



**ecobreed**  
IMPROVING CROPS



Funded by European Union  
Horizon 2020  
Grant agreement No 771367



NATIONAL AGRICULTURAL  
AND FOOD CENTRE

**Ücm**FPV

# Invitation

## ECOBREED project training

### 04<sup>th</sup>-08<sup>th</sup> of December, 2023



## Advanced genotyping training course

We invite you to the **Advanced genotyping workshop**, organized by Národné poľnohospodárske a potravinárske centrum (NPPC) and Faculty of Natural Sciences, University of Ss. Cyril and Methodius in Trnava (UCM) in the framework of the Horizon 2020 project ECOBREED.

In a three-day intensive training course, we will present you an overview of the advanced genotyping techniques and how to transfer them into breeding practices with an emphasis on organic agriculture. The course is an excellent opportunity to obtain advanced knowledge, but also to train on practical aspects as the program consists of lectures and practical task, which require active participation.

The program will cover the following topics:

- ECOBREED project aim and main results.
- Advanced genotyping
- Methods in molecular biology
- Molecular breeding of crops

ECOBREED offers a limited number of **bursaries for students**.

## Training course background

Among crop sciences, plant breeding discipline and tools are crucial for effective improvement of organic sector. The main traits that plant breeding must effectively integrate are better crop adaptability to local agro-ecological conditions, tolerance to changing biotic and abiotic stressors, and excellent product quality. The incorporation of cutting-edge genotyping tools will be beneficial and useful for accelerating breeding efforts, especially for quantitative traits that are challenging to breed. The most promising new cultivar candidates are still chosen by careful phenotyping of a large number of breeding candidates, which remains the foundation of plant breeding.

During the 2023 training course, we will focus into the topics of advanced genotyping tools in relation to organic wheat improvement, such as advanced genotyping, for measuring and predicting relevant plant traits in a plant breeding context.

**Venue:** Slovakia

### The meeting will take at:

- NPPC - Research Institute of Plant Production, Bratislavská cesta 122, 921 68 Piešťany, Slovakia; Google maps: <https://maps.app.goo.gl/DLEWwVAv5jyYVrkHA>; GPS: 48.58572309666473, 17.81560601949342
- Faculty of Natural Sciences at the University of Ss. Cyril and Methodius in Trnava, Hlavná 6, 919 51 Špačince, Google maps: <https://maps.app.goo.gl/3j4pKuWWqLVCCTZf7>; GPS: 48.43669069992435, 17.60965532309806

**Language:** English

**Training format:** Lectures, practical activities in the laboratories

**Pre-requisites:** Students in natural and agricultural sciences.

**Bursaries: ECOBREED project offers a limited number of bursaries for students.**

Obligatory documents for bursaries qualifications: student card and motivation letter.

Selected students will be contacted individually, upon process completion.

Each bursaries includes a funds to support travel and accommodation costs.

### Criteria for bursaries award

- Proof of active enrolment at a university.
- Motivational letter and field of interest.
- Country with low uptake of organic agriculture.
- Gender equality

Motivational letter and student card send to [riaditel.vurv@nppc.sk](mailto:riaditel.vurv@nppc.sk). Please write in the e-mail which workshop you are interested in.

**Deadline for bursary application: 17<sup>th</sup> of November 2023**

After the deadline all applications will be processed by ECOBREED, and they will get in contact with you.



# Training course programme

Training course on Advanced genotyping (December 04-08, 2023)

## Monday, December 04, 2023

Arrival of participants

## Tuesday, December 05, 2023

Time	Name of action
08:45 – 09:00	Registration
09:00 – 09:15	Welcome and Introduction
09:15 – 09:30	Presentation of the ECOBREED project
09:30 – 11:00	Methods of molecular biology. Katarína Ondreičková, NPPC, Slovakia
11:00 – 11:15	Coffee/Tea break
11:15 – 12:45	Plant genotyping. Ján Kraic, NPPC/UCM, Slovakia
12:45 – 13:45	Lunch break
13:45 – 15:15	Plant molecular breeding. Martina Hudcovicová, NPPC, Slovakia
15:15 – 15:45	Discussion
15:45 – 17:15	Molecular methods and domestication of cereals. Miroslav Švec, Comenius University in Bratislava, Slovakia

## Wednesday, December 06, 2023

09:00 – 12:00	Practice: Plant DNA isolation methods (alternative approaches). Daniel Mihálik, Lenka Klčová, NPPC/UCM, Slovakia
12:00 – 13:00	Lunch
13:00 – 16:00	Practice: Qualitative and quantitative analysis of isolated plant DNA. Daniel Mihálik, Lenka Klčová, NPPC/UCM, Slovakia

## Thursday, December 07, 2023

09:00 – 12:00	Practice: Polymerase chain reaction (PCR) analysis of plant DNA. Daniel Mihálik, Lenka Klčová, NPPC/UCM, Slovakia
12:00 – 13:00	Lunch
13:00 – 16:00	Practice: Electrophoretic analysis of amplified plant DNA. Daniel Mihálik, Lenka Klčová, NPPC/UCM, Slovakia

## Friday, December 08, 2023

Departure of participants



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**PERSONAL DATA MANAGER:** National Agricultural and Food Centre, Hlohovecká 2, 951 41 Lužianky, Slovak Republic.

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