2d at 31

67. *Id.* at 296, 881 P.2d at 41; *see also* N.M. R. EVID. 11-702.

68. *See supra* note 34 and accompanying text.

69. *Anderson*, 118 N.M. at 297, 881 P.2d at 42.

70. *Id.* (quoting United States v. Bonds, 12 F.3d 540, 559 (6th Cir. 1993)).

71. *Id.* at 297, 881 P.2d at 42.

72. *Id.*

73. *Id.* The *Anderson* court cited the following articles as examples of the FBI's published work: F. Samuel Baechtel, *A Primer on the Methods Used in the Typing of DNA*, 15 CRIME LAB. DIG. 3 (Supp. No. 1 1988); Bruce Budowle et al., *An Introduction to the Methods of DNA Analysis Under Investigation in the FBI Laboratory*, 15 CRIME LAB. DIG. 8 (1988); F. Samuel Baechtel, *Recovery of DNA from Human Biological Specimens*, 15 CRIME LAB. DIG. 95 (1988); Bruce Budowle, *The RFLP Technique*, 15 CRIME LAB. DIG. 97 (1988); Catherine Theisen Comey, *The Use of DNA Amplification in the Analysis of Forensic Evidence*, 15 CRIME LAB. DIG. 99 (1988); Dwight E. Adams, *Validation of the FBI Procedure for DNA Analysis: A Summary*, 15 CRIME LAB. DIG. 106 (1988); William G. Eubanks, *FBI Laboratory DNA Evidence Examination Policy*, 15 CRIME LAB. DIG. 114 (1988). *Id.*

74. *Anderson*, 118 N.M. at 298, 881 P.2d at 43.

> by imperfections inherent in the process . . . ." [and] to what extent the FBI attempts to resolve the uncertainties [of the test] in the defendant's favor.[75]

Under the first criteria, the New Mexico Supreme Court found it "troubling" that there was no evidence that the FBI performed "sufficient proficiency testing."[76] Nevertheless, because this first criteria is part of the third *Daubert* factor, the court found that "in this instance, [it] speaks to the weight of the evidence and not to its admissibility."[77] As to the second criteria, Anderson argued that the FBI's methods did not account for potential substructures within a population.[78] Although the State conceded that the FBI's techniques have potential errors, it argued that the random match probability[79] is only an "evidentiary tool" and is not offered as conclusive evidence of the defendant's guilt.[80] The State also argued that the FBI's methodology always provides a conservative estimate on the probability of a match, and, therefore, errs on the side of the defendant.[81] The New Mexico Supreme Court agreed with the State, holding that disputes concerning the accuracy of the probability number go to the weight of the evidence and not its admissibility.[82] Thus, it seems that as long as the DNA experts are qualified, the court will admit the forensic DNA evidence.

Finally, the supreme court addressed whether DNA profiling, particularly the "fixed bin analysis" method the FBI used in this case, is generally accepted by the relevant scientific community.[83] The court found that, even though Anderson established that there is a substantial amount of controversy within the scientific community over the accuracy of the FBI's statistical probabilities, "the accuracy of results goes to the weight of the evidence and is properly left to the jury."[84] Therefore, the court established that its duty is only to ensure the proper entry of evidence and expert testimony, and not to decide disputes within the scientific community.

B. Rule 703

Anderson separately contended that "the FBI's method of calculating the probability of a coincidental match does not use the type of data

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75. *Id.* at 298, 881 P.2d at 43 (quoting Government of the Virgin Islands v. Penn, 838 F. Supp. 1054, 1066 (D.V.I. 1993)).

76. *Id.* at 299, 881 P.2d at 44.

77. *Id.*

78. *Id.*; *see supra* note 2. *See also* Kaye, *supra* note 22, at 105.

79. *See supra* note 2.

80. *Anderson*, 118 N.M. at 299, 881 P.2d at 44.

81. *See Anderson*, 118 N.M. at 292-95, 881 P.2d at 37-40 (summarizing the DNA evidence experts' testimony).

82. *Id.* at 299, 881 P.2d at 44. Because "[t]he [State's] experts clearly outlined the controversy and counsel had the opportunity to engage in vigorous cross-examination . . . [t]he trier of fact has the right to believe or disbelieve the testimony it hears." *Id.*

83. *See id.* at 290, 881 P.2d at 35 (discussion concerning "fixed bin analysis").

84. *Id.* (citing United States v. Jakobetz, 955 F.2d 786, 800 (2d Cir.), *cert. denied*, ____ U.S. ____, 113 S. Ct. 104 (1992)).

reasonably relied upon by experts in the field and is, therefore, inadmissible."[85] The *Anderson* court found Anderson's argument without merit, concluding that the experts in Anderson reasonably relied upon data and facts used by experts in the field of molecular biology and population genetics.[86] Because the experts used data and facts generally relied upon by DNA experts, the court found "that the experts testified about scientific knowledge based on sound methodology."[87]

C. *Rule 403*

Anderson also argued that even if the DNA evidence was admissible under Rules 702 and 703, the "evidence carrie[d] with it an 'aura of infallibility' that . . . [would] tend to mislead or confuse the jury, and therefore its probative value . . . [was] outweighed by its prejudicial impact."[88] The court disagreed. Because Anderson had ample opportunity to "vigorously cross-examine the State's experts and to present his own rebuttal expert witnesses to demonstrate why the results were unreliable, the procedures flawed, and the evidence not infallible," the DNA evidence was not overly prejudicial.[89]

