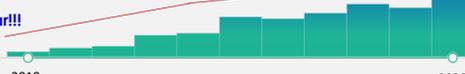


Dear CEMBIO members, last trimester of a complex 2020, although difficulties cannot hide all the positive events:

**14 new publications this trimester, 27 papers and 5 book chapters along this year!!!**

CEMBIO papers



September started with the arrival at CEMBIO of an IM-LC-QTOF-MS instrument.

We expect to improve our analytical capabilities with a state-of-art technique to solve the more complex biological questions. Looking forward to new and awesome results.

However, the most important arrival has been our three brilliant, young PhD researchers. Fresh minds willing to approach new challenges. Welcome to CEMBIO!! A place for team learning, but also a place where your inputs are expected. Research is worthy when it engages your brain, not only your hands. We will miss CEMBIO Christmas dinner and our Father Christmas with his elf and presents. Good moments to share, we will keep them in our minds.... **MERRY CHRISTMAS!!**

Coral

**Spotlight**

The new Ion Mobility LC-MS equipment arrived in September and is fully functional!



**Events, Activities & Seminars**



**October 21-23, 2020 | Training on Ion Mobility Spectrometry**

Attendees: Coral Barbas, Antonia García, Francisco Javier Rupérez, Vanessa Alonso, María Fernanda Rey-Stolle, Jorge Saiz, Antonio Mariscal, Alberto Gil de la Fuente and María Morán

**November 3, 2020 | Clinical lipidomics interest group in International Lipidomics Society**

How to translate the lipidomic analytical method into real clinical practice. Michal Holcápek, Anne K. Bendt, Michael Vogeser, and Peter Meikle



**November 24-25, 2020 | Agilent 2020 Virtual Omics Symposium**

Unveiling novel metabolic changes affecting the brain slices used for electrophysiological recordings through a multiplatform metabolomics approach. Coral Barbas (CEMBIO)  
Unveiling the capabilities of Q-TOF GC/MS in metabolomics studies applied to rheumatoid arthritis. M<sup>a</sup> Fernanda Rey-Stolle Valcarce (CEMBIO)



**Networks**

**December 14, 2020 | Epi-LipidNET - Pan-European Network in Lipidomics and EpiLipidomics**

EpiLipidNET Core team first Network meeting about epilipidomics and oxidized lipids



**Conferences**

**September 27-30, 2020 | e-MSB 2020: 36<sup>th</sup> International Symposium on Microscale Separations and Bioanalysis**

Poster Presentation: Multiplatform Metabolomics approach for biomarker discovery in cancer of neuroendocrine origin. Ángeles López-González, Ángeles López-López, Coral Barbas and others  
Plenary Closing Lecture: New developments in metabolomics with CE-MS. Coral Barbas  
Short Course: Introduction to metabolomics workflow. Coral Barbas



**November 4-6, 2020 | 7<sup>th</sup> Scientific Conference of Polish Metabolomics Society, Bialystok**

Plenary Closing Lecture: In source fragmentation: a tool for improving metabolite identification in untargeted Metabolomics. Coral Barbas



**October 4-7, 2020 | World Immune Regulation Meeting (WIRM) XIV**

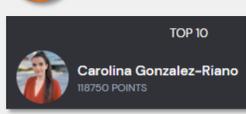
Oral presentation: The impact of metabolic alterations on immune response in severe allergic disease. Juan Rodríguez-Coira, Alma Villaseñor, David Obeso and others



**Spotlight**

✓ **Carolina González-Riano**

Winner with the most interactive participation points at Metabolomics 2020 Congress



