

Part A. Personal Information

DATE

July 22th, 2025

Surname(s)	Bello López	
Forename	Miguel Ángel	
Social Security, Passport, ID number		
Sex	Male	
Age		
Researcher codes	WoS Researcher ID	N-1756-2014
	SCOPUS Author ID	6506839441
	Open Researcher and Contributor ID (ORCID)	0000-0002-4533-7323
	PRISMA (Seville University)	https://prisma.us.es/investigador/384

A.1. Current position

Post/ Professional Category	Catedrático de Universidad	
UNESCO Code	2301	
Key Words	Liquid phase microextraction, electromembrane extraction, nanostructured supports, emerging pollutants, HPLC, mass spectrometry	
Name of the University/Institution	Department/Centre	Department of Analytical Chemistry. Faculty of Chemistry
	Full Address	c/ Prof. García González, s/n. 41012-Sevilla. Spain
Start date	21/12/2017	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1984	Universidad de Sevilla	First degree	Licenciado en Ciencias Químicas
		Masters (if appropriate)	
1988	Universidad de Sevilla	PhD	Doctor en Ciencias Químicas

A.3. Indicators of Quality in Scientific Production (See the instructions)

Research periods (CNAIE): 5	
Total number of citations: 4742; Average number of citations during the last five years: 319	
Total number of publications in the first tercile: 82; First quartile: 45	
Thesis supervised: 10	
h-index: 31; i10 index: 73	
DialnetID	1987242

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

I received the "Ciudad de Sevilla" Research Prize for my Doctoral Thesis entitled "Characterization and state of chemical alteration of the materials used in the construction of Seville Cathedral". During the doctoral period and immediately afterwards, the research

developed, pioneering in Spain, focused on the study of chemical alteration processes in monuments of historical-artistic interest such as cathedrals of Seville, Cádiz, Granada and Almería or the Alhambra of Granada, among the most important. I was a member, from its creation until its dissolution, of the "Work Group of the University of Seville for the conservation of monumental stone works". Since 1999 my major research has been focused on the proposal of analytical procedures for the analysis of pharmaceuticals and other emerging pollutants in biological and environmental samples. More recently, the proposal of liquid phase microextraction and electromembrane extraction procedures has also one of my research issue. My Research Group has been a Spanish's pioneer in the development and publication of analytical applications of microextraction in phase liquid using hollow fibers as support (HF-LPME), and one of the first worldwide, after the Group of Professor Pedersen-Bjergaard, in the development of analytical applications derived from the use of systems of electromembrane extraction (EME). Currently we are worldwide pioneers in the development of supports decorated with metal nanoparticles (NPs) for electromembrane extraction and new active supports (agar with NPs, PIMs, chitosan, nanostructured tissues).

I have participated in 16 Research Projects (two as IP1) and in 4 FEDER Scientific Infrastructures as IP. I have enjoyed 18 grants from the Andalusian Research Plan. I have published 102 papers in scientific journals, 6 books and 6 book chapters, as well as 16 unpublished Proceedings published in Congresses of great international impact and more than 90 Communications to national and international Congresses.

I have recognized 5 research periods (CNAIE), 5 periods (maximum) of the Quality Unit of the Andalusian Universities and 6 teaching periods (US).

I am member of the Editorial Advisory Boards of the journals *Current Chromatography* (Betham Science Publishers) and *Separations* (MDPI). I have participated, by invitation, in the evaluation of more than 100 articles in journals in my area of knowledge, most of which are located in the first quartile of its JCR category.

Since 2012 I am Director of the General Research Service (SGI) of Microanalysis of the University of Seville, included in the Research, Technology and Innovation Center of the University of Seville (CITIUS), as well as member of the Advisory Board of the General Research Services of the University of Seville. Since 2016 to 2019 I was a member of the A3 Accreditation Commission of ANECA. In 2020 I was member of the Advisory Committee A2 (Chemistry) of the CNEAI (ANECA).

During 4 years (1998-2002) I was a member of the Board of the Andalusian Regional Group of the Spanish Society of Analytical Chemistry, with the position of Treasurer.

Since 1993 I have been Head of the Andalusian Research Plan Group (PAI) FQM-109, which merged in 2012 with FQM-291, of which I also became Head after the merger..

Part C. Relevant accomplishments

C.1. Publications

Aranda-Merino, N., Marín-Garrido, A., Román-Hidalgo, C., Ramos-Payán, M., Abril, N., Fernández-Torres, R., Bello-López, M. Á. Bioavailability of flumequine and diclofenac in mice exposed to a metal-drug chemical cocktail. Evaluation of selenium protective role. *British Journal of Pharmacology* (2024) 1-17. <https://doi.org/10.1111/bph.16312>

A. Martín, R. Fernández-Torres, M. A. Bello-López, M. Ramos-Payan. An improved microfluidic device to enhance the enrichment factors in liquid phase microextraction: application to the simultaneous extraction of polar and non-polar acids in biological samples. *Microchimica Acta* (2023) 190:170 <https://doi.org/10.1007/s00604-023-05752-9>

