



Dear CEMBIO colleagues and friends,

This newsletter arrives a little later than usual. What was intended as an end-of-academic-year edition has become an opportunity to look back at our achievements while already looking ahead to a new academic year. And there is certainly much to celebrate! New scientific contributions, exciting projects, technological advances, awards and recognitions, and, above all, the achievements of the people who make CEMBIO what it is.

A new academic year is now underway, bringing new challenges, opportunities and undoubtedly a great deal of hard work. But also new questions to explore, new collaborations to build and new reasons to celebrate.

Thank you all for your dedication and for making CEMBIO such a stimulating place to work and grow.

Let's make it another great year!

Coral

Spotlight

Recognition for CEMBIO as the most active Research Group in Science Communication

Coral Barbas on behalf of CEMBIO receives the Excellence and Commitment Award



Six CEMBIO Researchers Among Spain's Most Outstanding Female Scientists

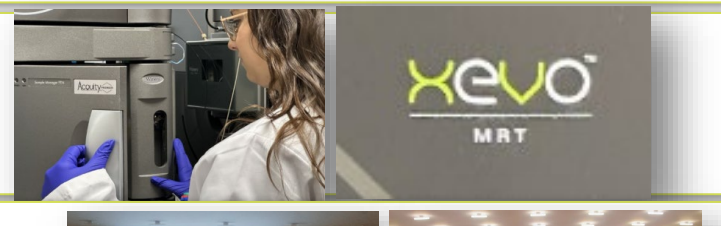
According to "Ranking de Mujeres Investigadoras Españolas y en España" elaborated by CSIC

- Coral Barbas – 109
- Antonia García – 1347
- Angeles López – 4256
- Alma Villaseñor – 7358
- Ana Gradillas Nicolás – 8224
- M^a Fernanda Rey-Stolle – 11696

CEMBIO launches the first analyses with the new #Xevo #MRT #MS and #Premier #LC

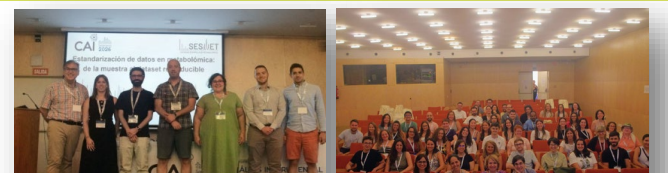
from Waters Corporation

Promising results are expected for high-resolution oxylipin profiling



From sample to reproducible dataset: a pre-conference workshop at CAI2026 Salamanca

Víctor González, David Chamoso and Javier Rupérez led the workshop "Data standardisation in metabolomics: from sample to reproducible dataset" organized by SESMet



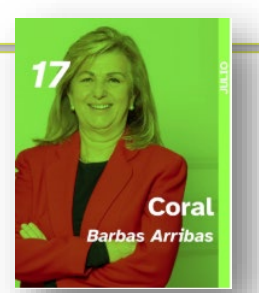
CEMBIO in press



Coral Barbas appears in "[Mujeres ConCieMcia](#)" for her pioneering career in analytical chemistry and metabolomics



Coral Barbas appears in "[The Analytical Scientist](#)" for "The International Day of Women and Girl in Science" as a leading voice in analytical science



Conferences

March 13th, 2026 | Entrega de Premios de la Olimpiada de Química de Madrid, Alcalá de Henares (Spain)

➤ **Invited conference:** "Pequeños chivatos: lo que los metabolitos dicen de ti (sin que lo sepas)". **Cristina Muñoz San Martín**.



March 24 - 27th, 2026 | Analytica 2026, Munich (Germany)

➤ **Invited Keynote:** Uncharted biology: unlocking the hidden metabolome in reproductive health. **Víctor González**.

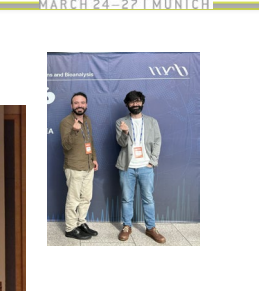


May 10 - 13th, 2026 | International Symposium on Microscale Separations and Bioanalysis (MSB 2026), Daejeon (Korea)

➤ **Invited keynote:** Metabolomics and CE-MS: from a couple's fight to a honeymoon. **Víctor González**.

