Dr Martin Hall – Written evidence (FRS0037)

1 Background (Q1: Is forensic science contributing to the delivery of justice in the UK?)

As an Expert Witness in the Criminal Justice System (CJS), acting as a consultant for my institute directly to the Police Forces of England, Wales and Scotland and also through commercial forensic providers, it is my opinion that forensic science undoubtedly contributes significantly to delivery of justice in the UK. It does this by providing the tools to investigate evidence types that could not otherwise contribute to an investigation, by supporting the information provided by analysis of other types of evidence (e.g. eye witness statements) and, at early stages in an investigation, highlighting areas and time frames for investigation. Although forensic science research, its application and regulation undoubtedly go hand-in-hand, it is my opinion that, of these three areas, advances in forensic science through research have the potential to contribute most to the future effectiveness of the CJS, exemplified by the dramatic impact of the introduction of DNA techniques following research. My expertise is in a niche evidence type, forensic entomology, and my comments below relate specifically to that although they might apply equally to other similar types of evidence.

2 Understanding and use of Forensic Science in the Criminal Justice System (Q5: What is the level of understanding of forensic science within the Criminal Justice System amongst lawyers, judges and juries. How can it be improved?)

Last year I contributed to the Judicial College’s Coroners’ Officers Continuation Training Course, which highlighted issues and concerns with the investigation of death, natural or unnatural. This appeared to be an excellent format for raising awareness of forensic science within the CJS more generally.

In my own area of forensic science, funding cuts have led to a situation where I am called to collect evidence at scenes less often, evidence instead being collected by the investigating team at the scene. While this can be financially prudent it can be short sighted. Without significant training and experience by investigating teams of infrequently encountered niche evidence, such evidence, if collected at all, can be collected in a manner that makes subsequent robust analysis impossible, e.g., incorrect preservation and storage of evidence, incorrect quantity and quality of evidence and/or evidence overlooked. Sustained and regularly updated training of crime scene personnel is essential to mitigate this.

3 Forensic Science research landscape

Q12: How should further research funding for forensic science be justified?

There will always be a need for further forensic science research and we can never say we know enough to meet the demands for a forensic investigation. The rise of digital forensics is evidence of this, but even within existing branches
of forensic science new techniques continually arise that can be applied to improve and expand the currently accepted norm – research is essential to scope their relevance and potential future role in forensic investigation. For example, recent work using micro-computed tomography has provided an improved method for aging blow fly puparia recovered as forensic evidence\(^1\). As such equipment becomes increasingly available this new technique could be adopted routinely.

**Q15: Are there current or anticipated skills gaps? Who should have responsibility for and/or have oversight of training?**

Most commercial forensic providers focus on high demand and high throughput techniques for their core staff and input on niche evidence types is provided on a contract basis by external specialists. The latter often do not list the investigation of forensic evidence as their major role, they are instead employed in their institutes (e.g. universities, museums) mainly to carry out teaching and research. This can be healthy because there is a casework-research continuum, in which casework highlights lacunae in our knowledge that can be addressed by targeted research. However, it can also be problematic for a researcher/lecturer to take on casework because the unpredictable nature of forensic casework can make it difficult to meet the ongoing deadlines imposed by everyday research and teaching. In addition, forensic reports do not contribute to citation indices so they tend not to receive the academic recognition needed for career progression. Mechanisms need to be introduced to facilitate the entry of new practitioners into forensic casework, with recognition of the value of casework by their employers, to overcome the problem of a future skills gap. It is crucial that there are opportunities for the next generation of applied forensic scientists to gain casework experience to ensure continuity of the ability of the CJS to analyse forensic evidence, especially niche evidence.

In most areas of niche evidence the numbers of practitioners are few and so successional planning is important, to prevent periods when it becomes impossible to find someone with the required expertise to analyse the specific evidence type. The National Crime Database of Expert Advisers is a current tool that could be used now or adapted in the future to highlight present and future skills gaps to a dedicated group of stakeholders within the CJS, which will be the major beneficiary of successfully addressing these gaps.

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