

**PRESS RELEASE ON BEHALF OF THE FORENSIC INSTITUTE, GLASGOW
REGARDING THE CADDY REVIEW OF LOW TEMPLATE DNA
15TH APRIL 2008
For immediate release**

Following the judgment in the Omagh Bombing Trial (*R v Hoey* [2007] NICC 49 (20 December 2007)) including our extensive criticism of a technique used by the Forensic Science Service Ltd (FSS) to amplify and interpret very small amounts of DNA (known as “Low Copy Number” (LCN) DNA), a review was commissioned by the new Forensic Regulator. This review, conducted by Prof. Brian Caddy, Dr Adrian Linacre and Dr Graham Taylor was released last Friday (12th April 2008). It concluded that the technique was “robust” and “fit for purpose”, although that purpose was never defined.

We are at a loss to connect the content of the report with the conclusion. If this report is to represent the scope and the depth of the work of the new office of the Forensic Regulator then we are not optimistic for the future of the quality, and in particular the reliability, of science apparently approved by the Crown for use in British courts.

The Forensic Institute and other scientists acknowledge the fact that technologies exist to amplify small amounts of DNA. On that, there is ‘robust’ science published internationally by a range of institutions in a host of reputable journals. However, it is a fact that:

- The Review team did not consult anyone who had expressed contrary opinion on the merits of the FSS Ltd’s LTDNA technique and spoke only to the organisations selling the technique and to the police as ‘customers’. (This despite the Home Office’s own stated view that where commercial products are being “sold” to the police, “the police and others are not well placed to evaluate the quality of the service provided across the range of scientific disciplines...there needs to be a mechanism to identify poor providers or services and protect the police and Criminal Justice System (CJS) from them before procurement...and the police are not the only user of forensic science and the quality standards must reflect the needs of other stakeholders in the CJS.”¹)
- No agreement exists, even among the few providers of the service, about how the results of LTDNA profiling should be interpreted. In effect, the DNA profiles reported

¹ Home Office Consultation Document “Standard setting and quality regulation in forensic science” 31 August 2006 at para 12.

for LTDNA cases are likely to depend on which laboratory the material is sent to, which is clearly not the hallmark of a “robust” scientific technique.²

- There is no widespread scientific support for the technique used by the FSS Ltd, it is not internationally recognised as valid or reliable.
- Furthermore, it is accepted by the Review that what existed and was offered by the FSS Ltd at the time of the Omagh trial was not sufficient to establish the validity of the technique.
- There has been no opportunity for the international scientific community, nor anyone other than the three members of the Review panel, to assess the data claimed to support the validation of the technique.
- It is accepted by the Review, and apparently by the FSS Ltd, that they should apply the SWGDAM standards (developed by the *Scientific Working Group on DNA Analysis Methods*, a group of internationally renowned forensic DNA scientists) which were specifically proposed by Professor Jamieson in evidence at the Omagh trial. Despite this, the FSS Ltd were not compliant with these standards then, and are not compliant with them now.
- Even the Review insists that DNA profiling requires a quantitation step; the technique used by the FSS Ltd does not have a quantitation step, and is not adhering to best practice as recognised by the Review.
- DNA in forensic work frequently involves mixtures. The Report specifically recommends “more work” on the interpretation of mixtures (and indeed mentions mixtures only three times in 35 pages), despite the significance of mixtures in the forensic context and thus in criminal prosecutions.
- A scientific report, produced for a criminal appeal case by the FSS Ltd in March 2008, contained the statement, “Preliminary indications are that this report makes no significant criticisms of the LCN technique”. This means that the FSS Ltd and its staff had knowledge of the results of the Review at least three weeks prior to its release.

² The National Measurement System Chemical and Biological Metrology Website, part of the Department of Universities, Innovation, and Skills <http://www.nmschembio.org.uk/GenericArticle.aspx?m=108&amid=586> states: “Analytical measurements made in one location should be consistent with those elsewhere. *Why Is It Important?* Disagreements between companies or other organisations over analytical measurements waste time and cost money. If a supplier and purchaser reach different conclusions about a product or a service in which they are trading, both will have to bear costs in resolving their differences. The laboratories used may lose business or face legal costs if the dispute escalates. Regulations cannot be fairly enforced if the relevant analytical data show inconsistencies.”

This despite the fact that the Home Office specifically called for the Regulator to be “independent of any forensic science provider”.³

The Review therefore lacks sufficient authority to allow any weight to be attached to its findings until all of the defects identified by the Review and other scientists have been rectified, and the clear disagreements among providers and scientists nationally and internationally have been resolved. Even by the most generous interpretation, there is clearly no general agreement in the scientific community about the reliability of LTDNA analyses as performed by the FSS Ltd. This basic tenet of, for example the *Daubert* standard regarding the acceptability of forensic science evidence in courts in the USA, means that the UK is likely to see evidence presented that would not meet the standard of other comparable technologically and legally advanced systems.

In short, the Report carries less weight than even a single published scientific paper (of which there have been many on this topic) and should be accorded that insignificance until the data upon which the opinions are based are made available to all and have met general scientific approval. Until then, the description of the LTDNA technique sold by the FSS Ltd as “robust” or “fit for purpose” is a denial of the serious scientific questions which remain about the reliability and validity of the technique. Taking the review as the ‘final word’ on the technique is an error with potentially serious consequences for the reputation of British science and for the Criminal Justice System.

For further comment and information;

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³ Home Office Consultation Document “Standard setting and quality regulation in forensic science” 31 August 2006 at para 23: “The core proposal is that the Regulator would be independent of any forensic science provider”.