

**IN THE UNITED STATES DISTRICT COURT
DISTRICT OF KANSAS**

Michael Rowan,

Plaintiff,

Case No. 15-9227-JWL

v.

**Sunflower Electric Power Corporation and
Mid-Kansas Electric Company, LLC;**

Defendants.

MEMORANDUM & ORDER

On August 29, 2013, plaintiff sustained electrical injuries when he was installing a guard structure under an overhead power transmission line during a utility line construction project near Medicine Lodge, Kansas. Plaintiff asserts negligence claims against the owner of the transmission line, Mid-Kansas Electric Company, LLC, and the operator of the transmission line, Sunflower Electric Power Corporation. This matter is now before the court on plaintiff's motion to exclude the testimony of defendants' bioelectrical expert Mark Kroll. According to defendants' evidence, Mr. Kroll's scientific specialty is bioelectricity, which concerns the interaction of electricity and the human body and the effects of electricity on the body. Mr. Kroll's affidavit establishes that he has received advanced degrees in electrical engineering; that he is an adjunct professor of biomedical engineering at California Polytechnic University and the University of Minnesota; and that he is a regular lecturer on the issues of therapeutic and traumatic shocks, most commonly to physicians. He recently lectured at Stanford University

Hospital and Cornell University Medical School. Mr. Kroll avers that he currently sits on the highest committee that debates and establishes electrical injury safety limits for the world and that he is one of three voting members from the United States. He has performed considerable research, authored numerous scientific articles and chapters, and is an inventor on over 300 issued U.S. patents in the field of bioelectricity. He has been retained as an expert witness in more than 140 criminal and civil cases involving real and alleged high-voltage electrical injury.¹

Mr. Kroll's expert report contains eleven opinions, including his opinions on the nature and extent of the electrical shock received by plaintiff; whether the shock received by plaintiff could have caused or contributed to certain injuries asserted by plaintiff; and whether plaintiff's injuries would have been reduced if he had been wearing rubber gloves at the time of the incident. In his motion, plaintiff challenges to some extent each of the opinions asserted by Mr. Kroll. In resolving plaintiff's motion, the court assumes familiarity with the court's memorandum and order resolving the parties' motions for summary judgment and the parties' factual showing on summary judgment. As will be explained, the motion is granted in part and denied in part. It is granted to the extent that Mr. Kroll may not testify that plaintiff suffered no brain damage as a result of the incident and is otherwise denied.

Standard

¹ In his reply, plaintiff contends that there is no "evidentiary support" in the record for the "conclusory" statement that Mr. Kroll has been retained as an expert in more than 140 cases involving high-voltage electrical injury. To the contrary, the statement is supported by Mr. Kroll's affidavit.

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the Supreme Court instructed that district courts are to perform a “gatekeeping” role concerning the admission of expert testimony. *See id.* at 589–93; *see also Kumho Tire Co. Ltd. v. Carmichael*, 526 U.S. 137, 147–48 (1999). The admissibility of expert testimony is governed by Rule 702 of the Federal Rules of Evidence, 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 or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702.

In order to determine that an expert’s opinions are admissible, this court must undertake a two-part analysis: first, the court must determine that the witness is qualified by “knowledge, skill, experience, training, or education” to render the opinions; and second, the court must determine whether the witness’s opinions are “reliable” under the principles set forth in *Daubert* and *Kumho Tire*. *See Ralston v. Smith & Nephew Richards, Inc.*, 275 F.3d 965, 969 (10th Cir. 2001). The rejection of expert testimony is the exception rather than the rule. *See* Fed. R. Evid. 702 advisory committee notes. Under Rule 702, “[t]he proponent of expert testimony bears the burden of showing” that its proposed expert satisfies these requirements, and district courts have considerable latitude in determining whether the proponent has satisfied this burden. *See Heer v. Costco Wholesale Corp.*, 589 Fed. Appx. 854, 861 (10th Cir. 2014) (quoting *United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009); *Kumho Tire*, 526 U.S. at 152).

