

ANNOUNCEMENT OF A RESEARCH GRANT (BI)
Reference: IIA – LIC-3- Transform-Genetic Improvement
CONTEST CODE – PRBI/25/2024

Competition is open for the award for the award of a **RESEARCH GRANT (BI)** within the scope of the project “**Transform-WP1-P1.1 WP1-P1.1. Genetic improvement and forest material for reproduction of autochthonous species**”, by the Polytechnic Institute of Coimbra, funded by the **PRR**, through the funding line, **DGADR - IFAP - INVESTIMENTO RE-C05-i03 – RESEARCH AND INNOVATION AGENDA FOR THE SUSTAINABILITY OF AGRICULTURE, FOOD AND AGROINDUSTRY (NOTICE No. 01/C05-i01/2021)**.

The grant (LIC) will be aimed at the implementation and development of the following activities:

1. Harvesting fruit from selected strawberry tree trees in the seed-producing orchard, certified in the Qualified category, fruit processing, seed extraction and subsequent conservation.
2. Assessment of seed viability after different conservation periods.
3. Evaluation of the effect of different treatments to break dormancy on the germination rate.
4. Seed treatment to break dormancy, subsequent germination and plant transplantation.
5. Monitoring plants in the greenhouse and later after transfer to the acclimatization area of the forest nursery; monitoring micropropagated clonal plants during the acclimatization process; carrying out cultural treatments (identification card for plant protection product applicators required).
6. Collection of carpophores of mycorrhizal fungi, ulterior *in vitro* establishment and subsequent multiplication in solid and liquid media for substrate inoculation.
7. *In vitro* establishment of the selected plant material, by meristematic apices, using a binocular magnifying glass equipped with cold light.
8. *In vitro* multiplication of selected clone cultures followed by *ex vitro* rooting and acclimatization.
9. Preparation and sterilization of culture media and required material washing.
10. Monitoring of tests carried out in the field (dendrometric assessment, flowering and fruit production).
11. Installation of new progeny tests in complete and randomized blocks, with georeferencing of the different blocks.
12. Data collection, statistical treatment, and dissemination of results.

Generic scientific area: *Agriculture and Forestry Sciences*

Specific scientific area: *Forestry Sciences*

Admission requirements:

According to Article 3 of the Research Fellowship Regulation of the Polytechnic Institute of Coimbra approved through Dispatch No. 5963/2020, published in “Diário da República”, 2nd serie of June 1, 2020, candidates must:

- **Possess a graduated degree in the field of the specific scientific area: Forestry Sciences.**
- **Prove that they are enrolled in a master's or in an integrated master's degree in the field of Forestry Sciences or enrolled in non-conferring courses of academic degree integrated in the educational project of a higher education institution.**
- **Have experience in the Functional Contents of the Operation and Domain in the application of techniques and protocols in the laboratory, in the nursery and in the field, previously mentioned in activities to be implemented and developed.**

Work plan:

The work plan will be to develop:

- In the field: harvesting fruits in the seed-producing orchard; Monitoring of tests installed in different soil and climate conditions; Establishment of new tests in complete and randomized blocks; Collection of plant material from selected plants for *in vitro* establishment; Collection of carpophores of mycorrhizal fungi, especially under conditions of environmental stress for *in vitro* establishment and subsequent plant inoculation.
- In the laboratory: fruit processing, seed extraction and cleaning; seed conservation; implementation of pre-germination treatments to break dormancy and subsequent evaluation of the germination rate.
- In the forest nursery: sowing and subsequent monitoring of the plants; acclimatization of micropropagated plants; plant mycorrhization; and nursery cultural operations.
- In the laboratory: *in vitro* establishment of selected plants; *in vitro* multiplication of clone cultures and strains of mycorrhizal fungi; preparation and sterilization of culture media.
- In the office: analysis and statistical treatment of results; and dissemination of results.

