

ME-CFS25-001 - ME/CFS Biobank Austria

Abstract

Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) is a debilitating multisystem disorder characterized by profound fatigue, post-exertional malaise, cognitive impairment, sleep disturbances, pain, and autonomic, neuroendocrine, and immunological dysfunction. Despite its high prevalence (up to 0.8%), its pathomechanisms remain poorly understood. The considerable heterogeneity among patients, including sex-specific differences in hormone levels and distinct pathomechanistic profiles in patient sub-groups, underscores the need for precise stratification to enable biomarker discovery and targeted interventions. Biobanking represents a critical infrastructure to support these efforts.

The ME/CFS Biobank Austria, established in 2023 and harmonized with UK, the Netherlands', and German ME/CFS biobanks, addresses the lack of access to well-characterized patient samples, including those of severely affected individuals often excluded from research. The biobank employs an innovative approach combining comprehensive remote symptom assessment via standardized questionnaires (MBSQ, DSQ-PEM, Bell Scale, Klok Scale, Funcap55) in phase 1 of participation. Participation in phase 2 enables prioritized collection of blood, as well as biometric measurements according to international standards in addition to patient-based biospecimen collection (saliva, stool, urine). This ensures precise stratification while minimizing patient burden. All biospecimens are processed under a harmonized SOP framework and stored in an ISO 9001-certified biobanking environment, ensuring high comparability and suitability for international research collaborations.

The continued expansion of the ME/CFS Biobank Austria will support mechanistic studies, biomarker identification, and large-scale European research initiatives. Over the 18-month project period, up to 120 additional patient sample sets will be collected, strengthening a sustainable and high-quality resource for advancing ME/CFS research.

Scientific disciplines:

Immunology (40%) | Molecular biology (30%) | Data science (30%)

Keywords:

Myalgic encephalomyelitis/chronic fatigue syndrome biobanking standardization harmonisation biomedical data

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Status: Ongoing (01.01.2026 - 30.06.2027)

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Further links to the persons involved and to the project can be found under

<https://www.gmbh.wwtf.at/funding/programmes/ei/ME-CFS25-001/>