CV Date	03/06/2025

Part A. PERSONAL INFORMATION

First Name	José		
Family Name	Bernal del Nozal		
Sex	Male	Date of Birth	03/07/1979
ID number Social Security, Passport			
URL Web	tesea.uva.es		
Email Address	jose.bernal@uva.es		
Open Researcher and Contributor ID (ORCID)	0000-0002-8618-3543		

A.1. Current position

Job Title	Catedrático de Universidad		
Starting date	2024		
Institution	Universidad de Valladolid		
Department / Centre	Química Analítica / Facultad de Ciencias		
Country		Phone Number	
Keywords	Other analytical techniques; Other analytical methods; Electrophoresis; Chromatography		

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2020 - 2024	Profesor Titular de Universidad / Universidad de Valladolid
2012 - 2020	Profesor Contratado Doctor / Universidad de Valladolid
2010 - 2012	Profesor Ayudante Doctor / Universidad de Valladolid
2008 - 2010	Doctor Contratado "Juan de la Cierva" en el Instituto de Fermentaciones Industriales y posteriormente en el Instituto de Investigación en Ciencias de Alimentación / Consejo Superior de Investigaciones Científicas
2003 -	Becario Predoctoral / Universidad de Valladolid
2001 -	Becario de Colaboración en el Departamento de Química Analítica / Universidad de Valladolid

A.3. Education

Degree/Master/PhD	University / Country	Year
Química analítica aplicada, contaminación y medio ambiente	Universidad de Valladolid	2007
Master Universitario en Química Experimental y Laboratorios	Universidad de Valladolid	2003
Licenciado en Ciencias Químicas	Universidad de Valladolid	2002

Part B. CV SUMMARY

In relation to my scientific career, it began in 2003 in my PhD stage at the University of Valladolid. After obtaining my PhD, I worked as post-doc at the Institute of Industrial Fermentations/ Institute of Food Science Research of CSIC, with a “Juan de la Cierva” contract (Jan 2008-Oct 2010) under the supervision of Prof. Dr. Alejandro Cifuentes. During this period, I was in a short-stay (Jun 2009- Jan 2010) in the Laboratory of Analytical Chemistry at the University of Helsinki (Finland) supervised by Prof. Dr. Marja Liisa Riekkola. Afterwards, I obtained an Assistant Professor position in the Department of Analytical Chemistry at the University of Valladolid (Oct 2010), and since May of 2012 until May 2020, I worked as Permanent Assistant Professor in the same University. During this last period, I stayed 2 months (Aug 2012-Oct 2012) as Visiting Professor in the Flavor Research and Education

