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iPROLEPSIS

Horizon Europe-funded project developing a novel personalised digital care ecosystem for people with PsA

iPROLEPSIS project newsletter | Issue No. 10

November 2025

Welcome to the 10th edition of the iPROLEPSIS project newsletter. In this issue, we bring you insights into World Psoriasis Day, HaDEA article, past and upcoming events, and much more.

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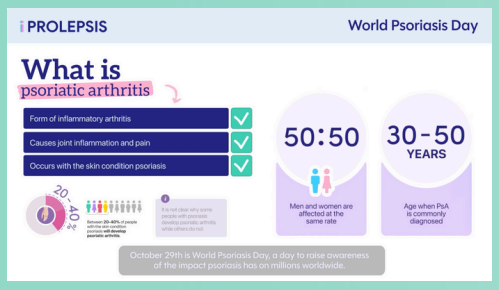
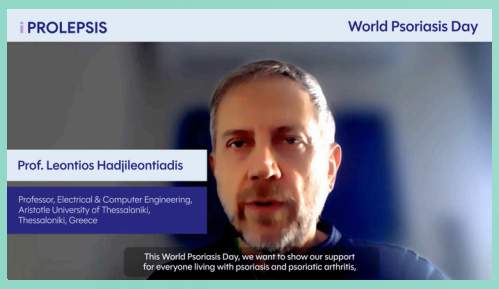
Project Highlights

World Psoriasis Day 2025

29 October marks **World Psoriasis Day** – a day dedicated to raising awareness of the impact psoriasis has on millions worldwide.





For many, the condition goes beyond the skin: up to 30% develop psoriatic arthritis, an inflammatory disease that causes joint pain, stiffness, and fatigue, significantly affecting daily life.

This year's World Psoriasis Day video highlights how iPROLEPSIS is working to advance psoriatic arthritis prevention and care. Through clinical studies, digital biomarkers, and co-created digital health tools, the project aims to support early detection, timely monitoring, and personalised care.

Watch the video

HaDEA article

On World Psoriasis Day, the European Health and Digital Executive Agency (HaDEA) highlights how the iPROLEPSIS project is advancing early detection and personalised care for psoriatic arthritis.

In an interview with **Prof. Leontios Hadjileontiadis, project coordinator,** HaDEA explores how iPROLEPSIS brings together clinicians, researchers, and data scientists to transform psoriatic arthritis management across Europe. The discussion covers the project's use of AI and biological data to build comprehensive patient profiles, its collaborative approach between dermatology and rheumatology, and the importance of EU funding and ethical, cross-border cooperation in enabling innovation.

Read the full article on HaDEA's website

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Knowledge base

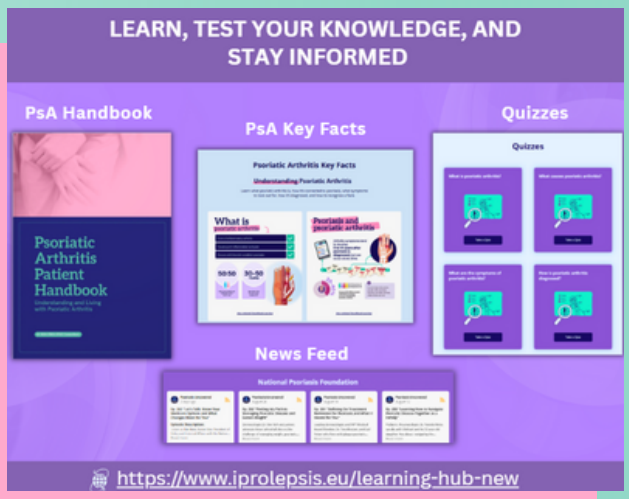
A Refreshed Space to Learn More About Psoriatic Arthritis

The **iPROLEPSIS Learning Hub** has been redesigned and expanded with a new look, improved structure, and additional content – making it easier and more engaging to explore. The updated platform offers accessible information and practical resources about psoriatic arthritis, supporting anyone who wishes to better understand the condition and its management.

Already visited by 160 people.
Will you be next?

The renewed Learning Hub brings together several sections that guide visitors through different aspects of psoriatic arthritis:

- **Psoriatic Arthritis Handbook** – an overview of psoriatic arthritis, including symptoms, diagnosis, and management.
- **Key Facts** – short explanations and definitions to help understand key topics.
- **Interactive Quizzes** – quick checks to support learning in an engaging way.
- **News Feed** – a selection of updates and materials from external, recognised sources.



