BETA TESTING OF A TARGETED NEXT GENERATION SEQUENCING SOLUTION FOR FORENSIC GENOMICS: THE 20/20 EXPERIENCE

S. Dennis, New York City OCME, Department of Forensic Biology

Illumina's Sequencing (NGS) by Synthesis (SBS) enables the entire human genome to be sequenced in one day. As a simpler yet highly effective alternative, forensic scientists can choose to perform targeted sequencing of PCR products. By sequencing a dense set of forensic loci, casework and database efforts are directed toward the genomic regions that best answer forensic questions, relieving privacy concerns and simplifying analysis. Because it does not depend on allele separation by size, the number of targets interrogated is not limited, allowing a more comprehensive result to be generated.

This presentation will describe the NYC OCME's experience and results of the beta testing of a targeted amplicon panel for forensic genomics developed by Illumina on their MiSeq FGx platform. This panel combines a core of global short tandem repeat markers used routinely today, along with additional forensic loci that can provide information when standard markers would fail to sufficiently resolve a case.