

X Reunión de la Sociedad Española de Espectrometría de Masas

(XRSEEM – Córdoba 2022)

After two years in the virtual space, in 2022 we are returning to an in-person meeting, congress and conference. The Spanish Society for Mass Spectrometry (hereinafter referred to as “SEEM”) has celebrated its 10th meeting (XRSEEM) from the 1st to the 3rd of June in Córdoba, Spain. SEEM is a scientific society whose objective is to promote and spread knowledge of mass spectrometry among the scientific community as well as organize meetings between professionals, young researchers and companies to share current knowledge and experiences.

In this 10th edition, the AGR-287 research group of the Department of Analytical Chemistry from the University of Córdoba was in charge to organize the XRSEEM in their home city. Around 70 scientific communications have been presented in the fields of environmental analysis, food analysis, bioanalysis, instrumentation, metabolomics, ion mobility mass spectrometry (IM-MS) and proteomics. Together with the invited national and international researchers of recognized prestige allowed to give a vision of the current state of mass spectrometry in Spain and worldwide.

The day before the start of XRSEEM, a pre-congress one-day (in-person) course about IM-MS was organized, a subject that is taking on special relevance in recent years. This course was held by Prof. Lourdes Arce, Prof. Encarnación Moyano, and Prof. Facundo Fernández. Lourdes Arce is a professor at the University of Córdoba and she was the president of the conference. Encarnación Moyano is a professor at the University of Barcelona and she is the president of the SEEM and part of the scientific committee of this meeting. Facundo Fernández is a professor at the Georgia Institute of Technology, and an expert in IM-MS, ambient ionization techniques, metabolomics, and pharmaceutical forensics.

The congress started on Wednesday 1st June with the welcome ceremony held by the organizers of the meeting and followed by the plenary session of Prof. Jacob the Boer from the Amsterdam Institute for Life and Environment about the use of pyrolysis GC/MS in the determination of microplastics, and the invited speaker Prof. Soledad Rubio Bravo from the University of Córdoba, whose communication dealt with the innovative use of supramolecular solvents for the sample treatment in chromatography-mass spectrometry. During the day, 10 oral communications related to the environmental analysis were made, in addition to the first poster flash session and oral communication about the analysis of micro(nano)plastics in tap water exposed by the second invited speaker of the day Dr Marinella Farré Urgell from IDAEA-CSIC.

The second day opened with the plenary session of Prof. Facundo Fernández about the rising technologies to increase the metabolic coverage, single cell analysis, double bond pinpointing for lipidome elucidation, IM-MS and imaging. The communication of the invited speakers dealt with the analytical instruments based on the IM-MS for olive oil classification by Dr M^a José Carador of the University of Córdoba; and the mass spectrometry-based methods in food quality and safety challenges by Dr Monic Mattarozzi from the University of Parma. Thirteen oral presentations were given about IM-MS, instrumentation and food analysis, as well as the second poster flash session. In these communications, several presentation from different trading houses, both for the launch of new instrumentation and keynotes to steam certain mass spectrometry-analytical questions, were included.

Friday 3rd was the last day of the XRSEEM, starting with the invited speaker Dr Feliciano Priego Capote of the University of Córdoba with his oral communication about the different mass spectrometry acquisition methods available to improve the identification process in metabolomics, which is considered the bottleneck of this approach. The oral communications focused on the contribution of mass spectrometry in the fields of bioanalysis, doping in sports and omics. Dr. Carlos Cordeiro of the University of Lisboa was the last invited speaker with his communication about the contribution of magnetic resonance mass spectrometry from proteomics to protein complexes. To finish with the closing session with Prof. Lourdes Arce and Prof. Encarna Moyano.

The social program included a visit to the Royal Stables of Córdoba, founded by the Spanish King Felipe II in 1572 "in order to breed sturdy horses for the service of the Royal House" and that is still a recognized center for breeding horses. The Conference dinner took place in the restaurant Bodegas Campos, which was first opened in 1908 and became an emblematic place in the historic area of Córdoba.

The XRSEEM held the elections to the SEEM Organization. Esteban Abad (IDAEA-CSIC, previous vice-president) was elected as the new president of the SEEM. Pablo Rodríguez and Sandra Pérez kept their positions as Treasurer and Secretary. Encarnación was elected as vocal within the Organisation. Two new members, David Fabregat (University Jaume I) and Francisco Ayala (University of Duisburg-Essen) were elected as vocals. Additionally, it was agreed that the next events organized by the SEEM would be the 2nd meeting of young researchers in Mass Spectrometry in 2023 and the 11th meeting of the SEEM in 2024.

In summary, the XRSEEM had a big program condensed into two and a half days with high-quality sessions and discussion, covering a wide range of topics in which mass spectrometry has a key role. We would like to acknowledge SECyTA for the financial support to early career members to attend the XRSEEM.

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