Opinions Regarding Amount and Duration of Current

In Opinion 4, Mr. Kroll calculates the amount of current that entered plaintiff's body and the duration of time that plaintiff was exposed to the current. Plaintiff contends that this opinion must be excluded because it is speculative and unreliable. According to plaintiff, other experts—including one of defendants' experts—have opined that performing such calculations would be “almost impossible” and plaintiff's expert Mr. Johnson avers that there are simply too many unknown variables to reliably calculate those numbers. As defendants highlight, however, the fact that calculations are “almost impossible” for certain experts does not render those calculations impossible for every expert. Mr. Kroll has, in fact, performed those calculations and plaintiff can explore on cross-examination the specific variables utilized by Mr. Kroll.

Plaintiff further asserts that Opinion 4 is unreliable because it is based on an incorrect assumption found in Opinion 2 of the expert report—that plaintiff was not in direct contact with the pole at the time the pole was energized but had his fist clenched as much as 1.4 inches away from the pole at that time. Plaintiff urges that eye-witness testimony demonstrates that plaintiff was holding the pole at the time the pole was energized. While this is certainly something about which plaintiff can inquire during cross-examination, Mr. Kroll has sufficiently explained his assumption (*i.e.*, based on eye-witness testimony that there was an electrical “arc,” some distance was required between plaintiff's fist and the pole) such that the opinion is not excludable on that basis. The court further rejects plaintiff's argument that Mr. Kroll “arbitrarily” selected “random” numbers to support his calculations. Mr. Kroll explained that he estimated the distance between plaintiff's fist and the pole (and other distances utilized in his

calculations) based on his knowledge of the distance that electricity can “jump” or “arc” depending on the voltage.

Finally, plaintiff contends that Mr. Kroll’s calculation as to the duration of the shock that plaintiff received (between 2 and 8 milliseconds) lacks credibility because eye-witnesses would not have been able to observe an arc connection in such a short period of time. But plaintiff has not challenged the methodology used by Mr. Kroll in calculating the duration of the shock and the record reflects that Mr. Kroll is qualified to make those calculations. Plaintiff, then, may examine Mr. Kroll at trial about whether his calculations are consistent with a witness observing an arc connection but the court will not exclude those calculations.²

Lack of Medical Training and Expertise

In his report, Mr. Kroll opines that the electrical shock received by plaintiff did not pass near the brain and, accordingly, the shock could not have caused any memory deterioration, headaches or brain damage (Opinion 5); that the shock could not have caused any nerve damage to plaintiff’s lower back or any permanent nerve damage elsewhere (Opinions 7 and 10); that the shock could not have caused or contributed to any depression or PTSD asserted by plaintiff (Opinion 9); and that the shock could not have caused any internal injuries or organ damage (Opinion 11). Plaintiff moves to exclude these opinions on the grounds that Mr. Kroll is not

² In Opinion 6, Mr. Kroll concludes that the wearing of rubber gloves would have prevented plaintiff’s injuries. This opinion is based in part on Mr. Kroll’s calculations concerning the amount and duration of current to which plaintiff was exposed. Plaintiff, then, objects to Opinion 6 based on his objections concerning Mr. Kroll’s calculations as to the amount and duration of current. Because the court has rejected plaintiff’s challenges to these calculations, it necessarily rejects plaintiff’s challenge to Opinion 6.

qualified to render medical, psychiatric or neuropsychological opinions because he has no training in these fields and has not examined or treated plaintiff. Simply put, plaintiff contends that Mr. Kroll cannot reliably opine on the nature and extent of plaintiff's injuries.

With one exception, plaintiff misconstrues the opinions offered by Mr. Kroll. Mr. Kroll, in large part, opines only that any injuries claimed by plaintiff could not have been caused by the electrical shock he received. Mr. Kroll does not purport to opine as to whether plaintiff in fact has experienced headaches, PTSD, depression or other injuries. His opinions are limited to explaining why the shock received by plaintiff did not cause those injuries. In that regard, his opinions are properly based on his training and experience concerning the effect of the shock received by plaintiff on his body in light of the level of shock received, the entrance and exit sites of the electrical current; the path of that current through plaintiff's body; and the way in which electricity passes through the human body. The one exception, however, is that Mr. Kroll does state in his report that plaintiff suffered "no brain damage." While Mr. Kroll is certainly permitted to explain to the jury why he concludes that the electrical shock received by plaintiff would not have caused any brain damage, he may not testify that plaintiff suffered no brain damage as a result of the incident, particularly when it is undisputed that plaintiff experienced blunt trauma to his face and head when he was struck by the pole.

