**MOTION TO EXCLUDE EXPERT TESTIMONY ON FIREARM IDENTIFICATION, OR, IN THE ALTERNATIVE, TO CURTAIL SUCH TESTIMONY, UNDER *DAUBERT V. MERRELL DOW PHARMACEUTICALS***

[DEFENDANT], by counsel, respectfully moves this Court to exclude expert testimony on the subject of firearm identification, or, in the alternative, to curtail such testimony. Firearm identification used for the purpose of conclusively identifying a particular weapon or bullet has been discredited by the scientific community, as laid out in a recent report by the National Academy of Sciences. As described below, firearm identification does not satisfy the standards for the admissibility of scientific evidence laid out in Daubert v. Merrell Dow Pharmaceuticals

because there is no known rate of error, its conclusions are not quantifiable or testable, there are no uniform standards or criteria for reaching conclusions, and firearm identification has been rejected by the scientific community. In addition, given this forensic method’s significant shortcomings and thoroughly subjective nature, having an expert testify as to the conclusions of a firearm identification would greatly confuse the jury and would be far more prejudicial than probative.

[FILL IN]

# STATEMENT OF FACTS

1. **LEGAL STANDARD**

Louisiana Code of Evidence article 702 provides the standard for the admission of expert testimony: “If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact at 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.” A trial court judge plays a “gatekeeping” role when it comes to expert testimony, “ensur[ing] that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” Daubert v. Merrell Dow Pharm*.,* Inc., 509 U.S. 579, 589 (1993).[1](#_bookmark0)

Under Daubert, courts should weigh the following factors when considering the

admission of expert testimony:

* 1. whether a theory or technique is falsifiable; in other words, whether the technique can be or has been tested;
  2. whether the theory or practice has been published in scientific, peer-reviewed journals;
  3. whether the technique has a known or potential rate of error, and what that rate of error is;

1 The Supreme Court of Louisiana has adopted the guidelines set forth by the U.S. Supreme Court in Daubert. State v. Foret, 628 So. 2d 1116, 1121 (La. 1993).

* 1. whether standards exist to control the technique’s operation; and
  2. the technique’s degree of acceptance within the scientific community.

Daubert, 509 U.S. at 589; State v. Young, 35 So. 3d 1042, 1047 (La. 2010).

The standard is flexible and no single factor is determinative. Daubert, 509 U.S. at 589.

Importantly, the Daubert factors apply to established and novel theories and techniques alike. Id.

The crucial consideration is whether the purported expertise, here firearm identification, is sufficiently scientifically valid to merit a fact-finder’s reliance on it.

# ARGUMENT

1. **Despite Its Long Acceptance by Courts, the Scientific Community Has Rejected Firearm Identification as a Reliable Method of for Conclusively Establishing a Connection Between a Particular Bullet and a Particular Gun.**

Until recently, federal and state courts have admitted firearm identification almost without exception, often without even applying Daubert factors, based on the assumption that the

method is scientifically valid and the fact that past courts have accepted the method time and again. See, e.g., United States v. Hicks, 389 F.3d 514 (5th Cir. 2004) (accepting reliability of

toolmark and firearm identification without question); United States v. Santiago, 199 F. Supp. 2d

101, 111 (S.D.N.Y. 2002). Courts admit this evidence on the assumption that toolmark and firearm identification is widely accepted in the scientific community. United States v. Monteiro,

407 F. Supp. 2d 351, 364 (D. Mass. 2006) (“courts have understandably been gun shy about questioning the reliability of such evidence”).

We now know that the scientific community has rejected the use of firearm identification to identify a specific firearm or bullet. A recent and thorough review of the scientific literature on firearm identification by the prestigious National Academy of Sciences concluded that firearm identification cannot uniquely identify a specific gun for a number of reasons, including the fact that a firearm examiner’s conclusion of a match “remains a subjective decision based on unarticulated standards and no statistical foundation for estimation of error rates.” Nat’l Acad. Sci., Strengthening Forensic Science in the United States: A Path Forward 153-54 (2010)

(hereinafter “NAS Report”), available at [http://books.nap.edu/openbook.php?record\_id=12589.](http://books.nap.edu/openbook.php?record_id=12589)

The sections that follow provide an overview of firearm identification and the National Academy of Sciences’ evaluation of this forensic method.

