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## Generating human DNA profile(s) from cell phones for forensic investigation

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Cell phones were used to collect human DNA. Sufficient quantity and quality of human genomic DNA was obtained from the cell phones using Quantifiler<sup>®</sup> Human DNA Quantitation Kit (Applied Biosystems, Foster City, CA). Genetic profiles were developed from the DNA on the cell phones and were compared with the reference DNA profiles from the buccal cells of the cell phone owners. Complete STR profiles were generated from 33% (N=36) of the participants cell phones. In addition, 28% of cell phones had partial DNA profiles matched with the cell phone owners. While, 33% of the cell phones had unknown partial or complete profiles, four of the unknown partial profiles had more than two alleles at the STR loci indicating multiple unknown cell phone users. The Y chromosome was detected at the Amelogenin locus from the DNA profiles generated from two females cell phones identifying unknown male contributor(s). Our study demonstrates that DNA collected from the cell phones can be used as reliable physical evidence in forensic investigations.

### Biography

Khalid M Lodhi is an Associate Professor in the Department of Biological Sciences at Fayetteville State University (FSU). In addition, he serves as the Director of the forensic science program. He started his forensic career at ReliaGene Technologies as a Senior Scientist, where he was a member of team who worked on forensic DNA database. He then joined Indianapolis Marion County Forensic Services Agency as a forensic scientist, where he investigated over 100 criminal cases involving DNA and testified as an expert witness. He received several scholarships and prestigious awards to receive his education and career advancements such as NUFFIC/FAO fellowship, UNESCO research fellowship, Asia 21 Scholarship, Yoneyama Rotary Scholarship, Kenan Fellowship and Fulbright Specialist award. His current research interest involve (1) the identification of one or more individual(s) using Low Copy Number DNA from a touched object; (2) innovative methods of forensic education and (3) identification of one or more individual(s) from hematophagous insects. He supervises the research of graduate, undergraduate and high school students on these projects. He is the author of several high-ranking international peer reviewed journals. He is the member of American Academy of Forensic Sciences and International Association for Identification.

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