CV date	29/11/2021

Part A. PERSONAL INFORMATION

First name	Mª Elena		
Family name	Pitarch Arquimbau		
e-mail	epitarch@uji.es		
Open Researcher and Contributor ID (ORCID) (*)		Researcher ID: L-8465-2014 Orcid Code: 0000-0002-3343-5815	

(*) Mandatory

A.1. Current position

Position	Profesor Titular de Universidad	
Initial date	09/09/2009	
Institution	Universitat Jaume I	
Department/Center	Physical and Analytical Chemistry Research Institute for Pesticide and Water	
Key words	Chromatography, Mass Spectrometry, Water contamination	

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
2006-2009	Profesora Contratada Doctora/Universitat Jaume I/Spain
2002-2006	Ayudante/Universitat Jaume I/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
B Sc. Chemistry	Universitat de València	1997
Ph D Chemistry	Universitat Jaume I	2001

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

I am a full University teacher of Analytical Chemistry at University Jaume I and I develop my activity in teaching and research aspects. My research area focuses on the study of the possibilities that mass spectrometry, with different analyzers, offers in different application fields such as environment and food safety.

After finishing my undergraduate studies in Chemical Sciences, I started my research with the development of my doctoral thesis focused on analytical methodology for the determination of organophosphorus and organochlorine pesticides in human biological samples. The lines of my research have followed, mainly, the instrumental evolutions that have occurred in the field of gas and liquid chromatography coupling to mass spectrometry analyzers from conventional (quadrupole and ion trap) to the most innovative couplings using tandem mass analyzers (triple quadrupole) or high resolution mass spectrometers with TOF analyzer. The projects carried out have allowed the development of different work methodologies as well as the generation of analytical methods for the quantitative determination of different organic pollutants (pesticides, PCBs, PAHs, pharmaceuticals, drugs of abuse…) in various matrices (environmental, biological, food, etc.). I have also worked in the development of new analytical tools in order to improve the detection of the misuse of doping products and to try to discover new metabolites or markers for a specific substance. Nowadays, my investigation is mainly focused in the development of advance analytical approaches for control and evaluation of organic contaminants, especially emergent contaminants, in environmental samples. The research studies the combined use of the two chromatographic techniques GC-QTOF MS and LC-QTOF MS, a powerful strategy for the screening and confirmation of organic pollutants in waters improving the quality and the quantity of the information obtained.

I am author of 55 scientific articles in international journals (H-index 29, sum of times cited 2.375, average per item 44), mostly in the first quartile of its category, which have contributed to the current knowledge of modern analytical chemistry based especially on mass spectrometry techniques. Consequently, I have numerous contributions at scientific national and international congresses.

I have participated in more than 20 research projects related to state-of-the-art of analytical chemistry, i.e. PROMETEO of the Valencian government in Spain. My research group has an

extensive international collaboration, highlighting the close cooperation with countries such as The Netherlands, Belgium, Norway, United Kingdom, among other. This international collaboration forms part of various projects and actions, such as: 1) European Research Project JUST-2018-AG-DRUGS, 2) International collaboration network for grupos of excellence (ISIC 2012/016) in the field of environmental pollution and safety food, financed by the Generalitat Valenciana.

In the last 10 years, I have supervised 3 Doctoral Thesis defended in October 2014, April 2016 and July 2021, respectively, which has contributed to the development of the training of young researchers in the field of Analytical Chemistry. Since 2009, I have been the coordinator of the interuniversity master's degree in Applied Chromatographic Techniques, in which three Spanish Universities are involved. I have also supervised several master's final projects in the field chromatographic techniques and/or mass spectrometry both for research purposes and in the field of chemical industries.

During my research career, I have participated in more than 55 contracts, some of them for technological development and innovation, collaborating with both private and public sector companies. The latter has been in 2021 as responsible researcher in a collaboration agreement funded by Generalitat Valenciana to carry out a research project applied to water resources in the Comunidad Valenciana focus on the occurrence of antibiotics in wastewater from a WWTP.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications

Rapid and sensitive analytical method for the determination of amoxicillin and related compounds in water meeting the requirements of the European union watch list, D. Fabregat-Safont, **E. Pitarch***, L. Bijlsma, I. Mateu, F. Hernández, Journal of Chromatography A 1658 (2021) 462605

The relevant role of ion mobility separation in LC-HRMS based screening strategies for contaminants of emerging concern in the aquatic environment, A. Celma, L. Ahrens, P. Gago-Ferrero, F. Hernández, F. López, J. Lundqvist, **E. Pitarch**, J.V. Sancho, K. Wiberg, L. Bijlsma*, Chemosphere 280 (2021) 130799

