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EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

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COPYTREE NEWSLETTER

No. 8, July 2025

CA 21157 www.copytree.eu

"European Network for Innovative Woody Plant Cloning"

Collaboration on a European level between experts for sharing and applying innovative in vitro technology on woody plants

Enjoy your reading!

1. CopyTree Activities

1.1

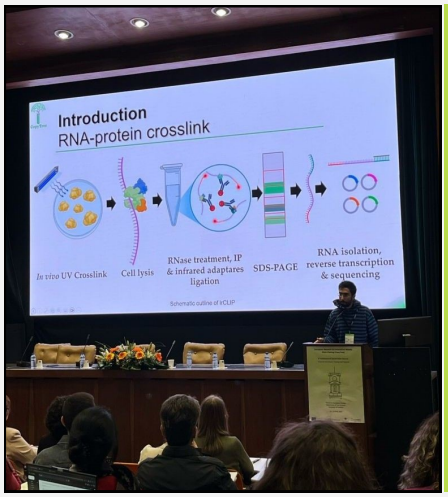
3rd CONFERENCE OF COPYTREE
Trees for the future: Cloning and beyond

12-14th May, 2025 University of Coimbra, Portugal	Local Organizers: Jorge Canhoto; Sandra Correia

This international event brought together leading scientists and professionals to share the latest advances in *in vitro* plant biotechnology in woody species, with a strong focus on cloning, propagation, and conservation.

During the three-day event, recent advances in cloning and other tree biotechnologies were discussed. The five working groups had interactions that will bring mutual benefits. Five keynote speakers related with each of the Working Groups presented an overview of the subject.

Participants exchanged ideas, presented cutting-edge research, and attended five keynote talks, each representing one of the CopyTree Working Groups.



We are especially grateful to the local organizers, and their dedicated team, for the wonderful event they organized, expertly combining science, culture, and hospitality.

The experience continued with a post-conference excursion to the iconic Douro Valley, home of Porto wine, and the Peneda-Gerês National Park, Portugal's most important natural reserve.

1.2 Colleagues of the Humboldt-Universität zu Berlin are happy to release their "Somatic-Plants" web page

https://www.somatic-plants.education

For several years we entertained the idea of setting up a rather educational website about vegetatively propagated plants. The website is hosted by the Humboldt-Universität zu Berlin and curated by our research group "Plant Evolution and Biodiversity" belonging to the Institute of Biology. Apart from the presentation of our group with research focus on somatic embryogenesis of conifers, we aim to shed light on different *in vitro* multiplication techniques (initialized for sure with our system on "somatic embryogenesis") – so people will be able to "Learn more!" about the diverse possibilities. If you are interested in having your system added to the website, we'll be happy if you contact us. We have the vision to open this topic to the public, to spark interest and inform more and more people about the benefits of using clonally propagated plant material, as well as the difficulties and obstacles we currently face. So, if you are interested in telling the world about the application and necessity of iv plant multiplication, we'd appreciate your email. In this regard we presented our network, the COST action CopyTree and are proud to refer to experts on different tissue culture systems.

Under construction - the FAQ section: Another matter of interest is answering diverse questions that typically (and frequently) arise when we present our news to the public (e.g. Long Night of Sciences) or stakeholders (e.g. Conferences of funding agencies). We intent to clear up with outdated or wrong beliefs (e.g. "Are clones GMOs?"), help to understand methodological questions (e.g. "How can trees survive without (mycorrhizal) symbioses?") and potential ethical issues – as far as possible (e.g. "Is natural selection part of iv plant multiplication?"). If you have similar experience and are asked the same old questions again and again – please don't hesitate to send us your standard inquiries and replies – so we all can help to educate our followers, colleagues, clients and everyone with an interest in plants, and therefore ease the way for stable plant production and future projects on somatic plants.

1.3 Projects involving CopyTree members

Project КП-06-КОСТ/17 (12.08.2024): *"Optimizing micropropagation of valuable tree species through innovative PlantForm™ TIS bioreactors"*

Funded by the Bulgarian National Science Fund.

