

FORMAT

FORENSIC METHYLATION ANALYSIS TOOLSETS FROM MOLECULAR CLUES TO JUSTICE'S FRONTLINES

11
PARTNERS

48
MONTHS

8
COUNTRIES

4.7M€
TOTAL GRANT

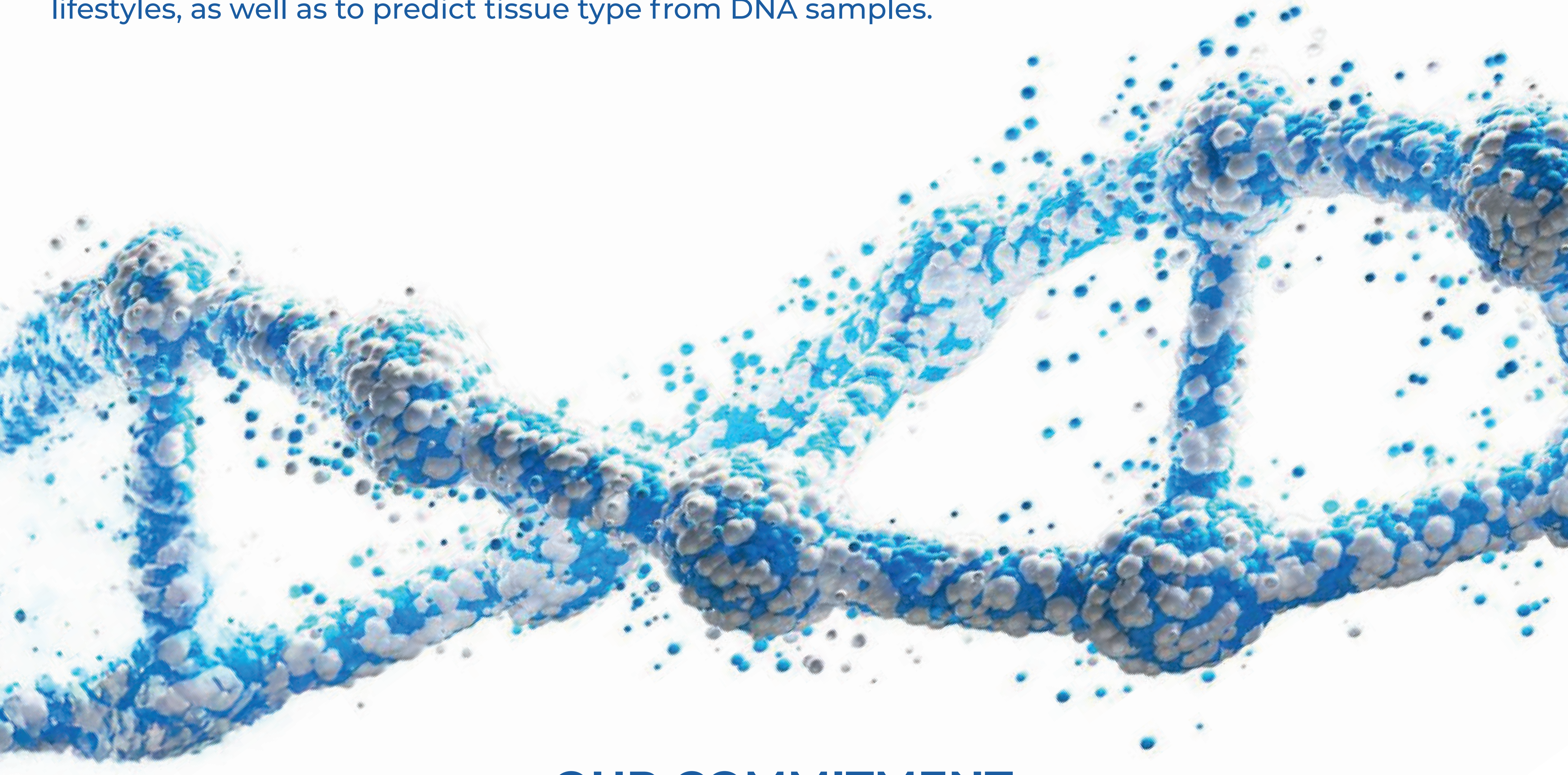
September 2025
August 2029

Spain, United Kingdom,
Portugal, Austria,
The Netherlands, Poland,
Sweden, and Germany

