

984 P.2d 467 (1999)

Mary Lou BUNTING and Nicholas Bunting, as guardians and natural parents of Raef A. Bunting, a minor, Mary Lou Bunting and Nicholas Bunting, Petitioners,

v.

Charles JAMIESON, M.D., Respondent.

No. 98-287.

Supreme Court of Wyoming.

July 16, 1999.

468 *468 Representing Petitioners: P. Richard Meyer of Meyer and Williams, Jackson, WY, Argument by Mr. Meyer.

Representing Respondent: Robert M. Shively and Amy M. Taheri of Shively Law Offices, Casper, WY, Argument by Ms. Taheri.

Representing Amicus Curiae: Donald I. Schultz of Holland & Hart, Cheyenne, WY, Defense Trial Counsel.

Before LEHMAN, C.J., and THOMAS, MACY, GOLDEN, and HILL, JJ.

HILL, Justice.

Petitioners, the Buntings, filed a medical malpractice action on behalf of themselves and their son, Raef. They claim the Respondent's failure to timely refer Raef to a genetic specialist delayed a proper diagnosis of Hurler Syndrome. Petitioners allege the delay caused a permanent and substantial deterioration in Raef's prognosis. After taking the deposition of the Appellant's expert, Respondent Dr. **Jamieson** filed a motion in limine to preclude the expert's testimony. Respondent contends the opinion is not reliable and, therefore, inadmissible under Rule 702 of the Wyoming Rules of Evidence. After hearing argument by counsel, the district court granted Respondent's motion, thereby excluding Petitioners' only proffered causation witness. We granted a writ of review, and here adopt the approach propounded by the United States Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993) and its progeny. We find the district court abused its discretion, however, in its application of *Daubert*, and remand this case for a proper analysis.

ISSUES

Petitioners present the following issue for review:

1. In a case where treating physicians and scientists are unanimous that early treatment produces better outcomes, was it proper for the trial court to exclude the opinion of the Plaintiff's treating physician concerning Plaintiff's improvement if earlier treatment had been rendered?
2. Where Plaintiff's treating physician and preeminent expert on the disease from which Plaintiff is suffering testified that he would have been improved through an earlier diagnosis and treatment, was it proper for the trial court to prevent him from testifying to his opinion because quantification of the degree of improvement is subject to dispute?
3. Do Rule 702 or *Daubert* criteria apply to exclude the opinions of treating physicians who are applying medical knowledge which is within their expertise?
4. Was it proper for the trial court to make factual findings in the nature of summary judgment findings in ruling upon a motion in limine, when there were no facts presented to the court which would have justified

them?

Respondent proposes a single issue:

Did the Honorable Hunter Patrick of the Fifth Judicial District abuse his discretion in ruling that plaintiffs' expert's causation testimony did not meet the requirements for admissibility of expert testimony?

Amicus Wyoming Association of Defense Trial Counsel phrase the issues as follows:

- 469 *469 A. Should the district court's order excluding expert opinion testimony be reviewed under an abuse of discretion standard?
- B. Should the proffered medical expert opinions be scrutinized under the standards of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, [509 U.S. 579] 113 S.Ct. 2786 [125 L.Ed.2d 469] (1993)?
- C. Given questions raised about reliability of the medical expert's conclusions, was it an abuse of discretion for the district court to exclude opinions as to *how much better off* this plaintiff would likely have been, assuming an earlier bone marrow transplant?
- D. Did the district court act within its discretion, given the lack of foundation, when it excluded the opinion that *this plaintiff* would have been better off with an earlier bone marrow transplant?

FACTS

This case centers on the effect of a delayed diagnosis of Hurler Syndrome. The incidence of Hurler Syndrome is approximately 1 in 100,000 and is one of about 30 diseases known as "storage diseases." Although the infant appears normal at birth, the child lacks the ability to produce a specific enzyme, α -L-iduronidase. In the absence of this enzyme, deposits of glycosaminoglycan accumulate in the body's organs and skeletal system, impeding their function. Eventually, the accumulation produces skeletal deformities, cardiac problems, neurological dysfunction, mental retardation, hearing loss, and corneal opacification. Untreated, the disease causes death at a median age of 5 years, and children rarely survive beyond ten years.

Hurler Syndrome occurs only when both a child's mother and father are genetic carriers. A person who is a carrier produces about half the amount of the enzyme that a non-carrier produces, while the person afflicted with the disease produces none. Raef's mother, father, and younger sister are carriers who produce about 50% of the normal production of the enzyme.