Center at the University of Minnesota (USA) in collaboration with Prof. Devin Peterson. In addition, I was invited to the University of Chile in April 2016 by Professor Edwar Fuentes to supervise and discuss different aspects of a project that dealt with the incidence of pesticides in bee products. Finally, I obtained an Associate Professor position in May 2020 at the University of Valladolid, and I has been promoted to Full Professor in May 2024. During all these years, I have worked with several analytical separation techniques as conventional and ultra-high liquid chromatography, conventional and multidimensional gas chromatography, capillary electrophoresis and supercritical fluid chromatography, all of them coupled to several detectors especially mass and tandem mass spectrometry ones. I have also contributed as author/co-author to more than 120 scientific publications (JCR), including more than 55 in the corresponding Q1 and/or 50 as corresponding author, a H-index of 31 and more than 3000 citations, 100 congress presentations (10 invited presentations and 15 oral communications), 6 book chapters, 1 patent, 21 research projects or contracts with various industries and government agencies for more than 700000 euros. It must be remarked that I was/am the principial researcher of two national projects (RTA2015-00013-C03-03; PID2022-141679OR-C33). I am member of the working team since September 2023 of the COST CA22105 action (BEekeping products valorization and biomonitoring for the SAFEty of BEEs and HONEY (BeSafeBeeHoney). Due to my Research Activity, I obtained the I3 certificate in 2019. I have some international collaborations with the University of Chile, University of Reading (UK), University of Chemistry and Technology (Prague), Aristotle University of Thessaloniki (Greece), Florida International University (EE.UU), University of Helsinki (Finland), University of Lund (Sweden), Universidade Federal de Santa Catarina (Brazil), McGill University (Canadá), and Clermont Auvergne Institut National Polytechnique (France). The relevance of the scientific findings is also justified for the contribution for expanding the knowledge about some relevant issues such as colony collapse disorder, food safety and quality, including the analysis of contaminants like pesticides, antibiotics, metals, microplastics and plasticizers, and bioactive compounds from different families (amino acids, betaines, glucosinolates, phenolic compounds, lipids,..) , and in development of new analytical strategies, especially those that involved green chemistry. In the last years, I have mainly worked in the apiculture area, especially in developing new strategies for determining contaminants and bioactive compounds in bee products. Moreover, I have collaborated with different institutions (public and private) through the different contracts and projects. I would like also to remark that I have supervised 5 PhD thesis, and I am currently supervising three more, I have also directed 15Master Theses and 18 Bachelor Theses works. All my former PhD students are currently working in universities or in Companies related to pharmaceutical, bioanalytical, of food analysis, and in most cases, their research activity is related to the work that they performed during their PhD stage. In addition, I am also member of the Editorial Board of JCR publications: Food Analytical Methods, Journal of Food Composition and Analysis, Measurement: Food, Foods, Molecules, Separations y Frontiers in Chemical Biology. I have reviewed more than 200 publications for more than 20 different JCR journals, and I have been selected for the evaluation of projects from FONDECYT (Chile), National Science Centre (Poland), Agencia Estatal de Investigación, Plan Andaluz de Investigación, Projects GO (INIA-CSIC), and the University of Valladolid. In addition, I have also evaluated several national and international PhD theses. Finally, I am also a member of SECyTA, RSEQ, SEQA, and I am currently the coordinator of the TESEA group.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. Adrián Fuente-Ballesteros; Lei Tian; Lan Liu; Ana M. Ares; Stéphane Bayen; (6/6) José Bernal (AC). 2025. Development and validation of a green and practical method for studying pesticides and related chemical compounds in bee pollen samples by UAE-LC-QTOF-MS. Journal of Food Composition and Analysis. Elsevier. 145, pp.107765.

2 **Scientific paper**. Adrián Fuente-Ballesteros; Victoria Samanidou; Ana M. Ares; (4/4) José Bernal. 2025. Ten principles for developing and implementing tools in the context of white analytical chemistry. Sustainable Chemistry and Pharmacy. Elsevier. 45, pp.102031.

3 **Scientific paper**. Adrián Fuente-Ballesteros; Víctor Martínez-Martínez; Ana M. Ares; Silvia Valverde; Victoria Samanidou; (6/6) José Bernal (AC). 2025. Violet Innovation Grade Index (VIGI): A New Survey-Based Metric for Evaluating Innovation in Analytical Methods. Analytical Chemistry. American Chemical Society. 97, pp.6946-6955.

4 **Scientific paper**. Ana María Ares; Lucía Alcaide; (3/4) José Bernal; Silvia Valverde. 2024. Development and validation of a green analytical method for determining fourteen bisphenols in bee pollen by ultra-high-performance liquid chromatography-tandem mass spectrometry. Food Research International. Elsevier B.V.. 195, pp.114955.

5 **Scientific paper**. Patricia Brugnerotto; Adrián Fuente-Ballesteros; Beatriz Martín-Gómez; Ana María Ares; Luciano V. Gonzaga; Roseane Fett; Ana C.O. Costa; José Bernal. 2024. Free amino acid profile in Mimosa scabrella honeydew honey from Brazil and chemometric analysis for geographical discrimination. Food Research International. Elsevier B.V.. 177, pp.113856.

