

RESEARCH ACTIVITY

3D virtual facial reconstruction is an advanced and complex technique, which combines new hardware and software technologies, the most modern procedures of tridimensional modelization and rigorous scientific anthropological studies.

TRIDIMENSIONAL RECONSTRUCTION



TRIDIMENSIONAL RECONSTRUCTION OF THE INDIVIDUAL 392 STARTING FROM THE SKULL



SKULL OF US 392 FOUND IN S. SEVERA ARCHAEOLOGICAL SITE (LATIUM)

RESULTS/PRODUCTS

The application of 3D graphics can be exploited in the fields of human evolution and forensic anthropology, and also in the development of footage and documentaries: pre-production, production and post-production, from the storyboard to the final editing.

RESEARCH TEAM

University of Rome "Tor Vergata"

Olga Rickards
Cristina Martinez-Labarga

EVE Interactive Studios S.r.l.

Raoul Carbone

ACHIEVED APPLICATIONS

3D reconstructions in anthropological and forensics fields:

- Acquisition and scan of the find.
- Study and parametrization.
- Creation of tridimensional models.
- Creation of materic models in plastic polymers, starting from tridimensional reconstructions.

RESEARCH ACTIVITY

- DNA and more generally ancient biomolecules are considered a "*market place*" for the exploitation and management of cultural heritage.
- The most advanced biomolecular techniques are applied to human remains –bones and teeth– recovered in archaeological key sites spanning from Palaeolithic to Eneolithic in order to reconstruct the Neolithic transition in Italy.

RESERACH GROUP

Centre of Molecular Anthropology for ancient DNA studies, Villa Mondragone, Monte Porzio (RM),
Department of Biology, University of Rome "Tor Vergata"

Olga Rickards
Cristina Martinez-Labarga

MOLECULAR CHARACTERIZATION OF HUMAN REMAINS



sampling

bone sample pre-treatment



DNA extraction



PCR setting



RESULTS/PRODUCTS

The comparison of the first Italian farmers ancient DNAs (aDNA) with those of the Paleolithic, post-Neolithic and extant populations allows to quantify the degree of genetic changes related to the introduction of agriculture and pastoralism. Moreover, it permits to determine the extent of biological contribution that the first Neolithic populations to the groups who at present live in the Italian peninsula.

RESEARCHES IN PROGRESS

The aim our investigations is to relate the genetic and cultural changes that have occurred in the populations that have inhabited peninsular Italy over the last 30,000 years to their subsistence strategies, state of health, social complexity and environment.