



MEDIA RELEASE

Europe's Innovative Health Initiative awards prestigious grant "CLAIMS", Enabling Precision Medicine for MS Patients

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Through the Innovative Health Initiative (IHI), the European Commission, together with several industry partners supports the CLAIMS (Clinical impact through AI-assisted MS care) project for almost 10 million euros. The CLAIMS project will run over the next 4 years to realize a companion diagnostic platform supporting the assessment and specification of disease worsening in Multiple Sclerosis (MS), and making data-driven precision medicine a reality for patients with MS (pwMS).


MS is a devastating autoimmune disorder of the central nervous system, affecting an estimated 700,000 patients in the EU and over 2.8 million patients globally. To date, there is no cure for MS. Multiple disease-modifying treatments are on the market that focus on the prevention of the acute inflammatory relapses of the disease. While such relapses are known to result in cumulative disease worsening if left untreated, recent evidence suggests that progression independent of relapse activity may instead be the most important driver of long-term cumulative disability worsening ⁽¹⁾.

Prof. Dr. Friedemann Paul, CHARITE-Universitaetsmedizin Berlin, coordinator of CLAIMS stated: *"In light of the serious burden Multiple Sclerosis imposes on people having to live with this condition any attempt to improve prediction of disease course on an individual level is a huge leap for patients. CLAIMS will make a relevant contribution to advancing the personalized provision of care to pwMS."*

The **CLAIMS** project aims to address the urgent need for a more data-driven and personalized clinical decision-support tool for pwMS, one that addresses the new insights in disease worsening due to both relapses and disease progression independent of relapses, and as such supports optimal treatment decisions and improved long-term patient outcomes. As such, our mission is to develop, validate, and seek regulatory approval for a companion diagnostic platform that provides a holistic view of each patient. This platform will visualize existing and new biomarker data, as well as predict disease trajectories under different treatment scenarios while accounting for comorbidities. Powered by deep-learning-based disease subtyping and progression models, this platform aims to enhance the precision of MS care, extending the patients' quality-adjusted life years, and reducing the economic burden on both individuals and society.

"The challenge in MS care is to provide individual patients with the right drug at the right time in order to preserve long-term neurological function. There is a great promise in implementing digital solutions to further improve MS care," says Annemie Ribbens, project lead for CLAIMS at icometrix. She continued *"With the CLAIMS project, we aim to use recent advances in deep learning-based AI for novel biomarker assessments and decision models to generate an improved understanding of disability worsening in MS, and to translate this to tools that support optimal treatment decisions in daily clinical routine."*

Fifteen partners from nine different countries are involved with this prestigious project, bringing together a range of multidisciplinary expertise from clinical, scientific, and technical fields. The list of partners includes key medical experts from leading European Hospitals in the field of MS, i.e., CHARITE-Universitaetsmedizin Berlin (coordinator), Centre Hospitalier Universitaire de Lille, Casa Di Cura Igea SPA, Vseobecna Fakultni Nemocnice v Praze, Ruhr-Universitaet Bochum and the Technische Universitaet Dresden. Through the European Charcot Foundation, the project ensures that the patient perspective is considered, and that the wider MS community is informed about the project outcomes and how they can improve the patient's care trajectories. With icometrix (project lead), Nocturne and AALTO university, the consortium also has tremendous experience regarding AI-based medical image analysis and prognostic modelling for MS. Synapse research management partners SL brings over a



decade of experience in European research project management to the table, ensuring milestones are met on time and within budget. Importantly, the consortium includes the leading pharmaceutical companies Bristol-Myers Squibb and F. Hoffmann-La Roche Ltd, and biotech companies IMCYSE and AB Science bring expertise translating results from the highly controlled setting of a clinical trial into real-world clinical practice. The diversity of the consortium is a true asset, ensuring all necessary expertise is available to achieve its challenging goals.

(1) Giovannoni et al., 2022, doi: 10.1177/17562864211066751

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