



## FLOR-ALP

« Improving our knowledge of the flora of the Alps »

# Technical specifications for genetic analyses of Alpine plant species

### I] PURPOSE OF THE CONTRACT

The Conservatoire Botanique National Alpin is running a FEDER POIA FLOR-ALP program, which aims to implement a strategy for acquiring knowledge of the flora of the Alps in line with the SRB (Stratégies Régionales pour la Biodiversité) in the Sud-PACA and AURA regions.

With financial support from the Fonds Européen de Développement Régional Massif des Alpes, the Auvergne-Rhône-Alpes region and the Provence-Alpes-Côte-D'azur region, CBNA is launching the FLOR-ALP program, which will run until October 2026.

The main objectives of this project are to:

- update flora occurrence data for the region.
- guarantee their validation and dissemination in regional SINPs.

The program will improve knowledge of the flora of the Alps, in particular by focusing on little-known species.

### II] CONTRACT CONTENT

The present specifications identify the content of the service to be provided to the CBNA.

#### 2.1- Problem: Genetic analysis of plant species in the genus *Festuca*.

The study aims to clarify the taxonomy of various species of the genus *Festuca*. It concerns species distributed in the western Alps and beyond (Alps, Pyrenees and Massif Central). The aim is to carry out a phylogeny of these fescues in order to refine taxonomic and chorological knowledge of the group in the western Alps. This study is being carried out by a working group made up of several CBNs (Méditerranéen de Porquerolles, Alpin, du Bassin parisien, de Brest, Sud Atlantique and Massif central), the Société botanique d'Alsace, the Digitalis association, independent botanists (R. Portal, R. Bœuf, etc.) and genetics researchers such as L. Hardion (CNRS, University of Strasbourg) and A. Baumel (IMBE, University of Aix-Marseille).

#### 2.2 - Nature of the mission.

The CBNA wishes to carry out genetic analyses using an NGS (new generation sequencing) 'genome skimming' method on the chloroplastic genome of fescue plants. This choice offers two major advantages: ease of implementation, and reuse of the results of Boeuf et al. (2022) to create a national database of French fescues. Samples will be collected and stored in order to complete the results using the Angiosperms 353 bait hybridization method for nuclear DNA.

Individuals will be collected and DNA extracted. The solutions will be sent to the service provider according to the required assays.



**The mission is as follows:**

- Library preparation, hybridization and sequencing.
- Sequencing
- Hybridization with Angiosperms353

**A fixed-price proposal would be appreciated (per individual or per batch of individuals).**

Deliverables:

Supply of raw data in conjunction with L. Hardion Lecturer-researcher  
University of Strasbourg, Faculty of Life Sciences  
LIVE - Image Ville Environnement Laboratory, UMR 7362, CNRS  
Institut de Botanique, 28 rue Goethe, 67000 Strasbourg  
(+33) 03.68.85.18.30 <laurent.hardion@live-cnrs.unistra.fr>

Scientific publications:

The CBNA reserves the right to exploit and develop the results through scientific publications, in compliance with the rules of research ethics in France.

**III] EXPECTED SKILLS**

- Experience in genetic analysis, in particular MyBaits Angiosperms353 methods and tools.

**IV] HOW THE SERVICE WILL BE CARRIED OUT**

A steering committee will be set up to monitor and control the smooth running of the service. The timetable for this mission will run from 15/11/2024 to 01/06/2025. The results of the analyses are expected within 2 months of receipt of the DNA extractions.

The deliverables mentioned in chapter 2 must be produced for this project.

Your proposal will be evaluated on the following criteria:

- price: 30%
- technical proposal, taking into account the specificity/technicality of the assignment: 30%.
- assessment of equivalent work already carried out: 20% - qualification/competence of resource persons: 20%.
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Please send your offer electronically by 09/11/2024 to Sylvain ABDULHAK, botanist-ecologist, at s.abdulhak@cbn-alpin.fr