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EU Programme: Horizon 2020

Call: Fight against Crime and Terrorism, SEC-08-FCT-2016 (part b): Forensics techniques on broadened use of DNA

Type of action: Research and Innovation Actions

Grant Agreement Number: 740580

Project title: Visible Attributes through Genomics: Broadened Forensic Use of DNA for Constructing Composite Sketches from Traces – VISAGE

Duration time: 1 May 2017 – 31 October 2021 (54 months)

Budget: 5 000 000,00 EUR

Partners: Erasmus University Medical Center Rotterdam, Coordinator (The Netherlands), Jagiellonian University (Poland), University of Santiago de Compostela (Spain), Medical University of Innsbruck (Austria), University of Cologne (Germany), King's College London (United Kingdom), University Hospital Cologne (Germany), Bundeskriminalamt (Germany), Institut National de Police Scientifique (France), Netherlands Forensic Institute (The Netherlands), Swedish National Forensic Centre (Sweden), Metropolitan Police Service (United Kingdom), Central Forensic Laboratory of the Police (Poland).

Description:

The VISAGE Consortium aimed to overcome the general limitation of current forensic use of DNA by broadening it towards constructing composite sketches of unknown perpetrators from traces recovered at crime scenes.

Currently used standard forensic DNA profiling is only successful in cases where a DNA profile recovered from a human biological crime scene trace matches that of a potential suspect, who is either directly available via police investigation or by searching criminal DNA databases nationally or across Europe. However, there is an "information gap" in cases where a perpetrator has successfully escaped police investigation in the respective case or when the perpetrator's DNA profile has not yet been added to the criminal DNA database.

VISAGE project aimed to bridge this gap by providing reliable intelligence information on appearance, age, and ancestry of the unknown trace donor - all representing **visible** attributes approached through **genomic** means (hence the Consortium's acronym **VISAGE**), as directly obtained from the trace DNA, which allows the construction of a composite sketch of the unknown trace donor.

By using this "biological witness" outcome information in the course of the case investigation, the search for the unknown perpetrator will be focused and police will be guided towards the most likely person, or group of persons, meeting the composite sketch outcomes established from the trace

DNA. Moreover, age, and to some extent bio-geographic ancestry information additionally allow searching in registers, which provides additional intelligence information.

The project achieved this overall aim by developing and validating a set of prototype tools, the new VISAGE Toolkit, for producing as detailed as possible appearance, age, and bio-geographic ancestry prediction information of an unknown trace donor as fast as possible, allowing the construction of composite sketches from DNA of as many as possible crime scene traces. The post project activities will focus on the implementation of VISAGE Toolkit in the relevant environment of routine forensic DNA service.