Objectives to be accomplished by the candidate:

- a) Harvesting fruit in the seed orchard, fruit processing, seed extraction and subsequent conservation.
- b) Assessment of seed viability after different conservation periods.
- c) Evaluation of the effect of different treatments to break dormancy on the germination rate.
- d) Seed treatment to break dormancy, subsequent germination and plant transplantation.
- e) Monitoring plants in the greenhouse and later after transfer to the acclimatization area of the forest nursery; monitoring micropropagated clonal plants during the acclimatization process; carrying out cultural treatments (identification card for plant protection product applicators required).
- f) Collection of carpophores of mycorrhizal fungi, ulterior *in vitro* establishment and subsequent multiplication for substrate inoculation.
- g) *In vitro* establishment of the selected plant material, by meristematic apices, using a binocular magnifying glass equipped with cold light.
- h) *In vitro* multiplication of selected clone cultures followed by *ex vitro* rooting and acclimatization.
- i) Preparation and sterilization of culture media and required material washing.
- j) Monitoring of tests carried out in the field (dendrometric assessment, flowering and fruit production).
- k) Installation of new progeny tests in complete and randomized blocks, with georeferencing of the different blocks.
- l) Data collection, statistical treatment, and dissemination of results.

Duration of the grant:

The grant, under exclusivity, will last for 6 months, according to the Research Grant Regulation of the Polytechnic Institute of Coimbra, through Dispatch No. 5963/2020, published in “*Diário da República*”, 2nd serie of June 1, 2020, scheduled to begin on February, 2025.

Monthly Maintenance Allowance:

The Monthly Maintenance Allowance corresponds to the basic value of **990.98 euros per month**, according to the table of grants of FCT, I.P. in the country (Appendix I - Table of monthly maintenance allowances for the FCT I.P. Research Grant Regulation): <http://www.fct.pt/apoios/bolsas/valores>. with the payment being made monthly by bank transfer.

To this amount is added the Voluntary Social Insurance corresponding to the 1st tier, if the applicant chooses to register, and Personal Accident Insurance.

Host institution and scientific supervision:

The work will be carried out at the ESAC and in the field, under the scientific supervision of Maria Filomena Figueiredo Nazaré Gomes.

Evaluation criteria:

The evaluation of the applications will focus on the merit of the candidate, by applying the following parameters according to the following formula:

Assigned note (from 0 to 100) = $(0,25 * C1 + 0,25 * C2 + 0,25 * C3 + 0,25 * C4) * F1 * F2 * F3$

C1 – Experience in monitoring field tests, in installing progeny tests in complete and randomized blocks, in georeferencing and in the statistical treatment of results.

C2 - Experience in fruit processing, seed extraction, in establishing treatments to break seed dormancy, in the production of plants in nurseries and inherent cultural operations (identification card for plant protection product applicators required).

C3 - Experience in the *in vitro* establishment and subsequent propagation of mycorrhizal fungi.

C4 – Experience in the *in vitro* establishment and subsequent propagation of woody species.

Weighting factors F1, F2 and F3 are defined as follows:

F1 - Area of Study / Training:

F1 = 1,0 Field of Study / Training in the specific scientific area: Forestry Sciences.

F1 = 0,5 Area of Study / Training in the general scientific area: Agricultural Sciences.

F1 = 0,1 Area of Study / Training in other scientific areas.

F2 - Experience in the application of the techniques and protocols of the activities to be carried out and indicated above:

F2 = 1.0 for work experience of more than 24 months

F2 = 0.6 for work experience longer than 12 months

F2 = 0.5 for work experience longer than 6 months

F2 = 0.4 for curricular internship experience equal or inferior to 6 months

F2 = 0.1 for training within the curricular area.

F3 - Driver's license and knowledge of the Portuguese language:

F3 = 1.0 with driver's license and knowledge of Portuguese language.

F3 = 0.3 with knowledge of Portuguese, but no driving license.

F3 = 0.1 with driving license and no knowledge of Portuguese.