C. Trombini; J. Kazakova; A. Montilla-López; R. Fernández-Cisnal; M. Hampel; R. Fernández-Torres; M.A. Bello-López; N. Abril; J. Blasco. Assessment of pharmaceutical mixture (ibuprofen, ciprofloxacin and flumequine) effects to the crayfish *Procambarus clarkii*: A multilevel analysis (biochemical, transcriptional and proteomic approaches). *Environmental Research* 200 (2021) 111396. <https://doi.org/10.1016/j.envres.2021.111396>

Román-Hidalgo, Cristina; López-Pérez, Germán; Martín-Valero, María Jesús; Bello-López, Miguel Ángel. Chitosan tailor-made membranes as biopolymeric support for electromembrane extraction. *Talanta* 199 (2019) 290-295. DOI: 10.1016/j.talanta.2019.02.079

María Ramos-Payán, Elia Santigosa, Rut Fernández-Torres, and Miguel Ángel Bello-López. A new microchip design. A versatile combination of electromembrane extraction and liquid-phase microextraction in a single chip device. *Analytical Chemistry* 90 (2018) 10417–10424. DOI: 10.1021/acs.analchem.8b02292.

María Ramos-Payán; Elia Santigosa; Jordi Coello; Miguel Ángel Bello-López. A comprehensive study of a new versatile microchip device based liquid phase microextraction for stopped-flow and double-flow conditions. *Journal of Chromatography A* 1556 (2018) 29–36. DOI: 10.1016/j.chroma.2018.04.051

Sofía Barreales-Suárez, Manuel Callejón, Stéphane Azoilay, Miguel Ángel Bello-López, Rut Fernández-Torres. Liquid chromatography quadrupole time-of-flight mass spectrometry determination of six pharmaceuticals in vegetal biota. Uptake study in *Lavandula dentate*. (<https://doi.org/10.1016/j.scitotenv.2017.11.244>). *Science of the Total Environment* 622–623 (2018) 655–663 .

Maria Ramos Payán; Elia Santigosa; Jordi Coello; Miguel Angel Bello López. A comprehensive study of a new versatile microchip device based liquid phase microextraction for stopped-flow and double-flow conditions in a single step. *Journal of Chromatography A* 1556 (2018) 29–36. DOI: 10.1016/j.chroma.2018.04.051.

Cristina Román-Hidalgo, María Jesús Martín-Valero, Rut Fernández-Torres, Manuel Callejón-Mochón, Miguel Ángel Bello-López. New nanostructured support for carrier-mediated electromembrane extraction of high polar compounds. *Talanta* 162 (2017) 32-37. (DOI: 10.1016/j.talanta.2016.10.022).

7. Cristina Román-Hidalgo, María Ramos-Payán, Juan Antonio Ocaña-González, María Jesús Martín-Valero, Miguel Ángel Bello-López. Agar films containing silver nanoparticles as new support for electromembrane extraction. *Analytical and Bioanalytical Chemistry* 407(2015) 1519-1525 (DOI: 10.1007/s00216-014-8375-6)

María Ramos-Payán, Rut Fernández-Torres, Juan Luis Pérez Bernal, Manuel Callejón-Mochón, Miguel Ángel Bello-López. A novel approach for electromembrane extraction based on the use of silver nanometallic-decorated hollow fibers. *Analytica Chimica Acta* 849 (2014) 7-11. (DOI: 10.1016/j.aca.2014.08.020)

Mercedes Villar-Navarro, María Ramos-Payán, Rut Fernández-Torres, Manuel Callejón-Mochón, Miguel Ángel Bello-López. A novel application of three phase hollow fiber based liquid phase microextraction (HF-LPME) for the HPLC determination of two endocrine disrupting compounds (EDCs), octylphenol and nonylphenol, in environmental waters. *Science of the Total Environment* 443 (2013) 1–6. (DOI :10.1016/j.scitotenv.2012.10.071).

Mercedes Villar-Navarro, María Ramos-Payán, Juan Luis Pérez-Bernal, Rut Fernández-Torres, Manuel Callejón-Mochón, Miguel Ángel Bello-López. Application of three phase hollow fiber based liquid phase microextraction (HF-LPME) for the simultaneous HPLC determination of phenol substituting compounds (alkyl-, chloro- and nitrophenols). *Talanta* 99 (2012) 55-61. (DOI: J.TALANTA.2012.05.020).

M. Ramos, M.A. Bello, R. Fernández-Torres, M. Villar, M. Callejón. Electromembrane extraction (EME) and HPLC determination of non-steroidal anti-inflammatory drugs (NSAIDs) in wastewater samples. *Talanta* 85 (2011), 394-399. <https://doi.org/10.1016/j.talanta.2011.03.076>

C.2. Research Projects and Grants

1. Efecto de la microbiota intestinal y suplementación con selenio en la bioacumulación y metabolismo de principios farmacológicos con actividad neurotóxica en mamíferos. (PID2021-123073NB-C22). FINANCING: Ministerio de Ciencia, Innovación y Universidades 2022- 2025. IP: Miguel Ángel Bello López y María Ramos Payán.

