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Authors: Barbara Karolina Zajac, Richard Zehner, Stefanie

Scheiper, Melanie Weissenberger

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### ACCEPTED MANUSCRIPT

# Kit-dependent discrepancy in D16S539 and general considerations for database matches

Barbara Karolina Zajac1\*, Richard Zehner2, Stefanie Scheiper2, Melanie Weissenberger1

1 Institute of Forensic Medicine and Traffic Medicine, Department for Forensic Genetics, University Hospital Heidelberg, Germany

2 Institute of Legal Medicine, Department for Forensic Biology, University Hospital Frankfurt, Germany

\*Corresponding author:

Barbara Karolina Zajac

barbarakarolina.zajac@med.uni-heidelberg.de<mailto:barbarakarolina.zajac@med.uni-heidelberg.de>

Institute of Forensic Medicine and Traffic Medicine

Department for Forensic Genetics

Vo?stra?e 2

69115 Heidelberg, Germany

E-mail Addresses:

zehner@med.uni-frankfurt.de<mailto:zehner@med.uni-frankfurt.de>

scheiper@med.uni-frankfurt.de<mailto:scheiper@med.uni-frankfurt.de>

weissenberger@med.uni-heidelberg.de<mailto:weissenberger@med.uni-heidelberg.de>

#### Abstract

Throughout the last decade more companies have been offering multiplex PCR kits for forensic STR typing. As a consequence, it has been demonstrated, that an observed genotype may unexpectedly vary at a single locus when different STR kits have been used. Analysing STR profiles which have to be entered in a national database, unknown or undetected primer binding site mutations, insertions or deletions within the flanking region of STR loci may hinder matches and therefore have far-reaching consequences. The current

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