MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

**CURRICULUM VITAE (CVA)**

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

## Part A. PERSONAL INFORMATION

| CV date | 18/04/2022 |
|---|---|

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|---|---|---|---|
| First name | Josefina Marí | | |
| Family name | Bota Salort | | |
| Gender (*) | Female | Birth date | 02/01/1974 |
| Social Security, Passport, ID number | 43086965F | | |
| e-mail | j.bota@uib.es | URL Web | |
| Open Researcher and Contributor ID (ORCID) (*) | | 0000-0001-7039-7638 | |

### A.1. Current position

| | | | | |
|---|---|---|---|---|
| Position | Associate professor of crop production (TU) | | | |
| Initial date | 14/09/2017 | | | |
| Institution | Universitat de les Illes Balears (UIB) | | | |
| Department/Center | Biology | INAGEA | | |
| Country | SPAIN | | Teleph. number | |
| Key words | Crop production, plant ecophysiology, plant stress, genetic resources, plant-microbe interaction, crop sustainability | | | |

### A.2. Previous positions (research activity interuptions, art. 14.2.b))

| Period | Position/Institution/Country/Interruption cause |
|---|---|
| 2009-2014 | Postdoctoral Researcher/IRFAP-Balearic Goverm./Spain |
| 2014-2015 | Postdoctoral Researcher/UIB/Spain |
| 2015-2017 | Temporary Associate professor (PCDint) |

### A.3. Education

| PhD, Licensed, Graduate | University/Country | Year |
|---|---|---|
| PhD in Bilogy | Universitat de les Illes Balears (UIB) | 2004 |
| European PhD | Universitat de les Illes Balears (UIB) | 2004 |
| Graduate in Biology science | Universitat de les Illes Balears (UIB) | 1998 |

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

I have been an Associate Professor (TU) of Plant Production at the Universitat de les Illes Balears (UIB) since 2017. During my PhD (2000-2004; Fellowship granted by the University of the Balearic Islands (FPU-UIB), my research was focused on the effects of water deficit on photosynthesis, highlighting the relative importance of $CO_2$ diffusion limitations and the metabolic limitations imposed by drought on the photosynthetic process. My PhD thesis entitled "Regulation of photosynthesis in response to water stress: metabolic and CO2 diffusion limitations" obtained the maximum qualification, Cum Laude. My contribution in this field is reflected in several publications in international journals, some of them still receive a large number of citations every year (see for instance DOI: 10.1055/s-2004-820867; 10.1093/aob/mcf079). Moreover, my PhD thesis obtained the "III National Award for Research in Water Relations" given by The Spanish Society of Plant Physiology.

In parallel during my PhD, I started a more applied research related to crop ecophysiology, studying the grapevine local genetic resources and its genetic variability in terms of photosynthesis, drought response and water use efficiency. The high level of virus infection in the local grapevine cultivars made necessary the sanitary recovery of infected cultivars and the study of biotic stress by virus infection. During my postdoctoral period (fellowship from DOC-INIA Program) I was focused on this line. The characterization of local minority grapevine cultivars and their sanitation permitted the collaboration and Participation in the authorization of new vine cultivars in the Balearic Islands (Giró Ros, Gorgollassa and Escursac) and in the certification of two clones of the Manto Negro cultivar.
I have maintained this research line in plant responses to abiotic and biotic stresses and genetic variability of these responses, until nowadays, through financial support and participating in 25 research projects, 2 at the European level, 11 at the national level (6 from the national plan, 5 INIA projects (2 of them as PI) and 12 regional projects (3 as PI).
During my career I have set up many national and international collaborations, hence my publications include more than 100 co-authors from several countries. My research has been published in more than 60 scientific publications achieving an h-index of 23 (Scopus).
During my postdoctoral time I started the training of young researchers, until now, I supervised 4 doctoral theses (2 still in progress), 3 master's theses and several degree final projects.
Since 2014 I participate in the evaluation of research projects for the National Agency for Project Evaluation (ANEP). I act as a reviewer for several international journals and since 2021, I am an editor of Plants journal.
Since 2020 I am the head of the Research Group on Plant Biology under Mediterranean Conditions (Plantmed) from the UIB. In the last years within the main subjects exposed my research interest is the study of plant tolerance to drought to face climate change and reduce the environmental impact of water use in agriculture.

