MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

CV date	12/01/2023

Part A. PERSONAL INFORMATION

First name	M Pilar		
Family name	Calo Mata		
Gender (*)		Birth date	
Social Security, Passport, ID number			
e-mail	p.calo.mata@usc.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		https://orcid.org/0000-0002-9568-6046	

(*) Mandatory

A.1. Current position

Position	Associate Professor of Food Technology		
Initial date	20/01/2004		
Institution	University of Santiago de Compostela		
Department/Center	Analytical Chemistry, Nutrition and Food Science/College Of Veterinary Sciences, USC-Campus Lugo		
Country	SPAIN	Teleph. number	606434668
Key words	Foodomics, Genomics, Proteomics, Food safety, food fermentation, Food microbial species ID, food authenticity and traceability		

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

Period	Position/Institution/Country/Interruption cause
22 Dec 2016-21 June 2017	activity interruption (maternity leave)
January 2004-Present	Associate Professor of Food Technology, Department of Analytical Chemistry, Nutrition and Food Science,
nov. 2000- August 2002	Postdoctoral Research Fellow/Hospital Clínico Universitario de Santiago de Compostela - CHUS/
nov. 1997- August 2000	Postdoctoral Research Fellow/ Instituto de Investigaciones Marinas - CSIC (IIM-CSIC), Vigo, Spain
March 1995 – August 1997	Postdoctoral Research Fellow/University of Wisconsin-Madison - Food Research Institute, Wisconsin, USA

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Food Microbiology, Ph.D.	University of Santiago de Compostela	1994
Pharmacy Bachelor´s degree	University of Santiago de Compostela	1988

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

Scopus Author ID: 7004154005, ResearcherID: L-3771-2017

Indicators of scientic production

Citations (total): 4474 (scholar-google, ScG); 2992 (scopus, Sco)
Citations (last five years): 2157 (ScG), 1272 (Sco)
Publications in Q1 journals: 60
H index: 42 (ScG); 35 (Sco), i10-index: 70

- **Scientific publications publications according to Scopus**: More tan 100 publications including 75 peer-reviewed articles in international journals of the JCR-SCI, 14 Book chapters in international books; 7 peer-reviewed Review articles in international journals of the JCR-SCI; 3 conference papers (in total 100 co-authors)
- **National and International Congresses**: More than 100 contributions
- research projects: PI of 7 research projects, Co-PI of 1 multidisiplinary research Project, and participant in 28 research projects (granted by the Spain goverment, Galicia goverment, and Spanish Ministry of External Affairs-Spanish /Agency of International Cooperation (AECI)).
- **Supervisor** of 6 Ph.D. theses + 2 under development. 16 Master´s Thesis, 11 Bachelor´s Degree Thesis

Subject Area according to Scopus: Biochemistry, Genetics and Molecular Biology; Immunology and Microbiology; Agricultural and Biological Sciences; Chemistry; Foodomics

Expertise achieved: throughout the years have achieved multidisciplinary expertise

USC, as Associate Professor at the Department of Analytical Chemistry, Nutrition and Food Science has been involved in different research topics. The areas of expertise include: (i) Meat and seafood authenticity and traceability; (ii) characterization of pathogen, spoilage, biogenic amine and natural biopreservatives (bacteriocins) producing bacterial species by genomics and proteomics

CHUS. Genomic characterization of SNPs

UWM-FRI, Wisconsin, USA. Analysis of the carotenogenesis routes of the yeast *Phaffia rhodozyma.* Analysis of antimicrobial activity of natural compounds against *Clostridium difficile.*

IIM-CSIC, Vigo. Fish and seafood authenticity (species identification)

Department of Microbiology, USC Wine alcoholic and malolactic fermentation microbiota isolation and characterization. Characterization of lab induced astaxanthin hiperproducing mutant strains of the yeast *Phaffia rhodozyma*.

