The purpose of this seminar is to offer an overview of topics in scientific evidence with a focus on mass and toxic torts. The primary impetus for the seminar is the decision of the United States Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786 (1993). In that case the Court determined that the rule in Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) that established the “general acceptance” test of the admissibility of scientific evidence did not survive the adoption of the Federal Rules of Evidence in 1975. The Daubert court then sketched out the factors trial courts might consider in determining admissibility. In the opinion of many, the Daubert case has opened a new period in the relationship between science and law. The district court judges have been invited to take a much more active role in determining admissibility, an invitation that a number of courts have already accepted. The Daubert opinion also has caused people to reconsider how expert testimony should be presented to courts. Although Daubert first emerged and took root in mass tort cases (Daubert concerns the drug Bendectin), its reach has steadily expanded into nearly every area of expert witnessing. The seminar still retains its Daubert roots, but its primary focus today is to provide an overview of three related topics: a) the law governing the admissibility of expert scientific testimony, b) an introduction to scientific methods, statistics, and the science supporting (or failing to support) expert testimony in several areas, and c) the interaction between scientific opinion and our adversarial system.

I have assembled a set of readings for the seminar that will be available as a packet in the copy center.

Each person in the seminar has two obligations: a) to read the materials and participate in class, and b) to write a term paper. As to the first obligation, there is LOTS of reading. I expect everyone to have read each week’s material prior to class and to participate in the discussion. If you think this will not be possible, you should not take the course. The grade in the course will be based partly on class participation. Grades will be based primarily on the second requirement, the term paper. You should begin working on this as soon as possible. You should arrange to speak with me no later than the end of the third week of the semester to discuss possible topics.

I have made assignments for twelve weeks of the seminar. Somewhere around Week 6 or 7 I wish to take out a week or two to talk about term papers. Each person will be asked to make a short presentation (15 minutes) about their research topic.

Following is the reading list for the course. If my past experience is any indication, we will not finish the entire syllabus. We will do what we can.
PART I: LAW

WEEK 1: From Frye to Daubert

1. Frye v. United States, 293 F. 1013 (D.C. Cir. 1923)

Also Worth Reading:

c. Daubert v. Merrell Dow Pharmaceuticals, 43 F.3d 1311 (9th Cir. 1995)

WEEK 2: Joiner and Kumho Tire: Parts Two and Three of the Daubert Revolution

a. In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717 (3rd Cir., 1994) (pp. 741-50)
2. The Scope of Daubert

Also Worth Reading:

a. Goodyear Tire & Rubber Co. v. Rios, 143 S.W.3d 147 (Tex. App. 2004) (a Texas case with facts similar to Kuhmo Tire)


d. Faigman, ET AL., *MODERN SCIENTIFIC EVIDENCE* (2012). Chapter 1: Admissibility of Scientific Evidence. (This long chapter is a resource. You may wish to refer to it to get a better overview of things.)

WEEK 3: Where are the States

1. The Texas Position (Civil)
   
a. Du Pont v. Robinson, 923 S.W.2d 549 (Tex. 1995) (adopting Daubert)
   
   
c. Cooper Tire & Rubber Co. v. Mendez, 204 S.W.3d 797 (2006)
   

2. The Texas Position (Criminal)
   
   

3. Other states
   

Also worth reading:

a. Merrell Dow Pharmaceuticals, Inc. v. Havner, 953 S.W.2d 706 (Tex. 1997) (a case you should read after we discuss epidemiology in week 5)

b. People v. Leahy, 8 Cal.4th 587, 34 Cal.Rptr.2d 663, 882 P.2d 321 (1994) (sticking with *Frye*)


h. Marsh v. Valyou, 977 So.2d 543 (Fla. 2007) (In which Florida passes on an opportunity
to retreat from Frye– now superceded by statute.)
I. Alice B. Lustre, Post-Daubert Standards for Admissibility of
Scientific and other Expert Evidence in State Courts. 90 A.L.R.5th 453

WEEK 4: The Proof of Specific Causation

1. A Phillip Dawid, David L Fagman and Stephen E. Fienberg. Fitting Science Into Legal
   Contexts: Assess ing Effects of Causes or Causes of Effects? 43 Sociological Methods
   and Research 359 (2014).
2. Guinn v. Astrazeneca Pharmaceuticals LP, 602 F.3d 1245 (11th Cir. 2010) (Seroquel and
   diabetes) (excluded).
   Appeal dismissed and judgment affirmed Bowen v. E.I. DuPont de Nemours & Co., Inc.,
   906 A.2d 787 (Del Supr. 2006). (Benlate and birth defects). (just read the unpublished
   opinion)

Also Worth Reading:

c. Heller v. Shaw, 167 F.3d 146 (3rd Cir. 1999) (an early Becker opinion)
   (Accutane and schizophrenia) (excluded)
   fastening device) (admitted)
g. Best v. Lowes Home Centers, Inc., 563 F.3d 171 (6th Cir. 2009) (pool chemicals
   and loss of smell) (admitted)
h. Jean Macchiaroli Eggen, Clinical Medical Evidence of Causation in Toxic Tort
i. Joseph Sanders and Julie Machal-Fulks, The Admissibility of Differential
   Diagnosis Testimony to Prove Causation in Toxic Tort Cases: The Interplay of
   Adjective and Substantive Law, 64, No. 4 L. & Contemp. Probs. 107 (2001).
j. Edward J Imwinkelried, The Admissibility and Legal Sufficiency of Testimony
   About Differential Diagnosis (Etiology): Of Under–and over Estimations, 56
k. Gary E. Marchant, Genetic Data in Toxic Tort Litigation, 14 J. Law & Policy 7

PART II: SCIENCE
WEEK 5: Scientific Method and Elementary


A. Toxic Torts.

WEEK 6: Toxicology and Epidemiology

3. FAIGMAN, ET AL., MODERN SCIENTIFIC EVIDENCE (2012). Chapter 23: Epidemiology
4. FAIGMAN, ET AL., MODERN SCIENTIFIC EVIDENCE (2012). Chapter 22: Toxicology

WEEK 7: A Case Study: Silicone Implants

1. Hopkins v. Dow Corning Corp., 33 F.3d. 1116 (9th Cir. 1994).
4. Institute of Medicine, Safety of Silicone Breast Implants, Executive Summary, Ch 8-9.

Also worth reading:


B. Forensic Evidence

WEEK 8: Fingerprint Identification

Also worth reading

c. Cole, Simon A. Et al., *Beyond the Individuality of Fingerprints: A Measure of Simulated Computer Latent Print Source Attribution Accuracy*, 7 Law, Probability & Risk 165 (2008) (I will discuss Figure 9 in class.)

C. Social Science Evidence

WEEK 9: Eyewitness Identification

4. North Carolina General Statutes § 15A-284.5.2
Also Worth Reading


e. Steblay, Nancy K. et al., Sequential Lineup Lapse and Eyewitness Accuracy, 35 Law & Hum. Behav. 262 (2011)


PART III. THE ADVERSARIAL SYSTEM

WEEK 10: Scientific Epistemology


2. Milward v. Acuity Specialty Products Group, Inc., 639 F.3d 11, 18 n. 7 (1st Cir. 2011). (Milward picks up on the idea in Stevens’ dissent in Joiner).


Also Worth Reading


e. Deason, Ellen E. Court-Appointed Expert Witnesses: Scientific Positivism Meets
Bias and Deference, 77 Ore. L. Rev. 59 (1998).


WEEK 11: The Use of Experts


Also worth reading.


WEEK 12: Juries and Judges.


Also worth reading.


And there is evidence judges have trouble as well.
