

CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	Maria Belén		
Family name	Picó Sirvent		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	mpicosi@btc.upv.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-7761-990X		

(*) Mandatory

A.1. Current position

Position	Full Professor (CU)		
Initial date	20/12/2016		
Institution	Polytechnic University of Valencia (UPV)		
Department/Center	Dept Biotechnology/ Research Institute COMAV		
Country	Spain	Teleph. number	
	Cucurbits, genetic resources, breeding, resilience, fungi, viruses, drought, salt stress, molecular markers, genetic maps, QTLs, populations, grafting, roots, digital phenotyping		

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

Period	Position/Institution/Country/Interruption cause
1995-1996	PhD/Researcher/UPV/Spain
1997-1998	Lecturer/Ayudante de Escuela Universitaria/UPV/Spain
1999-2000	Lecturer/Ayudante de Universidad/UPV/Spain
2000-2003	Associate Prof./Titular de Escuela Universitaria/UPV/Spain
2003-2016	Professor/Titular de Universidad/UPV/Spain
2016-2022	Full Professor/Catedrático de Universidad/UPV/Spain
2021-2024	Vice rector of Research/UPV/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Agronomic Engineer	Polytechnic University of Valencia (UPV)	1994
PhD. Agronomic Engineer	Polytechnic University of Valencia (UPV)	1999

(Include all the necessary rows)

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

Since 1996, I have been the responsible of 15 courses (degree/master), supervisor of 14 PhD Thesis (most PhD students today Professors/Researchers in National/international Universities or Seed companies), and 46/35 TFG/TFM (many of the students today working in seeds companies). I became Full Professor of Genetics at the UPV in 2016 (5 5-yr periods teaching, and 5 6-year periods research/transfer (1995/2019)). Secretary at the Biotechnology dept. (2008-2012), Coordinator of the Biotechnology degree (2012/2017), Coordinator of the Biotechnology PhD program (2012/2020), Head of the Biotechnology dept (2021), Vice Rector of Research at UPV (2021-2024).

I started my scientific career with my Ph.D. at UPV, developing tomato cultivars resistant to viruses (1999), two of them transferred to industry (S.Fito). I did two postdoc stays at U. California Davis (2000, and 2002), publishing two papers in these two international stays. I got expertise in breeding genetic resources against viruses, fungi, and abiotic stress and for fruit quality, and in genetics and genomics, including high throughput genotyping. All this experience was focused on Cucurbits breeding, creating

the Cucurbits breeding group (Research Institute COMAV-UPV; <https://cucurbreed.webs.upv.es/equipo/>). I have participated in numerous breeding programs aimed to develop cucurbit varieties resistant to biotic (viruses and aerial and soilborne fungi) and abiotic stress (breeding for improved root systems and use of grafting for managing soil stress, and combined, temperature/salt and fungal stress), and in the development of a wide range of genetic and genomic tools (genomes of melon and Cucurbita, transcriptomes, mapping populations, QTL analysis, MAS, fine mapping of candidate genes, identification of genes responsible of interesting traits, gene editing platforms, and phenotyping tools) necessary to make more efficient the breeding progress. This knowledge and tools have been produced interacting with international and national groups leading cucurbits breeding (IBMCP-CSIC, CRAG, IFAPA, CEBAS), and the results have been used by many other researchers, seed companies and farmers cooperatives.

