MINISTERIO DE CIENCIA E INNOVACION

ABBREVED CURRICULUM VITAE (CVA) – maximum 4 PAGES
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AGENCIA ESTATAL DE INVESTIGACIÓN

Part A. PERSONAL INFORMATION

CV date	12.05.2022

First and Family name	M. Auxiliadora Prieto		
Social Security, Passport, ID number	11803563D	Age	55
Researcher codes	WoS (Researcher ID)	I-8092-2015	
	SCOPUS (Author ID)	7202098526	
	Open Researcher and Contributor ID (ORCID) *	0000-0002-8038-1223	

(*) Mandatory

A.1. Current position

Name of University/Institution	Spanish National Research Council (CSIC)			
Department	Biological Research Center Margarita Salas			
Address and Country	C/ Ramiro de Maeztu, 9			
Phone number	918373112	E-mail	auxi@cib.csic.es	
Current position	Full Professor of CSIC		From	Feb 2021
Key words	Biopolymers, bioplastics, biomaterials, microbiology, metabolic engineering, bioeconomy, biotechnology			

A.2. Education

PhD	University	Year
Pharmacy	Complutense-Madrid	1996

A.3. General indicators of quality of scientific production

Total citation (Scopus): 3182
Average citations last five years, including present year: 262 (scopus)**,** 360 (Google scholar)
Indice H: 36 (Scopus), 42 (Google scholar, 5277 cites) **https://scholar.google.es/citations?user=Ghk8kA0AAAAJ&hl=es)**
Q1: (87%, last five years)
Number of Doctoral Thesis supervised: 9 finished (7 last 10 years) and 3 ongoing.
Sexenios: 5 (last 2010-2015)

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

M. Auxiliadora Prieto received her PhD in Pharmacy in the year 1996 from the Complutense University of Madrid. She was granted with two EMBO fellowships. First, at the Federal Institute of Biotechnology, Germany, in the group of Prof. Kenneth Timmis. Then, as EMBO Postdoc fellow at the Institute of Biotechnology, ETH Zürich, Switzerland, in the group of Prof. Bernard Witholt. Currently she is Full Professor at the Spanish National Research Council (CSIC). She runs the Polymer Biotechnology group as part of the Microbial and Plant Biotechnology Department of the Biological Research Centre-Margarita Salas (CIB-CSIC) (http://cib.csic.es/research/microbial-plant-biotechnology/polymer-biotechnology). The group aims to explore and exploit the bacterial abilities for producing and degrading bio-based polymers with two different applications; as i) bioplastics, in order to contribute to global sustainability, and as ii) biomaterials for implants, drug delivery systems and tissue engineering directed to the biomedical sector. In their projects the group applies tools of molecular biology and metabolic engineering, combined with new omics technologies and synthetic biology. Prof. Prieto has participated in, led and/or coordinated 16 national and 10 international projects devoted to fundamental and applied science in collaboration with industries for designing

sustainable bioprocesses for industrial production of biopolymers. She has private contracts with industries and is main inventor of 9 families of patents. She has directed 7 Doctoral Theses during the last 10 years and many Master Theses and graduated research works. She has huge experience in microbial metabolism for the molecular characterization of pathways related to biosynthesis and biodegradation of biopolymers (more than 100 scientific publications in the field). At CSIC level, she is the coordinator of the Interdisciplinary Platform for Sustainable Plastics towards a Circular Economy (SusPlast) (http://www.susplast-csic.org), which is integrated by eighteen Institutes of CSIC and thirty-three groups. It counts with multidisciplinary biotechnological researchers, dedicated to bioprospecting, biocatalysis, biotransformation, environmental microbiology, synthetic and systems biology, plastics and bioplastics synthesis and biodegradation. She is co-founder of the SME Darwin Bioprospecting Excellence SL (http://darwinbioprospecting.com/) and Editor in chief of Microbial Biotechnology (Wiley). In 2015-2018 she served as scientific advisor in topics related to synthetic biology and biotechnology at the Subdivision of Scientific and Technical Transversal Programs, Strengthening and Excellence of the Spanish State Research Agency. She is currently a member of the Scientific Advisory Board of the CIB-CSIC. At international level is member of the Science Advice working group for Policy by European Academies (SAPEA), examining issues related to bioplastics and their degradation in open environment and composting plants https://www.sapea.info/topics/biodegradability-of-plastics/

Part C. RELEVANT MERITS
C.1. Publications (10 selected, 10 years)

