CURRICULUM VITAE (CVA)

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

CV date	10/06/2023

Part A. PERSONAL INFORMATION

First name	Plazas	
Family name	Maria de la O	
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Open Research and Contributor ID (ORCID)(*)		0000-0001-8090-7312

(*) Mandatory

A.1. Current position

Position	Associate Professor		
Initial date	14/12/2021		
Institution	Universitat Politècnica De València		
Departament/Center	Biotechnology / Institute for Conservation and Improvement of Valencian Agrodiversity		
Country	Spain	Teleph. number	6794555900
Key words	Plant breeding, abiotic stress, Solanaceae, crop wild relatives, genetic resources, molecular biology, introgression, phenomics		

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
2020 - 2021	Juan De La Cierva – Incorporación IBMCP (CSIC) / Spain
2018 - 2020	Posdoctoral contract – APOSTD Generalitat Valenciana (UPV) / Spain
2017 - 2018	Juan De La Cierva – Formación IBMCP (CSIC) / Spain
2006 - 2017	Superior Laboratory Technician / Universitat Politècnica de València / Spain
2003 - 2006	Research Felloship / Universitat Politècnica de València / Spain
2001 - 2003	MediumLaboratory Technician / Universitat Politècnica de València / Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Dr. in Biotechnology	Universitat Politècnica de València / Spain	2015
Engineer in Agronomy	Universitat Politècnica de València / Spain	2001

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

María de la O Plazas Ávila is a recent Associate Professor (2021) at the Genetics Section of the Universitat Politècnica de València (UPV). Prior to obtaining this position, she has some Posdoctoral positions as Juan de la Cierva Formación (2017-2018) and Incorporación (2021) in the Instituto de

Biología Molecular y Celular de Plantas (IBMCP – CSIC) and as researcher in UPV (2018-2020), including some periods as collaborative professor (2016, 2020, 2021).
She has a Ph.D. in Biotechnology since 2015 and her thesis focused on the study of the genetic improvement of eggplant for bioactive compounds, on the one hand, the use of wild species and related cultivated species to use them in the generation of pre-breeding. materials with beneficial characters for both species. She and, on the other hand, in the study of bioactive compounds, mainly in polyphenols, and polyphenol oxidases with the idea of obtaining cultivated aubergines with better nutraceutical properties, mainly due to the presence of chlorogenic acid in this crop.
Her research activity has focused on genetic improvement to obtain quality traits in Solanaceae and other horticultural crops and on the adaptation of crops to abiotic stresses. My works have been based on the use of sources of intraspecific and interspecific variation, using a wide range of techniques and methodologies. In recent years she has focused on the adaptation of Solanaceae to climate change, being she responsible for the line of improvement of tolerance to abiotic stresses of Solanaceae in COMAV.
She is the author of 82 scientific articles, 69 published in journals indexed in JCR (41 with international groups), 7 book chapters and 95 contributions to congresses. He has participated in 14 competitive national projects and 7 international ones (3 from the H2020 program for R + D + i projects and 3 European projects co-financed by the Erasmus + program, in addition to 2 from the Global Crop Diversity Trust foundation) and 2 research contracts with Business. She is Principal Investigator in a project of the UPV-First Projects 2018 and in another granted by the GVA for Young Researchers.
She has made several stays during her postdoctoral stage: 3 months (2017) at Wageningen University and Research (1st in the ranking of the International University of Agriculture); 15 months (2018-2019) at the University of Turin; Short stays in international research laboratories in the USA, Israel, Italy, Hungary, and Romania and in the Spanish seed company "Meridiem Seeds".
Her teaching activity in official titles is more than 650 hours (2015-2021) as an associate professor (5.5 months in 2016 and 6 months in 2020) and as a postdoctoral researcher. She has been a professor at the UPV in subjects of the Interuniversity master's in plant Genetic Improvement and the degree in Biotechnology. She has also taught 13 hours of teaching at the European Plant Breeding College (Erasmus + Program) and 24 hours at the ERASMUS-MUNDUS EmPlant Master at Uppsala University). She is the author of 1 practice book, 2 didactic book chapters and 8 didactic articles in international conferences. She participates in 3 Teaching Innovation projects.
She has been co-director of 1 Doctoral Thesis (2019), 4 Final Master Thesis, 1 Final Degree Project and 8 Final Degree Projects, and is currently co-directing 3 doctoral theses. In addition, she has been the secretary of the course "European Plant Breeding College" (2016).
She is part of the editorial committee (Reviewer of the review) in "Frontiers in Plant Science" (IF = 4,106; 1st decile), section "Plant improvement" and is guest editor of the special issue "Plant crop improvement" of the magazine. Agriculture (MPDI).
She has obtained the "Young Researchers 2017" award, awarded by the Spanish Society of Horticultural Sciences and the Award for the best oral communication in Agronomy, at the Congress of Young Researchers in Agri-Food Sciences 2018.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(see instructions)*

