RICHARD THOMAS WALSH, EXECUTOR OF THE ESTATE OF THOMAS J. WALSH, DECEASED,	IN THE SUPERIOR COURT OF PENNSYLVANIA
Appellant	
v.	
BASF CORPORATION, BAYER CORPORATION D/B/A BAYER CROPSCIENCE, L.P., AND BAYER CROPSCIENCE HOLDING, INC., AND/OR BAYER CROPSCIENCE, L.P. AND BAYER CROPSCIENCE HOLDING, INC., IN THEIR OWN RIGHT; BIOSAFE SYSTEMS, L.L.C., CHEMTURA CORPORATION, CLEARY CHEMICAL CORP.; DOW AGROSCIENCES, L.L.C.; E.H. GRIFFITH, INC.; E.I. DUPONT DENEMOURS AND CO., INC.; G.B. BIOSCIENCES CORPORATION; JOHN DEERE LANDSCAPING, INC., SUCCESSOR TO LESCO, INC.; MONSANTO COMPANY; NUFARM AMERICAS, INC.; REGAL CHEMICAL CO.; SCOTTS-SIERRA CROP PROTECTION CO.; AND SYNGENTA CROP PROTECTION, INC.,	

Appellees No. 1661 WDA 2016

Appeal from the Order Entered October 14, 2016 In the Court of Common Pleas of Allegheny County Civil Division at No(s): G.D. No. 10-018588

BEFORE: BENDER, P.J.E., BOWES, J., and STRASSBURGER, J.*

DISSENTING OPINION BY BENDER, P.J.E.:

FILED JUNE 20, 2018

* Retired Senior Judge assigned to the Superior Court.

I do not agree with the Majority that the trial court's *Frye* inquiry, derived from *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), was 'overly expansive.' Accordingly, I respectfully dissent.

The Majority criticizes the trial court for looking behind the generally accepted methodologies that Appellant's experts purported to employ, and reviewing the studies on which they relied in applying their methodologies. I believe such screening is necessary to prevent experts from "evad[ing] a reasoned *Frye* inquiry merely by making references to accepted methods in the abstract." *Betz v. Pneumo Abex, LLC*, 44 A.3d 27, 58 (Pa. 2012). As the trial court aptly observed:

[U]nder [Appellant's] position, assume that [Appellant's expert, Nachman Brautbar, M.D.] concludes that Chemical A causes AML in humans. Also assume Dr. Brautbar supports this conclusion solely by citing an article that concludes Chemical A is completely safe for human exposure. Under [Appellant's] theory, the [c]ourt may not address the substance of the article, but must accept Dr. Brautbar's citation and pass the issue on to a jury.

Under [Appellant's] approach, Dr. Brautbar may cite a study regarding traffic patterns in New York City for the proposition that Chemical A causes AML in humans. The [c]ourt may play no role beyond seeing whether Dr. Brautbar cited a study to address a Bradford Hill criterion. Again, according to [Appellant], the [c]ourt must pass the issue on to a jury.

Supplemental Memorandum, 12/27/16, at 6.

Here, the trial court recognized that Dr. Brautbar greatly relied on scientific literature in applying his methodologies. For instance, the trial court discerned that "Dr. Brautbar's opinions are not founded on the Bradford Hill

criteria as a stand-alone scientific method without citation to peer-reviewed research. In fact, Dr. Brautbar's opinions rely heavily on citation to such research." *Id.* at 5.¹ Thus, the trial court reviewed the articles "not for the purpose of reaching its own conclusion regarding causation or to attack Dr. Brautbar's conclusions[,]" as the Majority suggests, but instead "to evaluate whether [his] cited authorities stand for what they are cited for." *Id.* at 5,6. It found that they did not.

By way of example, to support his general causation opinion that chromosomal aberrations can cause AML, Dr. Brautbar cited to authorities concluding that chromosomal aberrations may be used to predict cancer risk, generally — rather than AML, specifically. *See* Trial Court Opinion, 10/5/16, at 6. The trial court thereby determined that those authorities did not justify Dr. Brautbar's opinion that "chromosomal changes induced by exposure to genotoxic substances are capable of causing AML[,]" as "[n]one of the cited authorities link chromosomal aberrations to AML[.]" *Id.* In a similar vein, to

¹ Indeed, Dr. Brautbar explained:

The generally accepted methodology for determining "general causation" is to: (1) identify all relevant studies, (2) read and critically evaluate all the relevant studies, (3) evaluate all the data based upon recognized scientific factors (the Bradford Hill viewpoints) and other factors relevant to the chemical and the disease; (4) exercise best professional judgment in reaching a conclusion on the issue of whether a particular chemical or class of chemicals can cause a particular disease; and (5) explain the factual basis and the reasoning supporting the conclusion.

Dr. Brautbar's Report at 13.

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establish that specific products cause AML in humans, Dr. Brautbar "cited to animal studies, test-tube studies, and studies that include significant limiting language as to the applicability of their results to causation theories. It is not generally acceptable scientific methodology to select portions of studies that favor a certain outcome while ignoring direct statements against that outcome contained within the same article." *Id.* at 12-13. *See also id.* at 18 (finding that a study cited by Dr. Brautbar in support of his "fingerprint" theory which is based on the premise that products cause damage to human DNA or chromosomes — was misplaced as it represented that "chromosomal aberrations may occur in the absence of chemical exposure").

Further, although the Majority deems sufficient that "the scientific literature, in the aggregate, supports a causal relationship between long-term pesticide exposure and leukemia, such as AML[,]" **see** Majority Op. at 17, I tend to agree with the trial court and Defendants that more particularity is necessary. I think Appellant's experts' opinions required supporting research regarding the specific products and specific disease at issue.

Therefore, while I recognize that the judiciary is not generally comprised of scientific experts on causality, **see** Appellant's Brief at 17-18, I agree with the trial court that the studies relied on in applying a methodology should be reviewed to confirm that they are cited appropriately. In this case, I believe that the trial court gave adequate reasons for why it found that the cited articles did not support Dr. Brautbar's conclusions and, consequently, I would

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not determine that it abused its discretion in precluding the testimony of Appellant's experts. Thus, I respectfully dissent.