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

**C.1. Publications** *(see instructions)*


1. **Bota, J.,** Arroyo-García, R., Tortosa , I., Medrano, H. 2022. Exploiting genetic diversity to improve environmental sustainbaility of mediterranean vineyards. In: Sustainable viticulture and winemaking practices. Academic Press, Pp 25-44, ISBN 9780323851503
2. Flexas, J. (AC), Clemente-Moreno, M.J., **Bota, J.,** et al. & Carriquí, M (3/12). 2021. Cell wall thickness and composition are involved in photosynthetic limitation, *Journal of Experimental Botany*, 72 (11): 3971–3986
3. López-García, A., Jurado-Rivera, K.A., **Bota, J.,** Cifre, J., Baraza, E. 2020. Space and vine cultivar interact to determine the arbuscular mycorrhizal fungal community composition. Journal of Fungi 6(4): 1–18.
4. Florez-Sarasa, I., Clemente-Moreno, M.J., Cifre, J., Capó, M., Llompart, M., Fernie, A.R., **Bota, J.** 2020. Differences in Metabolic and Physiological Responses between Local and Widespread Grapevine Cultivars under Water Deficit Stress. Agronomy 10 (7): 1052.
5. Roig-Oliver, M., Nadal, M., Clemente-Moreno, M.J., **Bota, J.,** Flexas, J. 2020. Cell wall components regulate photosynthesis and leaf water relations of Vitis vinifera cv. Grenache acclimated to contrasting environmental conditions. Journal of Plant Physiology 244.
6. El Aou-ouad H; Pou A; Tomas M; Montero R; Ribas-Carbó M; Medrano H; **Bota J.** 2017. Combined effect of virus infection and water stress on water flow and water economy in grapevines 900532 - Physiologia Plantarum. 160: 171-184.
7. Montero, R., El aou ouad, H., Pacifico, D., Marzachì, C., Castillo, N., García, E., Del Saz, N.F., Florez-Sarasa, I., Flexas, J., **Bota, J.** 2017. Effects of Grapevine leafroll-associated virus 3 on the physiology in asymptomatic plants of *Vitis vinifera* L. Annals of Applied Biology 171: 155-171.
8. Medrano, H., Tortosa, I., Montes, E., Pou, A., Balda, P., **Bota, J.,** Escalona, J.M. 2018. Genetic improvement of grapevine (*Vitis vinifera* L.) Water use efficiency: Variability among varieties and clones. Water Scarcity and Sustainable Agriculture in Semiarid Environment. pp. 377 - 401. (Holanda): Elsevier, ISBN 978-0-12-813164-0.
9. **Bota, J.,** Tomás, M., Flexas, J., Medrano, H., Escalona, J.M. 2016. Differences among grapevine cultivars in their stomatal behavior and water use efficiency under progressive water stress. Agricultural Water Management 164: 91-99.

10. Tortosa, I., Escalona, J.M., **Bota, J.,** Tomás, M., Hernández, E., García-Escudero, E., Medrano, H. 2016. Exploring the genetic variability in water use efficiency: Evaluation of inter and intra cultivar genetic diversity in grapevines. Plant Science. 251, pp.35-43.
11. Montero, R., Pérez-Bueno, M.L., Barón, M. et al., & **Bota, J.** (9/9) 2016. Alterations in primary and secondary metabolism in Vitis vinifera 'Malvasía de Banyalbufar' upon infection with Grapevine Leafroll associated Virus 3 (GLRaV-3). Physiologia Plantarum. 157(4): 442-452.

**C.2. Congress**

1. Hmida, I., Moreno-Díaz, R., A.J. Ribas, M., **Bota, J**., Baraza, E. 2021. Can we predict arbuscular mycorrhizal inoculation effects on vine plants?, in Proceedings of the 1st International Electronic Conference on Agronomy, 3–17 May 2021, MDPI: Basel, Switzerland, doi:10.3390/IECAG2021-09996
2. Rodriguez-Izquierdo, A., Carrasco, D., Revilla, M.A., **Bota, J.,** Arroyo-Garcia, R. 2021. Transcriptome analysis of grapevine under drought conditions and description of adaptation strategies over drought conditions. 11th International Symposium on Grapevine Physiology and Biotechnology. On-line conference.
3. Flores, L.A., Molins, A., **Bota, J.,** Baraza, E. 2021. Efecto de distintos inóculos de micorriza comercial en el crecimiento de dos variedades de Vitis vinífera. Congreso Nacional de Ciencias Hortícolas, Córdoba, España
4. Romero-Munar, A.; Sancho, P.; Baraza, E.; Hernández-Montes, E.; **Bota, J.**; Escalona, JM. 2018. Water and soil management in vineyard: relationship between soil microbial community and its functional role with grapevine physiology and productivity. International Congress on Grapevine and Wine Sciences – ICVV. Logroño, España
5. **Bota, J.;** Llompart, M.; Clemente, M.; Cretazzo, E.; Janer, I.; Capó, M.; Ribas-Carbó, M.; Cifre, J. 2018. Different physiological responses to water availability and its implication on water use efficiency in grapevine cultivars. International Congress on Grapevine and Wine Sciences – ICVV. Logroño, España
6. El Aououad, H.; Pou, A.; Montero, R.; Medrano, H.; Tomàs, M.; Florez-Sarasa, I.; Ribas-Carbo, M.; Cifre, J.; **Bota, J.** 2017. The interaction between biotic (virus) and abiotic (drought) stresses in grapevine. 20th International Meeting of Viticulture GiESCO. Mendoza (Argentina)
7. El aou ouad H.; Montero R.; Tomás M.; Pou A.; Medrano H.; Ribas-Carbo M.; J. Cifre J.; **Bota J.** 2016. Water use efficiency and hydraulic conductance of two grapevine cultivars in response to biotic and abiotic stress. X International Symposium on Grapevine Phisiology and Biotechnology. Verona, Italy
8. El aououad, H.; Montero, R.; Tomás, M.; Ribas-Carbó, M.; Medrano, H.; **Bota, J.** 2015. nfluence of biotic and abiotic stress on physiological traits and water use efficiency in grapevine. 19èmes Journées GiESCO. Monpellier, France
9. **Bota, J.;** Tomas, M.; Medrano, H.; Flexas, J.; Escalona, J.M. 2014. Differences among Grapevine Cultivars in their Water Use strategy under Progressive Water Stress. XII Portuguese Spanish Symposium on Plant Water Relations. Évora, Portugal
10. El aououad, H.; Montero, R.; Romero, A.; Medrano, H.; **Bota, J.** 2014. Interactive effects of Leafroll associated virus (GLRaV-3) and drought on the physiology of two grapevine (Vitis vinifera L.) varieties. Plant Biology Europe FESPB/EPSO 2014 Congress. Dublin, Ireland