Member of commissions:

- Member of the commission of the Red Gallega de Bioinformática 31-01-2002 / 04-05-2003
- Member of the editing commission of the Biotechnology Degree (USC, 2014-2017)
- Member of the academic commission of the Master en Biotecnología (USC, 23-06-2008-2017)
- Member of the academic commission of the Master en Innovación en Seguridad y Tecnología Alimentarias (USC, 13/04/2010-2014)
- Member of the academic commission of the Doctorate Program “Member of the academic commission of the” (Sept 2020- present)

Evaluator of Scientific Projects for the following administrations:

- Fonds de la Recherche Scientifique – FNRS

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES *(ordenados por tipología) (*las 10 aportaciones más relevantes en cada uno de los siguientes apartados)

C.1. Publicaciones más importantes en libros y revistas con “peer review” y en conferencias

1. Quintela-Baluja, M.,Jobling, K.,Graham, D.W.,...Carrera, M.,Calo-Mata, P. Rapid Proteomic Characterization of Bacteriocin-Producing *Enterococcus faecium* Strains from Foodstuffs. *International Journal of Molecular Sciences*,2022, 23(22), 13830
2. Quintela-Baluja, M.,Jobling, K.,Graham, D.W.,...Barros-Velázquez, J.,Calo-Mata, P. Draft Genome Sequences of Two Bacteriocin-Producing *Enterococcus faecium* Strains Isolated from Non-fermented Animal Foods in Spain. *Microbiology Resource Announcements*, 2022, 11(11)
3. Quintela-Baluja, M.,Jobling, K.,Graham, D.W.,...Barros-Velázquez, J.,Calo-Mata, P. Nearly Complete Genome Sequence of *Raoultella ornithinolytica* Strain MQB_Silv_108, Carrying an Uncommon Extended-Spectrum-b-Lactamase-like bla_{BEL}Gene. *Microbiology Resource Announcements*,2022, 11(11)
4. Abril, A.G., Quintela-Baluja, M.,Villa, T.G.,...Barros-Velázquez, J.,Carrera, M. Proteomic Characterization of Virulence Factors and Related Proteins in *Enterococcus* Strains from Dairy and Fermented Food Products. *International Journal of Molecular Sciences*,2022, 23(18), 10971

5. Abril, A.G., Carrera, M.,Böhme, K.,...Villa, T.G.,Calo-Mata, P. Proteomic characterization of bacteriophage peptides from the mastitis producer *Staphylococcus aureus* by LC-ESI-MS/MS and the bacteriophage phylogenomic analysis. *Foods*,2021, 10(4), 799
6. Abril, A.G., Carrera, M.,Böhme, K.,...Villa, T.G.,Calo-Mata, P. Characterization of Bacteriophage Peptides of Pathogenic *Streptococcus* by LC-ESI-MS/MS: Bacteriophage Phylogenomics and Their Relationship to Their Host. *Frontiers in Microbiology*,2020, 11, 1241
7. Böhme, K., Calo-Mata, P.,Barros-Velázquez, J.,Ortea, I. Recent applications of omics-based technologies to main topics in food authentication. *TrAC - Trends in Analytical Chemistry*,2019, 110, pp. 221–232
8. Böhme, K., Calo-Mata, P.,Barros-Velázquez, J.,Ortea, I. Review of Recent DNA-Based Methods for Main Food-Authentication Topics. *Journal of Agricultural and Food Chemistry*,2019, 67(14), pp. 3854–3864
9. Carrera, M., Böhme, K., Gallardo, J.M.,...Cañas, B., Calo-Mata, P. Characterization of foodborne strains of *Staphylococcus aureus* by shotgun proteomics: Functional networks, virulence factors and species-specific peptide biomarkers. *Frontiers in Microbiology*,2017, 8(DEC), 2458
10. Prado, M., Ortea, I., Vial, S.,...Calo-Mata, P.,Barros-Velázquez, J. Advanced DNA- and protein-based methods for the detection and investigation of food allergens. *Critical Reviews in Food Science and Nutrition*,2016, 56(15), pp. 2511–2542

C.2. Congresses

Participation in more than 100 National and International Congresses.