Plaintiff also moves to exclude several other opinions, or portions thereof, based solely on the fact that Mr. Kroll is not a medical doctor and has not treated plaintiff. Mr. Kroll opines in Opinion 8, for example, that the severity of burns on the skin from an electrical injury do not necessarily reflect the extent or severity of internal injuries. Plaintiff contends that Mr. Kroll cannot testify as to the severity of plaintiff's burns or plaintiff's internal injuries. But again

plaintiff misconstrues Mr. Kroll's opinion. Mr. Kroll is opining only that no correlation exists between the appearance or severity of an electrical-injury skin burn and the severity of any underlying tissue damage or internal injury. This is an opinion that he is qualified to make in light of his education and experience. Similarly, Mr. Kroll opines in Opinion 2 that the entrance site of the current was plaintiff's left hand and, in Opinion 3, the current exited through plaintiff's feet, buttocks, upper right arm and the back of his right hand. Plaintiff does not persuasively argue that a medical degree is required to render those opinions. Mr. Kroll's opinions are based on his review of plaintiff's medical records, photographs of plaintiff's burns, witness interviews and incident reports, and his education and experience in bioelectricity. The court is convinced that Mr. Kroll is qualified to testify about the path of the electrical current through plaintiff's body.

Finally, Mr. Kroll opines in Opinion 1 that plaintiff received an "unusually mild shock." This opinion is based on a comparison between plaintiff and the "typical high-voltage injury patient" in various respects. Mr. Kroll asserts that plaintiff's peak myoglobin level was significantly less than the typical high-voltage injury patient; that plaintiff spent 13 days in the hospital compared to an average of 50 days spent by the typical high-voltage injury patient; that plaintiff had no kidney failure where the "vast majority" of high-voltage injury patients have acute kidney failure; and plaintiff's burns covered less than one percent of his body surface area compared to a much higher percentage in high-voltage injury patients. Again, Mr. Kroll does not purport to offer a medical opinion but rather an opinion as to the severity of the shock received by plaintiff based upon his training and experience in the field. In rendering his opinion, Mr. Kroll cites to published studies regarding high voltage electrical injuries and he

applies those studies to the facts of this case as reflected in plaintiff's medical records. Plaintiff's arguments, then, bear only on the weight of the opinion offered by Mr. Kroll and not the admissibility of that opinion. Thus, plaintiff is free to explore any deficiencies in Mr. Kroll's opinion on cross-examination, but the court will not exclude that opinion.

Supplemental Report

Defendants served a supplemental expert report from Dr. Kroll on January 28, 2017—prior to the close of discovery but well after the deadline for serving expert reports. Plaintiff moves to exclude the supplemental report in its entirety based solely on the fact that the report was untimely served. This aspect of plaintiff's motion is denied for two independent reasons. First, the scheduling order entered in this case required that any "technical" objections (described in the scheduling order as those objections not asserted under Federal Rules of Evidence 702-705) to expert disclosures, including reports, be filed with 14 days after service of the disclosure or report. Clearly, plaintiff's objection as to the timeliness of the supplemental report is a technical objection that plaintiff should have lodged within 14 days of receiving the supplemental report. The objection, then, is overruled as untimely. Second, plaintiff articulates no prejudice concerning the supplemental report and he does not challenge the substance of the report in any way. Moreover, defendants assert that they remained willing, even after the close of discovery, to produce Dr. Kroll for a deposition. Plaintiff does not dispute this fact in his reply brief. In the absence of any prejudice to plaintiff stemming from defendants' service of a supplemental report more than 7 months prior to trial, the objection to the supplemental report is overruled.

IT IS THEREFORE ORDERED BY THE COURT THAT the plaintiff's motion to exclude certain portions of Mark Kroll's testimony (doc. 496) is **granted in part and denied in part.**

IT IS SO ORDERED.

Dated this 21st day of August, 2017, at Kansas City, Kansas.

s/ John W. Lungstrum
John W. Lungstrum
United States District Judge