✓ **Tomás Barker**

Winner of the Metabolites "Best Poster Award" at Metabolomics 2020 Congress



**October 27-29, 2020 | METABOLOMICS 2020: 16<sup>th</sup> Annual Conference of the Metabolomics Society**

- Oral presentation & Poster: **Metabolomics: a novel approach in the study of cow's milk allergy**  
Authors: Tomás Clive Barker Tejada, Elisa Zubeldia, David Rojo, M<sup>a</sup> Fernanda Rey-Stolle, Coral Barbas and others
- Poster: Development of a Targeted Metabolomic LC-MRM/MS Method on Allergic Inflammation  
Authors: David Obeso, Alma Villaseñor, Coral Barbas and others
- Poster: Data-dependent normalization strategies for untargeted metabolomics – a case study  
Authors: Paula Cuevas-Delgado, Danuta Dudzik, Coral Barbas and others
- Poster: Metabolomic alterations of IgE-mediated exacerbation in Allergic Enteritis  
Authors: Elisa Zubeldia-Varela, Tomás Barker, David Rojo, Alma Villaseñor, Coral Barbas and others
- Poster: Identification of biomarkers for patient stratification in HDM-allergic asthma  
Authors: Alma Villaseñor, María Isabel Delgado-Dolset, Coral Barbas and others
- Poster: Insight into first-trimester metabolic changes associated with gestational Diabetes Mellitus development  
Authors: Danuta Dudzik, Coral Barbas and others
- Poster: A comprehensive study of metabolic changes in brain slices lifespan through a multiplatform metabolomics approach  
Authors: Carolina Gonzalez-Riano, Coral Barbas and others



**Publications**

**Cover Story**  
**antibiotics**  
Volumen 9, Issue 11, November 2020  
Gonçalves J., Luís Á., Gradillas A., García A., Restolho J., Fernández N., Domingues F., Gallardo E., Duarte A.P.  
**Ayahuasca Beverages: Phytochemical Analysis and Biological Properties**  
DOI: [10.3390/antibiotics9110731](https://doi.org/10.3390/antibiotics9110731)

**Metabolomics**  
Part of the Neuromethods book series. (NM, volume 159) November 2020  
**Untargeted Metabolomics Methods to Analyze Blood-Derived Samples**  
Dudzik D., García A. DOI: [10.1007/978-1-0716-0864-7\\_14](https://doi.org/10.1007/978-1-0716-0864-7_14)  
**GC-MS Nontargeted Metabolomics of Neural Tissue**  
Gonzalez-Riano C., Rey-Stolle MF., Barbas C., Garcia A. DOI: [10.1007/978-1-0716-0864-7\\_16](https://doi.org/10.1007/978-1-0716-0864-7_16)  
**Untargeted Metabolomics Determination of Postmortem Changes in Brain Tissue Samples by UHPLC-ESI-QTOF-MS and GC-EI-Q-MS**  
Gonzalez-Riano C., Garcia A., Barbas C. DOI: [10.1007/978-1-0716-0864-7\\_20](https://doi.org/10.1007/978-1-0716-0864-7_20)

**AEM**  
**Use of Flavin-Containing Monooxygenases for Conversion of Trimethylamine in Salmon Protein Hydrolysates**  
Goris M., Puntervall P., Rojo D., Clausen J., Larsen Ø., García-Moyano A., Almendral D., Barbas C., Ferrer M., Kjærang Bjerga G. E. Appl. Environ. Microbiol., September 2020  
DOI: [10.1128/AEM.02105-20](https://doi.org/10.1128/AEM.02105-20)

**Molecular Neurobiology**  
**Metabolic changes in brain slices over time: a multiplatform metabolomics approach**  
Gonzalez-Riano, C., Tapia-Gonzalez, S., Perea, G., Gonzalez-Arias, C., DeFelipe, J., & Barbas, C. Mol. Neurobiol., September 2020  
DOI: [10.1101/2020.09.03.280966](https://doi.org/10.1101/2020.09.03.280966)

**J. Chromatogr. B**  
**Optimization and validation of a chiral CE-UHPLC method for quantitation of aspartate, glutamate and serine in murine osteocytic and osteoblastic cells**  
Paz Lorenzo M., Valiente L., Buendia I., Gortázar A. R., Garcia A. J. Chromatogr. B, September 2020  
DOI: [10.1016/j.jchromb.2020.122259](https://doi.org/10.1016/j.jchromb.2020.122259)

**MICROBIOLOGY ECOLOGY**  
**Utilization of low molecular weight organic compounds by the filterable fraction of a lotic microbiome**  
Ghuneim L., Distaso M., Chernikova T., Bargiela R., Lunev E., Korzhnenkov A., Tashchakov S., Rojo D., Barbas C., Ferrer M., Golyshina O., Golyshin P., Jones D. FEMS Microbiol. Ecol., December 2020  
DOI: [10.1093/femsec/flaa244](https://doi.org/10.1093/femsec/flaa244)

**Nutrients**  
**Insulin Resistance in Obese Children: What Can Metabolomics and Adipokine Modelling Contribute?**  
Rupérez F.J., Martos-Moreno G. Á., Chamoso-Sánchez D., Barbas C., Argente J. Nutrients, October 2020  
DOI: [10.3390/nu12113310](https://doi.org/10.3390/nu12113310)