In the last 26 years, I have published 120 SCI papers (h 35, 3950 citations, 65% in the top 25% journals by CiteScore (Scopus), 79 SCI papers the last 10 years), 90 Q1, 50% of these documents co-authored with researchers in other countries/regions. The others mostly Q2 journals of relevance in the field of genetics and plant breeding. In a third, I was the first/second author, participating in the study design, experiments, and writing. In more than half, I am the corresponding and/or last, or next to last, author, responsible for funding, study conception, design of experiments, supervision of experimental activities, writing and results exploitation. Our results have been also included in outreach publications (Phytoma, Agricola Vergel, Vida Rural) to better reach the agricultural productive sector. With this aim, we participate in social networks to valorize genetic resources, FITONET, and in thematic and interdisciplinary platforms, AGROFOR, and networks, RENAVIPLANT. I have authored monographs MAPA and IPGRI, and specialized book chapters in leading international publishers (Springer, John Wiley & Sons, Cabi Publishing), and contributed with more than 180 communications to national and international congresses (SECH, SEF, EUCARPIA, ISHS, ASHS, PLANT GEM, PAG, etc.), often with invited conferences. I have participated in the last 25 years, in a total of 31 projects funded by national (CICYT, MINECO, MICINN, MICIU, INIA, MRR-NEXTGENERATION) and international calls (ERA-NET, PLANT KBBE, A.Bilaterales), being PI in 16 (AGF97-1208-C03-02, AGL2000-1809-C03-02, RF2004-00003-00-00, RF2008-00003-C02-02, RTA2008-00035-C02-02, RTA2011-00044-C02-02, PIM2010PKB-00691, PHB2012-0098, PHBP14/00021, AGL2014-53398-C2-2, E_RTA2013-00020-C04-03, RTC-2017-6023-2-AR, AGL2017-85563-C2-1-R-AR; PID2020-116055RB-C21, TED2021-132130B-I00, AGROALNEXT/2022/025). I have also been the PI of autonomic projects funded by GV, including two PROMETEO to support excellent groups (PROMETEO/2017/078 and /2021/072) to promote the transition to organic agriculture in cucurbits. The impact of our activities is evident in the citations and in the contracts with seed companies and institutions (City councils, farmers cooperatives, S. Fitó, R. Arnedo, De Ruiter, R. Zwaan, H. Moran, Vilmorin, Seminis, Sakata, Gautier). My contribution to cucurbits breeding has been internationally recognized (organization of the congress AGROALNEXT (2024), funded by MCIN and GVA with NextGenerationEU funds, and of the last edition of the Eucarpia Meeting Cucurbit Genetics and Breeding (2021)), and participating in the scientific committee of many editions, participation in the Cucurbits Working Group of the ECP/GR IPGRI/FAO (2018-2021), and in the Cost Action FA1204 “Vegetable Grafting against Stress” (2014-2016) etc

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

C.1. Publications *(see instructions)*

- López-Martín M, Montero-Pau J, Ylla G, Gómez-Guillamón ML, **Picó, B**, Pérez-de-Castro A (2024) Insights into the early transcriptomic response against watermelon mosaic virus in melon **BMC Plant Biology**, Vol 24, Article number 58 IF= 5,9 Cite Score=8,7. Q1 Published 20/1/2024 (24 accesses 22/1/2024). doi.org/10.1186/s12870-024-04745-x
- López-Martín M, Sifres A, Gómez-Guillamón, ML, **Picó, B**, Pérez-de-Castro, A (2024) Incidence and genetic diversity of cucurbit viruses in the Spanish Mediterranean area. **Plant Pathology**, 73(2), pp. 431–443 IF= 2,7 Cite Score=5,1. Q1 <https://doi.org/10.1111/ppa.13825>.
- López-Martín M, Pérez-de-Castro A, **Picó B**, Gómez-Guillamón ML (2022). Advanced Genetic Studies on Powdery Mildew Resistance in TGR-1551. **Int J Mol Sci.** 19; 23(20):12553. IF= 5,6 Cite Score=7,8. Q1doi: 10.3390/ijms232012553.
- Sáez C, Flores-León A, Montero-Pau J, Sifres A, Dhillon NPS, López C, **Picó B** (2022) RNA-Seq Transcriptome Analysis Provides Candidate Genes for Resistance to Tomato Leaf Curl New

