March-May 2020

Issue nº 3



Dear CEMBIO members,

These three months at CEMBIO (March-May) have been quite unexpected. We left the lab thinking that it was for a couple of weeks and here we are more than two months later. Despite the support with the online connections, which indeed have helped a lot, we have missed each other during these days. I was starting to enumerate these little things that we have missed, but everyone can think of their own things. First of all, CONGRATULATIONS to Toñi for her well-deserved Professorship!! recognized by AQU. When we can meet, we will celebrate it. I would like to point out the hard and fruitful work that has been done during this time: 15 top quality papers accepted in this trimester, and many

Thank you everybody for your compromise!! Coral

more in the pipeline, are a good proof. Not only that, but also, the fact that as soon as we got the permission, CEMBIO has been operative and most of the instruments are running new projects thanks to on site and on call support. I have witnessed the good ambience around.

Acreditación

Favorable

Congratulations Toñi for obtaining her "Acreditación a Catedrática en Química Analítica" by "Agencia para la Garantía de la Calidad del Sistema Universitario de Cataluña (AQU)"! Spotlight



Events, Activities & Seminars

March 3, 2020 | Seminar Tips & Tricks GC y GCMS. Universidad San Pablo CEU

March. 2020 | Seminars by our colleagues. Improving Lipid Annotations with Lipid Annotator and PCDL Manager Through MassHunter Qualitative and MassHunter Profinder. Carolina Riaño and Miguel Fernández

May 18, 2020 | Web Seminar: Nuevos Flujos de trabajo en Alta Resolución. Jaume Morales.

Practice Session (through Cisco Webex Events)



CEMBIO News

Trusted Answers

IN SCIENCE & TECHNOLOGY

nature catalysis



Networks

COST Actions approved by the Committee of Senior Officials (24 March 2020)

CA19105 - LipidNET- Pan-European Network in Lipidomics and Epilipidomics

CEMBIO is part of the approved proposal

LipidNET will foster inclusive networking, promoting new opportunities for collaborative research projects, knowledge and technology transfer, dissemination, caring for young scientists and scientists from target countries, keeping gender balance.

Sociedad Española de Metabolómica (SESMet) The Society, aiming to promote metabolomics network in Spain, has been officially approved and Coral Barbas is the Vice-President.



Publications

Genetically engineered proteins with two active sites for enhanced biocatalysis and synergistic chemo- and biocatalysis.

Alonso S, Santiago G, Cea-Rama I, Fernandez-Lopez L, Coscolín C, Modregger J, Ressmann A K, Martínez-Martínez M, Marrero H, Bargiela R, Pita M, Gonzalez-Alfonso J L, Briand M L, Rojo D, Barbas C, Plou F J, Golyshin P N, Shahgaldian F, Sanz-Aparicio J, Guallar V and Ferrer M.

Nature Catalysis. DOI: 10.1038/s41929-019-0394-4

The cover comes from an article lead by Manuel Ferrer, one of our collaborators, where CEMBIO members participate



Phagosomal removal of fungal melanin reprograms macrophage metabolism to promote antifungal immunity.

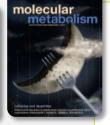
Gonçalves S M, Duarte-Oliveira C, Campos C F, Aimanianda V, ter Horst R, Luis Leite, Mercier T, Pereira P, Fernández-García M, Antunes D, Rodrigues C S, Barbosa-Matos C, Gaifem J, Mesquita I, Marques A, Osório N S, Torrado E, Rodrigues F, Costa S, JoostenShow lessKatrien Lagrou L A B, Maertens J, Lacerda J F, Campos A, D. Brown G, Brakhage A A, Barbas C, Silvestre R, van de Veerdonk F L, Chamilos G, Netea M G, Latgé J-P, Cunha C and Carvalho A.

Nat. Commun. March 2020. DOI:10.1038/s41467-020-16120-z



Unveiling the Fragmentation Mechanisms of Modified Amino Acids as the Key for Their Targeted Identification Mamani-Huanca M, Gradillas A, Gil de la Fuente A, López-

Gonzálvez Á, Barbas C. Anal.Chem. March 2020. DOI: 10.1021/acs.analchem.9b04313



Rubio C, Puerto M, García-Rodríquez JJ, Lu VB, García-Martínez I, Alén R, Sanmartín-Salinas P, Toledo-Lobo MV, Saiz J, Ruperez J, Barbas C, Menchén L, Gribble FM, Reimann F, Guijarro LG, Carrascosa JM, Valverde

Mol. Metab. May 2020. DOI: 10.1016/j.molmet.2020.01.018



Data-dependent normalization strategies for untargeted metabolomics-a case study.

