ArteryPhen

CHUS–IDIS
Santiago de Compostela, Spain

From candidate biomarkers to clinical evidence

Existing data. Prospective phenotyping. Clinical validation.

01 EXISTING RESOURCE



500+

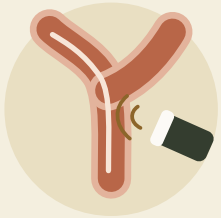
enrolled participants

GlycOxiTOD registry

Clinical data · vascular imaging
Selected biomarkers

Completeness varies by modality

02 WITH FUNDING



Prospective phenotyping

Standardised visits
Vascular imaging
Biosampling and follow-up

03 PROPOSED VALIDATION



Independent clinical validation

Separate validation participants
Locked models
Clinical comparators

PARTNER INPUT Candidate biomarkers + established AI methods

Schematic collaboration model

Seeking a biomarker-led consortium

Clinical partner / validation work package

Experienced Horizon coordinator
Basic / translational biomarker groups

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HORIZON-HLTH-2027-02-TOOL-01-two-stage

Source: investigator-provided GlycOxiTOD / ArteryPhen material, October 2026. Data access subject to approvals.

HORIZON EUROPE / BIOMARKERS & ARTIFICIAL INTELLIGENCE

From candidate biomarkers to clinical evidence

Existing data. Prospective phenotyping. Clinical validation.

ArteryPhen is a clinical–translational cardiovascular research line at CHUS–IDIS. We seek a biomarker-led consortium in which we can contribute existing clinical data, undertake funded prospective phenotyping and deliver independent clinical validation.

Target topic HORIZON-HLTH-2027-02-TOOL-01-two-stage

1 **Existing clinical resource**

GlycOxiTOD: 500+ enrolled participants, with clinical, vascular imaging and selected biomarker data. Available subsets—not a uniformly complete multimodal dataset. [1]

2 **Funded prospective data generation**

Standardised visits, biosampling, vascular assessment and longitudinal follow-up, designed around the consortium's biomarker and clinical question.

3 **Proposed independent validation**

Evaluation of candidate biomarkers and locked models against prespecified clinical comparators, using participants separate from model development.

Clinical capabilities

Vascular imaging

Carotid/femoral ultrasound, plaque assessment and carotid intima–media thickness.

Clinical phenotyping

Blood pressure, ambulatory monitoring, risk factors, treatments and follow-up.

Molecular research

Glycation, oxidative stress and inflammation; blood and urine sampling expertise.

Exploratory digital biomarkers

Carotid/peripheral photoplethysmography and engineering support; an optional module.

The partnership we are seeking

An experienced Horizon coordinator and basic/translational groups with promising biomarkers, working with AI partners and complementary clinical cohorts. Our preferred role is a funded clinical partner, leading a validation work package or substantial clinical task.

COLLABORATION FRAMEWORK

A clinical work package, not just patient recruitment

Initial focus: hypertension-associated vascular damage and disease progression. The biomarker, intended clinical use and study design would be agreed with the consortium.

How we would work together

Define and audit. Agree the clinical question, endpoints and comparators; document usable data, sample suitability and recruitment capacity.

Set up and deliver. Harmonise procedures, secure the necessary approvals, recruit or recall eligible participants, collect samples and maintain follow-up.

Validate and interpret. Lock the model and analysis plan before confirmatory testing; assess reproducibility, discrimination, calibration and added clinical value.

Designed for credible validation

Development data must already be available across the consortium. Validation participants remain separate from model development. Sample size and follow-up follow the endpoint, not the registry count. Treatment-benefit prediction requires appropriate comparative data and design. [2]

What the funding would enable

Dedicated research nursing, imaging and data-management capacity; protected clinical time; agreed assays, consumables and sample handling. Funding would turn established clinical access into systematic, protocol-driven delivery. Tasks, staffing and budget would be costed with the institution.

The team behind the clinical contribution

Néstor Vázquez Agra Clinical lead; Juan Rodés researcher, JR23/00018
Antón Cruces-Sande Molecular biomarkers and glycoxidation
Emma López-Prado Biomedical engineering and signal analysis
Óscar Seoane-Casqueiro Research nursing and device evaluation
Álvaro Hermida Ameijeiras Senior hypertension and vascular-risk expertise

Selected evidence

Plasma/urinary thiols in hypertension. J Clin Med (2026)

Independent ambulatory BP device evaluation. Rev Clin Esp (2026)

Discuss a clinical validation partnership

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[1] Investigator-provided GlycOxiTOD/ArteryPhen material, October 2026; NCT06325800.
[2] Supplied Horizon Europe Health Work Programme 2026–2027, TOOL-01, pp. 162–166.
Data and sample access remain subject to consent, ethics and institutional authorisation.