HAPPY HOLIDAYS AND BEST WISHES FOR THE NEW YEAR!

From the entire Biosfer Teslab team

Dear collaborators, clients and friends,

At Biosfer Teslab, we would like to thank you for your trust and support throughout 2025, a year in which we have continued to move forward in our commitment to innovation in health.

As the year comes to an end, we take a brief look back at some of the projects, publications, and activities that have marked our work over the past year.

This newsletter highlights advances in research, development, and innovation, as well as collaborations and participation in scientific conferences, reflecting our ongoing effort to translate knowledge into the clinical setting.

Thank you for being part of our community!

SCIENTIFIC ARTICLES – 2025

During 2025, Biosfer Teslab consolidated its scientific leadership with the publication of more than 20 articles, reflecting our continued commitment to research in metabolomics, lipoproteins, glycoproteins, and multi-omics approaches, applied to the understanding and management of cardiovascular, metabolic, inflammatory, and oncological diseases.

- Rehues P et al; A Robust Multivariate Approach Unveils a 1H-NMR-Based Spectral Metabolomics Signature Predictive of Cardiovascular Disease in People with Type 2 Diabetes: A Prospective Di@bet.es Cohort Study. J Proteome Res. 2025 Dec 5;24(12):6131-6141.
- García-Mateo S et al; Plasma protein glycosylation: a biomarker for predicting metabolic dysfunction-associated steatotic liver disease in inflammatory bowel disease. Rev Esp Enferm Dig. 2025 Nov 17.
- Carmona-Maurici J et al; A Potential Ratio for Detecting Subclinical Atherosclerosis: Insight into Advanced NMR Lipid Profiles in Severe Obesity. J Cardiovasc Transl Res. 2025 Dec;18(6):1805-1817.
- Santos-Pujol E et al; The multiomics blueprint of the individual with the most extreme lifespan. Cell Rep Med. 2025 Oct 21;6(10):102368.
- Amigó N et al; Triglycerides as Determinants of Global Lipoprotein Derangement: Implications for Cardiovascular Prevention. Int J Mol Sci. 2025 Aug 26;26(17):8284.
- Bernaldo de Quirós Fernández M et al; Glycoprotein Determination with NMR Spectroscopy to Evaluate the Effect of Metabolic Surgery over the Proinflammatory State of Patients with Obesity. Obes Surg. 2025 Sep;35(9):3422-3429. doi: 10.1007/s11695-025-08147-2. Epub 2025 Aug 7. PMID: 40773088.
- Comi, L et al; Metabolomic and functional characterization of human cell models to investigate the pathogenetic mechanisms underlying obesity and metabolic dysfunction-associated steatotic liver disease. Atherosclerosis, Volume 407, 119889
- Sopic, Sandra V et al; Targeted NMR metabolomics reveals sex-specific markers of myocardial infarction. Atherosclerosis, Volume 407, 120004
- Rehues P et al; ApoC-III proteoforms are associated with better lipid, inflammatory, and glucose profiles independent of total apoC-III. Cardiovasc Diabetol. 2024 Dec 4;23(1):433.
- Uribe-Herranz M et al; Microbiota Shape Metabolic and Immune Determinants of CAR-T Therapy and Correlate with Outcomes in Myeloma. Blood Cancer Discov. 2025 Sep 3;6(5):484-504.
- Mitić T, Georgescu A et al; Current status and challenges of multi-omics research using animal models of atherosclerosis. J Mol Cell Cardiol Plus. 2025 Jul 10;13:100476.
- Nordestgaard LT et al; Multiomics in atherosclerotic cardiovascular disease. Atherosclerosis. 2025 Sep;408:120414.

