

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	Adrian		
Family name	Rodríguez Burruezo		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web http://www.upv.es/ficha- personal/adrodbur	
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-4530-8071	

(*) Mandatory

A.1. Current position

Position	Full Professor		
Initial date	December 2017		
Institution	Universitat Politècnica de València (UPV)		
Department/Center	Inst. Univ. Conservación y Mejora Agrodiv. Valenciana (COMAV)		
Country	Spain	Teleph. number	
Key words	Plant Breeding, Solanaceae, plant genetic resources, landraces, agrodiversity, organic farming, organic breeding, fruit quality, volatiles		

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

Period	Position/Institution/Country/Interruption cause
2011-2017	Assoc. Professor (Prof. Titular)/UPV/Spain
2007-2011	Assoc. Professor (Prof. CD)/UPV/Spain
2004-2007	Researcher (Ramón y Cajal INIA)/IVIA/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Agricultural Engineer	Universitat Politècnica de València	1997
PhD Agric. Engineer (plant breeding)	Universitat Politècnica de València	2003

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

Adrián Rodríguez Burruezo (1974) is Full Professor (2017) at the Techn. College Agricultural Engineering and Natural Environment of UPV (ETSIAMN) and the current Director of the Inst. Univ. Conservación y Mejora Agrodiv. Valenciana (COMAV). He was previously Ramón y Cajal researcher at the Instituto Valenciano de Investigaciones Agrarias (IVIA), Prof. Contratado Doctor (2007-11) and Assoc. Professor (2011-17) at the ETSIAMN-UPV. His PhD was aimed to the adaptation and quality breeding of pepino (*Solanum muricatum* L.) for Mediterranean conditions, obtaining cum laude doctorate in January 2003.

He has 5 research periods from CNEAI (4 research + 1 transference). His main research lines are related to germplasm evaluation, phenomic and genotypic characterization, selection and improvement of Solanaceae vegetables, mainly peppers and other *Capsicum* (working since 2004), and other neglected crops, for adaptation to low input conditions, organic farming, nutritional and organoleptic quality, etc. He employs conventional breeding strategies, participatory breeding approach (involving networks of farmers, breeders, consumers, nurseries, institutions, etc.), large equipments (HPLC, GC/MS-olfactometry) and biotechnological tools (DNA polymorphisms, marker-assisted selection, in vitro culture), to implement new technologies and improved materials in horticultural production. He collaborates with several national and international groups, with a remarkable international projection reflected in European projects and publications with groups from France, Germany, Italy, Portugal, USA, Mexico. It accumulates 16

months of stays in foreign centers: 6 months predoctoral (NZ, Germany) and 10 months postdoc (USA, Brazil, France).

He currently leads the Capsicum Breeding Group at COMAV, whose main research lines have led to the adaptation to organic farming (with farmers and consumers), recovering traditional varieties, improving traditional varieties for resistances, nutritional quality and aroma, and exploitation of related species to develop new materials (in vitro rescue of interspecific hybrids, MAGIC populations, introgression families). His group includes 3 professors, 3 postdoctoral researchers, 3 predoctoral researchers (2 of them FPU), 2 senior technicians, 2 junior technicians and several Master thesis students.

Author of 85 articles published (3 more under review) in JCR indexed journals since 2001, 59 in the last 10 years (75% in Q1), 10 dissemination publications, 4 books (2 international), 11 chapters (7 inter), 190 contributions to congresses, including 4 invited conferences and plenary sessions, 9 participations in scientific committee (convenor of the XIVth EUCARPIA Meeting on Genetics and Breeding of Capsicum and Eggplant), and 20 invited seminars in the ERASMUS+ Program. His activity has been recognized with several awards and distinctions: i) Young Researcher Soc. Esp. Horticultural Sciences 2007, ii) Distinguished Researcher Universidad Trujillo (Peru) 2006, iii) Outstanding Paper 2010 Award Amer. Soc. Hort. Sci for the article HortTechnology 20:1049-1053, iv) Research Excellence University of Agricultural Sciences of Cluj-Napoca (Romania) 2012.

IP (since 2007) of 19 competitive projects (INIA-RTA, Retos-Colaboración, Generalitat Valenciana, UPV) and 4 R&D contracts with companies. Group leader (UPV partner) in the European projects H2020-LIVESEED (2017-21) and Horizon Europe LIVESEEDING (2022-2026), aimed at breeding and boosting the use of organic seeds in the EU farming sector. He has actively participated in other 20 competitive national projects (National Plan, INIA, Gen. Valenciana, UPV), 7 international (Global Crop Diversity Trust 2013-16 and 2017-19; Erasmus+ EPBC 2015-17 and SupBioEnt 2022-24; ERASMUS+ EMPlant 2018-21 and 2022-26; H2020 BRESOV 2018-22) and four R&D contracts with seeds and agri-food companies.

