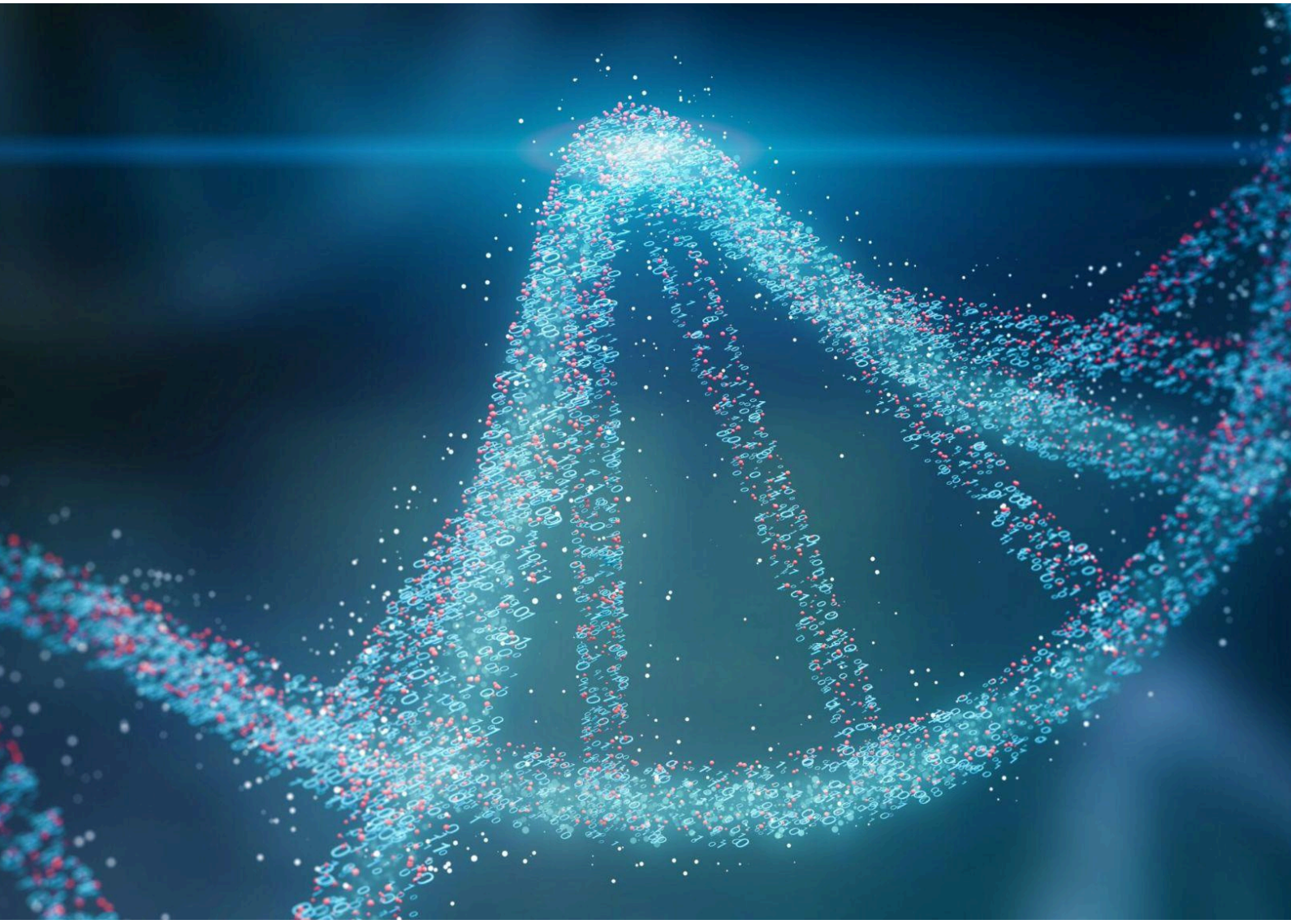
TargetMI Press Kit



L-Università ta' Malta

Leiden University Medical Center

European Innovation Council

Funded by the European Union

About us:

TargetMI: A Multi-Omics Approach to Novel Drug Targets, Biomarkers and Risk Algorithms for Myocardial Infarction is a 5-year €4 million project funded by Horizon Europe's European Innovation Council's Pathfinder Programme. Cardiovascular disease is a major cause of death & morbidity worldwide, with highly complex causes that involve genetic, lifestyle, & environmental factors. The goal is to combat coronary heart disease by developing biomarkers & risk algorithms to identify people at risk & applying a data-driven high throughput multi-omics approach for the rapid discovery of novel drug targets. TargetMI is coordinated by Prof. Stephanie Bezzina Wettinger from the University of Malta (UM), & the partner team at Leiden University Medical Center (LUMC) is led by Prof. Frits Rosendaal.