The study aims to evaluate the efficiency of micropropagation in two woody species—mahaleb cherry (*Prunus mahaleb* L.), a wild fruit tree with horticultural applications, and white willow (*Salix alba* L.), widely used for phytoremediation of heavy metal-contaminated sites—using the PlantForm™ TIS bioreactor, thus aligning with the objectives of CopyTree.

CopyTree members involved:

- **Rumyana Valkova** – WG2, WG3
- **Mariyana Gozmanova** – WG2, WG3
- **Lilyana Nacheva** – WG2, WG3
- **Ivaylo Tsvetkov** – WG2, WG3

1.4 Publications from CopyTree members

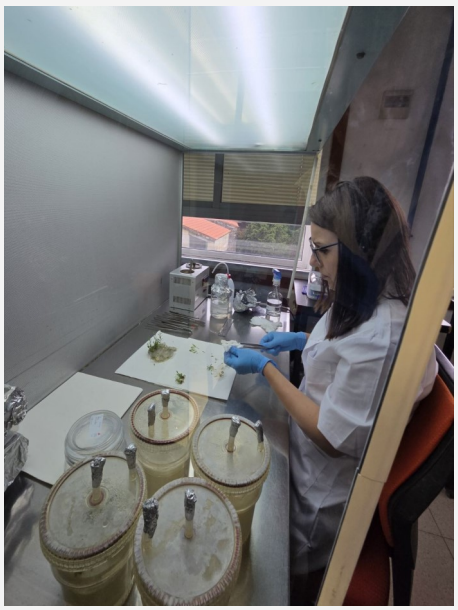
Castro-Camba, R., Sánchez, C., Rico, S. *et al.* A Shift in Auxin Homeostasis Is Linked to the Paclobutrazol-Induced Formation of Adventitious Roots in Chestnut. *J Plant Growth Regul* (2025). https://doi.org/10.1007/s00344-025-11728-1

1.5 Network Development

In early June 2025, Dr. Lilyana Nacheva and Dr. Diyana Aleksandrova, members of the COPYTREE network, participated in a one-week staff mobility training under the Erasmus+ Programme at the laboratory of Dr. Nieves Vidal, Misión Biológica de Galicia (CSIC), Santiago de Compostela, Spain.

During their stay, they received hands-on training in the application of modern temporary immersion bioreactor systems (TIS), specifically RITA® and PlantForm, for the micropropagation of woody species. The experience significantly contributed to the exchange of expertise and the strengthening of collaborative ties between institutions.

Dr. Nacheva and Dr. Aleksandrova express their sincere gratitude to Dr. Nieves Vidal for her warm hospitality and the fruitful scientific collaboration.



1.5 CRYOCONNECT - Kick off Meeting

On 25 June, 2025, the Academy of Sciences of Albania, in collaboration with the University of Tirana, Albania, hosted the kick off meeting of the ECPGR funded project:

"CryoConnect:

A Regional Initiative for a Cross-Border Cryobank in the Western Balkans and the Caucasus – A case study based on a sample of fruit tree and grape local accessions".

Local organizer: Valbona Sota

CryoConnect is a subregional initiative aimed at developing a Cross-border Cryobank, focusing on fruit trees and grapevibne accessions.

The initiative marks a significant step forward towards the long-term conservation of plant genetic resources and brings together leading institutions from:

- Serbia (Fruit Research Institute, Čačak)
- Croatia (Faculty of Agriculture, Zagreb)
- Albania (University of Tirana & Academy of Sciences of Albania, Tirana)
- Georgia (Scientific Research Center of Agriculture, Tbilisi)

North Macedonia (Institute of Agriculture, Skopje) and Bosnia and Herzegovina (University of Sarajevo, Faculty of Agriculture and Food Science, Sarajevo) participated as observers with the potential to join the initiative.