1. Rivero-Buceta V., Aguilar MR, Hernández-Arriaga AM, Blanco FG, Rojas A, Tortajada M, Ramírez-Jiménez RA, Vázquez-Lasa B, Prieto A. 2020. Anti-staphylococcal hydrogels based on bacterial cellulose and the antimicrobial biopolyester poly(3-hydroxy-acetylthioalkanoate-co-3-hydroxyalkanoate**). Int J Biol Macromol. 2020 162:1869-1879.**
2. Tarazona NA, Hernández-Arriaga AM, Kniewel R, Prieto MA. 2020. Phasin interactome reveals the interplay of PhaF with the polyhydroxyalkanoate transcriptional regulatory protein PhaD in *Pseudomonas putida*. **Environ Microbiol 22:3922-3936**
3. Mato A, Blanco FG, Maestro B, Sanz JM, Pérez-Gil J, Prieto MA. 2020. Dissecting the polyhydroxyalkanoate-binding domain of the PhaF phasin: rational design of a minimized affinity tag. **Appl Environ Microbiol. 86 (12) e00570-20.**
4. González E, Herencias C, Prieto MA. 2020. A polyhydroxyalkanoate-based encapsulating strategy for 'bioplasticizing' microorganisms**. Microb Biotechnol. 13:185-198.**
5. Tarazona NA, Machatschek R, Schulz B, Prieto MA, Lendlein A. 2019. Molecular insights into the physical adsorption of amphiphilic protein PhaF onto copolyester surfaces. **Biomacromolecules, 20:3242-3252.**
6. Hernández-Arriaga MA, del Cerro C, Urbina L, Eceiza A, Corcuera MA, Retegi A, Prieto MA. 2019. Genome sequence and characterization of the bcs clusters for the production of nanocellulose from the low pH resistant strain *Komagataeibacter medellinensis* ID 13488. **Microbial biotechnology 12: 620–632.**
7. Revelles O, N Tarazona, JL García, MA Prieto. 2016. Carbon roadmap from syngas to polyhydroxyalkanoates in *Rhodospirillum rubrum*. **Environmental microbiology 18: 708-720.**
8. Martínez V, Herencias C, Jurkevitch E, Prieto MA. 2016. Engineering a predatory bacterium as a proficient killer agent for intracellular bio-products recovery: The case of the polyhydroxyalkanoates. ***Sci Rep* 6, 24381.** https://doi.org/10.1038/srep24381
9. Prieto MA, Escapa IF, Martínez V, Dinjaski N, Herencias C, de la Peña F, Tarazona N and Revelles O. 2016. A holistic view of polyhydroxyalkanoate metabolism in *Pseudomonas putida*. 2015. **Environmental Microbiology 18: 341-357.**
10. Dinjaski N, Fernández-Gutiérrez M, Selvam S, Parra-Ruiz FJ, Lehman SM, San Román J, García E, García JL, García AJ, Prieto MA. 2014. PHACOS, a functionalized bacterial polyester with bactericidal activity against methicillin-resistant Staphylococcus aureus. **Biomaterials 35: 14-24.**

C.2. Research projects and grants (10 selected, five years)

1. MIX-UP **– MIXed plastics biodegradation and UPcycling using microbial communities** H2020-NMBP-TR-IND-2018-2020 – No 870294. PI-CSIC: Mª Auxiliadora Prieto Jiménez 2020-2023; (260.432,88 €)

2. NANOBIOCARGO-CM_**Nanocontenedores y nanovehículos dirigidos al transporte y liberación de agentes bioactivos** CAM. P2018/NMT4389. PI-CSIC: Mª Auxiliadora Prieto Jiménez. 2019-2022; (100.000€)

3. SINFONIA **– Synthetic biology-guided engineering of Pseudomonas putida for biofluorination.** H2020-NMBP-BIO-2018.– No 814418. PI-CSIC: Mª Auxiliadora Prieto Jiménez. 2019-2022; (419.578€)

4. TECMABIO **– Application of cutting edge TEChnologies for the synthesis of biofunctional MAterials based on bacterial BIOpolymers.** MINECO: BIO2017-83448-R. PI: Mª Auxiliadora Prieto Jiménez. 2018-2021; (254.000 €)

5. ENGICOIN **– Engineered microbial factories for CO2 exploitation in an integrated waste treatment platform.** H2020-NMBP-BIO-2017; BIOTEC-05-2017, No 760994-2. PI-CSIC: Mª Auxiliadora Prieto Jiménez, 2017-2021; (511.343 €)

6. AFTERLIFE **– Advanced Filtration TEchnologies for the Recovery and Later conversIon of relevant Fractions from wastEwater.** H2020-EU.3.2.6. No 745737. PI-CSIC: Mª Auxiliadora Prieto Jiménez. 2017 -2021; (216.000 €)

7. REFUCOAT **– Full recyclable food package with enhanced gas barrier properties and new functionalities by the use of high performance coatings.** H2020-EU.3.2.6. - (BBI-JTI). No 745791 PI-CSIC: Mª Auxiliadora Prieto Jiménez. 2017-2020; (267.115 €)

8. CELBICON **– Cost-effective CO_2 conversion into chemicals via combination of capture, electrochemical and biochemical conversion technologies.** EU- H2020-ISIB-2015-2. No 679050. PI-CSIC**:** Mª Auxiliadora Prieto Jiménez. 2016-2019 (444.735€)

