



### **D16 Post-Coital DNA Recovery Phase 2: Early Results From Participating Couples**

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After attending this presentation, the attendees will be able to review factors that may impact DNA detection after coitus as found in Phase 1 of the Post-Coital DNA Recovery Study<sup>1</sup> and will receive the results of Phase 2. This is a feasibility study on the methods and tools used in the Post-Coital DNA Recovery research in an early sample of participants.

This presentation will impact the forensic science community by providing attendees to plausible biological environmental explanations that impact DNA recovery (Phase 1) and present the research findings from the early group of couple participants (Phase 2) enrolled in the post-coital recovery of DNA.

The current published forensic science evidence implies that recovery of DNA occurs from the posterior fornix within a 36 hour time frame and from the cervix up to 72 hours. Medical infertility literature and one forensic study found that the cervix might yield DNA up to 72 hours. One forensic science publication found DNA at five days using routine analysis. When additional Y-STR methods were applied, DNA has been found up to seven days. Phase 1 of the Post-coital DNA Recovery research project brought together subject matter experts (SMEs) in 2010 to identify the biological and environmental factors that impact the recovery of DNA.<sup>1</sup> This presentation will briefly review Phase 1, including history of the 72 hour time limit for evaluation of victims and the methods for identifying factors that influence recovery of post-coital DNA. Attendees will be introduced to the IRB approved protocols and the feasibility study (Phase 2) of the first few couples that evaluated the procedures, methods, tools, and analysis of the blinded methodologies and evidence-based tools used by the data collectors. In the feasibility study (Phase 2) and the full-scale study (Phase 3), the data collectors and the evaluator will be blinded to the activities in the forensic laboratory. Demographic data will also be blinded to the data collectors, the forensic laboratory and the evaluator in Phases 2 and 3; however, the focus of the presentation will be on Phase 2, the barriers in the protocol for collection of sample data, the strengths in the implemented methods, reliability of the tools used to evaluate the environment of the vagina and cervix, and the reliability of the results of the data analysis from the first group of monogamous couples submitting samples according to the Post-coital DNA Recovery protocol. In summary, this presentation will briefly review Phase 1 identification of the biological and environmental barriers to locating DNA post coitus and present. Phase 2 that evaluates the feasibility of the methods, tools and protocols, as well as provide an explanation about the appropriateness and difficulty of using the new tools designed to capture specific characteristics of the female at the time of collection of the post-coital sample. These results are expected to provide specific insight for the researchers about the process and outcomes from the chosen methods so they may proceed to the full-scale study (Phase 3) with up to 150 couples entitled Post-Coital DNA Recovery. The feasibility results from Phase 2 will be presented and discussed.

#### **Reference:**

- <sup>1</sup> Speck, Patricia, et al. From the Bed to the Bench: Defining the Vaginal and Cervical Environment for Post-Coital DNA Recovery. *Proceedings of the 63<sup>rd</sup> Annual Scientific Meeting of the American Academy of Forensic Sciences*, Feb 21-16, 2011 Chicago, IL. Colorado Springs, CO: American Academy of Forensic Sciences, 2011

#### **Post-Coital DNA Recovery, DNA, Rape and Sexual Assault**