
SIGNIFICANCE OF KINSHIP STATISTICS AND THEIR INTERPRETATIONAL IMPLICATIONS IN FAMILIAL SEARCHES

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The Combined DNA Index System (CODIS) was developed to provide the law enforcement community with investigative leads to assist in the apprehension of the perpetrator of a crime. With the implementation of CODIS indices developed for the identification of missing persons and human remains, searches conducted specifically to uncover potential familial relationships have become a standard practice at the local, state and the national level. The potential of this type of search philosophy has begun to be considered for developing investigative leads in the more traditional criminal investigation indices: Convicted Felon and Forensic Unknown. Although the application of familial search methods would appear to be indistinguishable between these two applications, several underlying assumptions relevant to these types of database searches have yet to be addressed appropriately. Some of the assumptions directly affect the threshold or level of significance that may be placed on statistical interpretations of putative familial associations. We will discuss the nature and role that STR typing can play in the evaluation of kinship search results and provide an overview perspective of the interpretations that specific likelihood ratios may or may not suggest.