**FRAMEWORK FOR CHALLENGING FORENSIC EVIDENCE**

**1st: WHAT TESTIMONY ARE YOU CHALLENGING?**

**Two Areas to Challenge:**

**Foundational (scientific) Validity [forensic area as a whole or the improper extension of a forensic area]**

**Limit the testimony? [to what is scientifically valid and reliable]**

**Exclude all testimony?**

**Note: this is unlikely to happen for the forensic areas that have been accepted by courts [e.g. fingerprints and firearm toolmark]**

**Validity as Applied [How this examiner applied the method in this case]**

**Note: It can be difficult for the Court to follow an argument as to both in the same motion as a validity as applied challenge assumes the method is scientifically valid**

**2nd: HOW ARE YOU CHALLENGING THE TESTIMONY?**

**What Rules of Evidence applies to your challenge?**

**Rule 402**

**Is the evidence relevant?**

**Note: this is also a Rule 702 factor.**

**Rule 403**

**Even if relevant:**

**Is probative value substantially outweighed by danger of unfair prejudice?**

**Confuses the issues?**

**Misleads the jury?**

**Undue delay or waste of time or cumulative?**

**Rule 702**

**Does the examiner have scientific, technical or other specialized knowledge in the area they plan to testify?**

**Relevance: Will the testimony assist the jury to:**

**understand the evidence**

**determine a fact in issue**

**Is testimony based on sufficient facts or data?**

**Is testimony the product of reliable principles and methods? [Scientific validity]**

***Daubert* Factors**

**Can the method [or theory or principle] be tested or has been tested?**

**Has the method been subject to peer review and publication?**

**Does the method have a known or potential error rate?**

**Are there standards that are maintained that control the operation of the method?**

**Has the method received widespread acceptance in the relevant scientific community?**

**Anything else that suggests the testimony is not the product of a reliable principle or method?**

**Has the witness applied the principles and methods reliably to facts in this case? [validity as applied]**

**What case law applies to your challenge?**

**Is there helpful civil caselaw?**

**3rd: WHEN ARE YOU CHALLENGING THE TESTIMONY?**

**Pre-trial motion [motion in limine]?**

**Hearing?**

**What arguments do you make for a hearing?**

**written motion on why hearing necessary?**

**If granted hearing:**

**Present defense evidence through expert(s)?**

**Rely on cross of State’s examiner?**

**Argue 2009 NAS and 2016 PCAST?**

**Object at trial and request voir dire of state’s examiner?**

**File written motion at this time?**

**Rely on cross of State’s examiner [can’t present evidence in state’s case unless Court allows]**

**Argue 2009 NAS and 2016 PCAST?**

**PREPARATION FOR CHALLENGE [so you can answer the above 3 questions]**

**For IDS cases, request a** [**Forensic Consult with Sarah Olson**](https://forensicresources.org/forensic-consultations/)

**Understand [and know the problems with (if applicable)]:**

**Forensic Area**

**See:** [**Sarah Olson’s NC IDS Forensic Resources**](https://forensicresources.org/forensic-disciplines/)

**Read** [**2009 National Academy of Sciences**](https://www.ojp.gov/pdffiles1/nij/grants/228091.pdf)  **[NAS] and** [**2016 President’s Council of Advisor’s on Science and Technology**](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf) **(PCAST) sections on the forensic area**

**Understand** [**2021 DOJ PCAST response**](https://www.justice.gov/opa/pr/justice-department-publishes-statement-2016-presidents-council-advisors-science-and) **and problems with it**

**What is the method for the forensic area and how does it work?**

**Scientific Validity Challenge: Identify the *Daubert* factors that may apply in your case:**

**has the method been tested or can be?**

**by whom?**

**what are the studied the state relies on?**

**problems with prior testing?**

**Subject to peer review and publication?**

**by whom?**

**problems with publications and/or peer review?**

**Is there an established error rate or can there be one?**

**If no, what steps, if any, are being taken to establish an error rate?**

**Note: Any error rate that an examiner purports for themselves [e.g. “I have a 0 error rate”], in no way establishes the error rate for the method**

**Standards that are maintained and control the method?**

**what are the standards?**

**Who maintains them?**

**Accepted by relevant scientific community?**

**Who is the relevant scientific community?**

**Validity as Applied**

**Does the examiner have scientific, technical or other specialized knowledge?**

**Has the examiner followed the accepted method?**

**Has the examiner followed the Standard Operating Procedures [SOP’s] that were validated by the Crime Lab?**

**Does the examiner’s testimony go beyond what is scientifically valid?**

**Does the examiner’s conclusion go beyond what is currently accepted?**

**Scientific Method**

**Do the studies and testing relied on by the State follow the scientific method?**

**Studies relied on by the State to establish scientific validity**

**Are the studies scientifically valid?**

**Are the studies reliable?**

**Are the studies reproducible?**

**PCAST: 2 proper empirical validation studies by 2 different authors required to show scientific validity**

**Proper study design?**

**Proper conditions of study?**

**Precedent [and how to distinguish]**

**Was the case prior to change of Rule 702 (2011) in NC and courts establishing NC as a *Daubert* state (2016 in *McGrady*)?**

**In prior case, was there a hearing?**

**What testimony was presented?**

**State’s examiner?**

**Defense witness(es)?**

**What was the Court’s ruling?**

**Is there civil case law that may be helpful?**

**Note: Just because something was admissible before, doesn’t mean it should be admissible now [e.g. hair analysis, comparative bullet-lead analysis]**

**Retain Expert(s)**

**In forensic area?**

[**NC Forensic Resource Expert Database**](https://forensicresources.org/browse-all-experts/)

**Expert in scientific method and scientific studies?**

**Note: likely need for scientific validity challenge**

**Discovery**

**Complete lab file and bench notes**

**Standard Operating Procedures [SOP’s] in place at time of examination**

**Current and prior SOP’s if it has changed**

**Studies relied on by State to establish scientific validity of method**

**CV of Examiner**

**Trainings attended?**

**Corrective action reports for examiner**

**Proficiency Testing results of examiner**

**Is Proficiency testing similar or different to the examination in this case?**

**Interview State’s examiner**

**What method did the examiner use?**

**How did they examine the evidence in this case?**

**Do they believe there are any limitations for the method they used?**

**If there is no error rate for the method, what do they believe is their error rate [and why?]**

**Are they aware of NAS/PCAST and the problems mentioned in NAS/PCAST?**

**Anything you want to know that you don’t want to be surprised about the answer during testimony?**

**Prior trial transcripts of the examiner**

**Has the examiner changed their testimony over time?**

**Write Motion that incorporates:**

**Why you should receive a hearing [or voir dire of expert]**

**What testimony you are seeking to exclude**

**Why the testimony should be excluded**

**How precedent can be distinguished**

**IF RULE 702 CHALENGE FAILS AND TESTIMONY ALLOWED**

**Make the problems with the testimony as simple as possible for jury**

**Find analogies that fit why this allowed testimony isn’t reliable**

**Jury Selection**

**Cross of Examiner**

**Focus on the issues brought up in your motion that failed**

**Defense Evidence**

**Introduce evidence through defense expert(s)?**

**Closing**