Long COVID EU Project Highlights

Recent Progress and Insights

The Long COVID EU Project is pleased to share the latest developments in its Long COVID research through its sixth newsletter. This issue provides an overview of recent engagement activities and outlines ongoing communication initiatives.

The project, funded by the EU and led by Helsinki University Hospital (HUS), is a collaborative, four-year effort focused on uncovering the mechanisms underlying the persistent symptoms experienced by individuals post-COVID-19. Since 1st of June 2022, the consortium has been working together to understand the mechanisms of host-virus response underlying the long-term symptoms following SARS-CoV-2 infection.

Research Insights: Understanding Long COVID Symptoms and Treatment

This issue highlights three recent publications from the Long COVID EU project consortium:

1. **Serum antineuronal antibodies in patients with post-COVID-19 condition – association to intensive care**

Post-COVID-19 condition (PCC) encompasses persistent, often neurological, symptoms emerging ≥3 months after SARS-CoV-2 infection and persist ≥2 months without an alternative diagnosis. Neurological symptoms are common in PCC, and immune-mediated mechanisms have been proposed as potential contributors.

In this study, serum antineuronal antibodies in 314 patients with PCC were explored, as well as clinical factors associated with seropositivity.

2. **Facilitators and barriers for return to work among patients with post-COVID-19 condition: a qualitative interview study**

Post COVID-19 condition (PCC) can have long-lasting adverse effects, including impacts on work ability. This study explores the facilitators and barriers in the return-to-work (RTW) process. Several factors influencing work ability and the RTW process were identified, including (i) individual-related factors, (ii) work-related factors, (iii) health care-related and (iv) social factors. It is concluded that due to PCC's multifactorial nature, complicated by work ability challenges, requires a holistic approach considering individual, social and work-related factors. Effective support involves understanding patients' experiences and fostering collaboration among healthcare providers, employers and the social security system to facilitate RTW, especially in prolonged cases.

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3. **Basel Long COVID Cohort Study (BALCoS): protocol of a prospective cohort study**

The recent pandemic caused by SARS-CoV-2 had a profound global impact. While many individuals recovered from COVID-19, some developed long-lasting symptoms that significantly disrupted daily life. The WHO defines this condition as post-COVID-19 condition (PCC). Common symptoms include fatigue, dyspnoea, sleep disturbances and cognitive difficulties. Increasing evidence suggests that PCC is a multifactorial condition, shaped not only by biomedical but also psychological and social factors. This study presents the protocol of the Basel Long COVID Cohort Study (BALCoS), which aims to improve understanding of PCC by capturing clinical, functional and psychosocial aspects through repeated assessments over the course of 1 year.

All peer-reviewed scientific Long COVID Project publications:

1. Rohner, Stefan; et al. **Basel Long COVID Cohort Study (BALCoS): protocol of a prospective cohort study**. *BMJ Open*. 2025. doi:10.1136/bmjopen-2024-093981
2. Sulg, Aleksandra; et. al. **Facilitators and barriers for return to work among patients with post-COVID-19 condition: a qualitative interview study**. *Scandinavian Journal of Primary Health Care*. 2025. doi: 10.1080/02813432.2025.2525434
3. Posharina, Tatiana; et al. **Serum antineuronal antibodies in patients with post-COVID-19 condition – association to intensive care**. *Brain Behav Immun*. 2025. doi: 10.1016/j.bbi.2025.05.026
4. Lammi, Vilma; et al. **Genome-wide association study of long COVID**. *Nat Genet*. 2025. doi: 10.1038/s41588-025-02100-w
5. Karisola, Piia; et al. **Patients with post-COVID-19 condition show minor blood transcriptomic changes, with altered erythrocyte gene expression in a male subgroup**. *Frontiers in immunology*. 2025. doi:10.3389/fimmu.2025.1500997
6. Vangelova-Korpinen, Velina; et al. **Effectiveness of mindfulness-based online therapy or internet-delivered cognitive behavioral therapy compared with treatment as usual among patients with persistent somatic symptoms: Protocol for a randomized controlled trial**. *PloS one*. 2025. doi:10.1371/journal.pone.0316169
7. Ojha, Ravi; et al. **Dynamin independent endocytosis is an alternative cell entry mechanism for multiple animal viruses**. *PLoS pathogens*. 2024. doi:10.1371/journal.ppat.1012690.
8. Stålnacke, S.; et al. **Functioning of post-COVID-19 patients: a cross-sectional study at the outpatient clinic for long-term effects.** *Scand J Prim Health Care*. 2024. doi: 10.1080/02813432.2024.2410986
9. Tatham, L.; et al. **Ronapreve (REGN-CoV; casirivimab and imdevimab) reduces the viral burden and alters the pulmonary response to the SARS-CoV-2 Delta variant (B.1.617.2) in K18-hACE2 mice using an experimental design reflective of a treatment use case**. *Microbiol Spectr*. 2024. doi: 10.1128/spectrum.03916-23