SCIENTIFIC ARTICLES – 2025

- Masana L et al; The icosapent ethyl (IPE)-NMR avatar study. Nutr Metab Cardiovasc Dis. 2025 Nov;35(11):104199.
- Martínez-Falguera D et al; Initiating Empagliflozin and Sacubitril/Valsartan Early After Acute Myocardial Infarction: Mechanistic Study. J Am Heart Assoc. 2025 Jun 3;14(11):e040214.
- Fernández-Cruz E et al; Urinary Hippuric Acid as a Sex-Dependent Biomarker for Fruit and Nut Intake Raised from the EAT-Lancet Index and Nuclear Magnetic Resonance Analysis. Metabolites. 2025 May 23;15(6):348.
- Arrobas Velilla T et al; Analysis of lipoprotein (a) determination in a selection of Spanish Clinical Laboratories. Batary study. Clin Investig Arterioscler. 2025 Nov-Dec;37(6):500798. English, Spanish.
- Rehues P et al. CO-007 - EL EJE RESISTENCIA INSULINA-TRIGLICÉRIDOS-HDL: EFECTO DE LA EDAD, SEXO E IMC. Endocrinología, Diabetes y Nutrición
- Arrobas Velilla T et al; Aspectos fundamentales en la solicitud y determinación de la lipoproteína(a) en el laboratorio clínico. Adv Lab Med. 2025 Mar 3;6(1):17-27. Spanish. doi: 10.1515/almed-2024-0090. PMID: 40160393; PMCID: PMC11949533.
- Amigó N et al; Advanced serum lipoprotein and glycoprotein profiling for cardiovascular event prediction in type 2 diabetes mellitus: the LIPOCAT study. Cardiovasc Diabetol. 2025 Feb 21;24(1):88.
- Girona J et al. GDF15 Circulating Levels Are Associated with Metabolic-Associated Liver Injury and Atherosclerotic Cardiovascular Disease. Int J Mol Sci. 2025 Feb 26;26(5):2039.
- Bassols A et al; Fecal metabolomics to understand intestinal dysfunction in male dairy beef calves at arrival to the rearing farm. Sci Rep. 2025 Feb 26;15(1):6887.
- Fernández-Castillejo S et al; Ketone Bodies Are Potential Prognostic Biomarkers in Relapsed/Refractory Diffuse Large B-Cell Lymphoma: Results from the R2-GDP-GOTEL Trial. Cancers (Basel). 2025 Feb 5;17(3):532.
- D Martínez-Falguera et al; Effect of early initiation of empagliflozin with or without sacubitril/valsartan in a swine model of myocardial infarction, BJS, Volume 112, Issue Supplement_2, January 2025, znae322.010.
- Gómez-Delgado I et al; Long-term mitochondrial and metabolic impairment in lymphocytes of subjects who recovered after severe COVID-19. Cell Biol Toxicol. 2025 Jan 10;41(1):27.
- Lin KH et al; A use case in saroglitazar treatment of MAFLD patients. Clin Investig Arterioscler. 2025 Jan-Feb;37(1):100723. English, Spanish.

atherosclerosis EAS

Journal of proteome research

NMCD Nutrition, Metabolism & Cardiovascular Diseases

cancers

Cardiovascular Diabetology

BLOOD CANCER DISCOVERY

AMERICAN HEART ASSOCIATION JOURNALS

PROJECTS – 2025

During 2025, we strengthened our commitment to innovation and knowledge transfer through the acquisition of new competitive projects funded by public calls.

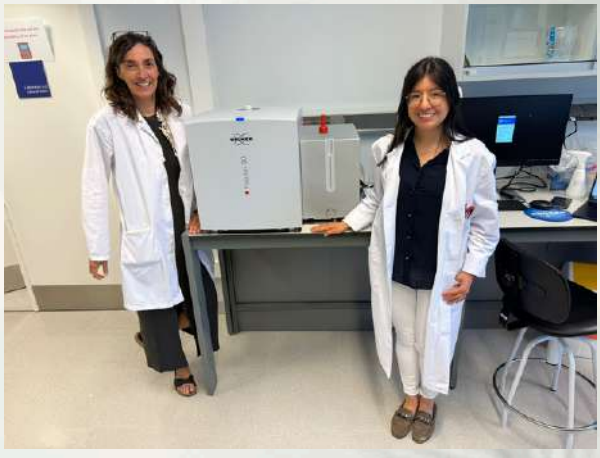
- TB omics – Innovative software for tuberculosis diagnosis based on urinary biomarkers. Public–Private Collaboration Project – AEI.