➤ **Oral communications:**

- ✓ Benchmarking a Commercial Dielectric Barrier Discharge Ion Source in Bacterial Lipidomics. **Miguel Fernández García**.
- ✓ Benchmarking Complementary MS Platforms for High-Coverage Profiling of the Polar Metabolome. **Francisco J. Rupérez**.



June 12 - 15th, 2026 | European Academy of Allergy and Clinical Immunology (EAACI Congress 2026), Istanbul (Türkiye)

➤ **Symposium:** Omics and allergic diseases: fact or fiction. **Alma Villaseñor**

➤ **Oral communication:** Revealing metabolotypes of IgE-, COX-1 inhibitors-, and MRGPRX2-mediated drug hypersensitivity reactions. **Andrea Macías**.

➤ **Flash Talk:** A Distinct and Stable Lipidomic Signature in Food-Allergic Patients Reveals a Predisposing Metabolic State for Cofactor-Induced Anaphylaxis. **Blanca Raposo**.

➤ **Best Flash Talk:** Systemic metabolic biomarkers identifying clinical tolerance in lipid transfer protein (LTP) allergy after pectin intervention. **Jaime Morillas**.



June 21 - 24th, 2026 | Metabolomics Conference 2026, Buenos Aires (Argentina)

➤ **Workshop Participation:** From Unknowns to Structures: Introducing CHESS-Hub and Mapping Community Needs in Metabolite Identification. **Coral Barbas**.

➤ **Keynote speaker:**

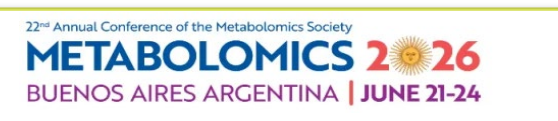
- ✓ The Hidden Language of the Liver: Decoding Metabolic Secrets through Targeted and Untargeted Metabolomics and Lipidomics. **Antonia García**.

➤ **Sponsor Lunch Presentations:** Targeted analysis of VOCs to Lipidomics and Data Integration: The CEMBIO Experience with Agilent Platforms in Translational Metabolomics. **Coral Barbas, Antonia García and Francisco J. Rupérez**

➤ **Oral communication:**

- ✓ Extending CEU Mass Mediator for Multi-Platform Metabolite Annotation in LC-MS, CE-MS and GC-MS. **Alberto Gil de la Fuente**.
- ✓ Integrated Multiplatform Metabolomics and Microbiota Profiling of HPV Infection in an Underdiagnosed Rural Peruvian Cohort. **Víctor González**.
- ✓ Inflammation Reprograms the Liver Lipidome and Metabolome: A Multi Omics Map of LPS Response. **Sara Moreno Talavera**.

➤ **Pre-Conference Workshop:** The current state and future requirements for the use of Quality Control (QC) in untargeted metabolomics as defined by mQACC. **Víctor González**.



July 8th, 2026 | Congreso de Innovación Educativa y Docente CEU USP (CIED-26), Madrid (Spain)

➤ **Oral communications:**

- ✓ ¿Qué revela tu aliento? Resolución de un enigma metabólico real: innovación en aprendizaje basado en retos. **Antonia García**.
- ✓ LABSAFE 360: aprendizaje inmersivo de seguridad en el laboratorio. **Cristina Muñoz, María Ángeles López, M^a Paz Lorenzo, Fernanda Rey-Stolle**.



June 13 - 16th, 2026 | I Congreso de Análisis Instrumental (CAI2026), Salamanca (Spain)

➤ **Oral communication:**

- ✓ Evaluation of dialysis technique on the clearance of uremic toxins associated with cognitive impairment in chronic kidney disease by targeted LC-QqQ-MS. **Beatriz Linillos**.
- ✓ Towards Non-Invasive Diagnosis of Malignant Hyperthermia: Biomarker Discovery. **Belén Fernández Requena**.
- ✓ Comparative metabolomic and lipidomic profiling of monocytes in HIV1 patients. **Henrique Dos Santos Oliveira**.

