PRESS RELEASE

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Zagreb University School of Medicine
Šalata 3b
10000 Zagreb
Croatia
Phone: ++385-1-4590-286
Fax: ++385-1-4590-222
Mail: dario.sambunjak@mef.hr
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Twelve-year experience of Split laboratory in identification of skeletal remains from mass graves

ZAGREB – DNA analysis was successfully applied in identification of skeletal remains from mass graves in Croatia, Bosnia and Herzegovina, and Voivodina in the last 12 years, according to a report published in the new, thematic issue of the *Croatian Medical Journal*. DNA analysis proved to be particularly useful in identification of victims whose remains were found several years after the war.

From 1993 to 2005, Split University Hospital Laboratory for Clinical and Forensic Genetics analyzed 1,155 skeletal samples and identified 703 bodies: 577 using standard forensic methods, 109 by DNA typing, and 17 by combination of these two methods.

The majority of identifications from 1993 to 1999 were achieved by standard forensic methods. The most commonly used method was identification of the remains by a living person who knew the deceased by direct facial recognition or recognition of special features, individual scars of marks. Other methods included matching of fingerprints or dentition.

In 42% of cases, these methods could not be used either because of extensive putrefaction or destruction of the remains, or because appropriate medical or dental records were not available. In such cases, DNA identification was requested and performed in the Split

laboratory. DNA analysis was necessary in identification of all skeletal remains found after 1999.

The crucial step in DNA analysis is extraction of genomic DNA. Team from the Split laboratory used several methods for extraction of DNA, confirming the effectiveness of the standard phenol/chloroform/isoamyl alcohol extraction, complemented with other methods and modifications,

The authors conclude that the advent of forensic DNA analysis methods greatly increased their ability to positively identify previously unknown skeletal remains by a comparative genetic analysis with presumptive relatives.

Correspondence to:

Vedrana Škaro
Ul. Grada Chicaga 21
10000 Zagreb, Croatia
vedrana.skaro@st.htnet.hr