1. Ana G. Abril; M.Carrera; K. Boheme; J. Barros- Velazquez; Jose L.R. Rama; P. Calo-Mata, A Sanchez Pérez. & T. G. Villa (2021) Proteomic Characterization of Antibiotic Resistance, and Production of Antimicrobial and Virulence Factors in*Streptococcus*Species Associated with Bovine Mastitis. Conference: 4th International Caparica Conference in Antibiotic Resistance. Contribution: Oral. Organizing entity: Bioscope, Proteomass, Caparica | Portugal June 2021. Excellent Shotgun Communication Prize Sponsored by PROTEOMASS Scientific Society.
2. Ana G. Abril; M.Carrera; B. Martin, K. Boheme; J. Barros- Velazquez; B. Cañas, T. G. Villa & P. Calo Mata (2019). Peptide biomarkers for mastitis producing Streptococcus spp. identification and characterization by LC-ESI-MS/MS. June 10-13, 2019. Vigo, Spain. ISBN: 978-84-120734-1-6. Conference: “Congreso Nacional de Biotecnología”/ National conference of Biotechnology. Contribution: Poster Organizing entity: SeBiot and Vigo University.
3. Ana G. Abril; M. Carrera; K. Bohme; J. Barros- Velazquez; C., B. Cañas; T. G. Villa & P. Calo Mata (2018). Characterization of bacteriophage peptides for pathogen identification by LC-ESI-MS/MS. June 16-20, 2018. Santiago de Compostela, Spain. Conference: XII EuPA Congress. “Translating genomes into biological functions”. Contribution: Poster Organizing entity: EuPA, SeProt
4. Ana G. Abril; I. Ortea; J.L. R. Rama; M. Carrera; K. Bohme; J. Barros- Velazquez; B. Cañas; T. G. Villa & P. Calo Mata (2018). Characterization of peptides for histamine-producing bacteria identification by LC-ESI-MS/MS. June 16-20, 2018. Santiago de Compostela, Spain. Conference: XII EuPA Congress. “Translating genomes into biological functions”.Contribution: Poster .Organizing entity: EuPA, SeProt

C.3. Research projects (Selection in the past 10 years)

1. Convenio de Colaboración entre a Consellería do Mar, CSIC, a Fundación Pública Galega Tecnolóxica de Supercomputación de Galicia (CESGA), a Fundación CETMAR, a Universidade de Santiago de Compostela, a Universidade de Vigo, a Universidade da Coruña Ref. CP082 (2022- 2025) Xunta de Galicia 2022- 2025 17.135,00 € IP: Prof. **Alberto Cepeda Saez**, Co-IP **Dr. Pilar Calo-Mata**
2. CONSOLIDACIÓN 2022 GRC GI-1628 - Laboratorio de Higiene, Inspección e Control de Alimentos - LHICA (2022- PG052) Ref.ED431C 2022/14 Xunta de Galicia 200.000,00 € 01/01/2022 31/12/2025, PI: Prof. **Alberto Cepeda Saez**