- Delhi Virus in Melon. **Frontiers in Plant Science**, 12, 798858. IF=5,75, Cite score=8,2 Q1, 13 citations Web of Science, 8.293 accesses. doi: 10.3389/fpls.2021.798858.
- Saez C, Martinez C, Montero-Pau J et al., **Pico, B (9/9)** ^(CA) (2020) A Major QTL Located in Chromosome 8 of Cucurbita moschata Is Responsible for Resistance to Tomato Leaf Curl New Delhi Virus. **Frontiers in Plant Science**, 11, 207. IF=5,7 Cite Score 8,2 Q1, 28 citations Web of Science, 6.335 accesses. DOI10.3389/fpls.2020.00207.
- Montero-Pau J, Blanca J, Bombarely A, et al. **Pico B (11/12)** ^(co CA) co-corresponding author; Canizares, J ^(co CA) (2018) De novo assembly of the zucchini genome reveals a whole-genome duplication associated with the origin of the Cucurbita genus. **Plant Biotechnology Journal**, Volumen: 16: 1161-1171. IF=6.6 Cite score: 14,1 Q1. 117 citations Web of Science. DOI10.1111/pbi.12860.
- Montero-Pau J, Blanca J, Esteras C, Martinez-Perez EM, Gomez P, Monforte AJ, Canizares J, **Pico B** ^(CA) (2017) An SNP-based saturated genetic map and QTL analysis of fruit-related traits in Zucchini using Genotyping-by-sequencing. **BMC Genomics** Vol 18: 94. IF=3.7 Cite Score=3,8 Q1, 58 citations Web of Science. 5.823 accesses DOI10.1186/s12864-016-3439.
- Perpiñá G, Esteras C, Gibon Y, Monforte AJ, Picó, B (2016) A new genomic library of melon introgression lines in a cantaloupe genetic background for dissecting desirable agronomical traits. **BMC Plant Biology** Vol 16, Article number: 154 IF=3,96 Cite score =5,03 Q1 42 citations Web of Science. 4.747 accesses. doi.org/10.1186/s12870-016-0842-0
- Garcia-Mas J, Benjak, A, Sanseverino V et al., (**Pico, B 29/35**), Puigdomenech P^(CA). 2012. The genome of melon (Cucumis melo L.). 2012. **PNAS** Vol 109 (29):11872-11877. IF=9.7 Q1 504 citations Web of Science.30.610 accesses. doi.org/10.1073/pnas.1205415109
- Blanca J, Cañizares J, Roig C, Ziarsolo P, Nuez, F, **Picó, B** ^(CA) (2011) Transcriptome characterization and high throughput SSRs and SNPs discovery in *Cucurbita pepo* (Cucurbitaceae) **BMC Genomics** Vol 12, Article number 104 IF=4,8 Q1 152 citations Web of Science. 19.000 accesses doi:10.1186/1471-2164-12-104

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

- Pico B** (2024). “AGROALNEXT2024: Innovation and transference in the Spanish agrifood sector”6-8 th March. Agroalnext Next Generation EU. MICIN. GVA. UMH-UPV Gandia **Congress organizer**
- Pico B** (2023) **Invited Conference-** Advances in Cucurbits Genetics and Breeding Section Biotechnology and Plant Breeding. XLIII Congreso de la Sociedad Española de Genética (21-23 Junio, Valencia 2023).
- Picó B** (2021).XIIth EUCARPIA meeting on cucurbit genetics and breeding. **Congress organizer**. On-line, 24-28 May 2021, Spain
- Picó B**, Rootstocks for melon grafting. **Keynote speaker**. 6th International Symposium on Cucurbits, June 2019, Genth, Belgium.
- Blanca J, Esteras C, Ziarsolo P, Roig M, Gomez P, Monforte AJ, Cañizares J, **Picó B**. New Genomics Tools for breeding Cucurbita spp **Invited conference**. Plant and Animal Genome XXVIII. San Diego, USA. January 12-16 2013.
- Picó B**. Cucurbigene: new genomic tools for breeding *Cucurbita*. **Invited Conference**. Xth EUCARPIA meeting on cucurbit genetics and breeding. On-line, 24-28 May 2012, Antalya, Turkey, October 15-18

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

- Genetic Diversity and digitalization to save water resources in cucurbits cultivation. Agency: AGROALNEXT Program, financed by MCIN with NextGenerationEU funds (PRTR-C17.11) and by GVA (AGROALNEXT/2022/025). Funding: 235.956 €. Period: (01/09/22 - 29/06/25). PI B. Picó and Ana Maria Pérez de Castro (UPV) Role: co PI.
- Resilience to Climate Change in Cucurbits Agency: AEI financed by MCIN with NextGenerationEU funds (TED2021-132130B-I00). Funding: 218.500,00 €. Period: (01/12/22 - 30/11/2024). PI B. Picó and A. J Monforte (UPV-CSIC) Role: co PI.
- Generation of new knowledge and tools, through multi-disciplinary approaches, for a sustainable, but profitable, watermelon and melon production (coordinated Project)/Advancing in watermelon and melon breeding for resistance against viruses, soilborne pathogenic fungi and water deficit stress (subproject 1). Agency: MCINN (PID2020-116055RB-C21). Co PI and coordinator of the