University of Malta (UM): The project is led by Prof. Stephanie Bezzina Wettinger from the Department of Applied Biomedical Science (ABS) at the Faculty of Health Sciences. The team is multidisciplinary and includes Dr. Panagiotis Alexiou (ABS), the European Research Area (ERA) Chair in Bioinformatics from the EU-funded BioGeMT ERA Chair project, and the ERA Chair team, other academics from the University of Malta, including Prof. Rosienne Farrugia (ABS), Prof. Melissa Formosa (ABS), and Prof. Jean Paul Ebejer (Centre for Molecular Medicine and Biobanking), together with staff employed specifically on the TargetMI project.

Leiden University Medical Center (LUMC): Led by Prof. Frits Rosendaal, chair of the Department of Clinical Epidemiology. Other team members include Dr. Bart van Vlijmen, from the Section of Thrombosis and Haemostasis of the Department of Internal Medicine, and Dr. Astrid van Hylckama Vlieg, from the Department of Clinical Epidemiology.

The project is also within a portfolio with two other EIC Pathfinder projects selected from the same Cardiogenomics challenge, namely B-Specific and MIRACLE.

Objectives:

The goal of TargetMI is to combat coronary heart disease by developing biomarkers & risk algorithms to identify people at risk early, and to develop novel drug targets that could be used to prevent heart attacks.

Website:

um.edu.mt/projects/targetmi

LinkedIn:

linkedin.com/showcase/targetmi-eu-project

Email:

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Prof. Stephanie Bezzina Wettinger

Coordinator and Principal Investigator of the TargetMI Project and Senior Researcher at the University of Malta

Prof. Stephanie Bezzina Wettinger is the Coordinator and Principal Investigator of TargetMI. Following a stint at the Academic Medical Center in Amsterdam as a Marie Curie fellow, she set up the Maltese Acute Myocardial Infarction (MAMI) Study (2008), the Malta Next Generation Sequencing project (2012), and TargetID (2020) — all nationally funded through the Malta Council for Science and Technology (MCST). These serve as a foundation for TargetMI. Her motivation is to develop tools and drugs to improve patient outcomes. She has extensive experience in biobanking, genomics and transcriptomics, and research project coordination.

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Available for interviews
Available for expert commentary

Prof. Frits Rosendaal

Principal Investigator and Chair of the Department of Clinical Epidemiology at Leiden University Medical Center

Prof. Frits Rosendaal leads the group at the LUMC in Leiden (the Netherlands) that participates in TargetMI. He is a cardiovascular epidemiologist and has performed many studies looking into causes of venous and arterial thrombosis, which were instrumental in the discovery of novel causes of thrombosis, such as Factor V Leiden. He is one of the most cited researchers in the field globally, and has received numerous prizes. He is elected fellow of the Royal Netherlands Academy of Arts and Sciences (KNAW), the German Academy Leopoldina, and the Academia Europaea.

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Available for interviews
Available for expert commentary

Logos:

Guidelines:

- Every dissemination/communication material must include four logos (in which all logos must be the same size, other than the TargetMI logo): the TargetMI project logo, the University of Malta logo, the Leiden University Medical Center Logo, and the European Innovation Council/Funded by the European Union logo. Each logo has two versions - one with text/images in colour (for light backgrounds), and one with text/images in white (for dark backgrounds).
- Where appropriate, the following disclaimer (stipulated by EISMEA) is also included: "Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Innovation Council and SMEs Executive Agency (EISMEA). Neither the European Union nor the granting authority can be held responsible for them."
- Communication materials always include the following: name of the project, the project website URL, the project logos, and acknowledgements to European Commission public funds. All publications and presentations will acknowledge the funding.