1. *Overview of Firearm Identification*

In a typical case, the identification of a firearm begins when an examiner receives a bullet recovered from a crime scene, as well as a gun that the police suspect was used in the crime, and he must answer the following question: did the gun that the police recovered actually fire the bullet that was found at the crime scene? Stephen G. Bunch et al., Is a Match Really a Match? A

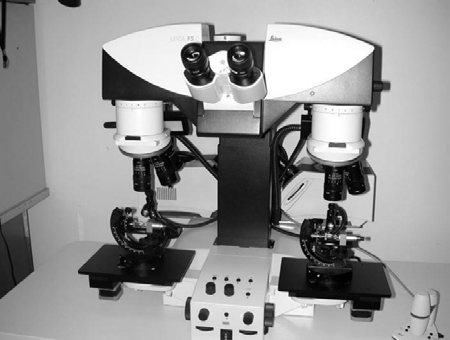
Primer on the Procedures and Validity of Firearm and Toolmark Identification, Forensic Sci.

Comm. vol. 11, no. 3 at section titled “General Examination Procedure for Bullets” (2009), available at [www.fbi.gov/hq/lab/fsc/current/review/2009\_07\_review01.htm](http://www.fbi.gov/hq/lab/fsc/current/review/2009_07_review01.htm) (hereinafter “FBI

Firearm Identification Primer”). As a bullet is fired from a gun, the hard metal of the gun barrel

makes scratches and indentations on the softer metal of the bullet—called “toolmarks”—and so to answer the question of whether the “suspect gun” fired the crime scene bullet, the examiner fires a test bullet from the suspect gun and then compares the toolmarks on the test bullet with the toolmarks on the crime scene bullet under a specially designed, “comparison” microscope, which allows the examiner to look at both bullets under the microscope at the same time.

# A Comparison Microscope



Id.; Scientific Working Group for Firearms and Toolmarks (SWGGUN), Firearm & Toolmark

Identification Powerpoint at slide 28, <http://www.swggun.org/resources/docs/SWGGUN%20A>

RK%20PP060607.ppt (hereinafter “SWGGUN Powerpoint”). The examiner compares the

markings on the bullets and decides whether the same gun fired both bullets. FBI Firearm

Identification Primer at section titled “General Examination Procedure for Bullets.”

A firearm examiner visually compares three categories of markings on the bullets: class characteristics, subclass characteristics, and individual characteristics. FBI Firearm Identification

Primer at section titled “General Examination Procedure for Bullets.” Class characteristics can

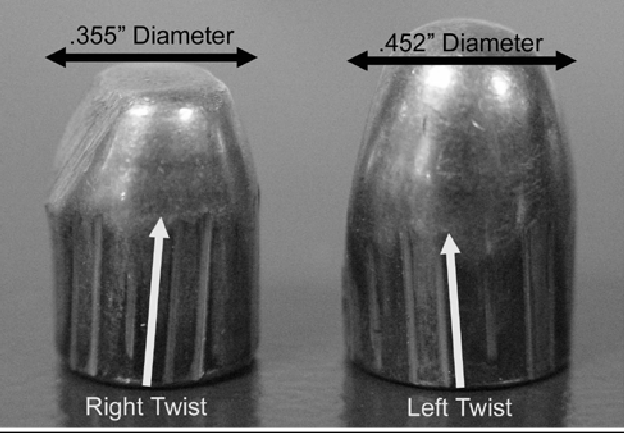
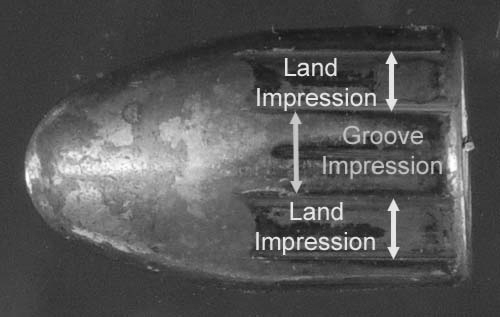
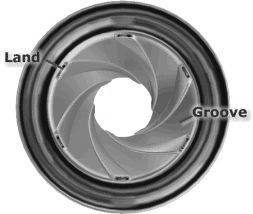
be defined as “distinctive features that are shared by many items of the same type.” NAS Report

at 152. In the context of firearms, class characteristics include the diameter of the bullet, as well as bullet markings that result from how the barrel of the gun was manufactured. FBI Firearm