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10. Liira, H.; et al. **Prognosis of patients with post-Covid-19 condition: Prospective cohort cluster analysis at one year**. *J Psychosom Res.* 2024. doi: 10.1016/j.jpsychores.2024.111808

11. Virrantaus, H.; et al. **Prognosis of patients with long COVID symptoms: a protocol for a longitudinal cohort study at a primary care referred outpatient clinic in Helsinki, Finland**. *BMJ Open*. 2023. doi: 10.1136/bmjopen-2023-072935

12. De Neck, S.; et al. **The Stereotypic Response of the Pulmonary Vasculature to Respiratory Viral Infections: Findings in Mouse Models of SARS-CoV-2, Influenza A and Gammaherpesvirus Infections**. *Viruses*. 2023. doi: 10.3390/v15081637

13. Kettunen, P.; et al. **SARS-CoV-2 Infection of Human Neurons Is TMPRSS2 Independent, Requires Endosomal Cell Entry, and Can Be Blocked by Inhibitors of Host Phosphoinositol-5 Kinase**. *Journal of Virology*. 2023. doi: 10.1128/jvi.00144-23

These publications are also available in the Long COVID Community on Zenodo, a multi-disciplinary open repository maintained by CERN. Furthermore, they can be found on the Long COVID website as well.

Project Insights: Engagement activities of the Long COVID Project

This issue highlights recent engagement activities from the Long COVID EU project:

1. Long COVID Webinars

In May 2024, the Long COVID EU Project has officially launched its webinar series to inform citizens, engage key stakeholders, and reach a wider audience. Each webinar focuses on a specific topic and features presentations from our project partners, offering valuable insights into the project's progress, research approaches, and key findings. With interactive Q&A sessions, the webinars provide a dynamic platform for learning and exchange and are open to everyone interested in the topic.

In the past six months, our 3rd Webinar was held with the topic "Exploring Biomarkers: Insights into the Long COVID EU Project". Here, our three esteemed speakers form the consortium presented different aspects of the biomarker research in the project:

(i) Long COVID and Lipids,
(ii) Immunoprofiling of antibody immune response, and
(iii) Genetics Helping to Understand Disease Mechanisms.

You can find the webinar recordings online at the Long COVID YouTube Channel.

The next webinar will be implemented soon, on the 18th of November 2025!

This time the consortium partners will focus on the mechanistic studies of the Long COVID EU Project. We're thrilled to have our partners from the University of Zurich and the University of Helsinki to share their insights. Don't miss this valuable opportunity to deepen your understanding of Long COVID research. Secure your spot today by registering here.

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2. New project video on AI development

We're excited to share our latest video updates from the Long COVID EU Project! This edition takes you deeper into the project's AI development approach with our dedicated partner Giampaolo Pileggi, project manager in the biomedical AI group of the NEC Laboratories Europe GmbH.

Watch the video to gain first-hand perspectives from our clinicians and stay tuned for more behind-the-scenes updates, as our project partners continue to share their perspectives!

Don't miss an update – follow our YouTube channel to stay connected!

3. 6th Consortium Meeting in Helsinki

The project convened its 6th consortium meeting in Helsinki on 18th – 19th of June, gathering all partners to provide updates, review progress, and establish priorities for the coming year. Notably, two patient representatives from the COFFI collaborative participated, contributing valuable insights and guidance on incorporating the patient perspective into our research efforts. Day one started with introductory remarks from the project coordinator (HUS) and our host (Spinverse), followed by comprehensive work package presentations detailing recent scientific progress. The agenda also included discussions to establish the roadmap for the final year of the project. On the second day, participants engaged in an interactive session with group activities focused on planning the development of the final publication, which will offer an integrated summary of the project's outcomes. Additionally, attention was given to non-scientific work packages, including project management, dissemination, communication, and exploitation. A notable highlight was the insightful feedback provided by patient representatives from the COFFI collaborative, who contributed their perspectives throughout the meeting.

Upcoming Events:

Looking ahead, the Long COVID EU project will host the next webinar on the 18th of November 2025.

This time, the webinar dedicated to explore the gain insights into the mechanistic studies. Registration details are available here.

For more information, see the
6th Long COVID Newsletter

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4th consortium meeting in Rovereto, Italy, on the 10th and 11th of June 2024.

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