**JPBA**  
**A body weight loss- and health-promoting gut microbiota is established after bariatric surgery in individuals with severe obesity**  
Sanchez-Carrillo S, Ciardi S., Rojo D., Zubeldia-Varela E., Méndez-García C., Martínez-Martínez M., Barbas C., et al. J. Pharm. Biomed. Anal., November 2020  
DOI: [10.1016/j.jpba.2020.113747](https://doi.org/10.1016/j.jpba.2020.113747)

**J. Chromatogr. A**  
**Enhancing confidence of metabolite annotation in Capillary Electrophoresis-Mass Spectrometry untargeted metabolomics with relative migration time and in-source fragmentation**  
Mamani-Huanca M, Gil de la Fuente A, Otero A, Gradillas A, Barbas C, Godzien J, López-González Á. J. Chromatogr. A, November 2020  
DOI: [10.1016/j.chroma.2020.461758](https://doi.org/10.1016/j.chroma.2020.461758)

**FREE RADICAL BIOLOGY & MEDICINE**  
**Metabolomics in posttraumatic stress disorder: Untargeted metabolomic analysis of plasma samples from Croatian war veterans**  
Konjevod M; Nedic Erjavec G; Nikolac Perkovic M; Sáiz J., et al. Free Radic. Biol. Med., November 2020  
DOI: [10.1016/j.freeradbiomed.2020.11.024](https://doi.org/10.1016/j.freeradbiomed.2020.11.024)

**JPBA**  
**Metabolomics analysis of microbiota-gut-brain axis in neurodegenerative and psychiatric diseases**  
Konjevod M., Nikolac Perkovic M., Sáiz J., Svob Strac D., Barbas C., Rojo D. J. Pharm. Biomed. Anal., November 2020  
DOI: [10.1016/j.jpba.2020.113681](https://doi.org/10.1016/j.jpba.2020.113681)

**GLIA**  
**Absence of R-Ras1 and R-Ras2 causes mitochondrial alterations that trigger axonal degeneration in a hypomyelinating disease model**  
Alcover-Sanchez B., García-Martin G., Escudero-Ramirez J., Gonzalez-Riano C., Lorenzo MP., Gimenez-Cassina A., Formentini L., Villa-Polo P., Pereira M.P., Wandosell F., Cubelos B. Glia, October 2020  
DOI: [10.1002/glia.23917](https://doi.org/10.1002/glia.23917)



✓ **Alma Villaseñor Solís**



Winner of the 10<sup>th</sup> Pharmacy Research Award for doctors in Pharmacy "MARIO MARTÍN VELAMAZÁN"

**Spotlight**

**Congratulations!!**

✓ **Raquel Melero**

We would like to extend a warm farewell to our colleague Raquel. Thank you for these years working together. We wish the very best for you on your upcoming journey at Instituto de Salud Carlos III, and you know that our doors are always open for you!



**Members Corner**

✓ **Elisa Zubeldia**



Workshop "¿Te gustaría saber más sobre el interior del cuerpo humano? Aprende a cuidar tus órganos"

Research Stay at Centro Nacional de Biotecnología (CNB-CSIC) from September to December



**Semana de la ciencia.**  
4 de noviembre  
**Noche de los investigadores.**  
27 de noviembre



**Welcome New Members:**



✓ PhD student: **María Morán Garibo**  
Under the supervision of **Coral Barbas** and **Jorge Saiz**  
Supported by the Spanish Ministry of Education and Science (FPU)



✓ PhD student: **Laura Mayo Martínez**  
Under the supervision of **Antonia Garcia** and **Javier Rupérez**  
Supported by the Spanish Ministry of Education and Science (FPU)



✓ PhD student: **David Chamoso Sánchez**  
Under the supervision of **Javier Rupérez**  
Supported by the CEU University (FPU)



✓ Bachelor final project: **Elena Hernández**  
Under the supervision of **Ana Gradillas**

✓ Bachelor final project: **Manuel Fernández**  
Under the supervision of **Alberto Gil-de la Fuente**



✓ PhD student from IMMA: **Carmela Pablo-Torres**  
Under the supervision of **Alma Villaseñor**



Have something to say? Send us your suggestions, events, photos, contents and ideas to improve this newsletter!