1. Metabolismo y distribución de principios activos farmacológicos en órganos de mamíferos expuestos a cocteles químicos. Correlación con células de epitelio humano intestinal. (PGC2018-096608-B-C22). FINANCING: Ministerio de Ciencia, Innovación y Universidades 2019- 2021. IP: Miguel Ángel Bello López y Rut Fernández Torres.
2. Actualización y Mejoras del Equipamiento Disponible en El Servicio General de Investigación de Microanálisis de la Universidad de Sevilla. (IE17-5727). FINANCING: Junta de Andalucía. 2019- 2020. IP: Miguel Ángel Bello López
3. Evaluación de la presencia de especies químicas y microcontaminantes orgánicos en el entorno de Doñana. Desarrollo de métodos rápidos de análisis y procedimientos metalómicos. (CTM2006-08960-C02-01/TECNO). FINANCING: DGICYT. 2006 -2009 . IP: José Luis Gómez Ariza
4. Red Nacional para la Sostenibilidad en la Preparación de Muestra (RED2022-134079-T) Ministerio de Ciencia, Innovación y Universidades. Acciones de Dinamización "Redes de Investigación" del Programa Estatal de Generación de Conocimiento y Fortalecimiento Científico y Tecnológico del Sistema I+D+i. IP: Marisol Cárdenas Aranzana
5. Aplicación de técnicas metalómicas, metabolómicas y métodos analíticos innovadores en ensayos de exposición de organismos a contaminantes. Validación en ecosistemas estuáricos. (CTM2012-38720-C03-00). FINANCING: Ministerio de Ciencia, Innovación y Universidades (Plan Estatal I+D+i 2017-2020). IP: José Luis Gómez Ariza.
6. Mejora del equipamiento del ICP con detector espectrometría de masas (IE_57035). FINANCING: Junta de Andalucía (Incentivos para la mejora de Infraestructuras, equipamiento y funcionamiento). 2014-2015. IP: Miguel Ángel Bello López / José Luis Mas Balbuena.
7. Mejora en El Equipamiento Científico del Servicio General de Investigación de Microanálisis de la Universidad de Sevilla: Apoyo a Estudios de Patrimonio Cultural (UNSE13-1E-1577) FINANCING: Subdirección General de Fondos Europeos para la Investigación (Subprograma Estatal "Proyectos de Infraestructura Científicas y Técnicas y de Equipamiento cofinanciados por el FEDER" correspondiente a la convocatoria de 2013). IP: Miguel Ángel Bello López
8. Renovación del equipamiento cromatográfico con detección de espectrometría de masas del Servicio General de Investigación de Microanálisis de la Universidad de Sevilla (EQC2019-005939-P). Ministerio de Ciencia, Innovación y Universidades. Ayudas para la adquisición de equipamiento científico-técnico del Subprograma Estatal de Infraestructuras de Investigación y equipamiento Científico-Técnico (Plan Estatal I+D+i 2017-2020). IP: Miguel Ángel Bello López.
9. Red Nacional para la innovación en las técnicas de tratamiento de muestras miniaturizadas (RED2018-102522-T). Ministerio de Ciencia, Innovación y Universidades. Acciones de Dinamización "Redes de Investigación" del Programa Estatal de Generación de Conocimiento y Fortalecimiento Científico y Tecnológico del Sistema I+D+i, IP: Marisol Cárdenas Aranzana

C.3. Contracts

1. Caracterización de alquilbencensulfonatos sódicos lineales (LAS), citrato trisódico, zeolita, percarbonato sódico y alquilsulfatos sódicos lineales para su inclusión en el registro europeo REACH. COMPANY/ADMINISTRATION FINANCING: PERSAN, S.A. FROM:24/01/2011 TO: 24/04/2011. IP: Miguel Ángel Bello López.
2. Convenio de colaboración entre DOSBIO 2010 S.L.U. y la Universidad de Sevilla (Secretariado de Centros, Institutos, Servicios de Investigación y Centro de Investigación, Tecnología e Innovación de la Universidad de Sevilla, SGI-CITIUS. FINANCING: EBRO FOODS S.A. a través del Programa FEDER-INTERCONECTA (Convocatoria 2012-Andalucía) Código: ITC-20111024. FROM: 2012 TO: 2014. IP: Miguel Ángel Bello López.
3. Convenio de colaboración entre Consentino S.A. y la Universidad de Sevilla (Centro de Investigación, Tecnología e Innovación de la Universidad de Sevilla, SGI-CITIUS), en el ámbito de la oferta de técnicas instrumentales y analíticas; y de proyectos de investigación conjuntos" FINANCING: Consentino, S.A. FROM: 25/05/2010 TO: ---- (extendable annually). IP: Miguel Ángel Bello López / Patricia Aparicio Fernández
4. Determinación de métodos de extracción de compuestos orgánicos volátiles en productos de consumo mediante cromatografía. FINANCING: Destilaciones Bordas Chinchurreta S.A. FROM: 01/01/2011 TO: 31/12/2012. IP: Miguel Ángel Bello López
5. Determinación de sorbato en resinas de recubrimiento para quesos. FINANCING: Emulcheese S.L.U FROM:2014 TO: 2014 IP: Miguel Ángel Bello López.