Investigation of pharmaceuticals in a conventional wastewater treatment plant: Removal efficiency, seasonal variation and impact of a nearby hospital, L. Bijlsma, **E. Pitarch***, E. Fonseca, M. Ibáñez, A.M. Botero-Coy, J. Claros, L. Pastor, F. Hernández, Journal of Environmental Chemical Engineering 9 (2021) 105548

Ecological risk assessment of pesticides in the Mijares River (eastern Spain) impacted by citrus production using wide-scope screening and target quantitative analysis, L. Bijlsma, **E. Pitarch***, F. Hernández, E. Fonseca, J. M. Marín, M. Ibáñez, T. Portolés, A. Rico, Journal of Hazardous Materials 412 (2021) 125277

Occurrence of pharmaceutical metabolites and transformation products in the aquatic environment of the Mediterranean area, M. Ibáñez*, L. Bijlsma, **E. Pitarch**, F. López, F. Hernández, Trends in Environmental Analytical Chemistry 29 (2021) e00118

Occurrence and ecological risks of pharmaceuticals in a Mediterranean river in Eastern Spain, E. Fonseca, F. Hernández, M. Ibáñez, A. Rico, **E. Pitarch***, L. Bijlsma*, Environment International 144 (2020) 106004

Comprehensive monitoring of organic micro-pollutants in surface and groundwater in the surrounding of a solid-waste treatment plant of Castellón, Spain, **E. Pitarch**, I. Cervera, T. Portolés, M. Ibáñez, M. Barreda, A. Renau-Pruñonosa, I. Morell, F. López, F. Albarrán, F. Hernández*, Science of the Total Environment 548-549 (2016) 211-220

Untargeted metabolomics in doping control: detection of new markers of testosterone misuse by ultrahigh performance liquid chromatography coupled to high-resolution mass spectrometry, M. Raro, M. Ibáñez, R. Gil,…, **E. Pitarch** (position 16/19),…, O.J. Pozo*, Analytical Chemistry 87 (2015) 8373-8380

Mass spectrometric behaviour of anabolic androgenic steroids using gas chromatography coupled to atmospheric pressure chemical ionization source. Part I: Ionization, M. Raro, T.

Portolés, J.V. Sancho, **E. Pitarch**, F. Hernández, J. Marcos, R. Ventura, C. Gómez, J. Segura, O.J. Pozo*, J. Mass Spectrom. (2014) 49:509-521

C.2. Congress

"Determination of pharmaceuticals and pesticides/transformation products in the Mijares river (Spain) by UHPLC-MS/MS" (poster presentation)
E. Fonseca, J.M. Marín, L. Bijlsma, C. Sales, E. Pitarch, F. Hernández
1st Iberian Meeting in Separation Sciences & Mass Spectrometry, Santiago de Compostela (Spain), 08/10/2019 (ISBN 9788409152384)

"Quality classification of virgin olive oils by GC-APCI-QTOF MS using a metabolomics-based statistical approach" (poster presentation)
C. Sales, I. Cervera, R. Gil, T. Portolés, E. Pitarch, J. Beltrán
Postgraduate Symposium on Food Fraud 2016, Wageningen (The Netherlands), 23/06/2016

"Potential of GC-APCI-MS/MS for the qualitative screening of urinary exogenous androgenic anabolic steroids. Comparison with traditional GC-EI-MS/MS" (poster presentation)
M. Raro, T. Portolés, E. Pitarch, J.V. Sancho, F. Hernández, L. Garrostas, J. Marcos, R. Ventura, J. Segura, O. Pozo
XV Scientific Meeting of the Spanish Society of Chromatography and Related Techniques (SECyTA 2015), Castelló de la Plana (Spain), 28/10/2015

C.3. Research projects

"Beneficios de la movilidad iónica acoplada a la espectrometría de masas hídrida quadrupolo-tiempo de vuelo en el descubrimiento e identificación de compuestos orgánicos. aplicación a aguas ambientales y fluidos biológicos". 01/01/2021 - 31/12/2022 (31.200€). Plan de promoción de la investigación de la Universitat Jaume I de Castelló, UJI-B2020-19
Principal investigators: Juan Vicente Sancho, Antoni F. Roig; *Participation: investigator*

"Estrategias analíticas para el control de contaminantes emergentes y evaluación de la eficacia de eliminación en procesos avanzados de oxidación en aguas residuales". 01/01/2009 - 31/12/2021 (71.390 €). Research Project Ministerio de Ciencia, Innovación y Universidades, RTI2018-097417-B-100
Principal investigator: Félix Hernández, Francisco López; Participation: investigator