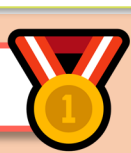
➤ **Pre-conference Workshop:** Standardization of Data in Metabolomics: from the Sample to a Reproducible Dataset. **Víctor González**.

➤ **Poster presentations:** A total of 12 posters were presented. Our colleagues **Alberto Gil, Pablo Cañadas, Laura Amorós, Constanza Fernández, Cristina Muñoz, Hana Cermakova, Isabel Fernández, Isabel Navas, David Chamoso and Antonio García Cívico**, they all had the opportunity to present their latest work at this conference.

- ✓ **Best Poster Award, sponsored by Analytical and Bioanalytical Chemistry Journal.** When Chirality Matters: Enantiomeric Analysis of D- and L Carnitine in Dietary Supplements. **Almir Custodio Batista Jr**.
- ✓ **Best Poster Award, sponsored by Bruker:** Decoding Human Seminal Plasma for Biomarker Discovery in Male Infertility. **Luz Alonso Dasques**.



Grants & Recognitions



Coral Barbas was named **Honorary Fellow of the Metabolomics Society 2026** and received the **Award for Distinguished Career from the Real Sociedad Española de Química**, recognizing her outstanding contribution to metabolomics and scientific training.



Jaime Morillas Best Flash Talk of EAACI at the **EAACI Congress 2026**

Luz Alonso Best Poster "SECYTA" award at the **CAI2026**, selected by Bruker

Almir Custodio Best Poster Communication Award at **CAI2026**, selected by the ABC Journal

Nuria Contreras **CEU Ángel Herrera Award** for Outstanding Research in the Field of Experimental Sciences

Alberto Gil Award for Recognition of the Research Career of a Young Researcher at USP-CEU

Antonia García **PIAI appointment** by the USP Research Commission – Research Activity Intensification Program



✓ **Blanca Raposo** received a travel grant for EAACI Congress for her abstract.

✓ **Jaime Morillas** received a travel grant for EAACI Congress for the best video contest award "Tell Us About Your Project".

✓ **Isabel Navas, Hana Cermakova, Isabel Fernández, Pablo Cañadas, Patricia Belinchón and Laura Amorós** were selected to attend ISS-METMS in Granada.

✓ **Cristina Muñoz San Martín**, award for the best logo for Master's Degree in Science and Analytical and Bioanalytical Technologies (MUCYTAB)

Projects

Project grant I+D from Comunidad de Madrid. MOBIR-CM. Ref: SAL-GL1193. *Dianas moleculares y aproximaciones biotecnológicas y farmacológicas para reducir la obesidad y potenciar la sensibilidad a insulina.* 2026-2030. 1.300.000 € (6 research groups from URJC, CSIC, and USPCEU).

• **PI:** Gema Medina (Coordinador, URJC). **Antonia García** (IP grupo Metabool, USPCEU). CEMBIO researchers involved: A. Gradillas, M.F. Rey-Stolle, M.P. Lorenzo, V. González, M. Fernández, B. Fernández, C. Fernández, H. DosSantos, H. Cermakova, M. Gutierrez

Project grant from HORIZON-MSCA (European Commission). Ref: 101281191. FoundaMet: A Foundational Model for Metabolomics. From Molecular Structure to Predictive Annotation. From 2027 - 2029. 194.075 € assigned.

• **PI:** Abraham Otero Quintana

• CEMBIO researchers involved: Alberto Gil, Ana Gradillas, Constantino A. García, Hana Cermakova, Pablo Cañadas, Sergio Saugar.

Project grant I+D from Comunidad de Madrid RENACE. Ref: SAL-GL-1162. *Enfermedad renal crónica, envejecimiento y fragilidad. Abordaje mediante terapias farmacológicas e intervenciones nutricionales.*

• **PI:** Coral Barbas, and M^a Ángeles López

• CEMBIO researchers involved: Coral Barbas, M^a Ángeles López, Beatriz Linillos and David Chamoso

Publications

Available links on papers, click in DOI!

Serum long-chain omega-3 and omega-6 fatty acids differentially predict brain atrophy, white matter hypointensities, and lacunes in individuals with cerebral small vessel disease with or without Alzheimer's disease

Leslie M Yedor, ..., **María Morán-Garrido**, ..., **Coral Barbas**, ..., Ameer Y Taha.

