



PhD project: genetic diversity, gene flow, and introgression in wild Robusta coffee populations in the tropical rainforest in the Congo Basin.

The project

Tropical rainforests cover only 7% of the earth's surface, but they are by far the richest biomes in terms of vascular plant diversity. To ensure the resilience and long-term stability of tropical rainforests, fostering the regeneration of the occurring woody plant species is critical. Yet, crucial aspects of gene flow, including pollination and seed dispersal have become strongly jeopardized through ongoing large-scale anthropogenic disturbances of tropical forests. Furthermore, many crop wild relatives from tropical forests face the risk of hybridization with planted cultivars.

ILVO, in collaboration with project partners Plantentuin Meise, KU Leuven, KMAA and UNIKIS, studies the population genetic structure, gene flow and the pollination and frugivorous communities in Robusta coffee, a tropical rainforest understory shrub, in the Congo Basin.

Comparing coffee populations from regions that differ in their degree of anthropogenic pressure will enable us to investigate the potential threats from anthropogenic interferences. Your task will be to implement state-of-the-art (NGS) genomics tools to quantify genetic diversity, gene flow, and introgression between *C. canephora* populations.

Your function

Activities that you will perform in the frame of this project include: the design of research plans, performing analysis and research in the field and in the lab, the generation and analysis of genetic data from *C. canephora* populations, the processing and interpretation of results, and writing of scientific manuscripts. In addition, you will present your work at (inter)national project meetings with the collaborating project partners, and at (inter)national scientific conferences.

The goal is to obtain a PhD based on the results of your research within 4 years.

Your profile

We are looking for a motivated colleague who:

- holds a university degree (Master's) in bio-engineering, sciences, bio-informatics, obtained at least with distinction.
- has obtained his/her degree at most 5 years ago
- has performed previous scientific work or research for no more than 365 days
- likes taking initiative, is creative, enthusiastic and ambitious
- has a hands-on mentality
- has strong communicative skills and actively engages to build and maintain contact with the collaborating project partners
- has strong organizational skills
- is fluent in writing and speaking in both Dutch and English
- is fascinated by scientific research and highly motivated to obtain a PhD
- experience with one or more programming languages used in bioinformatics and genomics (python, R) is a plus.



What do we offer?

A varied and challenging job as a research fellow that is also socially relevant. You will be part of a team of researchers from the various research institutes involved. You will be employed as a doctoral scholar (4 years) in a young and dynamic research environment in which the ILVO values of being positive, proactive, professional, exemplary and collaborative are paramount, and with many possibilities for your own development and training. The doctoral scholarship is initially granted for 1 year and is subject to a favourable evaluation extendable to 4 years. The fellowship is free of personal income tax, but contributes to your social security (e.g. pension). The net fellowship amount is € 2,240.55 net (€ 2,577.42 gross) for the first 2 years. For the last 2 years it is € 2,323.66 net (€ 2,673.02 gross). You work at ILVO, with both a ILVO promoter and an academic promoter from KU Leuven for your PhD.

Start: Autumn 2019

How to apply?

Deadline for applications is August 16th 2019. Please send a letter of application highlighting your motivation to join our team and extended CV (including a copy of your diploma and most recent list of your study grades) with clear reference to project **PhD - Coffee** to Isabel Roldán-Ruiz, Scientific Director Plant Science Unit via email to isabel.rolan-ruiz@ilvo.vlaanderen.be. Selected candidates will be invited for a personal interview. Students in their last year of university are also encouraged to apply.

For more info please contact

Job content: Tom Ruttink, senior scientist in genomics, Plant Science Unit- tel. 09 272 28 78 - tom.ruttink@ilvo.vlaanderen.be. Salary, benefits, etc: Caroline Buyst, HR-specialist - 09 272 25 12 - caroline.buyst@ilvo.vlaanderen.be.