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NextGen Project to Enhance Cardiovascular Wellbeing and Outcomes

An innovative initiative utilising artificial intelligence (AI) to tailor therapies for patients with cardiovascular disease was kicked off at a meeting in Utrecht, the Netherlands.

Funded by €7.6 million from the EU's Horizon Europe programme, the NextGen project will be executed by a 21-member consortium, including the European Society of Cardiology (ESC).

Cardiovascular diseases (CVDs) are the leading cause of global mortality, claiming nearly 18 million lives annually. In the EU, CVDs contribute to approximately one-third of all deaths. The economic toll of CVDs is substantial, estimated at €282 billion annually in the EU, equivalent to 2% of Europe's GDP. Moreover, CVDs impose significant personal burdens, often resulting in disability, work absences, premature retirement, and diminished quality of life.

Personalised medicine offers significant promise in alleviating the burden of CVDs. With genetic information becoming increasingly accessible and AI techniques being advanced, it has become much easier to utilise and combine data quickly.

NextGen aims to capitalise on these advancements by assembling a diverse coalition comprising clinical research organisations, universities, small and medium-sized enterprises (SMEs), and professional associations. This endeavour is intricate due to stringent data privacy regulations, diverse European standards, varied data formats, and the sheer magnitude of information.

The initial phase involves mapping existing initiatives to ensure the project's novelty and relevance. Consortium members will devise innovative tools to merge disparate data types securely while safeguarding individual privacy and enabling research use. The efficacy of these methods in overcoming current barriers to data integration in CVD will be validated through real-world pilot studies.

This effort will complement initiatives such as the 1+ Million Genomes project, which aims to facilitate secure access to genomics and clinical data across Europe, and the European Health Data Space, a governance framework for health data exchange.

Prof Panos Deloukas of Queen Mary University of London, UK, a consortium member, expressed enthusiasm for the project's potential in uniting CVD patient data across Europe and advancing precision medicine in cardiovascular healthcare.

Project coordinator Prof Pim van der Harst of University Medical Center Utrecht, the Netherlands, emphasised the importance of personalised medicine in optimising cardiovascular health. By compiling comprehensive individual profiles, NextGen seeks to pave the way for tailored therapies, ultimately enhancing cardiovascular well-being and outcomes.

Source: ESC

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