



P34. PHYLOPYR: The genetic information of Pyrenean plants accessible to society

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The PHYLOPYR project aims to reconstruct the Tree of Life of all flowering plant species (c. 3600) recorded in the Pyrenees using the Angiosperms353 probe set for target capture sequencing (TCS). Several proposals have been submitted to obtain funding and the project is still open to new collaborations. Plant species are being prioritized for TCS according to criteria such as endemism, conservation status, rarity, research interest, relevance in Habitats of Interest to the EU or to assess the impact of climate change. All species will be freshly collected, except threatened and rare species for which herbarium specimens may be used (e.g., *Dioscorea chouardii*) if collection is not approved by local authorities. Initially, we intend sample one population per species, vouchering three to five individuals. One of them will be designated as the voucher and will be processed in the wet lab and sequenced.

The Angiosperms 353-based TCS approach has been selected so that sequence data can be generated for up to 353 nuclear low-copy ortholog genes, as well as complete organelles. These data will allow a better representation of the Pyrenean flora in open molecular repositories, which will enable future research. The lab work will be centralized at the molecular lab at the Pyrenean Institute of Ecology, in Jaca, but other labs will also process samples depending on funding. The initial core team is formed by 15 researchers belonging to 10 institutions, including floristic and taxonomy experts (across the Pyrenees) and methodological and analytical experts (across Europe). Three herbaria, JACA, ARANZADI, and BC will safeguard the vouchers of the project, highlighting the relevance of plant collections in cutting-edge research and the necessity of voucher support as an asset for science.