CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	MARÍA BELÉN		
Family name	PASCUAL MORENO		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position	PROFESORA TITULAR		
Initial date	01/05/2020		
Institution	UNIVERSIDAD DE MALAGA		
Department/Center	BIOLOGÍA MOLECULAR Y BIOQUÍMICA	FACULTAD DE CIENCIAS	
Country	SPAIN	Teleph. number	
Key words	Plants, metabolism, amino acids, transcriptional and posttranslational regulation, biotechnology		

A.2. Previous positions (research activity interuptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2008- 2010 (30 months)	Postdoctoral research/ IBVF (CISC-US)
Oct 2010-Dec 2010 (3 months)	Postdoctoral research/ UMA
2011-2012 (22 months)	JdC Postdoctoral research/ UMA
Oct 2012/Mar 2013 (5 months)	Maternity leave
Mar 2013/Apr 2014 (14 months)	JdC Postdoctoral research/ UMA
May2014/Dec 2014 (8 months)	Unemployed
Jan 2015/Mar 2015 (2 months)	Postdoctoral research/ UMA
Mar 2015/Jun 2015 (4 months)	Profesora sustituta interina/ UMA
Jun 2015/Dec 2015 (6 months)	Postdoctoral research/ UMA
Jan 2016/Sep 2017 (21 months)	Junta Andalucía Research/ UMA
Oct 2017/ Apr 2020 (31 months)	Profesora sustituta interina/ UMA
Since May 2020	Profesora Titular de Universidad/ UMA

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Bachelor in Biology	Málaga	2001
Doctor	Málaga	2007

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

I obtained a Degree in Biology (2001) and a PhD in Biochemistry (2007) from the University of Málaga (UMA). My PhD research focused on the nitrogen metabolism in trees such as *Pinus pinaster* and poplar. This work resulted in several high-impact publications in the fields of Plant Sciences and Forestry (*New phytologist* 2004; *Tree physiology* 2008, 2018; *Phytochemistry* 2008; *Planta* 2010, 2015). I then carried out a postdoctoral stay in the laboratory of F. Javier Cejudo at IBVF (CSIC-University of Seville), where I worked on a project related to plant redox biology and the origin of peroxide-dependent signalling in plants. This research led to the

publication of four papers (*JExpBot* 2010; *JBC* 2010; *Plant Physiology* 2011; *The Plant Cell* 2012). In 2011, I joined the laboratory of F. Canovas under a "Juan de la Cierva" contract and initiated a new research line aimed at elucidating the transcriptional network involved in wood formation in *P. pinaster,* with special focus on the genetic and molecular coordination of phenylalanine biosynthesis and its phenolic derivatives. These studies allowed the identification of key regulatory mechanisms governing phenylalanine biosynthesis and its coordination with lignin synthesis (Craven-Bartle *et al*., 2013; Pascual et al., 2016). We identified the NAC transcription factors family in *P. pinaster* (*Pascual et al.,* 2015.), which subsequently led to the identification and functional characterization of PpNAC1 as a master regulator coordinating phenylalanine and lignin biosynthesis (*Pascual et al*., 2018, *Plant Biotech. J*. 16 (5): 1094-1104; Pascual-corresponding author- *et al*., 2018, *Progress in Botany*, 80:195-222). In addition, we demonstrated the critical role of MYB8 in regulating ADT enzymes and other genes involved in lignin biosynthesis (El-Azaz *et al*., 2020). This research was supported by International (European Union), national and regional projects, as detailed in Section C.3. The excellence of my postdoctoral research was accredited by ANECA, and I received the I3 certification in 2019.

Since 2010, I have been teaching in the Degrees of Biology, Biochemistry and Health Engineering, as well as in the Official Master´s Degree in Cellular and Molecular Biology at UMA (MBCM-UMA), contributing to the training of young researchers. I have coordinated four Teaching Innovation Projects, authored two educational book chapters (2015 and 2019), and completed more than 800 hours of lecturer training courses. I have also participated in national and international education conferences (CINDU 2015, CINDU 2019; *Jornadas de Innovación Educativa y Enseñanza Virtual*, 2016 and 2018). Furthermore, I have actively participated in science outreach activities aimed at disseminating scientific knowledge to society, including "Café con Ciencia", "La Noche Europea de los Investigadores" within the Marie-Curie Actions of the H2020 programme, and the organization of the "VII Feria de la Ciencia de Sevilla" May 2010. I am also author of three science communication articles published in "*Encuentros en la Biología*" (ISSN:2254-0296). I am deeply involved in the training of early-career researchers. I have co-supervised one PhD Thesis (2018), with results published in journals such as *Tree Physiology (2022), Plant Biotech J. (2018)* and *Frontiers in Plant Sci. (2018),* and I am currently supervising another PhD student (Eloy Rivas Oliveros). In addition, I have supervised more than six Master´s theses and at least ten Bachelor´s theses (TFG).