Identification Primer at section titled “General Examination Procedure for Bullets.” The inside of

a gun barrel has what are called “lands,” or raised surfaces, and “grooves” that run its length and that have a slight twist to them, so that as the bullet leaves the gun, it is spinning, which keeps the bullet flying true. Id. The lands and grooves along the inside of the barrel mark the outside of

the bullet as it leaves the gun, resulting in distinctive markings:



SWGGUN Powerpoint at slides 19, 27. These markings are classified according to three

characteristics: “the number of land and groove impressions imparted to the bullet . . . , the widths of these land/groove impressions, and the direction of the twist of these impressions.” FBI

Firearm Identification Primer at section titled “General Examination Procedure for Bullets.”

Land and groove patterns vary across different types and brands of guns, but a gun will impart the same basic land and groove impressions to every bullet that is fired from it. Therefore, if a test bullet and a crime scene bullet do not have the same land and groove pattern, the two bullets could not have been fired by the same gun. Id.

If a test bullet and a crime scene bullet have the same class characteristics, the examiner then puts both bullets under a microscope to determine if they share subclass and individual characteristics. Subclass characteristics are microscopic markings on a bullet “that may be common to a small group of firearms and that are produced by the manufacturing process, such

as when a worn or dull tool is used to cut barrel rifling.” NAS Report at 152. Importantly,

because subclass characteristics are shared by a number of guns, they can serve as a basis for exclusion—for deciding that a bullet could not have been fired from a particular gun—but not for identification. Individual characteristics are “fine microscopic markings and textures that are said to be unique to an individual . . . firearm.” Id. SWGGUN explained individual

characteristics as follows:

Most manufacturing processes involve the transfer of rapidly changing or random marks onto work pieces such as barrel bores, breechfaces, firing pins, screwdriver blades, and the working surfaces of other common tools. This is caused principally by the phenomena of tool wear and chip formation, or by electrical/chemical erosion. Microscopic marks on tools may then continue to change from further wear, corrosion, or abuse.

SWGGUN Powerpoint at slide 17. Examiners claim that two bullets can have sufficient

corresponding individual characteristics to support a conclusion, based on the markings alone, that they were fired by the same gun. The standard employed by firearm examiners is “sufficient agreement” and is defined as follows:

Agreement is significant when it exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with the agreement demonstrated by toolmarks known to have been produced by the same tool.

Assoc. Firearm & Tool Mark Examiners, Criteria for Identification, AFTE Journal (July 1992).

In its own guidelines, SWGGUN clarified the “sufficient agreement” standard:

This “sufficient agreement” is related to the significant duplication of random toolmarks as evidenced by the correspondence of a pattern or combination of patterns of surface contours. Significance is determined by the comparative examination of two or more sets of surface contour patterns comprised of individual peaks, ridges and furrows. Specifically, the relative height or depth, width, curvature and spatial relationship of the individual peaks, ridges and furrows within one set of surface contours are defined and compared to the corresponding features in the second set of surface contours. . . . The statement that “significant agreement” exists between two toolmarks means that the agreement is of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility.

SWGGUN, Guidelines: Criteria for Identification, www.swggun.org,/guidelinedocs/guidelines\_

criteriaforID.htm.

There are no criteria in the firearm examination field about which individual characteristics provide a reliable basis for comparison and which do not. NAS Report at 158-59.

Neither are there criteria for determining the weight that each characteristic should have in the overall comparison. Id. Finally, there is no standard for how many characteristics must be similar

or dissimilar before a conclusion is reached. Id.