The accepted treatment for Hurler Syndrome is a bone marrow transplant. Although always a risky procedure, the relative complications and outcome depend in large part on the origin of the donor. There are three possibilities: (1) a donor with identical human lymphocyte histocompatibility (HLA-identical); (2) a donor related to the patient who is HLA similar; and (3) a donor unrelated to the patient who is HLA similar. The object of the bone marrow transplant is to provide the recipient with a new blood system containing the capability of producing the absent enzyme. The transferred capability is roughly equivalent to the production found in the donor. Thus, a successful bone marrow transplant from a carrier donor (heterozygous donor) would provide the capability to produce about 50% of normal levels of production, while a successful transplant from a noncarrier donor (homozygous donor) would theoretically allow 100% production. Research indicates that the bone marrow transplant, if successfully engrafted without major complications, will halt the usual progression of the disease and may, in some cases, improve the recipient's condition. Prior to a bone marrow transplant, the recipient is provided preparatory treatment, including chemotherapy, to enhance the chances of successful engraftment and reduce the risks associated with the procedure. This involves a period of approximately 14 weeks from diagnosis to transplant for recipients of unrelated donors. Some of the serious risks to the recipient are surgical trauma, post-surgical pneumonia, and graft versus host disease (GVHD). These risks are more common when the donor is not HLA-identical.

Raef **Bunting** was born on February 28, 1994. As his physician, Dr. **Jamieson** treated Raef for continuous medical

problems, and on June 27, 1996, Dr. **Jamieson** wrote a letter referring Raef to a geneticist for evaluation. A genetic counselor from Shodair Hospital in Montana diagnosed Raef as having Hurler Syndrome. Following his diagnosis, Raef was transferred to the care of Dr. Krivit at the University of Minnesota Medical School for a bone marrow transplant. At that time, it was discovered that Raef's then nine-month-old sister, born when Raef was 21 months old, was a compatible carrier donor. Dr. Krivit performed a bone marrow transplant from Raef's sister in September 1996. *470 The transplant has successfully engrafted, and Raef now produces approximately 50% of the enzyme.

Petitioners filed suit against Dr. **Jamieson** on January 9, 1997, claiming that Respondent's untimely referral significantly compromised Raef's recovery ability. They offered Dr. Krivit's expert testimony to establish that, had Raef received a transplant following an accurate diagnosis at approximately 12 months, rather than allowing the disease to progress until he received his transplant at 31 months old, Raef would have higher intelligence and fewer physical problems in the future. Dr. **Jamieson** objected to this testimony, claiming Dr. Krivit's opinion was based on a program experimental in nature, that it lacked scientific foundation, and it contradicted his own published statements and research. After hearing the motion on June 15, 1998, the district court held Dr. Krivit's testimony inadmissible. We granted a petition for writ of review of the district court's order.

STANDARD OF REVIEW

Petitioners contend that the standard of review should be akin to that of summary judgment, since the trial court made findings of fact which disposed of the case. This is similar to the "hard look" approach formerly utilized in some federal jurisdictions where the exclusion of expert testimony was dispositive. In re Paoli, 35 F.3d 717, 733 (3rd Cir.1994). This approach, however, has been rejected by the United States Supreme Court in General Electric Company v. Joiner, 522 U.S. 136, 118 S.Ct. 512, 517, 139 L.Ed.2d 508 (1997).

The standard when reviewing the application of *Daubert* was recently clarified by the United States Supreme Court:

The trial court must have the same kind of latitude in deciding how to test an expert's reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides whether or not that expert's relevant testimony is reliable. Our opinion in Joiner [General Electric Co. v. Joiner, 522 U.S. 136, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997)] makes clear that a court of appeals is to apply an abuse-of-discretion standard when it "review[s] a trial court's decision to admit or exclude expert testimony." 522 U.S. at 138-39, 118 S.Ct. 512. That standard applies as much to the trial court's decisions about how to determine reliability as to its ultimate conclusion.... Thus, whether *Daubert's* specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine.

Kumho Tire Company, Ltd. v. Carmichael, 526 U.S. 137, 119 S.Ct. 1167, 1176, 143 L.Ed.2d 238 (1999). "In determining whether there has been an abuse of discretion, the ultimate issue is whether or not the court could reasonably conclude as it did." Campbell v. Studer, 970 P.2d 389, 392 (Wyo.1998).