Colour

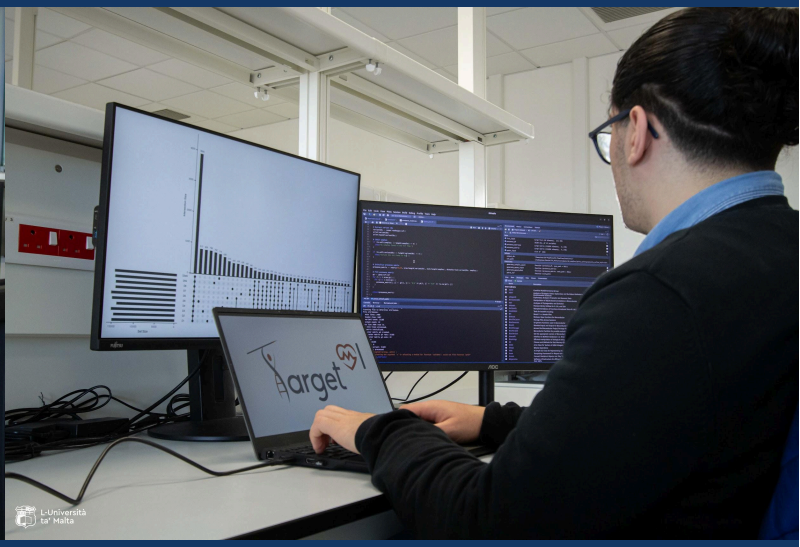
White

Key communication messages:

- Cardiovascular disease is the leading cause of death worldwide, taking an estimated 17.9 million lives each year (who.int/health-topics/cardiovascular-diseases#tab=tab_1), and it is predicted to increase to 23.3 million by 2030 (mainly from heart attacks and strokes) (academic.oup.com/eurheartjsupp/article/16/suppl_A/A7/358555).
- Coronary heart disease is a type of cardiovascular disease where blood flow is disrupted. If this happens in the brain, it causes a stroke, and if it happens in the heart, it causes a heart attack, in which part of the heart muscle dies. Coronary heart disease can arise from many factors such as lifestyle, environment, and genetics.
- Despite research on the genetic, lifestyle, and environmental factors associated with myocardial infarction, practical applications to prevent it remain limited.
- In TargetMI, we are using the latest technologies to measure levels of thousands of molecules in blood from over one thousand individuals collected in a previous study (the Maltese Acute Myocardial Infarction or MAMI study). These levels will then be extensively analysed computationally using bioinformatics to compare the differences between those who had a heart attack and those who did not. Genetic factors contributing to these differences will also be identified. The findings will help to establish risk algorithms and assays for potential biomarkers, which can then be used to identify who is most at risk for heart attacks. An approach of using this extensive data to identify robust drug targets is also being developed to accelerate the process for identifying new medicines that could help to prevent heart attacks, as well as other diseases.

Photos:

TargetMI wet lab work



Bioinformatics works on the TargetMI project

TargetMI weekly meetings

Some of the TargetMI team

Most of the TargetMI team

TargetMI Lead team members

Boilerplate from the European Innovation Council (EIC):

European Innovation Council:

The European Innovation Council (EIC) was established by the European Commission in 2021 following a 3-year successful pilot phase. It has a mission to identify, develop and scale up breakthrough technologies and disruptive innovation. It has a budget of over €10 billion for the period 2021-2027.

The funding and support are organised into three main funding schemes covering all technology readiness levels: EIC Pathfinder for advanced research to develop the scientific basis to underpin breakthrough technologies; EIC Transition to validate technologies and develop business plans for specific applications; and the EIC Accelerator to support companies (SMEs, start-ups, spin-outs and in exceptional cases, small mid-caps) to bring their innovations to market and scale up. The Accelerator provides a combination of grant support and direct equity investments in companies through a dedicated EIC Fund, which also provides a platform for co-investments with other investors.

For all schemes, the direct financial support is augmented with access to a range of Business Acceleration Services.

The strategy and implementation of the EIC is overseen by the EIC Board of twenty individuals from the innovation ecosystem (academia, business, investment, and ecosystem builders). The EIC also employs dedicated Programme Managers with high level expertise in their fields, to set the challenges and proactively manage portfolios of projects towards technological breakthroughs.

Also include:

1) The European Innovation Council is Europe's flagship innovation programme to identify, develop and scale up breakthrough technologies and game changing innovations. The EIC has been established under the EU **Horizon Europe** programme. It has a budget of €10.1 billion to support game changing innovations throughout the lifecycle from early-stage research, to proof of concept, technology transfer, and the financing and scale up of start-ups and SMEs.
2) Only the most innovative companies get selected. In the first year of the EIC Accelerator programme, out of more than 4,000 applicants, 164 projects were selected for funding. This shows how intense the competition is under the programme and demonstrates the high quality of the proposals funded.
3) A unique feature of the EIC is that it provides funding for individual companies (mainly start-ups and SMEs) through both grants and investments. The investments currently take the form of direct equity or quasi-equity investments, and are managed by the **EIC Fund**. The companies also receive tailor-made coaching and support in commercialisation – like facilitated access to overseas trade fairs.

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