The determination of whether a particular characteristic is similar or dissimilar is entirely in the eyes of the examiner:

[The decision criteria used by trained firearm-toolmark examiners . . . are subjective in practice . . . . [M]icroscopic comparisons are clearly observer- dependent. Because the similarities and dissimilarities between evidence specimens lie along a nonlinear continuum and require an observer to “draw a line” and make a judgment call, we firmly believe that the human examiner is integral to the science and examination process.

FBI Firearm Identification Primer at section titled “The Scientific Foundation of Firearm and

Toolmark Identification.”

1. *Evaluation of Firearm Identification by the National Academy of Sciences*

On November 22, 2005, the Science, State, Justice, Commerce, and Related Agencies Appropriations Act of 2006 became law. 119 Stat. 2290 (2005). Through this act, Congress directed the United States Attorney General to provide funding to the National Academy of Sciences (“NAS”) to convene a committee, known at the Committee on Identifying the Needs of the Forensic Science Community, to study the current state and remaining needs of the forensic sciences. NAS Report at 2. This Committee was formed under the auspices of the NAS’s

Committee on Science, Technology, and Law and the Committee on Applied and Theoretical Statistics, and “was composed of many talented professionals, some expert in various areas of forensic science, others in law, and still others in different fields of science and engineering.” Id.

at xx. After three years of study, including a review of all published scientific literature related to particular forensic methods, the NAS issued a report that revealed that some forensic disciplines, including firearm identification, severely lack scientific validity. Id. at 3. The report’s central

finding was that other than DNA analysis, “no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.” Id. at 5. Additionally, imprecise or

exaggerated expert testimony has sometimes contributed to the admission of erroneous or misleading evidence. Id. at 3.

In its review of firearm identification, the National Academy of Sciences thoroughly reviewed all of the literature relating to firearm identification, heard testimony from trained firearm examiners, and reviewed cases in which firearm examiners testified, and the Report found that the method has significant shortcomings from a scientific standpoint, which are outlined below.

* 1. *Fundamental Assumptions of Firearm Identification Have Never Been Verified Scientifically.*

“[T]he scientific knowledge base for toolmark and firearms analysis is fairly limited.” Id.

at 153. The fundamental assumption of firearm identification is that every gun will make markings on bullets that are detectably different from markings made by any other gun. This assumption has never been proven. Id. As an earlier National Academy of Sciences report put it:

# Finding: The validity of the fundamental assumptions of uniqueness and reproducibility of firearms-related toolmarks has not yet been fully demonstrated

[. . . .]

A significant amount of research would be needed to scientifically determine the degree to which firearms-related toolmarks are unique or even to quantitatively characterize the probability of uniqueness.

Nat’l Acad. Sci., Ballistics Imaging 3 (2008), available at [http://books.nap.edu/openbook.php?](http://books.nap.edu/openbook.php)

record\_id=12162. In other words, we do not know that every gun is unique in ways that will be apparent to firearm examiners. Without any support for this fundamental assumption of firearm identification, there is a risk of misidentification, of firearm examiners greatly exaggerating the strength of their analysis, and of jurors confusing the issues.

* 1. *There Are Several Pitfalls to Relying on “Individual Characteristics” to Identify Firearms.*

While firearm examiners rely on microscopic, “individual characteristics” to compare bullets, many of those characteristics may actually be shared by bullets fired from a number of different guns. In 1955, a study found that 15% to 20% of the microscopic scratches on bullets fired from different .38 Special Smith and Wesson revolvers actually matched, meaning that those scratches, which appeared to be “individual characteristics,” were not reliable bases for making an identification. See Adina Schwartz, A Systemic Challenge to the Reliability and

Admissibility of Firearms and Toolmark Identification, 2005 Colum. Sci. & Tech. L. Rev. 1, 7

(2005) (discussing 1955 study and similar, recent research). When examiners rely on “individual” characteristics that may actually be shared by a number of guns, there is a risk of misidentification.

Also, examiners can easily confuse individual characteristics with “subclass characteristics.” Recall that both kinds of characteristics are microscopic, but subclass characteristics are microscopic markings that appear on bullets fired from a number of different guns and result from quirks in the manufacturing process, “such as when a worn or dull tool is

used to cut barrel rifling.” NAS Report at 152. Such quirks can result in a number of guns that

impart remarkably similar microscopic characteristics on bullets fired through them, and unless a firearm examiner is aware of every quirk in the manufacturing process of many different types and brands of guns, there is a real risk that he will call a particular detail an individual characteristic when it is actually a subclass characteristic. Schwartz, supra, at 8-11. This kind of

“missed call” presents a risk of misidentification.

