PUBLISHER: ISABS – International Society for Applied Biological Sciences

CIRCULATION: 500 copies

Zagreb, May 2009

Copyright 2009

Video and/or audio-taping of any session is not permitted without prior approval from the speakers and from the scientific committee of the 6th ISABS Conference in Forensic Genetics and Molecular Anthropology

Presentation number: FG 9 Abstract number: ABS-67-ISABS-2009

Y STRs IN PROCESS OF DNA IDENTIFICATION OF WWII SKELETAL **REMAINS: CASE STUDY**

Cosovic M¹, Bego T², Popovac A³, **Crnogorac V**⁴, Dzehverovic M⁵, Avdic J⁵, Kovacevic L^{2,5}, Marjanovic D^{5,6}

¹Schering-Plough, Zagreb, Croatia; ²Faculty of Pharmacy, University of Sarajaevo, Sarajevo, Bosnia and Herzegovina; ³Pliva, Sarajevo, Bosnia and Herzegovina; ⁴Pharma-Swiss, Sarajevo, Bosnia and Herzegovina; ⁵Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina; ⁶Genos d.o.o. Zagreb, Croatia c.vedran@gmail.com

DNA analysis became almost the only solution in identification of victims\' remains from WWII. In this case study, PowerPlex 16 kit was used initially for obtaining this goal. Male victim's profile positively matched to certain male referent sample with lower probability. Since it was presumptive son-father matching case, additional analysis of Y-STRs markers was performed in the second phase of the project. Extraction of genomic DNA was performed according to the modified Qiagen protocol. QuantifilerTM Human DNA Quantification kit was used for quantifying human DNA. PowerPlex® Y System (Promega Corp., Medison, WI) kit was used for the amplification and detection of Y-STR loci. The detection of the results was completed on AB310 genetic analyzer. In this particular case study, usage of Y STR method helped in confirmation of previously obtained lower match.

Keywords: DNA analysis, Y chromosome, Y-STR, WWII, skeletal remains