Breeder and obtentor of 3 varieties of *S. muricatum* adapted to Mediterranean agroclimatic conditions and the 'Dealmagro' conservation variety used by the PGI "Eggplant of Almagro", as well as 1 variety of wax pepper and 1 variety of purple carrot under evaluation.

He is also the coordinator of the Participatory Plant Breeding Group of the Soc. Esp. Of Agroecology (SEAE) and member of the IFOAM-EU Seeds Expert Group. His academic activity has been focused on Plant Genetics and Breeding, having received the *Teaching Excellence Award* from Generalitat Valenciana 2010, and directing 32 master and 30 graduate thesis, 5 PhD thesis and 6 more under development (2 close to finish).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (10 main papers in the last 10 years)

- Ortega-Albero, Neus; González-Orenga, Sara; Vicente, Oscar; Rodríguez Burruezo, Adrián; Fita, Ana. (2023) Responses to Salt Stress of the Interspecific Hybrid *Solanum insanum* × *Solanum melongena* and Its Parental Species. *Plants*, 295(12) 10.3390/plants12020295
- Murcia Asensi, Carlos; Fita, Ana; de Luis-Margarit, Ana; Guijarro-Real, Carla; Raigón Jiménez, M^a Dolores; Blanca-Giménez, Vicente ... Rodríguez Burruezo, Adrián. (2024) Grafting in Capsicum peppers as a strategy to mitigate the effects of climate change on yield and quality factors. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 10.15835/nbha52113653
- Guijarro-Real C; Adalid-Martinez AM; Pires CK; Ribes-Moya AM; Fita A; Rodríguez Burruezo A. 2023. The Effect of the Varietal Type, Ripening Stage, and Growing Conditions on the Content and Profile of Sugars and Capsaicinoids in Capsicum Peppers. *Plants*, 12: 231. 10.3390/plants12020231
- Ortega-Albero N; González-Orenga S; Vicente O; Rodríguez-Burruezo A; Fita A. 2023. Responses to Salt Stress of the Interspecific Hybrid *Solanum insanum* × *Solanum melongena* and Its Parental Species. *Plants*, 12: 295. 10.3390/plants12020295
- Morales-Manzo, Ivan Ilich; Ribes Moya, Ana María; Pallotti Sagripanti, Claudia Gabriela; Jiménez Belenguer, Ana Isabel; Pérez-Moro, Clara; Raigón Jiménez, M^a Dolores ... Fita, Ana. (2023) Root-Soil Interactions for Pepper Accessions Grown under Organic and Conventional Farming. *Plants* (12)1873 - . 10.3390/plants12091873
- Moreno Peris E, Cortés Olmos C, Díez-Díaz M, González-Más MC, de Luis-Margarit A, Fita A, Rodríguez-Burruezo A. 2020. Hybridization in peppers (*Capsicum sp.*) to improve the volatile

- composition in fully ripe fruits: effect of parent combination and fruit tissue. *Agronomy* 10(5):751
- Pereira-Días L, Gil-Villar D, Castell-Zeising V, Quiñones A, Calatayud A, Rodríguez Burruezo A; Fita A. 2020 Main root adaptations in Pepper germplasm (*Capsicum* spp.) to phosphorus low-input conditions. *Agronomy* 10(5):637
- Pereira-Días, Leandro; Fita, Ana; Vilanova Navarro, Santiago; Sanchez-Lopez, Elena; Rodríguez Burruezo, Adrián. (2020) Phenomics of elite heirlooms of peppers (*Capsicum annuum* L.) from the Spanish centre of diversity: Conventional and high-throughput digital tools towards varietal typification. *Scientia Hort.* 265: 109245. 10.1016/j.scienta.2020.109245
- Ribes-Moya AM; Adalid-Martinez AM; Raigón-Jiménez MD; Hellín P; Fita A; Rodríguez-Burruezo A. 2020. Variation in flavonoids in a collection of peppers (*Capsicum* sp.) under organic and conventional cultivation: effect of the genotype, ripening stage, and growing system. *J Science Food Agric.* 100:2208-2223
- Pereira-Dias L, Vilanova S, Fita A, Prohens J, Rodríguez-Burruezo A. 2019. Genetic diversity, population structure, and relationships in a collection of pepper (*Capsicum* spp) landraces from Spanish centre of diversity revealed by genotyping-by-sequencing (GBS). *Horticulture Research* 6:54.
- Ribes-Moya AM, Raigón MD, Moreno-Peris E, Fita A, Rodríguez-Burruezo A. 2018. Response to organic cultivation of heirloom *Capsicum* peppers: Variation in the level of bioactive compounds and effect of ripening. *PLoS ONE* 13(11): e0207888.