**C.3. Research projects**

1. BIA01/20-2. Virus elimination in local grape varieties. Conselleria de agricultura, pesca i alimentació. FOGAIBA. Gobierno de las Islas Baleares (GOIB). PI: **Josefina Bota**. 2021-2022. 17000 €.
2. RTI2018-094470-R-C22. Agronomic management to improve vineyard sustainability, AGROSUST. Ministerio de Ciencia, Innovación y Universidades. PI: **Josefina Bota** (UIB). 01/01/2019 - 31/12/2021. 108900€.
3. BIA09/18. Obtaining virus-free grapevine material and its characterization. Conselleria de mediambient, agricultura i pesca. FOGAIBA. Gobierno de las Islas Baleares (GOIB). PI: **Josefina Bota** (UIB). 20/05/2019-19/05/2020. 17000 €.
4. EQC2018-004526-P. Growth chambers for the study of water use efficiency and response to climate change in plants. Ministerio de Ciencia, Innovación y Universidades. PI: Hipólito

Medrano (UIB). 2018-2020. 198.475 €

5. ERA-NET CoFund FACCE Surplus, VitiSmart: Toward a sustainable viticulture: Improved grapevine productivity and tolerance to abiotic and biotic stresses by combining resistant cultivars and beneficial microorganisms Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria. Ministerio de Agricultura, Pesca y Alimentación. PI: José Mariano Escalona Lorenzo (UIB). 01/04/2016- 31/03/2019. 75000 €.
6. BIA05/17. Sanitary recovery and oenological assessment of minority grapevine varieties of the Balearic Islands. Conselleria de mediambient, agricultura i pesca. FOGAIBA. Gobierno de las Islas Baleares (GOIB). PI: **Josefina Bota**. 01/06/2018-31/05/2019. 12500 €.
7. PROCOE/1/2017. Sustainability of the olive grove cultivated in super-intensive: water and fertilization needs in the varieties Koroneiki, Arbosana, Sikitita and Arbequina. Conselleria d' innovació, recerca i turismo. Gobierno de las Islas Baleares (GOIB). PI: Hipólito Medrano Gil. (Universidad de las Islas Baleares). 22/12/2017 22/12/2020. 35126€.
8. RTA2013-00068-C03-03. Improving water use efficiency in *Vitis vinifera* L.: genetic and physiological basis for better adaptation to climate change. Ministerio de Economía y Competitividad (MINECO). PI: Josep Cifre Llompart. (UIB). 02/10/2014- 02/10/2018. 90093.83 €
9. RF2012-00027-C05-03. Documentation, characterization, and rationalization of the prospected grapevine germplasm conserved in Spain. Creation of a Spanish nuclear collection. Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria. Ministerio de Agricultura, Pesca y Alimentación (INIA). PI: Anna Puig Pujol. 01/10/2012 01/10/2015. 25910.4 €.
10. RTA2010-00118-00-00. Sanitary study, preservation and characterization of minority grapevine varieties in the Balearic Islands. Confirmation of unique genotypes through the application of molecular markers. Sanitary recovery of infected genotypes using biotechnology techniques. INIA. PI: **Josefina Bota**. 2011-2013. 60000 €.

**C.4. Contracts, technological or transfer merits**

1. Agreement between the UIB and the Rosselló-Castell Corporation to collaborate in training and research. February 2015 University of the Balearic Islands. PI: Hipólito Medrano Gil. 2015. 33.000 €.
2. Agreement with the company Planet Horizons Technologies SA. University of the Balearic Islands-Planet Horizons Technologies SA. PI: Hipólito Medrano Gil. 2015. 60000 €.
3. Other transfer merits: Participation in the authorization of new vine cultivars in the Balearic Islands (Giró Ros, Gorgollassa and Escursac) and in the certification of two clones of the Manto Negro cultivar.