Visit the renewed Learning Hub

The Learning Hub provides an easy way to explore psoriatic arthritis – its characteristics, treatment options, and impact on daily life.

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Interview

In a recent interview with Thessalonikeon Polis, Vasilis Charisis and Project Coordinator Prof. Leontios Hadjileontiadis from the Signal Processing & Biomedical Technology Unit – AUTH shared insights on the iPROLEPSIS project.

The interview **highlights the iPROLEPSIS** project, showing how smartphones and wearables can assist in early detection and prevention of psoriatic arthritis through digital tools such as wearables, educational games, and personalised apps. It also touches on AI in healthcare, stressing its role in supporting – not replacing – healthcare professionals.

Read the full article (in Greek)

Events

IEEE HealthCom 2025

21 October 2025
Abu Dhabi, UAE

The iPROLEPSIS team from the Signal Processing & Biomedical Technology Unit – AUTH participated in the IEEE HealthCom 2025 Conference, held 21–23 October 2025 and hosted by Khalifa University in Abu Dhabi, United Arab Emirates.

The event gathered international experts in **digital health, artificial intelligence,** and **biomedical technologies** to discuss how AI can improve the understanding and management of **non-communicable diseases.**

Modeling joint swelling assessment through smartphone photographs

Giorgos Apostolidis *from the* ***Signal Processing & Biomedical Technology Unit – AUTH*** *presented the paper "Modeling Interphalangeal Joints for Swelling Assessment in Psoriatic Arthritis via Smartphone Photographs".*

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Events

By analyzing smartphone photos of hands, the study showcased that a digital estimation of joint thickness, namely **effective width,** with the aid of a **logistic regression model,** can serve as an effective tool for detecting interphalangeal joint swelling in people with **PsA.** This approach was validated on a real-world dataset collected within the PDPID study.

Designing exergames for Psoriatic Arthritis care

Prof. Leontios Hadjileontiadis (Signal Processing & Biomedical Technology Unit – AUTH) *presented the paper "Designing Exergames for Psoriatic Arthritis: The Spy and Zen Forest Paradigms".*

The **Spy** and **Zen Forest** exergames were co-designed to complement PsA care by making therapeutic exercises more engaging and accessible at home. Using **real-time** body tracking on mobile devices, these games promote dynamic movement to enhance mobility and strength, and **calm stretching** for flexibility and relaxation.

Panel discussion: Digital Bridges for Better Health

Project Coordinator Prof. Leontios Hadjileontiadis, Scientific & Technical Manager Vasileios Charisis, *and* ***Stelios Hadjidimitriou*** *from the* ***Signal Processing & Biomedical Technology Unit – AUTH,*** *together with* ***Dr. Kosmas Dimitropoulos*** *from the* ***Centre for Research & Technology Hellas (CERTH)*** *and* ***Prof. Mohamed Seghier*** *from* ***Khalifa University,*** *participated in the panel discussion "Digital Bridges for Better Health: AI Innovation from Europe to the Middle East and North Africa (MENA)", moderated by Giorgos Apostolidis.*

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Events

The panel provided insights into:

- The technical challenges in integrating AI with existing healthcare IT systems,
- How key stakeholders can collaborate to ensure AI digital health tools are user-friendly and clinically relevant,
- The role of patient engagement and digital literacy in the effectiveness of AI tools in chronic disease management
- How socio-cultural differences between Europe and MENA can influence the design and adoption of AI digital health solutions
- What are the key regulatory challenges in Europe and MENA regarding the use of AI in healthcare and what joint efforts can be undertaken to harmonize standards in these regions

During the session, the iPROLEPSIS project and its AI-enabled digital health tools for assisting **Psoriatic Arthritis management and care** were highlighted as a case study of AI solutions with potential to improve outcomes for people with **non-communicable diseases.**

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Events

Workshop chairing

Scientific & Technical Manager Vasileios Charisis *from the* ***Signal Processing & Biomedical Technology Unit-AUTH*** *co-chaired the workshop "AI-enabled Digital Health Tools for Non-Communicable Diseases: From Concepts to Impact". The workshop was co-organised with the AI-PROGNOSIS Horizon Europe project and included research works in the fields of psoriatic arthritis, Parkinson's disease, multiple sclerosis and post-stroke rehabilitation.*

Two of the presented papers stem from research carried out within iPROLEPSIS:

- Apostolidis et al., Modeling Interphalangeal Joints for Swelling Assessment in Psoriatic Arthritis via Smartphone Photographs
- Ramalho et al., Designing exergames for psoriatic arthritis: The Spy and Zen Forest paradigms

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Events

HLTH Event 2025

19-22 October 2025
Las Vegas, USA

iPROLEPSIS PDPID application was presented at the **GBIP Digital Health USA roadshow** in Las Vegas at **HLTH Event 2025** through our development partner, **WELLICS.** This marks an important step in showcasing how iPROLEPSIS can support improved personalized PsA management, increased awareness, continuous health monitoring, and digital inclusion on a global scale.