6 **Scientific paper**. Adrián Fuente-Ballesteros; Patricia Brugnerotto; Ana C. O. Costa; Ana María Ares; María J. Nozal; José Bernal. 2023. Determination of acaricides in honeys from different botanical origins by gas chromatography-mass spectrometry. Food Chemistry. Elsevier B.V.. 408, pp.135245.

7 **Scientific paper**. Ana M. Ares; María T. Martín; Jesús; Amelia V.; Mariano Higes; Raquel Martín-Hernández; José Bernal. 2022. Differentiation of bee pollen samples according to the betaines and other quaternary ammonium related compounds content by using a canonical discriminant analysis. Food Research International. Elsevier B.V.. 160, pp.11698.

8 **Review**. Ana Jano; Adrián Fuente-Ballesteros; Ana M. Ares; (4/4) José Bernal (AC). 2025. Miniaturized solid-phase extraction techniques in sample preparation applied to food matrices: A review. Microchemical Journal. Elsevier. 213, pp.113794.

9 **Review**. Adrián Fuente-Ballesteros; Ondrej Brabenec; Aristeidis S. Tsagkaris; Ana M. Ares; Jana Hajslova; (6/6) José Bernal (AC). 2024. Comprehensive overview of the analytical methods for determining pyrrolizidine alkaloids and their derived oxides in foods. Journal of Food Composition and Analysis. Academic Press INC Elsevier Science. 125, pp.105758.

10 **Review**. Adrián Fuente-Ballesteros; Ioannis Priovolos; Ana M. Ares; Victoria Samanidou; (5/5) José Bernal (AC). 2023. Green sample preparation methods for the analysis of bioactive compounds in bee products: A review. Advances in Sample Preparation. Elsevier. 6, pp.10060.

11 **Review**. Silvia Valverde; Ana María Ares; John Stephen Elmore; (4/4) José Bernal (AC). 2022. Recent trends in the analysis of honey constituents. Food Chemistry. Elsevier B.V.. 387, pp.132920.

12 **Review**. Laura Toribio; (2/4) José Bernal; María Teresa Martín; Ana María Ares. 2021. Supercritical fluid chromatography coupled to mass spectrometry: A valuable tool in food analysis. TRAC-Trends in Analytical Chemistry. Elsevier B.V.. 143, pp.116350.

C.2. Conferences and meetings

1 José Bernal. Determination of contaminants in bee products by using chromatographic techniques. XXIII Meeting of the Spanish Society of Chromatography and Related Techniques-SECyTA. SOCIEDAD ESPAÑOLA DE CROMATOGRAFÍA Y TÉCNICAS AFINES. 2025. Spain. Participatory - invited/keynote talk. Simposio.

2 Adrián Fuente-Ballesteros; Ondrej Brabenec; Aristeidis S. Tsagkaris; Ana M. Ares; José Bernal; Jana Hajslova. Monitoring 54 pyrrolizidine and tropane alkaloids in honeys by UHPLC-MS/MS. 9th EuChemS Chemistry Congress. The Institute of Chemistry of Ireland. 2024. Ireland. Participatory - oral communication. Conference.

3 José Bernal; Adrián Fuente-Ballesteros; Ana Jano; Ana M. Ares. Authenticating bee pollen origin by using high performance liquid chromatography. XXIV Reunión de la Sociedad Española de Química Analítica. SOCIEDAD ESPAÑOLA DE QUIMICA ANALITICA. 2024. Spain. 'Participatory - poster. Conference.

4 José Bernal. Autentificación y valorización de la miel en base a sus compuestos bioactivos. Aplicación a mieles de Palencia.. AVANCES EN LA INVESTIGACIÓN DE PRODUCTOS APÍCOLAS. Centro de Investigación Apícola y Agroambiental de Marchamalo-IRIAF. 2024. Spain. Participatory - invited/keynote talk. Jornada.

5 José Bernal. Autentificación de la miel y su aplicación a las mieles de Palencia. 5ª Feria Apícola Regional de Castilla y León. Asociación palentina de apicultores (APA) y Diputación de Palencia. 2024. Spain. Participatory - invited/keynote talk. Simposio.

