

Are you considering the
use of **cryopreservation**
for trees?



Excellent facilities for cryopreservation

The EU Trees4Future network offers an opportunity to work within your own project at the cryopreservation lab of the Natural Resources Institute Finland in Punkaharju.

The Luke Punkaharju provides excellent facilities for cryopreservation of different types of both tissue cultured and in vivo- samples. Within the infrastructure development and testing of different cryopreservation protocols can be performed.

Access to "Vegetative propagation" infrastructure located at the same laboratory provides an opportunity for subsequent regeneration of cryostored materials or for pretreatment of in vitro-samples to be cryopreserved. A quality system according to SFS-EN ISO/IEC 17025 standard is applied to cryopreservation work.

The laboratory includes:

- A programmable freezer (Planer) for slow-cooling cryopreservation technique
- 6 storage LN containers for cryopreserved samples, each with capacity of 500–6000 samples, option to store samples either in straws or storage boxes
- 5 liquid nitrogen containers, equipped with LN pumps having gas separator
- Cold- and freezing room capacities: rooms of 8 °C, +4 °C, -5 °C, -20 °C
- Several ultra-freezers of -70/-80 °C.
- Research microscope with UV-light and digital camera and several stereomicroscopes, also equipped with digital cameras are available for viability assays following cryostorage and thawing.

A visit lasting from two weeks to several months depending on the research topic. Before arrival, a work plan will be agreed upon. A guest can arrive with his/her own biological samples or material to be used in cryopreservation studies. Alternatively, the EVOLTREE Punkaharju ISS Infrastructure can be utilised as sample source. During the stay, the guest performs freezing and thawing of his/her samples, followed by viability assays and/or regeneration experiments, supported by the guidance of the host scientist and technicians. More extensive pretreatments of in vitro –sample materials or regeneration experiments using cryopreserved samples require access to MetlaVegProp -infrastructure as well.

Results are digitalised. Data analysis and interpretation are based on in-house experience with software available. If possible, reports and manuscripts will be prepared while the guest is still at the site, or by e-mail exchange afterwards.



Birches regenerated from cryopreservation

Photo: Luke/Tuija Aronen

Applications and further information

The EU is financing access to the lab (the costs for running the facility, as well as travel and boarding costs) up to 3 months through the Trees4Future network. Access is open for both scientific as practical needs within the EU and its associated countries. Applications for access to the vegetative propagation lab have to be made through the Trees4Future application system.

www.trees4future.eu/transnational-accesses.html

Further information:

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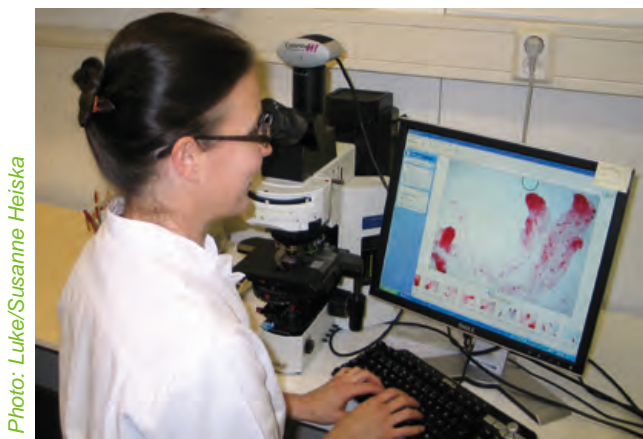


Photo: Luke/Susanne Heiska

Analysing cryostored embryogenic cultures