Participating CopyTree members:

Darko Jevremović and **Tatjana Vujović** (Fruit Research Institute, Čačak, Serbia)

Zvjezdana Marković (University of Zagreb, Croatia)

Efigjeni Kongjika and **Valbona Sota** (Research Center of Biotechnology & Genetics, ASA, Albania)

2. Upcoming Events & Activity Calls

2.1 The 5th Training School of CopyTree
Using robotics for scaling up somatic embryogenesis

17– 18 September, 2025

Natural Resources Institute Finland (Luke)

What will the participants learn?

1. Background and a case study on applying robotics for scaling up Norway spruce somatic embryogenesis will be presented

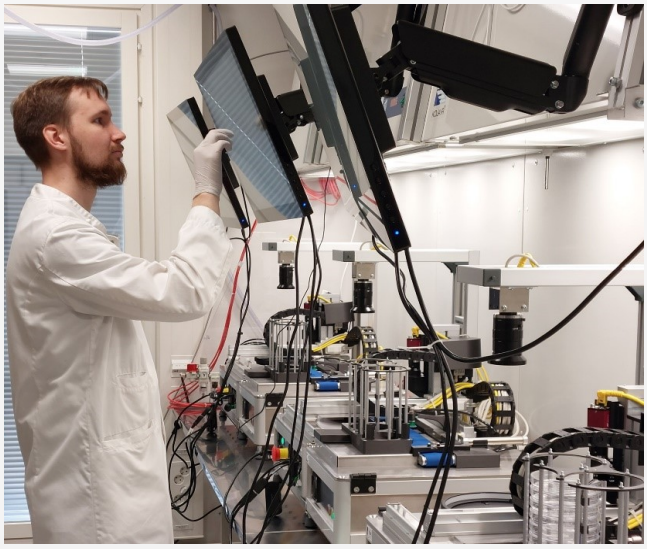
2. Invited specialists will share their experiences and discuss factors to be taken into account for:

- development of SE automation,
- testing SE robotics with a novel tree species;

3. Hands-on experience on using Luke's robotics to pick up and select somatic embryos of:

- Norway spruce, produced by Luke SE pipeline,
- participants own materials, representing various tree species;

4. A guided visit to Luke SE Technology Platform and SE field experiments.



READ MORE

Invited specialists:

- Elmar Bernhardt (South-Eastern University of Applied Sciences, Finland)
- Jana Krajnakova (Scion, New Zealand)

Local organizers and Instructors:

- Tuija Aronen, Mikko Tikkinen, Sakari Välimäki, Saila Varis (Natural Resources Institute Finland)

2.2 Call for Training School Organizers

We're also looking for members who want to design and deliver a training school during upcoming Grant Periods.

If you wish to organize a training school or workshop focused on a relevant theme where your institute holds expertise, let us know!

Click here to apply

2.3 International Symposium of Roots, Rhizomes, Tubers, Plantains, Bananas and Papaya

2.4 WEBINAR SERIES

Interested in learning more about *in vitro* culture of woody plants?

We are excited to announce our upcoming Webinar Series, where you will gain valuable insights on the following topics: Overcoming recalcitrance in woody plants; Tools for diagnosis, sanitation, and storing clean stocks; Scaling up the production of elite clones at an affordable price; Understanding the real risks associated with this technology; Raising awareness and providing information tools to improve public acceptance; Encouraging foresters and landowners to invest in planting poly-clonal forests.

CopyTree is currently looking for speakers for the webinar series!

The webinars will run for 60 minutes, with 5 minutes for introduction, 45 minutes for presentation, and 10 minutes for addressing participants' questions.

If you would like to submit a topic for consideration, please contact the CopyTree Webinar Coordinator, at tobias.bruegmann@thuenen.de

Stay tuned for more detailed information, coming soon on the CopyTree website!

3. Communication platforms

WEBSITE & SOCIAL MEDIA PAGES

- **COST Website**: https://www.cost.eu/actions/CA21157/
- **CopyTree Website:** www.copytree.eu

Please follow us on social media pages:

INTERNAL AREA OF COMMUNICATION

Are you already an approved CopyTree member?

Join our community area by signing up in this link:
https://www.copytree.eu/join-us

After signing up, join different working groups in interactive discussions.

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COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

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