"[D]ecisions of the trial court with respect to the admissibility of evidence are entitled to considerable deference and, as long as there exists a legitimate basis for the trial court's ruling, that ruling will not be reversed on appeal." It is also well established that a district court judgment may be affirmed on any proper legal grounds supported by the record. However, where the law imposes a duty on the district court to make findings on the record, we will not speculate as to the reasons for the decision.

English v. State, 982 P.2d 139, 143 (Wyo.1999)(internal citations omitted).

DISCUSSION

The trial court correctly anticipated our adoption of the analysis set forth in *Daubert supra*, to a trial judge's determination

to admit or exclude expert testimony. The admissibility of expert testimony is derived directly from W.R.E. 702, which states:

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.

471 *471 Our traditional analysis is found in *Springfield v. State*, 860 P.2d 435, 443 (Wyo.1993), where we stated:

[I]n ruling upon the offer of such evidence in Wyoming, our trial courts need only be concerned with the requisite foundation. Because it does appear the possibility of an erroneous result is more likely to arise from the testing techniques than from the procedure, it is important for the trial court to be satisfied about the manner in which the testing was performed, and the qualifications of the individual who accomplished the scientific technique.

(Quoting *Rivera v. State*, 840 P.2d 933, 942 (Wyo.1992)). We noted that our approach parallels the United States Supreme Court's decision in *Daubert*, and reiterated several of the "general observations" listed by that Court to be considered by the trial court. *Id.* We now expressly adopt the analysis provided by *Daubert* and its progeny as guidance for the Wyoming courts' determination whether to admit or exclude expert testimony. In doing so, however, we do not abandon our own precedent regarding the admissibility of expert testimony, but as in *Springfield, supra*, find the case law of the several jurisdictions essentially compatible on this subject.

Petitioners maintain that even if *Daubert* is the analysis used in Wyoming, it is not applicable to the opinions of a treating physician based on medical knowledge within the physician's specific area of expertise. Again, this contention has been rejected. In *Kumho, supra*, the United States Supreme Court stated:

We conclude that *Daubert's* general holding—setting forth the trial judge's general "gatekeeping" obligation—applies not only to testimony based on "scientific" knowledge, but also to testimony based on "technical" and "other specialized" knowledge. See Fed. Rule Evid. 702. We also conclude that a trial court may consider one or more of the more specific factors that *Daubert* mentioned when doing so will help determine that testimony's reliability. But, as the Court stated in *Daubert*, the test of reliability is "flexible," and *Daubert's* list of specific factors neither necessarily nor exclusively applies to all experts or in every case. Rather, the law grants a district court the same broad latitude when it decides how to determine reliability as it enjoys in respect to its ultimate reliability determination.

Kumho, 119 S.Ct. at 1171.

The primary goal of *Daubert's* gatekeeping requirement "is to ensure the reliability and relevancy of expert testimony. It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Black v. Food Lion, Inc.*, 171 F.3d 308, 311 (5th Cir.1999); *Kumho*, 119 S.Ct. at 1176.

In *Daubert*, the Supreme Court provided an analysis consisting of a two-part test. First, the district court must determine whether the methodology or technique used by the expert to reach his conclusions is reliable. If so, the court must determine whether the proposed testimony "fits" the facts of the particular case. *Daubert*, 509 U.S. at 592-93, 113 S.Ct. 2786; *Kennedy v. Collagen Corporation*, 161 F.3d 1226, 1227-28 (9th Cir.1998).

It is important to note, however, that *Daubert* recognized "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596, 113 S.Ct. 2786. As one court has stated:

Clearly, the Court envisioned cases in which expert testimony meets the *Daubert* standard yet is "shaky," and cases in which admissible expert testimony provides only a "scintilla" of support for a claim or defense. Put differently, an expert opinion must be based on reliable methodology and must reliably flow from that

methodology and the facts at issue—but it need not be so persuasive as to meet a party's burden of proof or even necessarily its burden of production.

472 Heller v. Shaw Industries, Inc., 167 F.3d 146, 152 (3rd Cir.1999). Thus, while the *472 burden is on the party offering the testimony to show that the testimony is admissible, Graham v. Playtex Products, 993 F.Supp. 127, 129 (N.D.N.Y.1998), a ruling on a motion in limine does not impose the same burden on the party offering the evidence as would be applied on a motion for summary judgment. Rather, the focus is on the admissibility of the testimony, not its ultimate sufficiency in establishing the case.

