



# Mònica Aguilera

## Professora associada

### Dades personals



**Categoria:** Professora associada

**Àrea de coneixement:** Producció Vegetal

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### Formació Acadèmica

- Enginyer Tècnic Forestal, Universitat de Lleida,
- Enginyer de Forests, Universitat de Lleida
- Doctorat, Universitat de Barcelona

### Experiència Professional

- 2017- actualitat. Professor Associat a temps parcial
- 2015-2017. Contracte postdoctoral docència i investigació, Universitat de Lleida



- 2014-2015. Investigador postdoctoral, Museum National d'Histoire Naturelle, Paris, França
- 2011-2014. Investigador postdoctoral, Universitat de Lleida
- 2006-2011. Investigador en formació, Universitat de Barcelona
- 2006. Tècnic de laboratori, Universitat de Lleida

## Recerca

- Fisiologia forestal
- Anatomia de la fusta
- Aplicació dels isòtops estables de les plantes en la seua caracterització fisiològica
- Paleoreconstrucció climàtica i ambiental mitjançant l'ús d'isòtops estables de restes arqueobotàniques (carbons i grans carbonitzades)
- Aprofitament del suro.

## Docència

- |                                   |                                                     |
|-----------------------------------|-----------------------------------------------------|
| · PRÀCTIQUES INTEGRADES II        | Grau en Enginyeria Forestal                         |
| · FOREST I INDÚSTRIA              | Grau en Enginyeria Forestal                         |
| · FOREST PHYSIOLOGY               | Màster in Mediterranean Forestry (MEDFOR)<br>MUNDUS |
| · MEDITERRANEAN FOREST PRODUCTS   | Màster in Mediterranean Forestry (MEDFOR)<br>MUNDUS |
| · FORESTRY SECTOR IN CATALONIA    | Màster in Mediterranean Forestry (MEDFOR)<br>MUNDUS |
| · MEDITERRANEAN FOREST MANAGEMENT | Màster in Mediterranean Forestry (MEDFOR)<br>MUNDUS |

## Publicacions Recents

Tornero, C; Aguilera, M; Ferrio JP; Arcusa H; Moreno-García M; Garcia-Reig S; Rojo-Guerra, M.(2017). Vertical sheep mobility along the altitudinal gradient through stable isotope analyses in tooth molar bioapatite, meteoric water and pastures: A reference from the Ebro valley to the Central Pyrenees. Quaternary International, in press.

Aguilera, M; Balasse, M; Lepetz, S; Zech-Matterne, V. ( 2017) Crop Fertility conditions in North-Eastern Gaul during the La Tène and Roman periods: a combined stable isotope analysis of archaeobotanical and archaeozoological remains. Environmental Archaeology, in press.

Martín-Goméz, P; Aguilera, M; Pemán, J; Gil-Pelegrin, E; Ferrio, JP. (2017). Contrasting ecophysiological strategies related to drought : the case of a mixed stand of Scots pine (*Pinus sylvestris*) and a submediterranean oak (*Quercus subpyrenaica*). Tree Physiology, 37: 1478-1492..

Ferrio JP, Díez-Herrero A, Tarrés D, Ballesteros-Cánovas JA, Aguilera M, Bodoque JM. (2015). Using stable isotopes of oxygen from tree-rings to study the origin of past flood events: first results from the Iberian Peninsula. Quaternaire, 26: 67-75.



Shestakova TA, Aguilera M, Ferrio JP, Gutiérrez E, Voltas J. (2014). Unravelling spatiotemporal tree-ring signals in Mediterranean oaks: a variance–covariance modelling approach of carbon and oxygen isotope ratios. *Tree Physiology*, 34: 819-838.

Araus JL, Ferrio JP, Voltas J, Aguilera M, Buxó R. (2014). Agronomic conditions and crop evolution in ancient Near East agriculture. *Nature Communications*, 5: 1- 9.

del Castillo J; Aguilera M, Voltas J; Ferrio JP. (2013). Isoscapes of tree-ring carbon-13 perform like meteorological networks in predicting regional precipitation patterns *Journal of Geophysical Research-Biogeosciences*, 118: 352-360.

Voltas J, Camarero JJ, Carulla D, Aguilera M, Ortiz A, Ferrio JP. A retrospective, dual-isotope approach reveals individual predispositions to winter-drought induced tree dieback in the southernmost distribution limit of Scots pine. *Plant, Cell and Environment*, 36: 1435-1448.

Aguilera M, Ferrio JP, Pérez G, Araus JL, Voltas J. Holocene changes in precipitation seasonality in the western Mediterranean Basin: a multi-species approach using  $^{13}\text{C}$  of archaeobotanical remains . *Journal of Quaternary Science*, 2:192-202.

Aguilera M; Ferrio JP; Araus JL; Tarrús J; Voltas J. (2011) Climate at the onset of western Mediterranean agriculture expansion: Evidence from stable isotopes of sub-fossil oak tree rings in Spain. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 299: 541-551.

Aguilera M, Voltas J, Ferrio JP, Serrano L. (2010) Evolución estacional de  $^{13}\text{C}$  en hojas y madera de dos quercíneas mediterráneas concurrentes (*Quercus ilex* subsp. *ballota* L. y *Quercus faginea* Lam.): dinámica de la eficiencia en uso del agua. *Ecosistemas*, 19: 6-13.

Aguilera M, Espinar C, Ferrio JP, Pérez G, Voltas J. (2009). A map of autumn precipitation for the third millennium BP in the eastern Iberian Peninsula from charcoal carbon isotopes. *Journal of Geochemical Exploration*, 102: 157-165.

Ferrio JP, Voltas J, Buxó R, Rovira N, Aguilera M, Bort J, Serret MD, Araus JL. (2008). Sustainability of the early Mediterranean Agriculture. *Options Méditerranéennes*, 83 : 17-23.

Aguilera M, Araus JL, Voltas J, Rodríguez-Ariza MO, Molina F, Rovira N, Buxó R, Ferrio JP. (2008). Stable carbon and nitrogen isotopes and quality traits of fossil cereal grains provide clues on sustainability at the beginnings of Mediterranean agriculture. *Rapid Communications in Mass Spectrometry*, 22: 1653-1663.