

SUFFOLK, ss.

COMMONWEALTH OF MASSACHUSETTS

SUPERIOR COURT
SUCR 2015-10363

COMMONWEALTH

vs.

JAMARE LEGORE
Defendant.

**RULING AND ORDER ON DEFENDANT'S
MOTION FOR DAUBERT/LANIGAN HEARING
ON ADMISSIBILITY OF FIREARM ANALYSIS**

By motion filed October 22, 2016, the defendant challenges the admissibility of expert testimony comparing ballistics evidence to a recovered firearm. The motion is based on a September, 2016 report by the President's Council of Advisors on Science and Technology ("PCAST"), entitled, *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods*. The report reviews the scientific validity of forensic feature comparison methods, including firearm toolmark analysis and makes recommendations to Federal courts and authorities regarding further steps to "strengthen forensic science and promote its more rigorous use in the courtroom." *Id.* at 2. For the reasons set forth below, the motion is denied.

Forensic ballistics or firearms identification involves the comparison of bullet and cartridge case evidence to a known firearm, seeking to determine whether the ballistics evidence was likely fired from a particular firearm. Evidence of a ballistics comparison, when performed by a properly trained and qualified analyst following an established methodology, has been

admissible in Massachusetts courts for well over a century. See, e.g., Commonwealth v. Barbosa, 457 Mass. 773,780 (2010); Commonwealth v. Best, 180 Mass. 492, 495-496 (1902). In Commonwealth v. Heang, 458 Mass. 827 (2011), the Supreme Judicial Court considered the admissibility of such evidence in light of a comprehensive legal and scientific review of forensic evidence contained in a report of the National Research Council (an arm of the National Academy of Science) entitled, *Strengthening Forensic Science in the United States: A Path Forward* (2009). After reviewing the scientific underpinnings and methodology applicable to the forensic comparison of ballistics evidence to connect it to a suspect firearm, the Court concluded, "where defense counsel is furnished in discovery with the documentation needed to prepare an effective cross-examination, where a jury are provided with the necessary background regarding the theory and methodology of forensic ballistics, and where an opinion matching a particular firearm to recovered projectiles or cartridge casings is limited to a 'reasonable degree of ballistic certainty', a jury will be assisted in reaching a verdict by having the benefit of the opinion, as well as the information needed to evaluate the limitations of such an opinion and the weight it deserves." Heang, 458 Mass. at 850.

The issue now before this court is whether, based on the recent PCAST report, there are grounds to revisit the SJC decision in Heang. After a non-evidentiary hearing and argument, and upon review of the PCAST report (and in particular, pages 104-114), there is no basis to disturb settled law permitting a properly qualified firearms expert from offering opinion evidence under Mass. G. Evidence § 702 relating to a comparison and match between a bullet recovered from the

alleged victim, and a bullet test-fired from a firearm allegedly associated with the defendant.¹

The PCAST report echos the concerns articulated by the National Research Council in 2009, regarding the scientific (foundational) validity of comparative ballistics analysis, noting the lack of scientifically rigorous and peer-reviewed studies on the uniqueness of class, sub-class, and individual characteristics imparted on projectiles or cartridge casings when fired from a known firearm, and limitations on the subjective nature of an examination of ballistics evidence. It notes, however, that since the 2009 NRC report, additional studies have been conducted that support the claim that reliable ballistics comparisons can be achieved, including one study by an independent laboratory designed to test the foundational validity of ballistics comparison testing. See Baldwin, D.P., Bajic, S.J., Morris, M., and D. Zamzow. "A study of false-positive and false-negative error rates in cartridge case comparisons." Ames Laboratory, USDOE, Technical Report #IS-5207 (2014); at afte.org/uploads/documents/swggun-false-positive-false-negative-usdoe.pdf.

Although the PCAST report is critical of the methodology employed in some of the studies conducted since 2009 and notes that the Ames Laboratory study, while following appropriate scientific protocols, has not been subject to a peer review, nonetheless it acknowledges that no study has undermined the claimed reliability of comparative ballistics evidence.

In short, the PCAST review does not significantly alter the findings and conclusions of the NRC report - indeed, the Council concluded, "[W]hether firearms analysis should be deemed admissible based on current evidence is a decision that belongs to the courts . . ." *Id.* at p. 12.

¹ The instant motion is based solely on the claim that there is an insufficient scientific foundational validity for ballistics comparison evidence. The defendant is not challenging whether the ballistics analysis here was valid as applied, nor for present purposes is he challenging the qualifications of the firearms examiner.

The report recommends, however, that if such evidence is admitted, it should be accompanied by testimony regarding the known error rates as found in Ames Laboratory's "black-box study". Based on the Supreme Judicial Court's comprehensive consideration of the issues relating to comparative ballistics evidence, and the Court's determination that such evidence, properly presented may aid a fact-finder at trial, this Court sees no reason to conduct a formal Daubert/Lanigan hearing based on the report issued by the President's Council.

ORDER

The Defendant's motion is **DENIED**. The Commonwealth shall be permitted to present expert testimony regard a forensic ballistics examination and comparison, subject to the conditions and limitations outlined in Commonwealth v. Heang, *supra*, and further subject to the requirement that the Commonwealth shall elicit testimony regarding known error rates based on studies identified in the PCAST report. Moreover, nothing herein shall limit defendant's counsel from cross-examining any firearms expert witness based on the findings and content of the PCAST report.


Justice of the Superior Court

Dated: November 17, 2016