- two research subprojects B.Picó and Ana Maria Perez de castro (UPV-CSIC-CITA). Funding: 235.000 €. Period: 01/09/21 - 01/09/24. Role: co PI and coordinator.
- Transitioning to Cucurbits Organic Production: a breeding approach to face climatic change and revitalize rural agricultural economy. Agency: Generalitat Valenciana (PROMETEO/2021/072). Funding: 474,000 €. Period 01/10/2021 to 31/12/2024. PI B. Picó and Maria José Díez (UPV-CSIC). Role: Co PI
- Genome editing to introduce resistance to diseases and pests in melon. Agency: Ministry of Science, Innovation and Universities (MICIU). RTC-2017-6023-2-AR. PI and coordinator of the two research subprojects B. Pico (UPV-CSIC): Funding: 127,727 €. Period: 01/01/18-01/01/22. Role: PI and coordinator.
- Selection of landraces adapted to organic farming. Agency: Generalitat Valenciana. PROMETEO/2017/078. PI: B. Pico (UPV). Funding: 346,733 €. Period: 01/09/18 - 01/09/21 Role: PI
- Multidisciplinary control of fungal and viral diseases in melon and watermelon. Ministry of Science Innovation and Universities (MICIU). AGL2017-85563-C2-1. PI and coordinator of two subprojects (UPV-IHSM La Mayora-CSIC): B. Pico. Funding: 169,400 €. Period: 01/01/17-01/11/21. Role: PI and coordinator.
- Identification of resistant sources to ToLCNDV and genetic dissection of resistance. Agency: Inst Nac de Inv. y Tecnol. Agraria y Aliment (INIA). RTA2013-00020-C04-03 PI of subproject: B. Pico (coordinator D. Janssen IFAPA) (UPV-IFAPA-CSIC). Funding: 100,000 € Period: 02/10/2014-02/10/2017. Role PI of subproject 3
- Biotechnological and cultural approaches for breeding melon and watermelon against diseases. Agency: Ministry of Economy and Competitiveness (MINECO). AGL2014-53398-C2-2-R. PIs: B Picó and Ana Mª Pérez de Castro (coordinator ML. Gómez Guillamon ISHM, La Mayora) (UPV-CSIC-CITA). Funding: 135,000 €. Period: 01/01/2015-31/12/2017. Role: co IP of subproject.
- Sugars and fruit quality in melon. Agency: EU (Plant-KBBE), MICINN (PIM2010PKB-00691). PI coordinator Daniele Hosemans (Vilmorine) Funding: 353,000 €. Period: 01/03/2011 to 31/12/2014 Role: PI subproject UPV
- Development of genomic tools in cucurbits, including genome sequencing, and their application to melon breeding. Agency: Genoma España. MELONOMICS. PI COMAV subproject: F. Nuez. (coordinator P. Puigdomenech CRAG) (UPV-CRAG-CSIC). Funding: 301,391€. Period: 30/12/2008-30/01/2012. Role: Researcher responsible of the COMAV,s activities

C.4. Contracts, technological or transfer merits, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

- M C Gisbert and **Belen Picó**. Two Rootstocks registered and with the Community Plant Variety Office (CPVO) rights granted. This right has uniform effect within the territory of the EC. N/Ref.:VV1598.5 'Fiandi' (2018/0431) Cucumis anguria L. × Cucumis ficifolius and N/Ref.:VV1598.6 FiMydi (2018/0437) Cucumis Myriocarpus L. × Cucumis ficifolius
- New breeding program to introduce resistance genes to pathogens in melon varieties 'Piel de Sapo', 'Amarillo' and 'Blanco'. **Company Intersemillas** Budget: 101,229 € 30/04/2019-01/05/2022. PI Belén Picó.
- Transference of a DNA set of a RILs Cucurbita pepo population suitable for mapping purposes Seed Company: **RIJK ZWAAN IBERICA**, S.A. Funding: 20.300 €. 30/04/2014-30/04/2016. PI: Belen Picó.
- Development of melón lines (Cucumis melo L. subsp. melo var. inodorus) with resistance to Monosporascus cannonballus and good root structure PI: F. Nuez (UPV-COMAV). B. Picó scientific responsible. **Seed Company: Ramiro Arnedo S.A.**. Funding: 241.311. 15/07/2009-01/01/2013