In the first prong of the *Daubert* analysis, the district court must determine whether the reasoning or methodology underlying the testimony is scientifically valid. Daubert, 113 S.Ct. at 2795. *Daubert* provided a non-exclusive list of four criteria to guide the trial court's determination: 1) whether the theory or technique in question can be and has been tested; 2) whether it has been subjected to peer review and publication; 3) its known or potential rate of error along with the existence and maintenance of standards controlling the technique's operation; and 4) the degree of acceptance within the relevant scientific community. Daubert, 509 U.S. at 593-94, fn. 12, 113 S.Ct. at 2796-97, fn. 12^[1]; see also, Springfield, 860 P.2d at 443. Later courts have endeavored to refine the gatekeeping role of the trial judge by identifying additional factors to assess reliability. These include: the extensive experience and specialized expertise of the expert, Ambrosini v. Labarraque, 101 F.3d 129, 140 (D.C.Cir.1996); whether the expert is proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, *Daubert*, (on remand), 43 F.3d 1311, 1317 (9th Cir.1995), cert. denied, 516 U.S. 869, 116 S.Ct. 189, 133 L.Ed.2d 126; Ambrosini, 101 F.3d at 139-40 (D.C.Cir.1996); and the non-judicial uses to which the method has been put, In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 742 n. 8 (3rd Cir.1994).

The second part of the *Daubert* approach requires the trial court to determine whether the testimony "fits" the disputed issues of fact. Daubert, 113 S.Ct. at 2796.

[W]hether the expert testimony will assist the trier of fact in understanding or determining a fact in issue—essentially asks whether the expert's testimony "fits" the facts of the case. This is a relevance standard. Moreover, "the 'helpfulness' standard incorporated in [F.R.E.] 702 means that the expert's opinion must relate to an issue that is actually in dispute and must provide "a valid scientific connection to the pertinent inquiry."

Graham, 993 F.Supp. 127 at 130 (N.D.N.Y. 1998) (quoting Margaret A. Berger, *Procedural Paradigms for Applying the Daubert Test*, 78 Minn.L.Rev. 1345, 1351 (1994)).

We are aware that the application of the *Daubert* approach to exclude evidence has been criticized as a misappropriation of the jury's responsibilities. See, Report of the 1997 Forum for State Court Judges, *Scientific Evidence in the Courts: Concepts and Controversies*, paper presented by Professor Michael H. Gottesman, pp. 41-53, sponsored by The Roscoe Pound Foundation, (1998).

The most difficult question concerning the application of Rule 702's "assist" requirement is whether the reliability of the expert opinion is a factor in deciding admissibility. On the one hand, the admission of unreliable expert testimony can hardly be said to "assist" since it undermines accurate factfinding, the basic policy goal of Rule 702. On the other hand, the court's exclusion of evidence on this basis can be inconsistent with the jury's power to evaluate witness credibility and give testimony its proper weight.

29 Charles Alan Wright & Victor James Gold, *Federal Practice and Procedure* § 6264 (1997). We, too, have recognized that, "it is imperative that the jury retain its fact-finding function." Springfield, 860 P.2d at 443 (citing United States v. Jakobetz, 955 F.2d 786, 796 (2d Cir.1992)).

473 To alleviate this potential conflict, *Daubert* admonished that methodology should be distinguished from the conclusion of the expert. *Daubert* at 595, 113 S.Ct. 2786. Thus, a trial judge need not and *473 should not determine the scientific validity of the conclusions offered by an expert witness. Rather, to decide admissibility, the trial judge should only consider

the soundness of the general scientific principles or reasoning on which the expert relies and the propriety of the methodology applying those principles to the specific facts of the case. Charles Alan Wright & Victor James Gold, *supra*, at § 6233; see also *Springfield, supra*, quoting *Jakobetz, 955 F.2d at 797* ("In other words, the court need not make the initial determination that the expert testimony or the evidence proffered is true before submitting the information to the jury.").

The ultimate question for the trial judge is whether both sides will have a fair opportunity to test the validity of scientific results; if not, those results should not be admissible.

... [E]xpert testimony should be admitted so long as it can be adequately tested by an adversary.

Daniel J. Capra, *The Daubert Puzzle*, 32 Georgia Law Rev. No. 3, 699, 705 (Spring 1998).

