

# 3<sup>rd</sup> International Conference on Forensic Research and Technology

October 06-08, 2014 Hilton San Antonio Airport, USA

## Study of rapidly-mutating Y-STRs in endogamous Punjabi population from Pakistan

Atif Adnan<sup>1,2</sup>, Arwin Ralf<sup>1</sup> and Manfred Kayser<sup>1</sup>

<sup>1</sup>Erasmus MC University Medical Center Rotterdam, The Netherlands

<sup>2</sup>University of Health Sciences, Pakistan

A recently identified set of 13 rapidly-mutating (RM) Y-STRs (DYF387S1, DYF399S1, DYF403S1a/b, DYF404S1, DYS449, DYS518, DYS526I/II, DYS547, DYS570, DYS576, DYS612, DYS626, and DYS627) typically reveals higher haplotype diversities than the commercially available Y-STR sets and allows differentiating male relatives for which commercial Y-STR sets are usually not informative. Here, we amplified the 13 RM Y-STRs and the commercial Yfiler Y-STRs in 106 individuals from the Punjabi population of Pakistan, which is characterized by high rates of endogamy. The RM Y-STR set completely individualized all males tested (haplotype diversity of 1.0), while with Yfiler a haplotype diversity of 0.9951 was obtained. Mutation analysis of the RM Y-STRs in a typical Punjabi Pakistani family (four generations) has also been carried out.

[a.adnan@uhs.edu.pk](mailto:a.adnan@uhs.edu.pk)