

Objet: call for post-doc positions

<http://idex.u-bordeaux.fr/n/Culture-of-talents/International-Post-Doctorates/r3137.html>

Bordeaux, le 3/6/18

Searching for an interesting project on xylem hydraulics, embedded into an evolutionary framework? Sylvain Delzon (Univ. Bordeaux, France; sylvain.delzon@u-bordeaux.fr) and Frederic Lens (Naturalis Biodiversity Center, The Netherlands; frederic.lens@naturalis.nl) are looking for a motivated postdoc who wants to apply for a 2y IDEX postdoc proposal (<http://idex.u-bordeaux.fr/n/Culture-of-talents/International-Post-Doctorates/r3137.html>; deadline around mid November 2018). The postdoc candidate should have at least 3-4 strong publications and will be housed in the Delzon lab (xylem physiology), with several visits to Naturalis (stem anatomy). A good starting point for the proposal text is available, but the candidate is free to adjust the original project according to his/her personal interest. If successful, the position starts between July-December 2019. A tentative title and summary is given below:

Reaching for the sky: investigating hydraulic failure to understand wood formation in the mustard family (Brassicaceae)

Woody plants (trees and shrubs) cover 30 percent of the planet's land area and offer crucial ecosystem services. It is unclear, however, why some plants are woody and others herbaceous. To this day, scientists have failed to provide satisfying answers, probably because wood formation is a complex process that can be triggered in different and largely understudied ways. One approach to solve this long-standing question is to unveil the key anatomical and physiological stem adaptations that allow herbaceous and woody species to survive in their habitats, through experiments focusing on the dynamics of drought-induced vascular dysfunction (gas embolism formation inside water conducting vessels). The cosmopolitan mustard family (Brassicaceae, 4000 species) serves as an excellent model group to tackle this question. Ten percent of the Brassicaceae species are woody – reaching up to 9m tall – and woodiness has evolved probably more than 100 separate times on both islands and continents. Outcomes of this project will revolutionize our understanding of wood formation, one of the most essential evolutionary innovations on earth.

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