With these principles in mind, we turn to the case before us. Petitioners designated Dr. Krivit as an expert whose proposed testimony would "discuss his research and the differences in prognosis which early diagnosis and treatment provide for patients such as Raef." Petitioners also stated Dr. Krivit would relay his opinion regarding "the degree of improved prognosis which would have occurred in this case with earlier diagnosis and/or referral."

At his deposition, Dr. Krivit testified that the optimum age for transplant is as early as possible, but before 24 months of age. This is because a delay in receiving treatment allows the disease to progress, thus causing increased developmental dysfunction. Dr. Krivit opined that due to the delay in Raef's diagnosis, he will most likely require extensive surgical intervention and a lowered intelligence quotient (20-30 points lower than 80-100) which would not have occurred with timely diagnosis and treatment. This opinion was based on studies conducted by teams in Great Britain and the United States, Krivit's extensive first-hand experience with Hurler patients, and his first-hand knowledge of Raef's condition.

Dr. **Jamieson** challenged this testimony, claiming that Dr. Krivit's opinion was inconsistent with medical literature authored by Dr. Krivit and his team, and that the research is incomplete and ongoing. Dr. **Jamieson** concluded that "the experimental nature of Dr. Krivit's opinions and conclusions fail to satisfy the *Daubert* criteria." Petitioners responded that the defense did not dispute that children are better off if treated earlier, but were attacking the credibility of Dr. Krivit's quantification of the amount of improvement. These objections, contend Petitioners, are the proper subject of cross-examination and not grounds for the exclusion of the evidence.

The district court began its analysis by recounting two portions of Dr. Krivit's deposition testimony which it found significant. The first question and response is as follows:

Q. [W]ould it be fair to say that you cannot say, to a reasonable degree of medical probability, which child ... is going to reach an above-average IQ, and which will stay in the normal range of the low 80s?

....

[A.] You guys got me on the ropes now. It's a good question if we refine the question a little better. *If we say, in the future*, what will be the ones that will make you feel like you're doing a shiny, glory job in making them totally normal. And the answer is, the earlier, the better, the better the transplant process, the less trauma during the bone marrow transplant process, the better will be the outcome.

We anticipate, and talk to parents about expectations afterwards, depending upon how early they are, how much involvement there is, and what kind of a transplant we're going to be doing.

At the present time I warrant to the parents—this is Bill Krivit now—I warrant to the parents that with an early age and a good marrow, and a good engraftment process, like we have here, I warrant them an IQ that should be close to 100.

474 *My colleagues wince when I do that.* But I do this so that the parents can have *474 a point of view. Because I think a hundred is approximately correct for what they're going to be at.

(Emphasis supplied.) The second portion which the district court found to be important reads:

Q. Do you have any recollection in Raef **Bunting's** case about having a particular desire to have his sister be the donor, either on the part of the medical team or on the part of the parents?

A. It was a—everybody should explained (sic) to them and told them what's going on, and a decision left to the parents and Dr. Peters. It was a 50/50 question.

Our data is being gathered and it's in this article that homozygosity is better than heterozygosity.... It's the carrier question.

And we don't have enough data to exclude one way or the other. So we provided them the expertise that a carrier may not give us enough enzyme, but it may be a safer marrow transplant. And so they and Dr. Peters chose this. Subsequently we've done others the same way.

Q. All right.

A. It has not been settled yet as to what a carrier level could do, and what a half of a carrier level could do, and what a fourth of a carrier level could do, How low we can go in replacing the enzyme to get betterment out of the patient. How quality of life can we do better.

(Emphasis supplied.)

The court then analyzed this testimony as applied to the facts of the case. It found:

11. Dr. Krivit's (sic) testified that there are three considerations concerning bone marrow transplants. They are (1) how early the transplants are; (2) how much involvement there is; and (3) what kind of a transplant is going to be done (related or unrelated donor).

12. If the transplant to Plaintiff, Raef **Bunting**, were within the time frame recommended by Dr. Krivit, it would be a transplant from an unrelated donor, acknowledged by Dr. Krivit to carry substantially more risk than a transplant from a related donor.

13. Going by Dr. Krivit's standards, even if Dr. Krivit could have done the transplant on the very day Raef's sister and donor was born, Raef **Bunting** was already on the verge of being too old to benefit from the transplant. It is fair to assume that there would have been additional delay for testing of both donor and donee. Furthermore, according to Dr. Krivit's testimony, after a donor is found, the donee has to undergo chemotherapy before the transplant can take place.