I was accredited as Full Professor by ANECA in 2020. Since March 2023, I have served as Coordinator of the Biochemistry Degree at the University of Málaga, since July 23, 2025, I have held the position of Academic Secretary of the Department of Molecular Biology and Biochemistry. Currently, I lead a research group focused on the regulation of aromatic amino acid metabolism in plants. Our research has been funded by a UMA project in 2021 and by two National Plan Project (PID2021-128168NB-100; PID2024-161730NB-100) from the Spanish Ministry of Science and Innovation.

Part C. RELEVANT MERITS

C.1. Publications

1. de la Torre F, Medina-Morales B, Blanca-Reyes I, **Pascual MB**, Ávila C, Cánovas FM, Castro-Rodríguez V **(2024)** Properties and functional analysis of two chorismite mutases from maritime pine. Cells, 13(11):929.

2. Llebrés MT, Castro-Rodríguez V, **Pascual MB**, Ávila C, Cánovas FM **(2022)** The amino acid permease PpAAP1 mediates arginine transport in maritime pine. ***Tree Physiol.*** 42(1):175-188.

3. El-Azaz J, de la Torre F, **Pascual MB**, Debille S, Canlet F, Hvengt L, Trontin JF, Ávila C, Cánovas FM (**2020**). Transcriptional regulation of arogenate dehydratase genes linked to lignin biosynthesis in maritime pine. ***J Exp. Bot.*** 71 (10): 3080-3093.

4. Pascual MB (corresponding author), Molina-Rueda JJ, Cánovas FM, Gallardo F (**2018**). Overexpression of a cytosolic NADP+-Isocitrate dehydrogenase causes alterations in the vascular development of hybrid poplars**.** ***Tree Physiol.*** 38: 992-1005.

5. Pascual MB, Llebrés MT, Craven-Bartle B, Cañas RA, Cánovas FM, Ávila C (**2018**). PpNAC1, a main regulator of phenylalanine biosynthesis and utilization in maritime pine. ***Plant Biotech J*****,** 16 (5): 1094-1104**.**

6. LLebrés-Ávila MT, **Pascual MB,** Ávila C, Cánovas FM (**2017**)**.** The role of arginine metabolic pathway during embryogenesis and germination in maritime pine (*Pinus pinaster* Ait.) ***Tree Physiology*****,** 38: 471-484**.**

7. Pascual MB, El-Azaz J, de la Torre F, Cañas RA, Ávila C, Cánovas FM (**2016**). Biosynthesis and Metabolic Fate of Phenylalanine in Conifers. ***Front Plant Sci.*** 7: 1030 – 1042.

8. Pascual MB, Cánovas FM, Ávila C (**2015**). The NAC transcription factor family in maritime pine (*Pinus Pinaster*): Molecular regulation of two genes involved in stress responses. ***BMC Plant Biology*****,** 15: 254 - 269.

C.2. Congress

- Posttranslational regtulation of aromatic amino acids biosynthesis in plants. Póster. **Pascual MB**, Rivas E, de la Torre F. XVII Plant Molecular Biology Meeting. Universitat Jaume I of Castellón (Spain), July 3-5, 2024.

- Posttranslational regulation of phenylalanine synthesis (PRoPheSy), Póster. Rivas E, **Pascual MB**, de la Torre F. 27th European nitrogen cycle meeting & XVI Reunión nacional del metabolism del nitrógeno (Nitrogen2024). Granada (Spain) October 1-4, 2024.

- Biotechnological approaches to increase biomass production in trees. Oral communication. **Pascual** MB, Molina-Rueda M, Cánovas FM, Ávila C. XIV Reunión Biología Molecular de Plantas. Salamanca, from 04/07/2018 to 06/07/2018.

- “PpNAC1, un regulador principal de la biosíntesis y utilización de fenilalanina en pino”. Oral communication. **Pascual MB**, Llebrés MT, Craven-Bartle B, Cañas RA, Cánovas FM, Ávila C. XIV Reunión Nacional del Metabolismo del Nitrógeno. Segovia, from 16/05/2018 to 18/05/2018.