Finally, as firearm examiners must admit, “individual” characteristics, which can be the result of post-manufacture wear and tear, by their very nature change over time. “Unlike the small ridges on fingers, a tool will change over time from wear and thus leave different marks on, for example, bullets.” FBI Firearm Identification Primer at section titled “The Scientific

Foundation of Firearm and Toolmark Identification.” The fact that firearm toolmarks change over time makes the field substantially different from, say, forensic DNA analysis or fingerprinting, where the underlying qualities persist throughout a person’s life.

* 1. *Firearm Identification is Subjective.*

“[T]he interpretation of individualization/identification [in firearm examination] is subjective in nature . . . .” SWGGUN, Guidelines: Criteria for Identification. Firearm

identification is inherently subjective, relying as it does on an examiner’s visual observations and decisions about whether pairs of visual phenomena are similar or dissimilar. The subjective nature of the comparisons makes them difficult to repeat or assess. Whether a firearm comparison results in an identification is a subjective assessment that is totally within the discretion of the examiner:

Knowing the extent of agreement in marks made by different tools, and the extent of variation in marks made by the same tool, is a challenging task. [The Association of Firearm and Tool Mark Examiners’] standards acknowledge that these decisions involve subjective qualitative judgments by examiners and that the accuracy of examiners’ assessments is highly dependent on their skill and training. . . . [T]he decision of the toolmark examiner remains a subjective decision based on unarticulated standards . . . .

NAS Report at 153-54. This total reliance on the subjective assessments of an individual

examiner—whose assessments cannot even be evaluated based on objective standards—presents a substantial risk of misidentification and deprives the fact-finder of an opportunity to weigh the evidence, having to rely instead on the good word of someone who the court has labeled an expert.

* 1. *Firearm Identification Has No Known Error Rate.*

As noted in both National Academy of Sciences reports cited in this motion, firearm identification has no known error rate. Id. at 154. “A significant amount of research would be

needed to scientifically determine the degree to which firearms-related toolmarks are unique or even to quantitatively characterize the probability of uniqueness.” Nat’l Acad. Sci., Ballistics

Imaging 3 (2008). Without an established error rate, it is impossible for firearm examiners to say

what the chances are that what they believe is an identification is actually not, which deprives the fact-finder of an opportunity to appropriately weigh the evidence and readily leads to greatly exaggerated testimony from firearm examiners. “Because not enough is known about the variabilities among individual tools and guns, we are not able to specify how many points of similarity are necessary for a given level of confidence in the result. Scientific studies have not been done to understand the reliability and repeatability of the methods.” NAS Report at 154.

* 1. *Firearm Examination Lacks Uniform Criteria.*

The NAS Report’s most thorough critique of firearm identification came in the area of

the field’s lack of standards and protocols:

A fundamental problem with toolmark and firearms analysis is the lack of a precisely defined process. . . . [The Association of Firearm and Tool Mark Examiners] has adopted a theory of identification, but it does not specify protocol. It says that an examiner my offer an opinion that a specific tool or firearm was the source of a specific set of toolmarks or a bullet striation pattern when “sufficient agreement” exists in the pattern of two sets of marks. It defines agreement as significant “when it exceeds the best agreement demonstrated between tool marks known to have been produced by different tools and is consistent with the agreement demonstrated by tool marks known to have been produced by the same tool.” The meaning of “exceeds the best agreement” and “consistent with” are not specified, and the examiner is expected to draw on his or her own experience. This AFTE document, which is the best guidance available for the field of toolmark identification, does not even consider, let alone address, questions regarding variability, reliability, repeatability, or the number of correlations needed to achieve a given degree of confidence.

