



November 14, 2024
For World Diabetes Day 2024

dAlbetes meets PRAESIIDIUM


The *dAlbetes* project is an innovative, Horizon Europe-funded initiative designed to revolutionize treatment approaches for type 2 diabetes by harnessing the latest advances in artificial intelligence (AI) and federated learning. With an international consortium of experts, *dAlbetes* is building a secure, federated health data infrastructure to support the development of virtual twins—digital replicas of patients' health profiles. These virtual twins will help healthcare providers predict and personalize treatment outcomes, paving the way for a new standard in diabetes care.

To develop these virtual twins, *dAlbetes* partners will integrate diverse health data from approximately 800,000 patients in Europe and USA into virtual twin models, all while adhering to stringent privacy regulations. The project employs federated learning, a privacy-preserving computational method that allows AI models to be trained on distributed datasets without requiring any data to leave its source location. This means that data remains securely behind firewalls, ensuring patient confidentiality while making effective use of large-scale health data.

The primary aim of *dAlbetes* is to provide personalized predictions for treatment outcomes in type 2 diabetes, addressing the critical, but unmet medical need for tailored guidelines in diabetes care. By harmonizing data from multiple patient cohorts in Europe and USA, *dAlbetes* will create virtual twin models that can be validated and deployed in real-world clinical settings. A corresponding software platform will ultimately serve as a model for next-generation patient registries, bridging current gaps in clinical guidance and supporting more effective, personalized patient care.

The *dAlbetes* consortium is a multidisciplinary team of experts in AI, software development, privacy protection, cybersecurity, legal and ethical considerations of using AI in healthcare, as well as diabetes research and treatment. This collaboration aims to create a roadmap for overcoming the often-competing demands of data privacy and large-scale data use in medical research, establishing a model for cross-border, privacy-conscious research.

Through this groundbreaking project, *dAlbetes* is committed to advancing medical research, improving patient outcomes, and contributing to the global development of precision medicine.

 Together with [PRAESIIDIUM](#), a Horizon Europe-funded project for AI-powered real-time prediction of prediabetes risk, we are excited to host a workshop in December 2024, in Rome, Italy. This event will bring together experts and leaders across fields to take a meaningful step toward our shared mission of advancing personalized type 2 diabetes care. Alongside fostering innovation and knowledge exchange, this workshop will provide valuable outreach to young students and budding scientists. We look forward to ongoing joint events, as we collectively work to create transformative (AI) tools for precision medicine.

Joint Post with PRAESIIDIUM for World Diabetes Day 2024
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