- PpNAC1, a main regulator of phenylalanine biosynthesis in *P. pinaster*. Panel. **Pascual MB**, Llebrés MT, Cañas RA, Cánovas FM, Ávila C. Congreso Luso-Español de Fisiología Vegetal. Barcelona, from 26/06/2017 to 29/06/2017.

- NAC-MYB-based transcripcional network involved in the regulation of phenylalanine biosynthesis in *P. pinaster*. Panel. **Pascual MB**, Cañas RA, Craven-Bartle B, Cánovas FM, Ávila C. III International Symposium on the Nitrogen Nutrition of Plants. EMBO conference: The Nitrogen Nutrition of plants. Montpellier, Francia, from 22/08/2016 to 26/08/2016.

- Transcriptional regulation of phenylalanine biosynthesis and utilization. Oral communication. **Pascual MB**, Cañas RA, Craven-Bartle B, Cánovas FM, Ávila C. XIII Reunión de Biología Molecular de Plantas. Oviedo, from 22/06/2016 to 24/06/2016.

- “PpNAC1, posible candidato para articular la red transcripcional implicada en la síntesis de pared celular secundaria en pino”. Oral communication. **Pascual MB**, Craven-Bartle B, Cánovas FM, Ávila C. XXXVII Congreso de la SEBBM. Granada, from 09/09/2014 to 12/09/2014.

- “Análisis de la familia de factores de transcripción NAC en pino. PpNAC1, un posible candidato en la regulación de la producción de madera”. Oral communication. **Pascual MB**, Craven-Bartle B, Cánovas FM, Ávila C. XII Reunión Nacional del Metabolismo del Nitrógeno. Bilbao, from 7/07/2014 to 9/07/2014.

C.3. Research projects

1. Proyect title: Proteostatic Mechanisms involved in the Synthesis of Aromatic Amino Acids in plants (PRoMeSA) (PID2024-161730NB-100)
Affiliation entity: Universidad de Málaga
PIs: Dra.M. Belén Pascual and Dr. Fernando de la Torre
Funding entity: Ministerio de Ciencia, Innovación y Universidades.
Start date-End date: 01/09/2022 to 31/08/2025
Amount: 165.000 €

2. Proyect title: Posttranslational Regulation of Phenylalanine Synthesis in Plants (PRoPheSy) (PID2021-128168NB-100)
Affiliation entity: Universidad de Málaga
PIs: Dra.M. Belén Pascual and Dr. Fernando de la Torre
Funding entity: Spanish Ministry of Science and Innovation
Start date-End date: 01/09/2022 to 31/08/2025
Amount: 90.000 €

3. Proyect title: "Ayudas para Proyectos Puente en la Universidad de Málaga (PP1UMA-B4)
Affiliation entity: Universidad de Málaga
PIs: Dra.M. Belén Pascual and Dr. Fernando de la Torre
Funding entity: Universidad de Málaga
Start date-End date: 01/12/2021 to 30/11/2022
Amount: 8.000 €

4. Proyect title: Molecular regulation of the biosynthesis and transport of essential amino acids in maritime pine (TransAminoPine) (RTI2018-094041-B-I00)
Affiliation entity: Universidad de Málaga
PI: Prof. Francisco M. Cánovas
Degree of contribution: Researcher
Funding entity: Spanish Ministry of Science, Innovation and University
Start date-End date: 01/01/2019 - 31/12/2021
Amount: 205.700 €

5. Proyect title: Biosíntesis de aminoácidos y economía del nitrógeno en plantas de interés forestal (BIO2015-69285-R)
Affiliation entity: Universidad de Málaga
PIs: Prof. Francisco Cánovas and Prof.Concepción Ávila
Funding entity: Spanish Ministry of Economy and Competitiveness
Degree of contribution: Researcher
Start date-End date: 01/01/2016 - 31/12/2018
Amount: 187.550 €

6. **Proyect title**: Genómica y Biotecnología del metabolismo del nitrógeno en coníferas (NitroGenoFor) (BIO2012-33797)
Affiliation entity: Universidad de Málaga
PI: Prof. Francisco Cánovas
Funding entity: Spanish Ministry of Economy and Competitiveness
Degree of contribution: Researcher
Period: 01/01/2013 – 31/12/2015
Amount: 110.000 €