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The Outer Limits Of Expert Testimony Gatekeeping

Law360, New York (March 13, 2013) -- The Delaware Supreme Court is set to hear oral argument this year in Tumlinson v. Advanced Micro Devices Inc., a leading birth defects case, in which Delaware Superior Court Judge Fred Silverman ruled that the opinions of plaintiffs' causation expert "cannot be accepted as evidence of causation" and addressed the essential gatekeeping function courts need to perform before admitting expert testimony in toxic tort cases.[1]

Tumlinson is one of the more than 25 cases filed against semiconductor manufacturers by current and former employees alleging that their work in "clean rooms" exposed them to chemicals that resulted in birth defects in their children.[2] The Tumlinson appeal comes on the heels of the Delaware Supreme Court's recent decision to uphold the dismissal of similar clean room birth defects claims in Peters v. Texas Instruments Inc.[3]

The Tumlinson plaintiffs include two parents who worked at AMD manufacturing facilities and their children, who suffer from birth defects. Specifically, Ms. Tumlinson and her son allege that she was exposed to isopropyl alcohol during her pregnancy, which caused her son to be born with severe birth defects.

Ontivero (another AMD employee) and his daughter claim that Ontivero was exposed to sulfuric acid, hydrogen peroxide, hydrofluoric acid and ammonium fluoride while working for AMD, which caused his daughter to be born with birth defects.

In mounting their case, the plaintiffs relied on the expert testimony of Dr. Linda Frazier to establish that the chemicals the parents were allegedly exposed to at AMD caused their children's birth defects. After a hearing in which Frazier was questioned by counsel for both parties and the court, Silverman found that Frazier's opinion did not meet the standard of reliability under Daubert and Texas law and could not be accepted as evidence of causation.

Among other requirements, Texas requires that an "expert relying on [epidemiological] studies must prove ... 1) the plaintiff was exposed to the same substance before the injury; 2) the dose levels were the same or greater than those in the studies; 3) the onset of plaintiff's injury was consistent with the studies; and 4) other possible causes are negated with reasonable certainty."

Applying this standard, the trial court found several critical flaws in Frazier's opinion, which posited that the plaintiffs' exposure to chemicals while working at AMD caused birth defects in their children.

First, the court explained that no epidemiological study "has directly linked cold room [fabrication] work, even in general terms, with Plaintiffs' birth defects."

Next, the court found that while Frazier's opinion was based on 10 causative chemicals, she also based her opinion on "other, unidentifiable chemicals" that she claimed contributed to the birth defects. This meant that her opinion was based on epidemiological studies that did not evaluate the "same substance" as plaintiffs, failing one of the key Texas requirements for reliability.

The court also explained that Frazier "did not analyze the exposure level of each chemical" plaintiffs were allegedly exposed to, most of the studies she relied on lacked any evaluation of exposure levels, and therefore, the opinion did not satisfy Texas' "same or greater dose level" requirement.

Further, one of the plaintiffs was obese, which studies have shown may be associated with birth defects. Frazier claimed this association was likely the result of diabetes or elevated blood sugar levels, not merely the obesity itself, and she therefore believed that the plaintiff's obesity was not the cause of the child's birth defects.

The court, however, explained that Frazier did nothing to confirm her diabetes theory and therefore had not actually ruled out obesity as the cause of the birth defects with "reasonable certainty."

Finally, the court excluded Frazier's causation opinion because the studies underlying her theory "involved different environments, tested for different outcomes, and/or reported no increased risk." For example, a study of Taiwanese semiconductor workers' children was not reliable because it addressed mortality rates, not birth defects, it lacked adequate exposure measurements, and it involved a Taiwanese workplace, "which may or may not mirror the AMD workplace."

Another study Frazier relied on evaluated congenital malformations in children of male painters exposed to glycol ethers. The court explained that neither of the Tumlinson plaintiffs worked as painters, and "there is no discernible relationship between the two work environments."

The trial court's decision to exclude Frazier's opinion based on Texas' strict reliability requirements demonstrates the key gatekeeper role courts must play in admitting expert testimony based on epidemiological studies. Given the complex scientific issues involved in toxic tort cases, "epidemiology poses just the risk of a verdict based on an incorrect appeal to authority." Silverman explained, "[t]his case is what Daubert is about."

The Delaware Supreme Court will rule on Plaintiffs' appeal of Tumlinson this year. The Supreme Court's decision will likely address how carefully the gatekeeper function should be performed by the Delaware trial courts presiding over the numerous remaining clean room and other toxic tort cases.

But more importantly, the significance of Tumlinson is even greater in light of the recent defense verdict affirmed by Delaware's Supreme Court in Peters v. Texas Instruments Inc., in which the court upheld the denial of recovery in a similar clean room exposure case based on workers' compensation exclusivity and the lack of a legal basis to bring a preconception tort claim under Texas law.[4]

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Gibson Dunn is not involved in the Tumlinson or Peters case. Gibson Dunn represents a defendant involved in other clean room birth defects litigation currently pending in Delaware.

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[1] Tumlinson v. Advanced Micro Devices, Inc., 2012 WL 1415777 (Del. Super. Ct.)

[2] See, e.g., Hupan v. Alliance One Int'l, No. 12C-02-171 (Del. Super. Ct.); Tumlinson v. AMD, Case No. 08C-07-106 (Del. Super. Ct.); Smith v. Freescale, No. 10C-07-273 (Del. Super. Ct.).

[3] Peters v. Texas Instruments, Inc., 2011 WL 4686518 (Del. Super. Ct.), aff'd 2013 WL 85245 (Del. 2013). The trial court decision was discussed in Law 360 in http://www.law360.com/articles/316215/birth-defects-prenatal-liability-or-workers-comp.

[4] Dennis and Jura, "Birth Defects — Prenatal Liability Or Workers Comp?," Law360, March 06, 2012, http://www.law360.com/articles/316215/birth-defects-prenatal-liability-or-workers-comp.