FOTO KICKOFF

- Industrial PhD – Integration of genomic and metabolomic data for the stratification of weight gain. Industrial Doctorate Programme (AEI/MICIU). INCORPORACIO JARA

We also continue to advance in the development of innovative solutions in diagnostics and clinical risk stratification through projects currently underway:

- DALÍ – Development of a colorectal cancer screening test based on NMR metabolomics. Project funded by CDTI within the PERTE Health Vanguard framework.
- COMPREMETE – Development of an advanced screening tool for the assessment of preterm birth risk. Project funded by CDTI – PERTE Health Vanguard.
- DISBETA-NMR – Collaborative project focused on the advanced characterization of lipoproteins using NMR to improve the diagnosis of dysbetalipoproteinemia and its implementation in the clinical setting.
- ACCIÓ Voucher – Internationalisation – Boosting the competitiveness and international expansion of Biosfer Teslab, strengthening its positioning in strategic markets.
- HARMONi – HARnessing the power of MultiOmics: towards the generation of Novel and Innovative diagnostic tools to improve CV risk prediction Public–Private Collaboration Project – AEI.
- GALVANO – Optimización, Validación y Explotación de una Plataforma de Producción versátil de Vesículas Extracelulares Grado Clínico mediante Tecnología Analítica de Proceso Public–Private Collaboration Project – AEI.
- AVANTE – Generación de Algoritmos de eValuación de riesgo vAscular basados en Técnicas Multiómicas. Acción conjunta CDTI-ISCIII



EUROPEAN PROJECTS 2025

At the European level, Biosfer Teslab participates in strategic research and training initiatives that promote international collaboration and the advancement of translational cardiovascular research. Through involvement in COST Actions and Marie Skłodowska-Curie programmes, the company contributes to the development of scientific networks of excellence and the generation of high-impact knowledge.

- AtheroNET – Participation in the COST Action AtheroNET, a European network aimed at promoting collaborative research and knowledge transfer in atherosclerosis and cardiovascular diseases.
- CardioSCOPE – Participation in the European CardioSCOPE project, funded under the Marie Skłodowska-Curie Actions, focused on advanced training and translational research in cardiovascular diseases, with more than 10 secondees hosted at Biosfer Teslab throughout 2025.

AtheroNET

CardioSCOPE
Empowering sciences for the "omics" era

Marie Skłodowska-Curie Actions

EVENTS AND CONFERENCES – 2025

We have actively participated in national and international scientific conferences and events, sharing research results and strengthening collaboration with the scientific and clinical community.

- European Atherosclerosis Society (EAS) Annual Meeting – Glasgow – International congress on atherosclerosis and lipids.
- "NMR Metabolomics" Seminar – CIMUS (Santiago de Compostela) – Clinical-context lecture.
- 48th European Lipoprotein Club Annual Meeting – Tutzing, Germany – Participation in the organisation of the meeting.
- AtheroNET – COST Action CA21153 – Sarajevo – Co-organisation, scientific committee member and session chair.
- Reus Technology Summit (2nd edition) – Reus – Lecture on biotechnology, personalised medicine and AI.
- 2nd Congress of the Catalan Society of Lipids and Arteriosclerosis / 27th XULA – Reus – Member of the organising committee, speaker and moderator.
- CardioSCOPE & AtheroNET Training School – Milan – Trainer in scientific careers, knowledge transfer and entrepreneurship.
- "NMR Metabolomics" Seminar – Biogipuzkoa (Donostia) – Clinical-context lecture.
- Recording Change: 50 Years of Female Innovation in Spain – Madrid – Participation as a roundtable speaker.

¡¡¡THANK YOU FOR THIS 2025!!!

We would like to thank all the people, institutions, and partner organisations that have made the development of projects, publications, and activities throughout 2025 possible. Your trust and continued collaboration are key to continuing progress in knowledge generation, innovation, and its application for the benefit of health and precision medicine.

We face 2026 with the commitment to continue driving research, innovation, and collaboration, advancing towards increasingly precise solutions with greater clinical impact.

The entire Biosfer Teslab team wishes you happy holidays and all the best for 2026.