European Researchers' Night 2025

26 September 2025
Oeiras, Portugal

On 26 September 2025, iPROLEPSIS took part in the **European Researchers' Night** in Oeiras, Portugal.

Researchers **Bárbara Ramalho, Samuel Gomes, Filipa Magalhães, and Rodolfo Costa from Faculdade de Motricidade Humana / Instituto Superior Técnico - ULisboa** presented the iPROLEPSIS Games to a wide audience.

The European Researchers' Night is an annual initiative that brings science closer to the public, creating opportunities for direct interaction between researchers and society. Visitors in Oeiras engaged with activities from different scientific fields, including interactive presentations and hands-on demonstrations, designed to raise awareness of ongoing research and its impact.

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Events

HiTech 2025 pitch for iPROLEPSIS Games

26 June 2025
Lisbon, Portugal

The iPROLEPSIS Games were presented at HiTech 2025, a program by HiSeedTech.

The pitch introduced the use of serious games to support treatment for Psoriatic Arthritis (PsA), focusing on symptoms like mobility, pain, breathing, and emotional well-being.

Watch the video

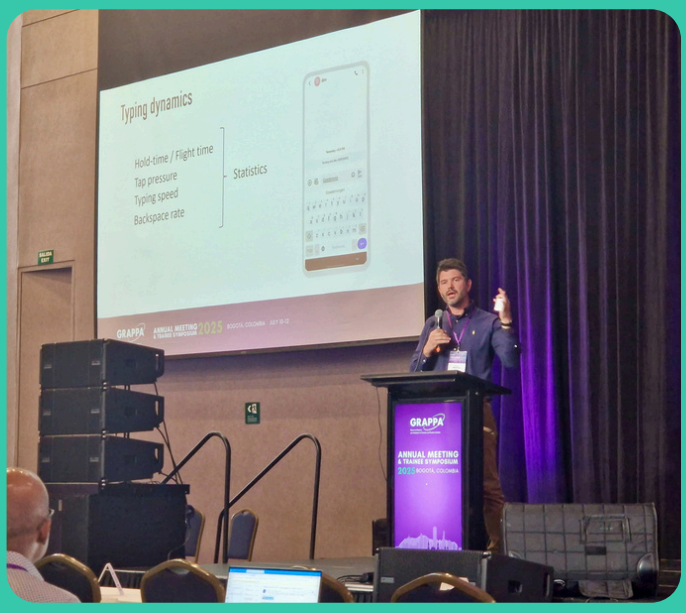
GRAPPA 2025

10–12 July 2025
Bogotá, Colombia

iPROLEPSIS participated in the **GRAPPA Annual Meeting 2025,** held on 10–12 July in Bogotá, Colombia. **Vasilis Charisis (Aristotle University of Thessaloniki – AUTH)** presented an overview of the project's key objectives and emerging results.

The talk highlighted how digital biomarkers – captured via smartphone typing dynamics and video-based motor tasks – can support the assessment of hand function in real-world conditions.

The session reached approximately **350 stakeholders,** including clinicians, researchers, and industry representatives, helping raise awareness of iPROLEPSIS and its goals within the psoriatic disease community.



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Clustering and Networking

iPROLEPSIS Presented at the MULTIPULM Project Kick-Fff Meeting

29–30 September 2025
Athens, Greece

The iPROLEPSIS project was presented during the kick-off meeting of the **MULTIPULM** project, held on 29–30 September in Athens.

iPROLEPSIS partners **Aristotle University of Thessaloniki (AUTH), Faculdade de Motricidade Humana (FMH),** and **Wellics** participated in the meeting, which brought together researchers, clinicians, user research experts, and technology providers.

Several **tools developed within iPROLEPSIS – including the breathing games created by FMH and the biAURA app developed by AUTH – will be further used in MULTIPULM.** These tools will be adapted to the local needs of the project's pilot sites in Brazil, Serbia, and Türkiye, and evaluated in relevant clinical studies.