C.2. Congress

More than 180 congress contributions, >80 in the last 10 years. Just to emphasize among the most relevant and recent ones:

1. Rodríguez-Burruezo A. Keynote Speaker. Participatory breeding towards a more diverse, resilient and society-oriented organic farming. IV International Plant Breeding Congress (Antalya, Turkey, 21-25 November 2022). Book of Abstracts: 36.
2. Rodríguez-Burruezo A. Plenary Session Speaker. Participatory plant breeding as a strategy to a more diverse, sustainable and resilient agri-food sector: examples of initiatives aimed at organic farming. 21st International Conference "Life Sciences for Sustainable Development" (Cluj-Napoca, Romania, 15-17 september 2022). Book of Abstracts: 76.
3. Sánchez-Sánchez A; Hernández Vi; Hellín P; Jiménez-Perez, M; Rodríguez Burruezo, A; Fenoll J; Flores P. 2022. Impact Of Low-Input Management And Microbial Biostimulants On Yields Of Traditional Pepper Varieties. 11th International Conf Agriculture for Life, Life for Agriculture (A4LIFE 2022). Bucharest, Romania: USAMV-Bucharest. Oral
4. Ortega-Albero, N; Bracho M; Bueso-Rodenas, E; Fita, A; Rodríguez Burruezo, A. 2021. Preliminary Studies On Gene Expression In *Capsicum* Peppers Roots In Response To Phosphorus Deficiency. Int. Conf Breeding and Seed Sector Innovations for Organic Food Systems. EUCARPIA Organic&Low-input Agriculture Congress 2021. Book Abstracts: 90. Oral
5. Ribes-Moya A, Adalid AM, Raigón MD; Rodríguez-Burruezo A. 2021. Effect of the ripening stage and the growing system on the content of main flavonoids in peppers. Int. Conf on Breeding and Seed Sector Innovations for Organic Food Systems. EUCARPIA Organic and Low-input Agriculture Section Congress 2021. Book Abstracts: 71. Oral

C.3. Research projects,

1. Organic seed and plant breeding to accelerate sustainable and diverse food systems in Europe (LIVESEEDING) (Horizon Europe grant 101059872). Fund. entity: Eur. Commission. 01/10/2022-30/09/2026. Subvention UPV: 141.000 €. PI (UPV): **A. Rodríguez-Burruezo**
2. Mejora de la capacidad antioxidante y del valor nutracéutico de los frutos del pimiento mediante el uso combinado de aproximaciones metabólicas y genéticas (SCPP2100C008703XV0). AEI Retos colaboración. Participant entities: SAKATA Ibérica (coordinator), CSIC-EI Zaidín and UPV-COMAV. 1/07/2022 – 30/06/2025. Subvention UPV: 122.935 €. PI UPV: **A. Rodríguez-Burruezo**
3. Desarrollo de Productos Compostables Símil Cartón a Partir de Subproductos Agrícolas Procedentes del Sector Vitivinícola (RASPONS) (INNEST/2022/224). Agenc. Valenciana Innovación. Participant entities: Bodega la Viña (coordinator), AIMPLAS, FECOAV, and UPV-COMAV. 06/05/22-30/09/24. Subvention UPV: 114.000 €. PI UPV: **A. Rodríguez-Burruezo**
4. Development of high quality and disease resistant improved ecotypes of peppers (*Capsicum annuum* L.) adapted to organic cultivation in South East of Spain (PID2019-110221RR-C32). Funding entity: Ministerio Ciencia e Innovación. Participant entities: IMIDA (coordinator,

Subproject 01), UPV-COMAV (subproject 02) and UMH (subproject 03). June 2020-May 2023. Subvention UPV: 111.199 €. PI UPV: **A. Rodríguez-Burruezo**.

5. Valorización y mejora de las variedades tradicionales de solanáceas para el desarrollo de una horticultura biodiversa, de bajos insumos y ecológica en un contexto de cambio climático. (CIPROM/2021/020). PROMETEO projects – Generalitat Valenciana. 01/01/22-31/12/25. Subvention UPV: 560.000 €. PI: J. Prohens and A. Fita

6. Selección y mejora de variedades tradicionales de pimiento (*Capsicum annuum* L.) para rendimiento y calidad de fruto y adaptadas a cultivo ecológico (RTA2014-00041-C02-02). INIA. Participant entities: IMIDA (coordinator) and UPV-COMAV. 17/09/2015 – 28/02/2019. Subvention UPV: 91.000 €. **PI UPV: A. Rodríguez-Burruezo**.