NAS Report at 155. Without a specified protocol that can be repeated from case to case, it is

impossible to evaluate the quality of an examiner’s work or judge whether the examiner performed the examination in a reliable manner. Not even being able to ask questions about the process the examiner used deprives the fact-finder of any meaningful opportunity to evaluate whether the examiner’s conclusion can be relied upon and leaves the fact-finder with no choice but to rely on the examiner’s good word.

# The Firearm Identification Analysis Offered in This Case Is Unreliable and, Based on the Present Consensus of the Scientific Community, Should Be Excluded from This Trial.

Here, the prosecution wishes to offer expert testimony related to firearm identification for the purpose of absolute identification—to show that a bullet found at the crime scene came from a specific gun. However, as discussed above, firearm identification is simply not a scientific—or even *reliable*—method for conclusively establishing a connection between a particular gun and a particular bullet.

Furthermore, the examiner in this case did not specify what type of markings on the test bullet and the crime scene bullet were similar and which characteristics were dissimilar, how much weight he gave each characteristic, how many characteristics he considered, whether he considered that some of the individual characteristics that he relied upon were actually subclass characteristics, whether any of the individual characteristics may have changed over time, or any other information that would allow a fact-finder to weigh the evidence appropriately. All we have is the examiner’s bald assertion that the unknown bullet and the known bullet came from the same weapon, a conclusion that is simply impossible to prove, given the limitations of firearm examination.

The firearm identification offered in this case fails under each prong of the Daubert test:

* **Not quantifiable, testable, or falsifiable:** The examiner’s conclusion is a purely subjective statement that two objects had similar visual characteristics; such a conclusion is totally unquantifiable and so there is no way to determine the reliability of the examiner’s analysis. NAS Report at 5-6 (2010). In addition, the examiner’s conclusion cannot be evaluated on the basis of his methods, because the field has no established methods; cannot be evaluated on the strength of his conclusions, because the field has no specific criteria for reaching conclusions; and cannot be evaluated on the basis of the examiner’s particular decisions about which microscopic details were deemed to be similar, because firearm examination leaves this decision completely within the discretion of the examiner.
* **No known rate of error:** As discussed above, the rate of error of firearm examination has never been scientifically established.
* **No uniform standards:** As described above, firearm examiners have no established protocols for carrying out their analysis, there is no agreement about what microscopic features are most probative in making comparisons, and the field has no specific criteria for an analyst to use in deciding whether a test bullet and a crime scene bullet were fired by the same gun.
* **Not accepted by the scientific community:** The two reports of the National Academy of Sciences cited in this motion on firearm identification are equivalent to the scientific community’s assessment of this forensic methodology. The NAS’s assessment, as described in detail above, amounts to a rejection of firearm examination as a method of identification.

In State v. Young, 35 So. 3d 1042 (La. 2010), the Louisiana Supreme Court found that a

trial court had abused its discretion in admitting expert testimony on the psychology of eyewitness identification. The Court based its ruling on three factors. First, the Court found that

labeling someone an “expert” in the field of eyewitness identification would unduly influence the jury and may lead them to credit the expert’s testimony more than the other evidence at trial. Id.

at 1050. Second, the Court was concerned that jurors exposed to an eyewitness identification expert would be misled “into believing that a certain factor in an eyewitness identification makes the identification less reliable than it truly is.” Id. Finally, the Court noted that expert testimony

on eyewitness identification “can be more prejudicial than probative because it focuses on the things that produce error without reference to those factors that improve the accuracy of the identifications.” Id.

This Court should bar expert testimony on firearm identification, just as the Supreme Court barred the admission of expert eyewitness identification testimony in Young. As noted

above, an overriding concern in Young was that a potentially persuasive expert testifying as to

the generalities of the inaccuracies of eyewitness observations—a matter the Court found had no scientific basis—would greatly influence the jury because he would be labeled an “expert.” Here, an expert testifying as to similarities between known and unknown bullets—which, as discussed above, have no scientific meaning at all—would unfairly prejudice the jury because jurors would assume that the expert’s opinion is reliable and scientifically valid. Merely being labeled as a specialist in firearm identification will mislead a jury about this discredited forensic method. See

id. (noting that “merely being labeled” an expert can unduly influence the jury); State v. Higgins,

898 So. 2d 1219, 1240 (La. 2005) (same); United States v. Angleton, 269 F.Supp.2d 868, 873-74

(S.D. Tx. 2003) (noting that the “aura” of testimony from an expert in a faulty discipline can mislead a jury to its validity); United States v. Lester, 254 F.Supp.2d 602, 608-09 (E.D. Va.