9. P4SB – **From Plastic waste to Plastic value using Pseudomonas putida Synthetic Biology.** EU-H2020-LEIT-BIO-2014-1. No 633962-2. PI-CSIC: Mª Auxiliadora Prieto Jiménez 2015-2019 (561.875€)

10. SYNPOL **– Biopolymers from syngas fermentation.** FP7-KBBE-2012-6. No FP7-311815. PI-CSIC: Mª Auxiliadora Prieto Jiménez. 2012 -2016 (318.311€)

C.3. Contracts (10 years)

1. Contract: # 20100857 Duration: 15/07/2010-15/07/2030 Exclusive license of the patent nº 200931258 Biopolis SL.
2. Contract: #20112080 Duration: 23/05/2011-21/09/2030. Exclusive license of the patent nº 201031401 Biopolis SL.
3. Contract: #20130130. Duration: 01/12/2012- 30/11/2031. Exclusive license of the patent 201131846 Biopolis SL.
4. Contract # 20101939 Evaluacion y validacion de procesos microbianos a escala piloto de sintesis de PHA Biopolis SL Duration:01/11/2010- 29/02/2012 (71.694,44 €)
5. Contract: # 20202113. Duration: 12/07/2020-11/07/2021. R&D contract "Bioplastics from livestock waste and the investigation of microbial consortiums" Zoitechlab, Spain (222.591,60 €)
6. Contract # 20204900. Duration 05/11/2020-04/11/2021. R&D contract “Design and implementation of a bioprocess for the production of biological based polymers” Ercros, Spain (194.174,6 €)
7. Contract # pending. Duration 01/01/2021-11/07/2024. Donation contract, Queen Sofia Foundation, Sustainable plastic waste management through cutting-edge biotechnological approaches (180.000 €)

C.4. Patents (last 10 years)

1. Prieto et al. Recombination Pseudomonas putida strains for the production of polyhydroxyalkanoate. EP19382964.5. Priority Data: 05/11/2019. PCT PCT/EP2020/080988
2. Vidal, et al. Caulobacter segnis strain and its use for the production of polyhydroxyalkanoatoes. Granted 08/02/2017 EP2987862B1
3. Castro Mayorga, J.M. Lagarón Cabello, M.J. Fabra Rovira, M.A. Prieto Jiménez, G. Sánchez Moragas. Procedimiento para la obtención de biopolímeros antimicrobianos que comprenden polihidroxialcanoatos y nanopartículas metálicas. Granted 15/10/2018. ES2647324
4. Dinjaski, Nina, José Luís García López, y María Auxiliadora Prieto Jiménez 2013. Uso de polihidroxiaciltioalcanoatos como bactericidas. P201330821. Granted 28/09/2015.
5. Martínez López V., Edouard Jurkevitch, José Luís García López, y María Auxiliadora Prieto Jiménez 2012. "Procedimiento de fermentación para la producción de polihidroxialcanoatos y derivados que comprende la utilización de predadores bacterianos. P201231516 Granted 04.02.2015.
6. Fernández Escapa, I, Carlos del Cerro, García López JL, Prieto Jiménez MA Sistema para mejorar la producción de polihidroxialcanoatos (bioplástico) por fermentación a partir de glicerol utilizando una cepa de Pseudomonas putida modificada genéticamente. ES201131846 Granted 18/06/2014. Licensed until 2019
7. Fernández Escapa, I, Morales Ruiz, MV, García López JL, Prieto Jiménez MA. Síntesis de polihidroxialcanoatos (PHA) con grupos tioesteres en la cadena lateral. Granted 12/02/2014. Spanish patent Nº P201031401
8. Martínez López V et al., Sistema de autolisis celular para el procesado de la biomasa bacteriana en la producción de polihidroxialcanoatos en Pseudomonas putida KT2440. ES2370947A1. Granted 2012-11-02. Licensed until 2019.

C.5. (Institutional responsibilities, Editor, Board of scientific societies, spin-off)

- Since July 2018, coordinator of the Interdisciplinary Platform for Sustainable Plastics towards a Circular Economy ***SusPlast*** of the CSIC (www.susplast-csic.org).
- Scientific advisor on topics related to synthetic biology and biotechnology in the Subdivision of Scientific and Technical Transversal Programs, Strengthening and Excellence of the State Research Agency (2015-2018).
- Chief Editor of Microbial Biotechnology (Wiley) (2015-today)
- Member of the Editorial Board of the journal Applied Environmental Microbiology (ASM) (2013-2018)
- Member of the Evaluation Commission of Scientific-Technological Activity of the Ministry of Science and Innovation as I+D expert (2015-2018).
- Member of the Scientific Advisory Board of the Biological Research Center-CSIC (Since 2019)
- Editorial Board Member of the European Federation of Biotechnology (EFB). Biomaterials Division (Since July 2020).
- She was one of the Co-founders of the company Darwin Bioprospecting Excellence SL (Valencia, Spain) http://darwinbioprospecting.com/).