14. Accepting Dr. Krivit's testimony about the time delays in performing the transplant as true, too much time expired before a donor was available. In other words, the transplant could not have been achieved at the time Dr. Krivit *now* recommends without incurring the substantial additional risk of using an unrelated donor.

15. The opinion testimony of Dr. Krivit on the subject of causation does not satisfy the peer review requirements of *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 [113 S.Ct. 2786, 125 L.Ed.2d 469] (1993), which this Court believes will be followed by the Wyoming Supreme Court.

16. THIS COURT will, therefore, not permit Dr. Krivit to testify that had the transplant been done earlier Raef **Bunting's** current condition would have been better. As a consequence of the foregoing findings, it is ordered that the motion of Defendant to exclude, in limine, all causation testimony of Dr. Krivit is GRANTED.

We find the district court abused its discretion in its application of the *Daubert* approach. The district court's order applies but one of the *Daubert* factors—peer review—in a conclusory manner. We do not know what other factors were considered by the trial court, nor are we told why the district court concluded that this one factor outweighed all others. Indeed, *Daubert* underscored that peer review was only a single factor in considering the admissibility of expert testimony,

and its absence was not dispositive. Daubert, 509 U.S. at 593, 113 S.Ct. 2786 (relevant, though not dispositive).

475 Moreover, this factor appears to be unconnected to the remainder of the district court's *475 factual analysis, which assumes the reliability of Dr. Krivit's statements.

As we have said in the context of the trial court's discretionary duties in determining the best interests of a child, an abuse of discretion is present "when a material factor deserving significant weight is ignored." Reavis v. Reavis, 955 P.2d 428, 431 (Wyo. 1998); Triggs v. Triggs, 920 P.2d 653, 657 (Wyo.1996) (quoting Vanasse v. Ramsay, 847 P.2d 993, 996 (Wyo.1993)).

To determine whether a district court has abused its discretion, we must rely on the district court's articulation of the factors which were considered and how those factors support its conclusions.

To play fair, a trial judge relying on discretionary power should place on record the circumstances and factors that were crucial to his determination. He should spell out his reasons as well as he can so that counsel and the reviewing court will know and be in a position to evaluate the soundness of his decision.

Reavis, 955 P.2d at 431-432 (quoting Maurice Rosenberg, *Judicial Discretion of the Trial Court, Viewed From Above*, 22 Syracuse L.Rev. 635, 665-66 (1971)). Recently, in English, 982 P.2d at 144, we recognized that the abuse of discretion standard, when applied to the admission of testimony under the catch-all exception to the hearsay rule, requires the district court to set forth its reasoning in more detail than may be required under other circumstances. See also, Betzle v. State, 847 P.2d 1010, 1021 (Wyo. 1993). The catch-all exception imposes stringent restrictions on its use, as compared to Rule 702, which is intended to promote admissibility of trustworthy evidence. However, we believe that the trial court's decision to dispose of a case by precluding expert testimony requires the same level of judicial explanation supporting its discretionary decision as the admission of testimony under the catch-all exception. A single conclusory statement applying one nondispositive *Daubert* factor is insufficient. Because we remand this matter to the district court for a full analysis of admissibility under the *Daubert* approach, as refined by later decisions, we take a moment to discuss those factors as applied to this case.

The initial step in reviewing the admissibility of expert testimony is the determination whether the *Daubert* factors apply to the specific testimony at issue. Where they are reasonable measures of reliability, these factors should be considered. Here, the question is not whether, generally, a more favorable prognosis results from the earliest possible treatment of Hurler Syndrome. Dr. **Jamieson's** expert clearly agreed with Dr. Krivit that this is so. The only issue is whether the quantification offered by Dr. Krivit as to Raef's prognosis is grounded on something other than "subjective belief or unsupported speculation." Joiner, 118 S.Ct. at 516.

Dr. Krivit testified that his conclusions can be validly extrapolated from the studies which have been done, his direct experience with 75% of all Hurler patients, and his treatment of Raef. Under the *Daubert* approach, it is not the conclusion but the method of extrapolation on which it is based which must be examined. Consequently, while the peer review factor is applicable to the underlying studies, it is not relevant to the method used by Dr. Krivit to reach his conclusions from those studies.