Cuevas-Delgado P, Dudzik D, Miguel V, Lamas S, Barbas C. Anal. Bioanal. Chem. April. 2020. DOI: 10.1007/s00216-020-02594-9

MÁ, Brochado-Kith O, Resino S, Martínez I. **PLoS One.** March 2020. **DOI:** 10.1371/journal.pone.0230844



OPLOS ONE

epithelial cells. Martín-Vicente M, González-Riaño C, Barbas C, Jiménez-Sousa

Metabolic changes during respiratory syncytial virus infection of

Plasma Metabolome Alterations Associated With Extrauterine **Growth Restriction**

Barbas C. Nutrients. April 2020. DOI: 10.3390/nu12041188



Dudzik D, Iglesias Platas I, Izquierdo Renau M, BalcellsC Esponera, Del Rey Hurtado de Mendoza B, Lerin C, Ramón-Krauel M and

Elicitation with Bacillus QV15 reveals a pivotal role of F3H on



flavonoid metabolism improving adaptation to biotic stress in Gutiérrez-Albanchez E, Gradillas A, García A, García-Villaraco A,

Gutierrez-Mañero F and Ramos-Solano B. **PLoS One.** May 2020. **DOI:** 10.1371/journal.pone.0232626



Oxidized Lipids in the Metabolic Profiling of Neuroendocrine Tumors - Analytical Challenges and Biological Implications. López-López A, Godzien J; Soldevilla B; Gradillas A; López-

García-Carbonero R and Barbas C.

Gonzálvez A; Lens-Pardo A; La Salvia A; Riesco-Martínez M C;

J. Chromatogr. A. May 2020.



Impact of global PTP1B deficiency on the gut barrier permeability during NASH in mice.



Comprehensive Examination of the Mouse Lung Metabolome Following Mycobacterium tuberculosis Infection Using a Multiplatform Mass Spectrometry Approach Fernández-García M, Rey-Stolle F, Boccard J, Reddy VP, García A, Cumming BM, Steyn AJC, Rudaz S, Barbas C.

J. Proteome Res. April 2020. DOI: 10.1021/acs.jproteome.9b00868







Dysregulation of glycerophospholipid metabolism during Behçet's disease contributes to a pro-inflammatory phenotype of circulating monocytes.

Mendes-Frias A, Santos-Lima B, Zildeana Sousa Furtado D, Ruperez F J, Assunção N S, João Matias M, Gomes V, Gaifem J, Barbas C, Gil Castro A, Capela C and

J. Translational Autoimmunity. May 2020. DOI: 10.1016/j.jtauto.2020.100056



Atherosclerosis Progression and Colchicine

Izidoro MA, Cecconi A, Panadero M, Mateo J, Godzien J, Vilchez JP, López-Gonzálvez Á, Ruiz-Cabello J, Ibañez B, Barbas C, Rupérez FJ.

Sci. Rep. April 2020.

DOI: 10.1038/s41598-020-63306-y

Processing Metabolomics and **Proteomics Data with Open Software:**

A Practical Guide

A. and Barbas C.

March 2020

Chapter 3: Metabolomics Wishart D, Godzien J, Gil-de-la-Fuente A, Mandal R, Rajabzadeh R,

Chapter 11: Metabolite Annotation With

DOI: 10.1039/9781788019880-00041

Pirimoghadam H, Ladner-Keay C, Otero

CEU Mass Mediator Gil-de-la-Fuente A, Godzien J, Otero A

and Barbas C. **DOI:** 10.1039/9781788019880-00315

Chapter 12: Metabolite Annotation Using

and BioTransformer Gil-de-la-Fuente A, Godzien J, Otero A and Barbas C.

Universität Regensburg

In Silico Generated Compounds: MINE

DOI: 10.1039/9781788019880-00323



Members Corner



in Molecular Biosciences Guest Associate Editor in Frontiers in Molecular Biosciences,

section Metabolomics. Research Topic: Metabolomics Perspectives for Clinical Medicine

✓ Post-doctoral (habilitation) Degree in Clinical Metabolomics from Medical University of Gdańsk, Poland





Research Mobilities

Vanesa Alonso:

March 1st-7th at **Regensburg University**, Germany. Biopark I, in the Institute of Functional Genomics, Metabolomics section. Learning automatic derivatization methodologies with a GERSTEL robot in the research group led by Dr. Katja Dettmer.





Valencia to advance in a collaborative project.





Calendar

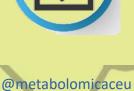
HERRAMIENTAS Y FLUJOS DE TRABAJO EN METABOLÓMICA Y LIPIDÓMICA Thursday, June 18, 11:00 am.

Program: "Soluciones Agilent. Preparándonos para la nueva era digital" Panelist Info: Jaume Morales. Especialista de producto Agilent LC/MS

Carolina Riaño. Investigadora posdoctoral CEMBIO

Duration: 1h





Have something to say?