Jury composition:

The Selection Panel is composed by the following elements: President: Maria Filomena Figueiredo Nazaré Gomes; Effective members: Isabel Maria Nunes da Rosa Dias Duarte; Maria Manuel Balseiro Vidal Substitute members: Joaquim Manuel Sande Silva and Teresa Maria Pinto Coelho Amado Vasconcelos.

Documents to be submitted:

Applications must include the following information:

- Application form available on the internet page for this competition at https://www.ipc.pt/bupc/concursos/form/concursos_bolseiros

- Elements of the National Identity Card/Citizen Card/Passport/Visa/Title of Residence; Tax Identification Number (NIF).
- Documents proving that the candidate meets the conditions defined in the admission requirements, namely, 1) certificate of qualifications and 2) certificate of enrolment in masters in the field of Forestry Sciences or in courses not leading to an academic degree integrated in the educational project from an institution of higher education.
- *Curriculum Vitae* of the candidate, in Portuguese or in English.
- Letter of reference or recommendation, including the contact details of the author(s) of the recommendation.

The above-mentioned documents, to be submitted as an application, must be submitted by the deadline established for this purpose in the present opening notice.

Deadline for receipt of applications:

The call is open during 10 working days from **09/12/2024 to 20/12/2024**.

Candidates must access and register on the website https://www.ipc.pt/bupc/concursos/form/concursos_bolseiros to submit the application, selecting the procedure for which they intend to apply.

Applications must be delivered exclusively in digital format, in portable document format (pdf), except for documents whose delivery is scheduled in other digital formats.

Application instructions are completed by filling in the sections available at the aforementioned email address.

When formalizing the application, if it contains a classified document that reveals commercial or industrial secrets, or secrets relating to literary, artistic or scientific property, the candidate must expressly indicate such reservation, under penalty of the work in question being freely accessed by any one of the other candidates, in consultation with the process.

When submitting the application, the candidate must provide only the necessary data, according to this notice, and must hide personal data present in the documentation, as these data may be freely accessed by other candidates during the process consultation.

3- Transform-Genetic Improvement”.

Applicable legislation and regulations:

Research Fellowship Holder Statutes, approved by Law No. 40/2004, of August 18 (Statute of the Scientific Research Fellow) amended and republished by Decree-Law No. 202/2012, of August 27, updated by: Decree-Law No. 233/2012, Law No. 12/2013, Decree-Law No. 89/2013, and Decree-Law No. 123/2019; the Regulation of Grants and Research of the Foundation for Science and Technology in force (Regulation No. 950/2019, of December 16, amended by Regulation No. 643/2021 of July 14) and the Research Grantee Regulation of the Polytechnic Institute of Coimbra, approved through dispatch No. 5963/2020, published in “Diário da República”, 2nd serie of June 1, 2020.

Communication of results:

Results of the evaluation will be published no later than 90 working days after the deadline for submission of applications.

Results will be listed by ordered alphabetically, posted in the showcase allocated to ESAC Human Resources, in the building B of Coimbra Polytechnic Agriculture School, all candidates are notified, for the purposes of prior hearing of interested parties, by e-mail.

If the result is unfavorable to the granting of the requested grant, the candidates have a period of 10 working days, after the disclosure of results, to give their opinion, wanting, in the pre-hearing of interested parties, in accordance with the provisions of the Code of Administrative Procedure.

Where the number of interested parties to be heard is so high that the prior hearing of interested parties becomes impractical, it is replaced by public consultation, carried out in accordance with the terms and within the time limits set out in Article 37(2) of Decree-Law No. 63/2019 of May 16.

The final decision shall be taken no later than 60 working days after the conclusion of the prior hearing of interested parties or public consultation.

The final decision can be contested, having 10 working days for this purpose, by sending to the President of the Jury the corresponding claim or appeal to the President of the IPC within 30 working days, both after notification.

For more information contact: the President of the Jury, by e-mail: fgomes@esac.pt.

The following annexes contain the models of the grant contract and the final reports to be drawn up by the grantee and the scientific advisor in accordance with the IPC Regulation (DR, No. 106 of 1 June 2020).

Coimbra, November, 2024