The testimony cited by the district court does little to illuminate the problem. We are not told why Dr. Krivit's colleagues wince when he guarantees parents an IQ level of approximately 100 with the proper conditions. Are his colleagues bothered by the IQ level he promises, the idea that he is guaranteeing anything, or the minimization of the problems associated with the transplant itself? Similarly, even though Dr. Krivit admitted that "it is not settled" as to what a carrier level could do or how low an increase in the enzymatic production will be beneficial, this does not answer whether his conclusions constitute a reasonably probable outcome based on the research already accomplished.

476 Dr. Krivit's qualifications are not at issue. He is regarded as one of the most knowledgeable persons in this field and has extensive clinical experience with this particular *476 disease. Thus, the analysis must be whether Dr. Krivit's opinion "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." Black v. Food Lion, Inc., 171 F.3d 308, 311; Kumho, 119 S.Ct. at 1176. It appears that the methods employed by Dr. Krivit are commonly used in clinical work to arrive at a medical opinion:

The textbook, *Medical Decision Making*, identifies the following information available to physicians making medical decisions: personal experience, published experience, and attributes of the patient. According to the text, a physician's opinion is guided by personal experience with similar events or by the experiences of colleagues....

In addition, physicians rely upon published experience, in the form of reports quantifying the risk or success associated with a certain procedure.... Finally, attributes of the patient are important to alert the physician for "unusual characteristics of the patient that put him at higher or lower risk than the average."

J. Conard Metcalf, *A Primer on Principles of Scientific and General Causation*, Colorado Trial Lawyers Association Trial Talk (1998) (reprinted in Wyoming Trial Lawyers Association Coffee-House, p. 4 at 20 (Spring 1999)), quoting H.C. Sox, M.A. Blatt, M.C. Higgins, K.L. Martin, *Medical Decision Making*, 33-34 (1988). On remand, the district court must explain why Dr. Krivit's conclusions are not a reasonable extrapolation based on this method.

In Dr. **Jamieson's** expert's deposition, the expert stated that his disagreement with Dr. Krivit's conclusions are due to Dr. Krivit's tendency to optimism, while he gravitates toward a skeptical view of the data. However, he agreed that "[t]here is room for the kind of scientific disagreement that [he] and Dr. Krivit, as professionals, men in [his] profession, have." Again, the district court must state why Dr. Krivit's testimony should be precluded, even though another expert in the field finds his opinion to be within the parameters of professional disagreement.

We also find the district court misapplied the second prong of the *Daubert* test. Many of the facts assumed by the district court, in particular that an earlier donor would necessarily have been unrelated, were not in the record. There is nothing which demonstrates that a relative other than Raef's sister could not have been a donor, or that a relative would necessarily be a carrier. In addition, Raef's sister was born in November 1995, three months before Raef's second birthday. Dr. Krivit testified that the better outcomes were derived from children transplanted before the age of two. Since Raef was diagnosed in June of 1996, and his transplant was in September, the record illustrates that only three months passed between diagnosis and transplant. Therefore, had the diagnosis been made prior to his sister's birth, Raef would still have been within the preferred age category given a three-month delay. The district court also ignored testimony of both experts which qualified the benefit of a transplant with the individual and the progression of the disease, as well as age.

As we stated above, in determining whether the expert testimony "fits" the facts of a case, the determination is not a substitute for summary judgment. In this case, Dr. Krivit's testimony is based on studies of patients with the same condition as Raef's and is directly relevant to whether a delay in diagnosis caused Raef harm—an issue hotly disputed in this case. Thus, there is definitely a "fit" between the facts and the testimony. The trial court erred in extending the motion in limine to include a dispositive determination based on facts assumed by the trial court. Rather, the task before the trial court on remand is simply to determine the scientific validity of the methods and reasoning used by the expert.

CONCLUSION

The application of the *Daubert* approach requires the district court to consider all factors relevant to the reliability of a proposed expert's testimony, with a focus on the methodology of the expert—not his or her conclusions. In so doing, the district court must clearly state its reasoning on the record. Because the district court failed to fully explain the factors
477 considered and how they *477 were weighed, we reverse and remand for further proceedings consistent with this opinion.

[1] Footnote 12 contains direction to sources relating other factors which may be relevant to the inquiry, citing *United States v. Downing*, 753 F.2d at 1238-39, and several treatises and law review articles.

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