Collaboration

This collaboration demonstrates the **adaptability** and broader **potential** of iPROLEPSIS digital tools beyond psoriatic arthritis, supporting research in other chronic conditions.

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Clustering and Networking

iPROLEPSIS, AI-PROGNOSIS & REBECCA: A Thematic Cluster on AI-Driven Digital Health

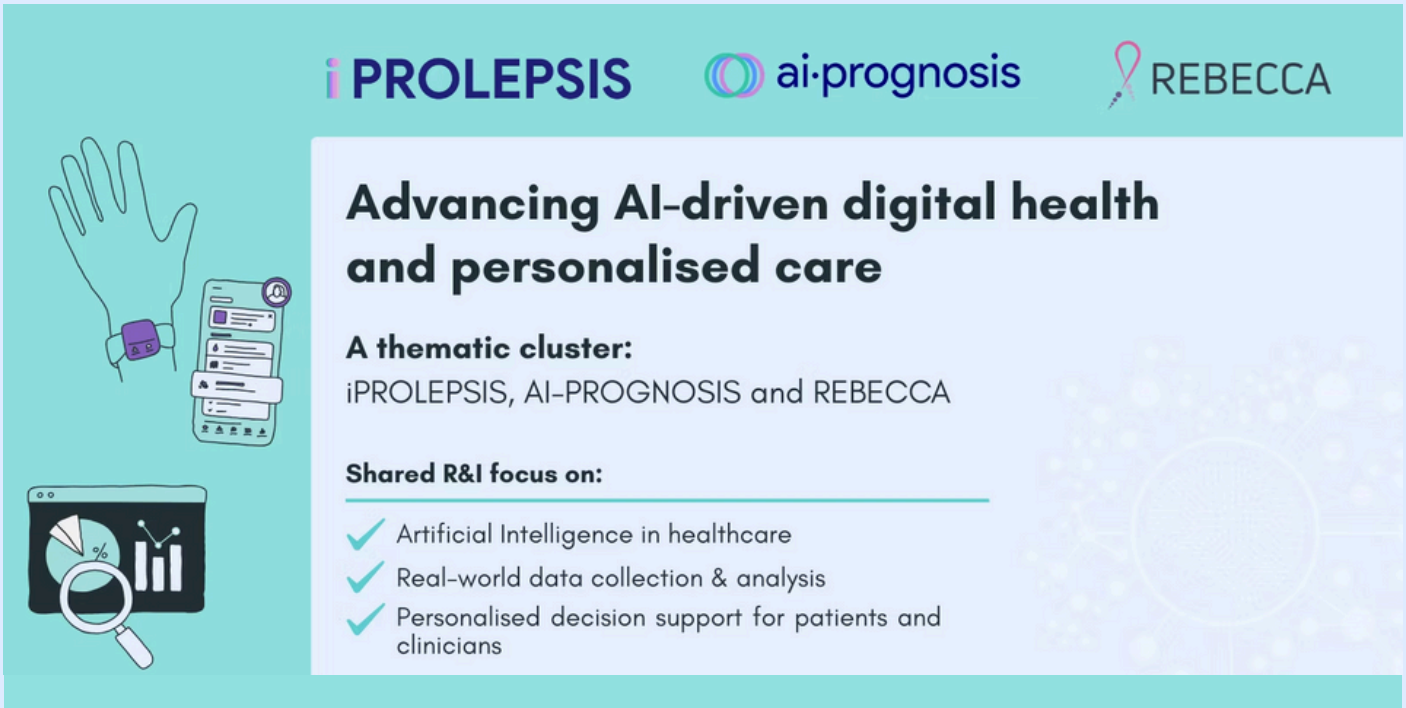
Three EU-funded projects exploring real-world data, wearables, and personalised care in healthcare innovation.

Have you ever asked yourself how to make AI really effective along the patient journey? That was one of the first questions we asked ourselves when we launched our project. Along the way, we discovered we weren't alone – many other research initiatives working with AI in healthcare were asking the same thing.

That's why we decided to take a step forward and create a cluster: a concrete way to **collaborate,** foster the **impact** of our **solutions,** and improve them through scientific exchange and an open science approach.

Cluster

AI-PROGNOSIS, iPROLEPSIS, and REBECCA – three EU-funded projects to advance patient-centric AI in healthcare.



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Upcoming Events

7th Plenary meeting

9-10 December 2025
Lisbon, Portugal

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