3. Gestión y producción sostenible de biorecursos (Bioredes). Xunta de Galicia/Consellería de Educación, Universidade e Formación Profesional. Code: 2018-PG0099, Ref. ED431E 2018/09. 01/01/2018 31/12/2020. 405.759,16 €. P.I. **Prof. Paulino Martínez Portela**.
4. Consolidación y estructuración de LHICA-GI1628 en higiene de los alimentos. 014-PG111). Xunta de Galicia/Consellería de Cultura, Educación e Ordenación Universitaria. Code: GRC2014/004. 24/06/2014 31/12/2017. 320.000,00 €. P.I. **Prof. Alberto Cepeda Sáez**.
5. Aplication of ionization mass spectrometry/electrospray for the rapid identification and quantification of food-borne pathogens. National Program of Food Technology and Resources (CICYT). Code: AGL2013-48244R. 01-06-14/31-12-16. 108.000 €. P.I. Dr. **Pilar Calo-Mata**.
6. Selection and characterization of lactic acid bacteria isolated from crude camel milk and producers of antimicrobial compounds for its use in food biopreservation. Spanish Ministry of External Affairs-Spanish Agency of International Cooperation (AECI). Code: A1/0338133/11. 01-01-12/01-01-13. 7.700 €. P.I. Prof. **Jorge Barros- Velázquez**.
7. Development of a universal DNA-based biosensor for the rapid diagnostic of microbial pathogens: specific application to bovine production. Spanish MInistry of Science and Innovation, INPACTO Sub-program. Code: IPT-2011-1290-010000. 01/06/2011-30/05/2014. 148.920,00 €. P.I. Dr **Pilar Calo-Mata**.
8. Caracterization of microorganisms from aquacultured fish species from Tunisian coast able to produce bioactive compounds. Spanish Ministry of External Affairs-Spanish Agency of International Cooperation (AECI). Code: 2011/PN075. 13-12-11/12-12- 12. 25.000 €. P.I.: Dr**. Pilar Calo-Mata**.
9. Development and application of the ligation reaction detection coupled to a universal array for the detection of spoilage and pathogenic bacteria in seafood products. National Program of Food Technology and Resources (CICYT). Code: AGL2010-19646. 01-07-10/01-07-13. 108,900 €. P.I.: Dr. **P. Calo-Mata**.
10. Development of a microarray for the rapid identification of emerging pathogens in ready-to- eat and minimally-processed foods. Galician Government-General Research Program. Code: 10PXIB261045PR. 01-08-10/01-10-13. 69.689 €. P.I.: Dr. **P. Calo-Mata.**

C.4. Contracts, technological or transfer merits

Research contracts with companies (selection from the last ten years)

1. Implementación de novas Tecnoloxías de bioconservación e envasado de productos mariños baseados en compostos bioactivos antioxidantes e antimicrobianas obtidos a partir de algas galegas. InnovaPeme (Ref 2020-CE139). PI Barros Velazquez, Jorge Porto-Muiños SL 12.350,00 € 2 01/10/2020 31/12/2021
2. OCEANWISE. Evaluación de parámetros microbiológicos en cuatro especies de pescado (Ref 2021-CL049) PI: Barros Velazquez, Jorge Centro Tecnolóxico do Mar (Fundación CETMAR) 4.646,40 € 3 01/06/2021 31/12/2021
3. Desenvolvemento dun sistema integral de valorización de langostillas (Munida spp) refrixerada e conxelada proveniente do caladoiro do Gran Sol (Expte. IN841C 2012/82) (2012-CE213) Ref. IN841C 2012/82 Barros Velazquez, Jorge Cooperativa de Armadores de Pesca do Porto de Vigo 9.500,00 € 6 24/09/2012 23/09/2014
4. Estudo e desenvolvemento de film biodegradable para o recubrimento de peixe fresco. Peixepac (10TAL048E)(2011-CE181) Ref.10TAL048E Barros Velazquez, Jorge Cooperativa de Armadores de Pesca do Porto de Vigo 20.125,00 € 5 27/01/2011 30/09/2013
5. Optimización da calidade en especies de peixe de Gran Sol a través da adición dunha mestura de ácidos orgánicos naturais con propiedades preservantes (código 10TAL018E) (2011-CE183) Ref.10TAL018E Barros Velazquez, Jorge Cooperativa deArmadores de Pesca do Porto deVigo 19.090,00 € 5 04/02/2011 31/12/2012

Patents

Method for the identification of species belonging to the Family Penaoidea by means of DNA analysis. **P. Calo-Mata**, A. Pascoal, M. Prado, A. Cepeda and J. Barros-Velázquez. Number: 200603211(9). Date: 21-09-2009.