6 Adrián Fuente-Ballesteros; José Bernal; Ana M. Ares. Key aspects during the development of analytical sample preparation methods: application to the study of selected pesticides in bee products. 13th International Conference on Instrumental Methods of Analysis: Modern Trends and Applications. Technical University of Crete. 2023. Participatory - oral communication. Conference.

7 Silvia Valverde; Beatriz Martín-Gómez; Lucía Alcaide; José Bernal; Ana M. Ares. Determination of bisphenols and related compounds in honey and bee pollen samples. 25th International Symposium on Advances in Extraction Technologies. Universidad de La Laguna. 2023. Spain. 'Participatory - poster. Conference.

8 Ana M. Ares; Beatriz Martín-Gómez; Jesús A. Tapia; Laura Toribio; María T. Martín; José Bernal. Differentiation Of Bee Pollen Samples According To Its Bioactive Compounds By Using A Canonical Discriminant Analysis. Second International Congress on Bee Sciences (IcBees). Afyon Kocatepe University. 2023. Participatory - oral communication. Conference.

9 José Bernal. Fraude en la miel. 4ª Feria Apícola Regional de Castilla y León. Asociación de apicultores del norte de Palencia (Apinorpa) y la Asociación palentina de apicultores (APA). 2023. Spain. Participatory - invited/keynote talk. Simposio.

10 José Bernal. Chromatographic methods for authenticating bee pollen origin. International Conference on Analytical and Bioanalytical Techniques. Magnus Group. 2022. Participatory - invited/keynote talk. Conference.

C.3. Research projects and contracts

1 **Project**. Enantiómeros de aminoácidos, betaínas y lípidos (ácidos grasos) como biomarcadores de la miel y el polen apícola (PID2022-141679OR-C33). José Bernal del Nozal. (Universidad de Valladolid). 01/09/2023-31/08/2026. 137.500 €.

2 **Project**. Betaínas y glucosinolatos como nutrientes del polen (RTA2015-00013-C03-03). José Bernal del Nozal. (Universidad de Valladolid). 13/07/2017-13/07/2020. 90.000 €.

3 **Project**. Presencia y persistencia de residuos de neonicotenoides en cera y polen (RTA 2013-00042-C10-03). José Luis Bernal Yagüe. (Universidad de Valladolid). 23/10/2014-15/03/2019.

4 **Project**. Tratamientos alternativos con productos naturales para el control de las nosemosis de las abejas melíferas (RTA 2012-00076-C02-02). María Jesús del Nozal Nalda. (Universidad de Valladolid). 15/05/2013-14/05/2016.

5 **Project**. Control de nosemosis de las abejas melíferas. II Metodología analítica para uso alternativo de fitoalexinas.. Ministerio de Ciencia y Innovación (INIA), proyecto RTA2009-00105-C02-02. José Luis Bernal Yagüe. (Universidad de Valladolid). 2009-2012.

6 **Project**. Tecnologías limpias aplicadas a la extracción de compuestos nutraceúticos de broculi. Junta de Castilla y León, GIR 127. José Luis Bernal Yagüe. (Universidad de Valladolid). From 2008.

7 **Project**. Seguridad y trazabilidad de alimentos transgénicos. MINISTERIO DE EDUCACION Y CIENCIA, AGL2005-05320-CO2-02. José Luis Bernal Yagüe. (Universidad de Valladolid y CSIC). From 2005.

8 **Contract**. Caracterización de mieles de la provincia de Palencia Asociación Palentina de Apicultores. José Bernal. 01/03/2023-01/11/2023. 14.500 €.

C.4. Activities of technology / knowledge transfer and results exploitation

Raquel Martín; Mariano Higes; María T. Martín; José Bernal; Laura Toribio; María Jesús Nozal; José Luis Bernal. 201331155. Composición alimenticia de abejas melíferas y procedimiento para controlar infecciones en dichas abejas mediante dicho alimento Spain. 09/07/2015. Universidad de Valladolid.