J Alzheimers Dis. December, 2025 DOI: [10.1177/13872877251401572](#)



Albumin orchestrates a natural host defence mechanism against mucormycosis

Antonis Pikoulas, Ioannis Marianos, ..., **María Morán-Garrido**, ..., **Sandra M. Camuñas-Alberca**, ..., **Coral Barbas**, ..., Georgios Chamiliis

Nature. January, 2026 DOI: [10.1038/s41586-025-09882-3](#)



Lipid and immune dysregulation and risk of metabolic disorders after HCV clearance in HIV/HCV-coinfected participants with cALD: a retrospective study

Ana Visada-Berdiacs, **Belén Requena**, ..., **Carolina González-Riano**, ..., **Coral Barbas**, ..., Ruben Martín-Escolano, María Angeles Jiménez Sousa

Front Immunol. January, 2026 DOI: [10.3389/fimmu.2025.1674837](#)



Subcutaneous and visceral adipose tissue lipidome in children reveals novel lipid species involved in obesity

Andrea Soria-Gondek, **Carolina González-Riano**, ..., **Belén Requena**, ..., **Coral Barbas**, David Sánchez-Infantes

Physiol Biochem. January, 2026 DOI: [10.1007/s13105-026-01147-5](#)



Plasma miRNA-Metabolite Dysregulation in People with HIV with Cirrhosis Despite Successful HCV Cure

Ana Visada-Berdiacs, Raquel Behar-Lagares, ..., **Belén Requena**, ..., **Carolina González-Riano**, ..., **Coral Barbas**, ..., Salvador Resino, María Angeles Jiménez Sousa

Pharmaceuticals. January, 2026 DOI: [10.3390/ph19010170](#)



Integrative Analysis of 4-Hydroxynonenal-Modified Proteins and Plasma Metabolome in Breast Cancer Patients

Morana Jaganjac, Matea Nikolac Perkovic, ..., **David Rojo**, ..., Neven Zarkovic

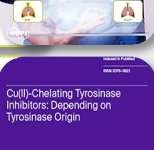
Antioxidants. February, 2026 DOI: [10.3390/antiox15020265](#)



Establishing an untargeted lipidomics workflow for cellular analysis: insights into endothelial cell function in anophylaxis

María Isabel Delgado-Dolset, Andrea Escobar-Peña, **Antonio Jesús García-Cívico**, Lucía Pajares, **René Neuhaus**, ..., **Coral Barbas**, ..., **Alma Villaseñor**

Front Immunol. March, 2026 DOI: [10.3389/fimmu.2026.1711640](#)



Early metabolic alterations in pediatric obesity: Depot-specific insights from untargeted adipose tissue metabolomics

Ángeles López-González, **Cristina Muñoz-San Martín**, ..., **Belén Requena**, ..., **Coral Barbas**, David Sánchez-Infantes, **Carolina González-Riano**

J Clin Lipidol. March, 2026 DOI: [10.1016/j.jacl.2026.03.003](#)



Methanol-driven esterification of volatile short-chain fatty acids in thermal desorption-based analysis

Philip Kwan Hung Leung, ..., **María Bajo-Fernández**, ..., Ilaria Belluorno

Commun Chem. March, 2026 DOI: [10.1038/s42004-026-01998-5](#)



Revealing misannotated electrospray ionization artifacts: A systematic pipeline for heterodimer detection in untargeted metabolomics

Maricruz Mamani-Huacana, **Ana Gradillas**, **Coral Barbas**, **Víctor González-Ruiz**

Microchem. J. April, 2026 DOI: [10.1016/j.microc.2026.171355](#)



Weaponizing nutrition: plants use a double strategy to fight herbivory, converting nutritionally essential fatty acids into defensive oxylipin signals

Guillermo H. Jiménez-Aleman, ..., **Coral Barbas**, **M^a Fernanda Rey-Stolle**, ..., Roberto Solano

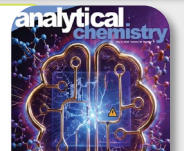
New Phytol. April, 2026 DOI: [10.1111/nph.71155](#)



