

CURRÍCULUM VITAE

(Abbreviated)

I.- PERSONAL DATA

Name: Hernández-Montes, Esther; Date of birth: September 5, 1983; Nationality: Spanish
Researcher ID: N-7243-2013
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Current Appointment

1. Assistant Professor (Horticulture) at Universidad Politécnica de Madrid
Departamento Producción Agraria
Escuela Técnica Superior de Ingeniería Agronómica, Alimentaria y Biosistemas

II. EDUCATION

PhD in Plant Biology (Universidad las Islas Baleares)	2017
MSc Degree in Plant Biology under Mediterranean Conditions (Universidad de las Islas Baleares)	2015
MSc Degree in Agro-Environmental Technology for Sustainable Agriculture (Universidad Politécnica de Madrid)	2012
Ingeniero Técnico Agrícola (Universidad Politécnica de Madrid)	2011
Bachelor's degree+MSc in Business Administration and Management (Universidad Autónoma de Madrid)	2006
Languages: English (C1)	

III.- RESEARCH PROJECTS

+ Member of the research team in the following projects:

1. “Agronomic management to improve vineyard sustainability”, RTI2018-094470-R-C22.
Funding: Ministerio de Ciencia e Innovación
Period: 01/01/2020- 31/12/2022
PI: Josefina Bota (Universidad de las Islas Baleares)
2. “Grape Ripening Under a Double Whammy of Heat Stress and Water Deficit”.
Funding: Washington Winegrape Comission
Period: 01/07/2019-31/05/2022
PI: Markus Keller and Esther Hernández-Montes (Washington State University)
3. “Optimización de la eficiencia en el uso de agua y del nitrógeno por la vid y de la calidad de la uva y el vino, combinando material genético y fertirrigación sostenible”, AGL-2017-83738-C3-1R.
Funding: Ministerio de Ciencia e Innovación
Period: 01/01/2018-31/12/2021
PI: Hipólito Medrano Gil (Universidad de las Islas Baleares)
4. “Generating knowledge and recommendations that will empower grape growers to cope with drought and heat”.
Funding: WSDA, Specialty Crop Block Program
Period: 01/09/2016-30/09/2019
PI: Markus Keller and Yun Zhang (Washington State University)
5. “Effects and mechanisms of action of canopy management strategies on plant physiology and grape composition in highly sustainable grapevine systems”.
Funding: Regione Emilia Romagna, Italy.
Period: 2016-2018
PI: Adamo Domenico Rombolà (Università di Bologna)

6. "Water and carbon balances in grapevines: genotype and environment effects", AGL-2011-30408-C04-01.
Funding: Ministerio de Economía y Competitividad
Period: 01/01/2012-30/06/2015
PI: Hipólito Medrano

IV.- PUBLICATIONS

+ Journal indexed in JCR:

1. Hernández-Montes, E.; Escalona, J.M.; Tomàs, M.; Martorell, S.; Bota, J.; Tortosa, I.; Medrano, H. 2022. Carbon balance in grapevines (*Vitis vinífera* L.): effect of environment, cultivar and phenology on carbon gain, losses and allocation. *Australian Journal of Grape and Wine Research*: 28, pp. 534-544.
2. Lehr, P. P.; Hernández-Montes, E.; Ludwig-Mueller, J.; Keller, M.; Zoerb, C. 2021. Abscisic acid and proline are not equivalent markers for heat, drought and combined stress in grapevines. *Australian Journal of Grape and Wine Research*: 28 - 1, pp. 119 - 130.
3. Hernández-Montes, E.; Zhang, Y.; Chang, B-M; Shcherbatyuk, N.; Keller, M. 2021. Soft, Sweet, and Colorful: Stratified Sampling Reveals Sequence of Events at the Onset of Grape Ripening. *American Journal of Enology and Viticulture*: 72-2, pp. 137-151.
4. Marin, D.; Armengol, J.; Carbonell-Bejerano, P.; Escalona, J. M.; Gramaje, D.; Hernández-Montes, E.; Intrigliolo, D. S.; Martínez-Zapater, J. M.; Medrano, H.; Miras-Avalos, J. M.; Palomares-Rius, J. E.; Romero-Azorín, P.; Save, R.; Santesteban, L. G.; de Herralde, F. 2020. Challenges of viticulture adaptation to global change: tackling the issue from the roots. *Australian Journal of Grape and Wine Research*: 27 - 1, pp. 8 - 25.
5. Hernández-Montes, E.; Escalona, J.M.; Tomas, M.; Medrano, H. 2020. Plant water status and genotype affect fruit respiration in grapevines. *Physiologia Plantarum*: 169 - 4, pp. 544 - 554.
6. Hernández-Montes, E.; Tomas, M.; Escalona, J. M.; Bota, J.; Medrano, H. 2019. Leaf growth rate and nitrogen content determine respiratory costs during leaf expansion in grapevines. *Physiologia Plantarum*: 165 - 4, pp. 746 - 754.
7. Tortosa, I.; Pou, A.; Douthe, C.; Balda, P.; Hernández-Montes, E.; Toro, G.; Escalona, J.M.; Medrano, H. 2019. Variability in Water Use Efficiency of Grapevine Tempranillo Clones and Stability over Years at Field Conditions. *Agronomy*: 9-11, 701.
8. Douthe, C.; Medrano, H.; Tortosa, I.; Escalona, J.M.; Hernández-Montes, E.; Pou, A. 2018. Whole-Plant Water Use in Field Grown Grapevine: Seasonal and Environmental Effects on Water and Carbon Balance. *Frontiers in Plant Science*: 9.
9. Fuentes, S.; Hernandez-Montes, E.; Escalona, J. M.; Bota, J.; Viejo, C. Gonzalez; Poblete-Echeverria, C.; Tongson, E.; Medrano, H. 2018. Automated grapevine cultivar classification based on machine learning using leaf morpho-colorimetry, fractal dimension and near-infrared spectroscopy parameters. *Computers and Electronics in Agriculture*: 151, pp. 311 - 318.
10. Park, S.; Ryu, D.; Fuentes, S.; Chung, H.; Hernández-Montes, E.; O'Connell, M. 2017. Adaptive Estimation of Crop Water Stress in Nectarine and Peach Orchards Using High-Resolution Imagery from an Unmanned Aerial Vehicle (UAV). *Remote Sensing*: 9 - 8, pp. 828 - 843.
11. Hernández-Montes, E.; Escalona, J. M.; Tomas, M.; Medrano, H. Influence of water availability and grapevine phenological stage on the spatial variation in soil respiration. 2017. *Australian Journal of Grape and Wine Research*: 23 - 2, pp. 273 - 279.

