



# FINAL PROGRAM AND ABSTRACTS

THE SIXTH ISABS CONFERENCE ON HUMAN GENOME PROJECT BASED  
APPLICATIONS IN FORENSIC SCIENCE, ANTHROPOLOGY  
AND INDIVIDUALIZED MEDICINE



June 1-5, 2009  
Split, CROATIA



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**CHALLENGES IN THE IDENTIFICATION OF WWII HUMAN REMAINS: USAGE OF Y-STR AND MINISTR APPROACH**

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The identification of human remains found in mass graves always employs different methods: identification by a living person, fingerprint analysis, dentition analysis, identification of special features, recognition of clothing and belongings, autopsy findings, the analysis by forensic anthropologists to estimate the species of the remains, sex, age, race, reconstruction of facial features from skulls, hair comparisons and DNA analysis. Since 60 years long time period from the end of the WWII, DNA analysis became the only solution in identification of victims' remains from that time. During the last few years, international scientific team was working on the challenging topic: DNA identification of the skeletal remains from the two WWII mass graves from Slovenia. Initially, PowerPlex 16 was successfully used for obtaining this goal. Additional analysis of Y-STRs markers was performed in the second phase of the project. Using this method, some of previously obtained lower matchings were confirmed and some of them were rejected. But in some cases both of those kits could not provide us any useful information. In those cases, we have performed analysis using two different miniSTR kits: PowerPlex S5<sup>®</sup> system and AB Minifiler. In some cases this approach gave us sufficient results for the strong, final conclusion about identity of processed human remains and proves it that the concept of miniSTR kits will certainly upgrade the analysis of DNA from old bones and teeth.

**Keywords:** human remains, WWII, DNA identification, Y-STR, miniSTR

**Suggested reading:**

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