

Programa Escuela de Verano,  
Curso **Isótopos estables: fundamentos y aplicaciones en ciencias naturales,**  
**Auditorio Facultad Ciencias Forestales**  
16-20 Enero de 2017

## **General**

Ferrio J.P., Resco V., Williams D.G., Serrano L., & Voltas J. (2005) Stable isotopes in arid and semi-arid forest systems. *Investigación Agraria, Sistemas y Recursos Forestales* 14, 371-382.

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Barbour M.M. (2007) Stable oxygen isotope composition of plant tissue: a review. *Functional Plant Biology* 34, 83-94.

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## **1. Isótopos de carbono en plantas**

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Badeck F.W., Tcherkez G., Nogués S., Piel C., & Ghashghaie J. (2005) Post-photosynthetic fractionation of stable carbon isotopes between plant organs - a widespread phenomenon. *Rapid Communications in Mass Spectrometry* 19, 1381-1391.

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### **Oxígeno/hidrógeno en plantas (fuente de agua)**

del Castillo, J., Comas, C., Voltas, J., & Ferrio, J. P. (2016). Dynamics of competition over water in a mixed oak-pine Mediterranean forest: spatio-temporal and physiological components. *Forest Ecology and Management*, 382, 214-224.

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Máguas, C., Rascher, K.G., Martins-Loução, A., Carvalho, P., Pinho, P., Ramos, M., Correia, O., Werner, C., 2011. Responses of woody species to spatial and temporal ground water changes in coastal sand dune systems. *Biogeosciences Discussions* 8, 1591-1616.

Palacio S., Azorín J., Montserrat-Martí G., & Ferrio J.P. (2014) The crystallization water of gypsum rocks is a relevant water source for plants. *Nature communications* 5, doi:10.1038/ncomms5660.

Voltas J., Lucabaugh D., Chambel M.R., & Ferrio J.P. (2015) Intraspecific variation in the use of water sources by the circum-Mediterranean conifer *Pinus halepensis*. *New Phytologist* 208, 1031-1041.

### **2b. Isótopos de oxígeno/hidrógeno en plantas (enriquecimiento y transpiración)**

Yakir D. & Sternberg L.D.L. (2000) The use of stable isotopes to study ecosystem gas exchange. *Oecologia* 123, 297-311.

Sternberg L.D.L., DeNiro M.J., & Johnson H.B. (1984) Isotope ratios of cellulose from plants having different photosynthetic pathways. *Plant Physiology* 74, 557-561.

Cernusak, L. A., Barbour, M. M., Arndt, S. K., Cheesman, A. W., English, N. B., Feild, T. S., ... & McInerney, F. A. (2016). Stable isotopes in leaf water of terrestrial plants. *Plant, cell & environment*, 39, 1087–1102

### **3. Isótopos de nitrógeno en plantas**

Craine, J. M., Brookshire, E. N. J., Cramer, M. D., Hasselquist, N. J., Koba, K., Marin-Spiotta, E., & Wang, L. (2015). Ecological interpretations of nitrogen isotope ratios of terrestrial plants and soils. *Plant and Soil*, 396(1-2), 1-26.

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#### **4a. Reconstrucción paleoambiental (anillos)**

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Gessler A., Ferrio J.P., Hommel R., Treydte K., Werner R.A., & Monson R.K. (2014) Stable isotopes in tree rings: towards a mechanistic understanding of isotope fractionation and mixing processes from the leaves to the wood. *Tree Physiology* 34, 796-818.

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Offermann C., Ferrio J.P., Holst J., Grote R., Siegwolf R., Kayler Z., & Gessler A. (2011) The long way down - Are carbon and oxygen isotope signals in the tree ring uncoupled from canopy physiological processes? *Tree Physiology* 31, 1088-1102.

Voltas J., Camarero J.J., Carulla D., Aguilera M., Ortiz A., & Ferrio J.P. (2013) A retrospective, dual-isotope approach reveals individual predispositions to winter-drought induced tree dieback in the southernmost distribution limit of Scots pine. *Plant, Cell & Environment* 36, 1435-1448.

#### **4b. Reconstrucción paleoambiental (arqueobotánica)**

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Ferrio J.P., Arab G., Bort J., Buxó R., Molist M., Voltas J., & Arais J.L. (2007) Land use changes and crop productivity in early agriculture: comparison with current conditions in the Mid-Euphrates Valley. *Options Méditerranéennes* 59B, 167-174.

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#### **4c. Dietas y análisis forense**

Cabañero, A. I., Recio, J. L., & Ruperez, M. (2006). Liquid chromatography coupled to isotope ratio mass spectrometry: a new perspective on honey adulteration detection. *Journal of agricultural and food chemistry*, 54(26), 9719-9727.

DeNiro, M. J., & Epstein, S. (1978). Influence of diet on the distribution of carbon isotopes in animals. *Geochimica et cosmochimica acta*, 42(5), 495-506.

Hobson, K. A. (1999). Tracing origins and migration of wildlife using stable isotopes: a review. *Oecologia*, 120(3), 314-326.

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Vogel, J. C., & Van der Merwe, N. J. (1977). Isotopic evidence for early maize cultivation in New York State. *American Antiquity*, 238-242.