12. Bchir, A.; Escalona, J.M.; Galle, A.; Hernández-Montes, E.; Tortosa, I.; Brahma, M.; Medrano, H. 2016. Carbon isotope discrimination ($\delta C-13$) as an indicator of vine water status and water use efficiency (WUE): Looking for the most representative sample and sampling time. *Agricultural Water Management*: 167, pp. 11 - 20.
13. Pou, A.; Escalona, J.M.; Tortosa, I.; Hernández-Montes, E.; Tomàs, M.; Martorell, S.; Bota, J.; Medrano, H. 2016. Using whole-plant chambers to estimate carbon and water fluxes in field-grown grapevines. *Theoretical and Experimental Plant Physiology*. 28, pp. 241 - 254.
14. Tortosa, I.; Escalona, J.M.; Bota, J.; Tomàs, M.; Hernández-Montes, 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 - 46.
15. Medrano, H.; Tomàs, M.; Martorell, S.; Flexas, J.; Hernández-Montes, E.; Roselló, J.; Pou, A.; Escalona, J.M.; Bota, J. 2015. From leaf to whole-plant water use efficiency (WUE) in complex canopies: limitations of leaf WUE as a selection target. *The Crop Journal*: 3 – 3, pp. 220 – 228.

+ Book chapters:

1. Medrano, H.; Tortosa, I.; Hernández-Montes, E.; Pou, A.; Balda, P.; Bota, J.; Escalona, J.M. 2018. Genetic improvement of the grapevine (*Vitis vinifera* L.) water use efficiency: Variability among varieties and clones. *Water Scarcity and Sustainable Agriculture in Semiarid Environment*. pp. 377 - 401. Elsevier.
2. Escalona, J.M.; Medrano, H.; Hernández-Montes, E. 2017. Determinación del estado hídrico de la planta. El potencial hídrico. *Guía de campo de viticultura*. Editorial Agrícola.

+ Other publications:

1. Escalona, J.M.; Hernández-Montes, E.; Tomás, M. Environmental and agronomic factors determining the carbon sequestration in vine. *Enoviticultura*. 31, 01/11/2014.
2. Hernández-Montes, E.; Tomás, M.; Medrano, H.; Escalona, J.M. Importance of respiratory components in the carbon balance of grapevine (*Vitis vinifera* L.). *Enoviticultura*. 31, 01/11/2014.
3. Velado, D.; Hernández-Montes, E.; Nart, E.; Puxeu, M.; Tejerina, M. Irrigation strategies adjusted to grape maturation. *Vida Rural*. 01/03/2013.
4. Hernández-Montes, E.; Pérez-Cidoncha, C.; Baeza, P.. Agronomical and physiological behaviour of the grapevine cultivars (*Vitis vinifera* L.): Godello, Sauvignon vert, Viognier and Verdejo. *Vida Rural*. pp. 46 - 50. 15/03/2012.
5. Baeza, P.; Sánchez-Lirio, M.; Verdugo, J.; Tejerina, M.; López-Pavón, C.; Martín-Cuadrado, L.; Iglesias, L.; Díaz-Riquelme, T.; Pérez-Ayuso, E.; Hernández-Montes, E.; Pérez-Cidoncha, C.; González, C. Agronomic response of different red grapevine cultivars in a temperate zone. *Agricultura*. 940, pp. 328 - 332. 15/03/2011.

V. OTHER ACTIVITIES

- Teaching experience (viticulture, horticulture, woody crops)
- Supervisor of 3 final year projects.
- 20 National and international conferences (oral presentations and posters)
- Referee of *Physiologia Plantarum* and *Computers and Electronics in Agriculture*.