The 10 most relevant publications in the last three years are the following:

1) Rosa-Martínez, E., Bovy, A., Plazas, M., Tikunov, Y., Prohens, J., & Pereira-Dias, L. (2023). Genetics and breeding of phenolic content in tomato, eggplant and pepper fruits. Frontiers in Plant Science, 14, 1135237.
2) Flores-Saavedra, M., Plazas, M., Vilanova, S., Prohens, J., & Gramazio, P. (2023). Induction of water stress in major Solanum crops: A review on methodologies and their application for identifying drought tolerant materials. Scientia Horticulturae, 318, 112105.
3) Plazas, M.; González-Orenga, S.; Nguyen, H.T.; Morar, I.M.; Fita, A.; Boscaiu, M.; Prohens, J.; Vicente, O. 2021. Growth and antioxidant responses triggered by water stress in wild relatives of eggplant. Scientia Horticulturae, 293, no. 110685.

4) Rosa-Martínez, E.; García-Martínez, M.D.; Adalid-Martínez, A.M.; ...; Plazas, M.; …; Prohens, J. 2021. Fruit composition profile of pepper, tomato and eggplant grown under uniform conditions. Fruit Research International 147:110531. Posición en lista de autores: 9/11
5) Borràs, D.; Plazas, M.; Moglia, A.; Lanteri, S. 2021. The influence of acute water stresses on the biochemical composition of bell pepper (*Capsicum annuum* L.) berries. Journal of the Science of Food and Agriculture, 101 (11), pp. 4724-4734.
6) Pacheco, J.; Plazas, M.; Pettinari, I.; …; Gramazio, P. 2021. Moderate and severe water stress effects on morphological and biochemical traits in a set of pepino (Solanum muricatum) cultivars. Scientia Horticulturae, 284, art. no. 110143.
7) García-Fortea, E.; García-Pérez, A.; Gimeno-Páez, E.; Martínez-López, M.; Vilanova, S.; Gramazio, P.; Prohens, J.; Plazas, M. 2021. Ploidy Modification for Plant Breeding Using In Vitro Organogenesis: A Case in Eggplant. Methods in Molecular Biology, 2264, pp. 197-206.
8) Vilanova, S.; Alonso, D.; Gramazio, P.; Plazas, M.; ...; Prohens, J. 2020. SILEX: A fast and inexpensive high-quality DNA extraction method suitable for multiple sequencing platforms and recalcitrant species. Plant Methods 16:110. Posición en lista de autores: 4/11
9) Arrones, A.; Vilanova, S.; Plazas, M.; Mangino, G.; Pascual, L.; Díez, M.J.; Prohens, J.; Gramazio, P. 2020. The dawn of the age of multi-parent MAGIC populations in plant breeding: novel powerful next-generation resources for genetic analysis and selection of recombinant material. Biology 9:229.
10) Plazas, M.; Nguyen, H.T.; González-Orenga, S.; Fita, A.; Vicente, O.; Prohens, J.; Boscaiu, M. 2019. Comparative analysis of the responses to water stress in eggplant (*Solanum melongena*) cultivars. Plant Physiology and Biochemistry, 143, pp. 72-82.

C.2. Congress

The most relevant project participations in congresses in the last years have been the following:

1) Biochemical response to water stress in six eggplant varieties, two wild relatives and two interspecific hybrids. Poster in Small Molecules inf Plant Research meeting (2019; Valencia, Spain).

2) Responses to water stress in four accessions of eggplant (*Solanum melongena*). Poster at the 17th International EUCARPIA Meeting on Genetics and Breeding of Capsicum and Eggplant (2019; Avignon, France).