CHALLENGE, MISSION AND OBJECTIVE

ForMAT addresses the critical challenges faced by forensic and legal systems: unsolved criminal cases, the complex task of identifying human remains in mass disasters (DVI), and the need for radiation-free age assessment of asylum claimants.

Our mission is to translate cutting-edge DNA methylation (DNAm) research into practical, validated, and ethical tools for forensic sciences. This approach uses epigenetic markers to estimate age and lifestyles, as well as to predict tissue type from DNA samples.



OUR COMMITMENT



TECHNOLOGY ADVANCEMENT:

Building on previous work (VISAGE project), ForMAT is advancing tools from Technology Readiness Level (TRL) 5 to TRL 7.



STANDARDIZATION:

Developing new predictive models integrated into a user-friendly bioinformatic tool accessible to the scientific community, ensuring standardization of methodologies.



ETHICAL FOUNDATION:

Ethical, legal, and social implications are continually assessed throughout the project to ensure responsible implementation and adherence to privacy regulations, including GDPR, particularly concerning vulnerable groups.

KEY IMPACT AREAS: A THREE-STAGE INNOVATION PIPELINE



01 CRIMINAL INVESTIGATIONS (OPEN/COLD CASES)

Our aim:
To provide investigative leads in cases where traditional DNA profiling fails to find a match.

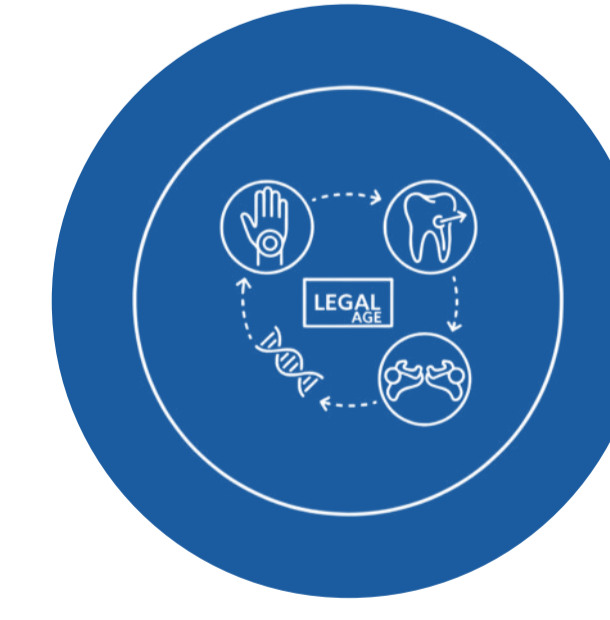
The solution:
The project is developing the DNAm somatic kit and DNAm germ-line kit to enable age estimation, identification of tissue-of-origin, and inference of lifestyle habits (e.g., tobacco/alcohol use) from trace DNA samples, narrowing the pool of potential suspects.



02 HUMAN REMAINS IDENTIFICATION (DVI)

Our aim:
To expedite the identification process of missing persons in mass disasters or grave sites.

The solution:
The DNAm DVI kit will use epigenetic age estimation to guide the identification of human remains, improving the efficiency of victims' identification and bringing closure to grieving families.



03 LEGAL AGE ASSESSMENT (ASYLUM CLAIMANTS)

Our aim:
To introduce a safer, high-accurate, and non-radiological method for assessing legal age.

The solution:
The DNAm legal age kit will employ advanced epigenetic analysis on 3rd Next Generation Sequencing (NGS) technologies to provide a high-accurate age estimation, serving as a radiation-free alternative to X-rays.



SCAN ME



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