"EUSEME Europe wide sewage analysis to monitor emerging drug problems". 15/10/2019-14/10/2021 (150.592,66 €). JUST-2018-AG-Drugs- Supporting initiatives in the field of drugs policy and drug policy initiatives
Principal investigator: Félix Hernández Hernández; *Participation: investigator*

"Estrategias analíticas avanzadas para el control y evaluación de contaminantes emergentes en aguas de riego". 01/01/2019-31/12/2020 (10.000 €). Plan de promoción de la investigación de la Universitat Jaume I de Castelló, UJI-B2018-55
Principal investigator: Elena Pitarch Arquimbau
"Desarrollo de estrategias analíticas, basadas en el uso de técnicas avanzadas de espectrometría de masas, en el campo de la salud pública". 01/01/2014 - 31/12/2017 (125.550€); 01/01/2020 - 31/12/2021 (109.583€). Generalitat Valenciana. Grupos Excelencia PROMETEOII/2014/023, PROMETEO/2019/040
Principal investigator: Félix Hernández Hernández; *Participation: investigator*

"Investigación de drogas de abuso y metabolitos en aguas residuales: implicaciones ambientales y estimación del consumo de drogas en poblaciones urbanas (SEWAGE-DRUGS)". 01/02/2013 – 31/01/2016 (47.970 €). Research Project Ministerio de Economía y Competitividad, CTQ2012-36189
Principal investigator: Félix Hernández Hernández; *Participation: investigator*

"Investigación cooperativa en medio ambiente y seguridad alimentaria" (ENVI-FOOD). 1/01/2012- 31/12/2015 (120.300€). Generalitat Valenciana. Redes de Excelencia ISIC/2012/016
Principal investigator: Félix Hernández Hernández; *Participation: investigator*

“Abuso de esteroides anabolizantes androgénicos en el deporte: evaluación de nuevas herramientas analíticas para mejorar la capacidad de detección en el control antidopaje”. 01/01/2012 – 31/12/2014 (48.400 €). Research Project Ministerio de Ciencia e Innovación, DEP2011-28573-C02-01
Principal investigator: Juan Vicente Sancho Llopis; *Participation: investigator*

“Potencial de GC-TOF MS para la investigación de plaguicidas en muestras de vegetales y frutas”. 01/01/2011 – 31/12/2013 (23.500 €). Research Project Universitat Jaume I-Fundació Caixa Castelló, P1 1B2010-23
Principal investigator: Elena Pitarch Arquimbau

C.4. Contracts, technological or transfer merits

“Conveni entre la generalitat a través de la conselleria d'agricultura, desenvolupament rural, emergència climàtica i transició ecològica i la universitat jaume i de castelló per a l'execució en l'exercici 2021 d’un projecte d'investigació aplicada a recursos hídrics en la comunitat valenciana”
Research contract Generalitat Valenciana.15/09/2021 – 15/12/2021 (40.000 €)
IP: Félix Hernández Hernández, ***Elena Pitarch Arquimbau***

“Identifying the biological metabolites of two mycotoxins that have been fed to Atlantic salmon”
Research contract NORWEGIAN INSTITUTE OF MARINE RESEARCH. 13/05/2021 – 01/06/2022 (20.000 €)
IP: Félix Hernández Hernández; *Participation: investigator*

“Investigación de contaminantes orgánicos en las aguas de lixiviado de residuos urbanos y en las aguas subterráneas del entorno de la planta de compostaje de Onda”
Several collaboration contracts Reciclados de Residuos la Plana, SA (RECIPLASA) – UJI. 2003-2021 (aprox. 180.000 €)
IP: Félix Hernández; *Participation: investigator*

“Estudio de contaminantes emergentes en aguas residuales y superficiales de Madrid”
Research contract DRACE INFRAESTRUCTURAS SA. 20/02/2019- 20/08/2020 (660.000 €)
IP: Félix Hernández; *Participation: investigator*

“Eliminación de contaminantes emergentes en la EDAR de Ricao”
Research contract SYD AGUAS UTE 98 SELLA. 11/05/2018 -31/12/2019 (30.000 €)
IP: Félix Hernández; Participation: investigator

“WATCH, Wastewater Analysis of Traces of illicit drugs-related Chemicals for law enforcement and public Health”
EU DG Home service contract HOME/2015/ISFP/PR/DRUG/0062. 19/12/2016 – 19/06/2018 (250.000 €, corresponding to UJI 44.282 €)
Consortium leader: Pim de Voogt (KWR bv, Nieuwegein, the Netherlands)
IP UJI: Félix Hernández*; Participation: investigator*