Decoding the Oxylipin Chemical Space Using Ion Identity Molecular Networking

Sandra M. Camuñas-Alberca, ..., **Hana Cermakova**, ..., **Pablo Cañadas-Miquel**, **Alberto Gil-de-la-Fuente**, ..., **Ana Gradillas**, **Coral Barbas**

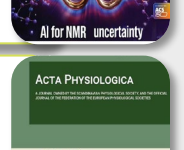
Anal Chem. April, 2026 DOI: [10.1021/acs.analchem.5c06084](#)



Citrate-Dependent Activation of Acetyl CoA Carboxylase Promotes Renal Lipid Accumulation in a Rat Model of Chronic Kidney Disease

Marta Sanz-Gómez, **Beatriz Linillos-Pradillo**, ..., **Antonia García**, **Coral Barbas**, ..., María S. Fernández-Alfonso

Acta physiologica. April, 2026 DOI: [10.1111/apha.70219](#)



FXR-YAP signalling maintains biliary epithelial cell identity and preserves liver homeostasis

Paula Sánchez-Sánchez, ..., **Andrea Macías-Camero**, **Alma Villaseñor Salís**, Robert F. Schwabe, Nabil Djoudir

Nat Metab. April, 2026 DOI: [10.1038/s42255-026-01521-z](#)



Lipid Class Prediction from MS1 Data using Gaussian Graphical Models

Thomas Rix, ..., **Alma Villaseñor**, **Ana Gradillas**, **Coral Barbas**, ..., Timothy M D Ebels.

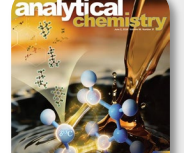
Anal Chem. June, 2026 DOI: [10.1021/acs.analchem.5c08067](#)



Serum Short-Chain Fatty Acids in Colorectal Cancer: Diagnostic Performance and Decoupling from Gut Producer Abundance

Juan Vicente-Valor, **Sofía Tesaloto**, **María Paz Lorenzo**, ..., **Francisco-Javier Rupérez**, ..., **Antonia García**, **Pilar Iniesta**

Allergy. July, 2025 DOI: [10.3390/cells15121096](#)



Trans fatty acids alter renal health in TGFβ3 mice with fibrosis revealed by metabolomics and lipidomics

Borja Lanzon, ..., **Carolina González-Riano**, ..., **Antonia García**, **Francisco Javier Rupérez**, **Adriana Izquierdo-Lahueria**, **Gema Medina-Gómez**

iScience. June, 2026 DOI: [10.1016/j.isci.2026.116506](#)



Lipidomics of HIV/HCV-related liver decompensation: association between plasma lipid depletion and immune dysregulation

Raquel Behar-Lagares, **Belén Requena**, ..., **Carolina González-Riano**, ..., **Coral Barbas**, ..., Ruben Martín-Escolano, María Angeles Jiménez Sousa

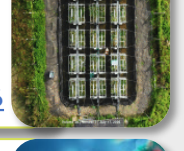
Front Immunol. June, 2026 DOI: [10.3389/fimmu.2026.1878207](#)



Metabolic and Oxylipin Signature of Testicular Germ Cell Tumors in Seminal Plasma

Luz Alonso Dasques, **Maricruz Mamani-Huacana**, **Sandra M. Camuñas-Alberca**, ..., **Constanza Fernández Hernández**, **Ángeles López-González**, **Francisco Javier Rupérez**, **Antonia García**, ..., **Kristian Alsmstrup**, **Coral Barbas**, **Víctor González Ruiz**

Andrology. August, 2026 DOI: [10.1111/andr.70347](#)



Decoding the urinary metabolome of aromatic amino acid pathways in Alport syndrome

Dominik Gallou, **Jaime Morillas-Armenta**, **Miguel Fernández García**, **Belén Requena**, **Santiago Angulo**, ..., **Ana Gradillas**, **Coral Barbas**, **Víctor González-Ruiz**, **Alma Villaseñor**

Anal Bioanal Chem. August, 2026 DOI: [10.1007/s00216-026-04707-8](#)



Body Mass Index