3) Biotechnological tools for adaptation of crops to climate change. Poster presentation at the European Biotechnology Congress (2019; Valencia, Spain).

4) Born to be introgressed with a wild (Eggplant). Poster presentation at Plant and Animal Genome (2019; San Diego, EEUU).

5) Photosynthetic response to salinity in eggplant and in the wild relative *Solanum torvum*. Poster presentation at the European Biotechnology Congress 2019 (2019; Valencia, Spain).

6) Caracterización y mejora genética de la berenjena (*Solanum melongena*) para compuestos bioactivos. Keynote presentation at the VIII congreso Ibérico de Ciencias Hortícolas (2017; Coimbra, Portugal).

7) Screening for drought tolerance in eggplant relatives and interspecific hybrids. Poster presentation at the XVI EUCARPIA Capsicum and Eggplant Meeting (2016; Kecskemét, Hungary).

8) Morphological characterization of common (*Solanum melongena*), gboma (*S. macrocarpon*), and scarlet (*S. aethiopicum*) eggplants from Africa. Poster presentation at the XVth EUCARPIA Capsicum and Eggplant Working Group Meeting (2013; Turin, Italy).

9) Evaluation of fruit shape variations in Spanish eggplants using an image analysis software. Oral presentation at the 25th Annual Congress of the Postgraduate Institute for Agriculture (2013; Peradeniya, Sri Lanka)

C.3. Research projects

The five most relevant projects in the last years are the following:

1) *Funder and reference:* European Commission (H2020-SFS-2015-774244)

Title: Breeding for resilient, efficient and sustainable organic vegetable production

Principal Investigator: Ferdinando Branca (University of Catania; PI of the project); Jaime Prohens Tomás (PI of partner P10-UPV)
Start and finalization dates: 01/05/2018 – 30/04/2022
Funding received: 390.715 € (partner P10-UPV)
Type or participation: Research team of partner UPV
2) *Funder and reference:* European Commission (H2020-SFS-2015-677379)
Title: Linking genetic resources, genotypes and phenotypes of Solanaceous crops (G2P-SOL)
Principal Investigator: Giovanni Giuliano (ENEA; PI of the project); Jaime Prohens Tomás (PI of partner P6-UPV)
Start and finalization dates: 01/03/2016 – 31/12/2021
Funding received: 479.830 € (socio P6-UPV)
Type or participation: Research team of partner UPV
3) *Funder and reference:* European Commission (H2020-SFS-2014-634561)
Title: Traditional tomato varieties and cultural practices: a case for agricultural diversification with impact of food security and health of European population (TRADITOM)
Principal Investigator: Antonio Granell Richart (IBMCP-CSIC; PI of the project)
Start and finalization dates: 01/03/2015 – 31/08/2018
Funding received: 417.769 € (partner IBMCP)
Type or participation: Research team
4) *Funder and reference:* Universitat Politècnica de València (SP20180144)
Title: Mejora de la tolerancia a la sequía en berenjena utilizando especies silvestres
Principal Investigator: María de la O Plazas Ávila (UPV; PI of the project)
Start and finalization dates: 01/01/2019 – 01/01/2021
Funding received: 7200 €
Type or participation: PI of the project
5) *Funder and reference:* Generalitat Valenciana (GV/2019/033)
Title: Utilización de especies silvestres en la mejora de la tolerancia a la sequía en berenjena
Principal Investigator: María de la O Plazas Ávila (UPV; PI of the project)
Start and finalization dates: 01/01/2019 – 01/01/2020
Funding received: 9000 €
Type or participation: PI of the project

C.4. Contracts, technological or transfer merits

The five most relevant contracts in the last years are the following:
1) *Funder*: Global Crop Diversity Trust
Title: Utilization of crop wild relatives in eggplant pre-breeding for adaptation to climate change
Principal Investigator: Jaime Prohens Tomás
Start and finalization dates: 01/12/2013 – 31/12/2016
Funding received: 264.550 US$
2) *Funder*: Zeta Seeds, S.L.
Title: Obtención de variedades de berenjena con aplicación de estrategias de aprovechamiento de la heterosis y generación de caracteres de valor añadido
Principal Investigator: Jaime Prohens Tomás
Start and finalization dates: 30/09/2009 – 30/09/2012
Funding received: 90.000 €