V. ANALYSIS AND IMPLICATIONS

Although *Anderson* held the forensic DNA evidence admissible, it never clarified whether trial courts should take "judicial notice" of DNA evidence in future cases. In *State v. Duran*,[90] however, a companion opinion to *Anderson*,[91] the court stated that "DNA profiling evidence and probability statistics based on the FBI's fixed-bin method are admissible in New Mexico courts."[92] *Duran* therefore gave DNA evidence judicial notice and found that any controversy over the FBI's DNA testing methods "pertained to the weight of the evidence [and] not [to] its admissibility."[93] Consequently, expert witnesses "may properly be placed before the jury, which will be free to believe or disbelieve any of the

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85. *Anderson*, 118 N.M. at 301, 881 P.2d at 46.
86. *Id.*
87. *Id.*
88. *Anderson*, 118 N.M. at 302, 881 P.2d at 47.
89. *Id.*; *see also Daubert*, ___ U.S. at ___, 113 S. Ct. at 2798.
90. 118 N.M. 303, 881 P.2d 48 (1994). In *Duran*, the New Mexico Court of Appeals certified an interlocutory appeal to the New Mexico Supreme Court asking whether the use of the "modified ceiling principle" method in making a DNA match is also admissible under *Alberico* standards. *Id.* at 305, 811 P.2d at 50. This is a statistical probabilities calculation method recommended by the National Research Council in its report titled *DNA Technology in Forensic Science*. *Id.* The *Anderson* court stated that, in the future, it preferred that DNA typing be performed with this method because it is a more "conservative" approach. *Anderson*, 118 N.M. at 302, 881 P.2d at 47.
91. *Duran*, 118 N.M. at 304, 881 P.2d at 49.
92. *Id.*
93. *Id.* at 304, 881 P.2d at 49. Furthermore, the court did clarify that the *Duran* and *Anderson* decisions in no "way affect the use of DNA evidence to exculpate a person accused of a crime." *Id.* at 307, 881 P.2d at 52.

testimony before it."[94] The court, however, did not expand on its reasoning behind giving DNA evidence judicial notice.

In light of *Alberico* and *Anderson*, it is difficult to accept the *Duran* court's rationale and conclusion. In *Alberico*, the court implied that the factors would be applied to every case in order to ensure that the FBI's methods remain as consistent and accurate as possible:

> As an abstract notion, the validity and reliability of a particular scientific method or technique remains constant once established. Thus, it would follow that the application of the particular scientific method would not vary from case to case and thus would be worthy of a judicial stamp of approval or rejection as a matter of law from an appellate court. This reasoning assumes, however, that the record on appeal contains all of the relevant, most recent data concerning the scientific method, and that assumes too much.[95]

The *Duran* court, however, explicitly gave judicial notice to the admissibility of DNA evidence.[96] It seems the *Duran* court got caught up in the excitement over the novelty of *Anderson* and forgot the possible implications of giving DNA evidence automatic admissibility.

Although New Mexico is not alone in allowing judicial notice of DNA testing,[97] the court needs to clarify the obvious conflict between the *Alberico* and *Anderson* precedent and *Duran*. Because contemporary DNA typing methods are extremely complex, the courts should not abandon the chance to have the evidence carefully examined before it is presented to a jury. The party offering the DNA evidence must be kept to a high standard of proof to help insure against mistakes and inaccuracies in the final product that is used as evidence at trial, while the opposing party must effectively and vigorously cross-examine. The advancement of DNA profiling in forensics is invaluable, but there must be incentive to strive for accuracy. Even though *Anderson* did not agree that juries would be misled by the "aura of infallibility" of DNA evidence, the possibility still remains that jurors may not be able to effectively comprehend the information of the experts because of the complex nature of DNA evidence. Thus, *Duran*'s judicial notice must be rethought. Compliance with Rules 702, 703 and 403 and a thorough application of the *Alberico* factors must occur in every DNA case before it goes to the jury.

VI. CONCLUSION

In *Alberico*, New Mexico adopted the *Daubert* factors to determine the admissibility of scientific evidence. In *Anderson*, the court applied these factors in conjunction with the rules of evidence to hold the forensic DNA evidence admissible in court. However, in *Duran*, the court failed

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94. *Duran*, 118 N.M. at 306, 881 P.2d at 51. The court rejected Duran's contention that the controversy over the ceiling method should be heard in a separate evidentiary hearing. *Id.*

95. *Alberico*, 116 N.M. at 169, 861 P.2d at 205.

96. *Duran*, 118 N.M. at 304, 881 P.2d at 49.

97. *See, e.g., Woodall*, 385 S.E.2d at 260.

to uphold those standards. The implication is such that the New Mexico Supreme Court has already lost sight of the importance of maintaining its high standards regarding the admissibility of DNA evidence.

New Mexico's courts should have to apply the *Alberico* and *Daubert* factors—as well as the basic rules of evidence—every time they confront DNA evidence. This analysis should occur in a hearing outside of the presence of jury, even though the separate hearing may be a time consuming and costly process. If time and money are unavailable, the only alternative would be to allow the court to hold an *in camera* inspection of how the testing procedures were followed before allowing the jury to hear the evidence. This less costly method, however, would not allow for cross-examination. A judge must not allow the trier of fact to hear the DNA typing evidence if the testing did not follow established protocol. Jurors should be trusted, but the temptation of letting the DNA evidence decide the case is too great to allow its admission without careful examination of its reliability, methodology and potential for prejudice.

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