7. Improve performance of organic agriculture by boosting organic seed and plant breeding efforts across Europe (LIVESEED) (H2020 grant 727230, call SFS-07-2016). Fund. entity: Eur. Com. 01/06/2017-01/06/2021. Subvention UPV: 84.000 €. PI (UPV): **A. Rodríguez-Burruezo**

8. Tesoro Agroecológico de Villena, ejemplo de fitomejoramiento participativo para recuperar ecotipos de alto valor añadido adaptados a cultivo ecológico. (AGCOOP_A/2018/015). Funding entity: Generalitat Valenciana. Participating entities: UPV-COMAV and Agrícola Villena Coop. From 2018 to 2020. Subvention (UPV): 58.600 €. **PI: A. Rodríguez-Burruezo**.

9. Mejora genética y agronómica de la calidad nutricional del pimiento y especies relacionadas (*Capsicum spp.*) (RTA2010-00038-C03-03). INIA. Part: IVIA (coord.), U. Almería, UPV-COMAV. 13/10/2010-13/04/2014. Subvention UPV: 90.384 €. PI UPV: **A. Rodríguez-Burruezo**

10. Consecución de una colección nuclear de pimiento y especies relacionadas (*Capsicum spp.*) basada en marcadores AFLPs y SSRs (RF2010-00025-00-00). Funds: INIA Rec. Fitogenéticos. 26/11/2010- 26/01/2014. Subvention: 75.781 €. PI: **A. Rodríguez-Burruezo**.

C.4. Contracts, technological or transfer merits,

1 Transfer Period (Sexenio Transferencia) from the CNEAI (recognized in 2019)

Also, the most relevant contracts with Companies and other entities in the last years are:

1. Development of double haploid lines from sweet and hot peppers. Funding company: UNIGEN Seeds Spain. Participating entities: UPV-COMAV. From 2019 to 2020. Subvention: 18.420 €. PI: **A. Rodríguez-Burruezo**.
2. Utilization of crop wild relatives in eggplant pre-breeding for adaptation climate change. Funding entity: Global Crop Diversity Trust. Participating entities: UPV-COMAV (coordinator), Univ. Félix Houphouet (Ivory Coast), UFR Biosciences (Sri Lanka). From 01/01/2015 to 01/01/2017. Subvention: 264.550 US\$. PI: J. Prohens (UPV)
3. Desarrollo híbridos F1 precomerciales de pimiento y evaluación de resistencias a virus PMMoV y TSWV. Funding company: MERIDIEM Seeds. Participating entities: UPV-COMAV. 15/01/2015 - 31/12/2015. Subvention: 12.291 €. PI: **A. Rodríguez-Burruezo**
4. Evaluación y desarrollo de líneas parentales e híbridos F1 de pimiento. Funding company: MERIDIEM Seeds. From 01/10/2013 to 01/08/2014. Participating entities: UPV-COMAV. Subvention: 38.843,55 €. PI: **A. Rodríguez-Burruezo**
5. Introgresión de resistencia a las nuevas poblaciones aparecidas en Almería y Murcia del virus del bronceado del tomate (Tomato Spotted Wilt Virus, TSWV) en líneas de pimiento dulce (*Capsicum annuum* L.) California, Lamuyo e Italiano. Funding company: Ramiro Arnedo. 15/07/2009-15/07/2012. UPVCOMAV. Subvention: 175.000 €. PI: F. Nuez
6. Desarrollo de variedades de pimiento tipo “California” adaptadas al Campo de la Vega Baja. (Alicante). Funding entity: Fundación Com. Valenciana para la Inv. Agroalimentaria (AGROALIMED). From 06/09/2006 to 06/09/2011. Subvention: 1.438.971 €. PI: F. Nuez and **A. Rodríguez Burruezo**

And patents/plant obtentions:

1. Pepino, *S. muricatum* (3): ‘Puzol’, ‘Turia’, ‘Valencia’. Public cultivars, used by a range of companies in Spain and abroad.
2. Eggplant: Conservation variety ‘Dealmagro’, Selection ‘H15’. Used commonly by farmers under PGI *Berenjena de Almagro*
3. One cultivar Pimiento Blanco de Villena (Wax Pepper) and one cultivar Zanahoria Morada de Villena under evaluation in registration office.