2003) (noting that expert testimony has the potential to be substantially prejudicial because of the “aura effect” associated with such testimony). In addition, if the firearm examiner is allowed to testify that the similarities between the crime scene bullet and the known bullet led him to conclude that they “matched,” the jury will be misled into believing that the similarities make the identification far more reliable than it actually is. Finally, testimony from the firearm examiner about his conclusion of a match would “be more prejudicial than probative because it [will] focus[] on the things that [are similar in the toolmarks] without reference to those factors that [are dissimilar].” Young, 35 So. 3d at 1050.

# In the Alternative, this Court Should Limit the Scope of the Expert’s Testimony to Exclude Any Conclusions of Absolute Identification Because Such Conclusions Do Not Rest on a Reliable Scientific Foundation.

Expert testimony should be limited by a district court if there is a significant gap between the existing data and the conclusions drawn by the expert witness during testimony. [General](https://web2.westlaw.com/find/default.wl?serialnum=1997242413&amp;tc=-1&amp;rp=%2ffind%2fdefault.wl&amp;sv=Split&amp;utid=3&amp;rs=WLW10.06&amp;db=708&amp;tf=-1&amp;findtype=Y&amp;fn=_top&amp;mt=LawSchoolPractitioner&amp;vr=2.0&amp;pbc=AF02662C&amp;ordoc=2017946380)

[Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997).](https://web2.westlaw.com/find/default.wl?serialnum=1997242413&amp;tc=-1&amp;rp=%2ffind%2fdefault.wl&amp;sv=Split&amp;utid=3&amp;rs=WLW10.06&amp;db=708&amp;tf=-1&amp;findtype=Y&amp;fn=_top&amp;mt=LawSchoolPractitioner&amp;vr=2.0&amp;pbc=AF02662C&amp;ordoc=2017946380) In Joiner, an expert witness testified that a study

found that the incidence of lung cancer deaths among workers was somewhat higher than would ordinarily expected due to their exposure to PCB’s, but the trial court excluded his testimony because the studies he relied on did not support his conclusions, as there was “simply too great an analytical gap between the data and the opinion proffered.” Id. An expert’s testimony must be

limited to those conclusions that are supported by the evidence and whatever scientific inquiry has been made into the field at issue.

Here, the firearm identification expert has issued a report stating that two of the examined bullets, a test bullet and one collected from the crime scene, came from the same source, but, as described above, that conclusion is simply not valid. Without any idea of how many points of similarity are necessary for a given level of confidence in the result, it is impossible to say with any accuracy how likely it is that two bullets came from the same source.

The only permissible testimony here—the only testimony that would be supported by the evidence—would be a recitation of the specific characteristics that the examiner found to be similar or dissimilar. Given that no reliable scientific study has ever been done to analyze the frequency of these characteristics in the markings that firearms impart to an object, the firearm examiner has no more idea than the jury does what inferences should be drawn from the similarities or differences, or whether one outweighs the other. The examiner cannot be permitted to testify about any conclusions he may have drawn from the similarities or differences, and he certainly cannot be permitted to testify that the markings on each bullet “matched with scientific certainty.” As discussed above, here is no scientific basis for such testimony.

# CONCLUSION

Under the applicable standards of Louisiana Code of Evidence article 702, this Court should only allow expert testimony that is reliable. Firearm identification is not a reliable method of absolute identification because of the tremendous amount of unreviewable discretion that rests with an examiner, a lack of standardized protocols, and, most importantly, the methodology’s fundamental inability to demonstrate a connection between evidence and a specific weapon.

For these reasons and those set forth above, the defendant respectfully requests that this Court exclude the testimony of the firearm identification expert in this case. In the alternative, the defendant respectfully requests this Court to limit the scope of the examiner’s testimony to a recitation of the characteristics that the examiner found to be similar and dissimilar.