POSTDOCTORAL RESEARCHER
Tree diversity effects on forest resilience to drought

Location: FRB – CESAB, 5, rue de l'École de Médecine, 34000 Montpellier, FRANCE
Salary: between 2822 and 3164 € gross per month
Contract: 24 months fixed term, full time (37.5h/week). Option for a part-time contract extended over a longer duration can be discussed.
Regulatory benefits (RTT days, health insurance, 50% reimbursement of public transport subscription and/or sustainable mobility allowance), access to partial remote working, and meal vouchers (partially covered by the FRB).

Application deadline: 17th May 2026
Starting date: 1st September 2026

Host structure

About FRB

The Foundation for Biodiversity Research (FRB) was launched in 2008 after the "*Grenelle de l'Environnement*" by the Ministries for Research and for Ecology, it was created by eight public research institutions (BRGM, CIRAD, CNRS, IFREMER, INRA, IRD, IRSTEA and MNHN), joined in 2014 by LVMH and in 2017 by the University of Montpellier. It gathers public research institutions, environmental NGOs, land and genetic resources managers and the private sector. It provides a forum where science meets society in order to address the current challenges related to biodiversity research.

About CESAB

The Centre for Synthesis and Analysis of Biodiversity (CESAB) is FRB's main programme and a leading research organization in Europe, and is renowned internationally.
Its aim is to implement the innovative work of synthesis and analysis of existing data in the field of biodiversity. Advancing knowledge, developing culture and collaboration, facilitating links between scientific disciplines and with the stakeholders, are the main objectives of CESAB, which welcomes every year a large number of researchers from all continents.
> More information about the CESAB

Job information

Widespread global reports of drought and heat-induced tree mortality have raised questions about the long-term persistence of forests and associated ecosystem services. Therefore, developing management strategies to safeguard forest functioning in a changing world is crucial. One such strategy involves increasing the biological diversity of forests (*i.e.*, species richness, functional diversity, phylogenetic diversity or tree structural diversity) (Messier *et al.*, 2022). Yet, the effect of tree species diversity on a forest's ability to cope with drought remains elusive, with previous studies reporting positive, neutral, and negative effects (Decarsin *et al.*, 2024; Grossiord, 2019; Pardos *et al.*, 2021;

Serrano-León *et al.*, 2025). A better understanding of the ecological and biological mechanisms at play is necessary to reconcile these divergent observations.

As part of the DIV4DROUGHT project, **you will conduct a meta-analysis of existing evidence for tree diversity effects on forest drought resilience and its components, resistance, and recovery**. To this aim, you will carry out a data synthesis, based on combined primary datasets from different international research networks, complemented with a systematic literature review. Beyond characterizing how tree physiological responses are influenced by tree diversity, the analyses will aim to elucidate the underlying mechanisms driving these responses, with the goal of identifying general patterns. You will explore these aspects by leveraging functional trait databases compiled by the consortium and working closely with process-based forest modelers.

This postdoctoral position will benefit from the exceptional context of the DIV4DROUGHT project, which brings together an international team of recognized experts in tree ecophysiology, forest community ecology, and climate–biosphere interactions, with strong expertise in field measurements, statistical analysis, and process-based modelling. The Div4drought consortium already gathered major primary datasets from international networks (TreeDivNet, FunDivEUROPE, GMAP, REFORM, among others) that have never been jointly analysed.

The postdoctoral researcher will interact closely with the DIV4DROUGHT consortium and actively participate in four in-person workshops held in Montpellier throughout the project.

You will be responsible for:

- Conducting a systematic, quantitative literature review
- Analysing the primary datasets collected by the Div4Drought consortium
- Engaging with the DIV4DROUGHT consortium and other collaborators to strengthen your mechanistic understanding of tree diversity effects on drought responses
- Leading the writing of scientific manuscripts

Qualifications

We are seeking a colleague holding a PhD in ecology, ecophysiology or forest science.
We require the following:

- Knowledge on the physiological responses of trees to water stress
- Knowledge of the ecological mechanisms explaining the effects of tree species interactions on their responses to drought
- An experience in statistical analyses of large environmental databases (with R, Python, Java etc.)

We will also value the following skills: a strong command of English, proven quantitative abilities with a solid publication record, excellent communication skills, and the capacity to work both independently and collaboratively. Experience with systematic reviews would also be a plus.

Application instructions:

Applications must be sent no later than 17th May 2026 to Charlotte Grossiord (charlotte.grossiord@epfl.ch) and Joannès Guillemot (joannes.guillemot@cirad.fr), and must include

- A cover letter motivating your interest for this position (nor more than 500 words)
- Your curriculum vitae (including 2 references).

References

Decarsin, R., Guillemot, J., Maire, G. le, Blondeel, H., Meredieu, C., Achard, E., Bonal, D., Cochard, H., Corso, D., Delzon, S., Doucet, Z., Druel, A., Grossiord, C., Torres-Ruiz, J. M., Bauhus, J., Godbold, D. L., Hajek, P., Jactel, H., Jensen, J., … Martin-StPaul, N. (2024). Tree drought-mortality risk depends more on intrinsic species resistance than on stand species diversity. Global Change Biology.

Grossiord, C. (2019). Having the right neighbors: How tree species diversity modulates drought impacts on forests. New Phytologist.

Messier, C., Bauhus, J., Sousa-Silva, R., Auge, H., Baeten, L., Barsoum, N., Bruelheide, H., Caldwell, B., Cavender-Bares, J., & Dhiedt, E. (2022). For the sake of resilience and multifunctionality, let's diversify planted forests! Conservation Letters, 15(1), e12829.

Pardos, M., del Río, M., Pretzsch, H., Jactel, H., Bielak, K., Bravo, F., Brazaitis, G., Defossez, E., Engel, M., Godvod, K., Jacobs, K., Jansone, L., Jansons, A., Morin, X., Nothdurft, A., Oreti, L., Ponette, Q., Pach, M., Riofrío, J., … Calama, R. (2021). The greater resilience of mixed forests to drought mainly depends on their composition: Analysis along a climate gradient across Europe. Forest Ecology and Management, 481, 118687. https://doi.org/10.1016/j.foreco.2020.118687

Serrano-León, H., Blondeel, H., Glenz, P., Steurer, J., Schnabel, F., Baeten, L., Guillemot, J., Martin-StPaul, N., Skiadaresis, G., & Scherer-Lorenzen, M. (2025). Multiyear drought strengthens positive and negative functional diversity effects on tree growth response. Global Change Biology, 31(9), e70394.