



**NUCLEIX PRESENTS DNA AUTHENTICATION TECHNOLOGY AT  
20<sup>th</sup> INTERNATIONAL SYMPOSIUM ON HUMAN IDENTIFICATION**

**Company Unveils New Elements of its Technology for Preventing Biological Identity Theft**

Las Vegas, Nevada, October 14, 2009 — Nucleix, Ltd., an emerging life science company specializing in forensic DNA analysis, announced that company researchers today presented its DNA authentication technology, a novel assay to distinguish between *in-vivo* (real) and *in-vitro* (fake) DNA, at the 20<sup>th</sup> International Symposium on Human Identification in Las Vegas, Nevada.

Earlier this year, Nucleix scientific co-founders Adam Wasserstrom, Ph.D., and Dan Frumkin, Ph.D., demonstrated that DNA evidence found at crime scenes can easily be falsified using basic equipment, know-how and access to DNA or a DNA database (1). Recognizing the need to safeguard the accuracy and credibility of DNA evidence in the field of forensics, the scientists developed a novel “DNA authentication” assay for combating this form of biological identity theft. Their study was published in the forensic industry’s leading peer-reviewed scientific journal, “*Forensic Science International: Genetics*.”

The Nucleix authentication assay is based on the fact that real DNA differs from fake DNA in biochemical properties, such as the methylation pattern. Specifically, *in vivo*-generated DNA contains genomic loci that are completely and consistently methylated and other loci that are unmethylated, differing from *in vitro*-synthesized DNA, which is completely unmethylated. Nucleix’s novel proprietary assay can identify and differentiate between real and all potential types of fake DNA through methylation analysis of a set of genomic loci. In this symposium, Dr. Frumkin presented further developments of the company’s DNA authentication technology. The Nucleix assay is comprised of a biochemical procedure followed by automatic signal analysis by a software application specifically designed for DNA authentication.

Details unveiled by Nucleix today demonstrate the ability to seamlessly integrate the company’s DNA authentication technology with the current standard DNA profiling procedure, thus maintaining the integrity of DNA evidence without a significant increase in expensive resources such as labor and materials. The company’s DNA authentication assay requires a minimal amount of DNA, makes use of equipment that is present in every forensic laboratory, and can be performed with profiling, thereby maintaining the current timeframe for sample analysis. In addition, profiling and authentication data can be combined into a single file, which is then analyzed by Nucleix's software, further reducing the complexity of integrating DNA profiling and authentication.

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“We are pleased to have the opportunity to present our breakthrough DNA authentication technology to peers in the forensics field,” said Drs. Wasserstrom and Frumkin. “Our goal is to provide an innovative Nucleix solution for ensuring DNA authentication that would enable rapid integration into current forensic analysis technology and workflow. This integration is necessary in order to maintain the high credibility of DNA evidence in the judiciary system.”

### **About Nucleix**

Nucleix, an emerging life science company specializing in forensic DNA analysis, has developed a "DNA authentication" assay for forensic casework samples with potential applications across multiple DNA analysis and validation fields. DNA fingerprinting has been established as one of the most important forensic tools in criminal investigations. Nucleix scientists have demonstrated the viability of creating artificial DNA and “biological identify theft.”<sup>1</sup> Using basic equipment and know-how, DNA with any desired profile can be fabricated in the lab, and this artificial DNA can then be planted in crime scenes as fake evidence. Until recently, there has been no way to distinguish between genetic profiles obtained from falsified DNA samples, which can appear identical to real biological profiles based on current analytical protocols and technologies. Nucleix’s proprietary assays can distinguish between "fake" (*in-vitro* synthesized) DNA, and "real" (*in-vivo* generated) DNA. The company is committed to developing state-of-the-art "DNA authentication" assays that can be integrated into the standard forensic procedure, in order to maintain the high credibility of DNA evidence in the courtroom and other uses. For additional information on Nucleix, please visit the company’s website at <http://www.nucleix.com>.

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<sup>1</sup> D. Frumkin, et al., Authentication of forensic DNA samples, *Forensic Sci. Int. Genet.* (2009), doi:10.1016/j.fsigen.2009.06.009