The Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) comprises recognized bloodstain pattern analysis (BPA) experts from North America, Europe, New Zealand, and Australia. The objective of SWGSTAIN is to serve as a professional forum in which BPA practitioners and practitioners from related fields can discuss and evaluate methods, techniques, protocols, quality assurance, education, and research relating to BPA. The ultimate goal of SWGSTAIN is to use these professional exchanges to address substantive and operational issues within the field of BPA and to work to build consensus-based “best practice” guidelines for the enhancement of the discipline.

SWGSTAIN acknowledges that a limited number of bloodstain pattern analysts have tendered opinions beyond the scope of the available evidence. SWGSTAIN is committed to developing guidelines for the quality of analysis, conclusions, and opinions of bloodstain pattern analysts.

SWGSTAIN recognizes that the opinions of bloodstain pattern analysts may contain an element of subjectivity; however, the foundation for these opinions is based upon well-established scientific principles. The scientific literature supporting these principles extends back more than one hundred years.

The combination of formal education and training is critical for analysts to gain an understanding of bloodstain pattern analysis; however, experience is important for the proper application of these scientific principles and the interpretation of bloodstain pattern evidence. The balanced use of education, training, and experience is shared by all within scientific communities.

The following comments address recommendations in the National Academy of Sciences’ (NAS) Executive Summary for “Strengthening Forensic Science in the United States: A Path Forward”.

**Recommendation 1:**
SWGSTAIN looks forward to working together with the appropriate bodies to participate in improving the scientific discipline of bloodstain pattern analysis.

**Recommendation 2:**
SWGSTAIN has recently published a recommended standard terminology for bloodstain pattern analysis. In addition, SWGSTAIN has recognized the need for standards for report content and has developed a recommended standard.

**Recommendation 3:**
SWGSTAIN is compiling and reviewing a bibliography of published scientific literature related to bloodstain pattern analysis. In addition, SWGSTAIN is reviewing ongoing and potential research on the reliability and accuracy of bloodstain pattern analysis methodologies. SWGSTAIN reviews relevant published scientific literature to determine validation issues that may need to be addressed.

**Recommendation 5:**
SWGSTAIN recognizes the need for research in human error and contextual bias. SWGSTAIN has developed guidelines for Standard Operating Procedures. These guidelines address the need

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for technical (peer) reviews of documentation, data, and conclusions presented for litigation. SWGSTAIN continues to develop quality assurance procedures to minimize bias.

Recommendation 6:
SWGSTAIN advocates research and development that advances measurement, validation, reliability, and information sharing. In addition, SWGSTAIN recommends proficiency testing in bloodstain pattern analysis and the establishment of protocols for bloodstain pattern analysis methods and practices.²,³

Recommendation 7:
SWGSTAIN endorses the principles of agency accreditation and individual certification. SWGSTAIN recommends development of a structure through which individuals can achieve internationally recognized certification in bloodstain pattern analysis and looks forward to providing assistance in the development and implementation of these programs.

Recommendation 8:
SWGSTAIN has published a Quality Assurance document that recommends quality assurance and control procedures for use with bloodstain pattern analysis.²

Recommendation 9:
SWGSTAIN advocates the establishment of an international code of ethics for forensic science professionals and the incorporation of that code within the existing SWGSTAIN professional code of ethics.

Recommendation 10:
SWGSTAIN advocates the development of meaningful educational programs for training future forensic scientists. SWGSTAIN is developing connections with university research and educational programs to advocate relevant research and development in bloodstain pattern analysis.

SWGSTAIN appreciates the opportunity provided by the NAS report to continue its participation in the development of the international forensic community in bloodstain pattern analysis.

Respectfully,

The membership of the Scientific Working Group on Bloodstain Pattern Analysis