

Editorial

We are very pleased to release the fourth Newsletter (Vol. 2, Issue 1) of the International Mycorrhiza Society (IMS). This is the second year birthday of the IMS Newsletter! Many thanks to all who contributed to this Newsletter, especially to César Marín, the Newsletter editor, and to the topic editors Justine Karst, Jason Hoeksema, and Jonathan Plett. Also, many thanks to a wide range of mycorrhizal researchers who have written nice highlights about their own ongoing mycorrhizal research, and/or to those that have appeared in our YouTube interviews. Please do contact us if you wish to being interviewed or to write a short article for an upcoming IMS Newsletter (cesar.marin@uoh.cl).

In this issue, we present our list of the Top 10 mycorrhizal papers for the last 4 months (September to December, 2020). This issue also contains four short research articles/commentaries providing new research insights on themes ranging from molecular ecology, plant invasion, to habitat restoration and signalling in the mycorrhizal symbiosis. We have also posted two YouTube interviews, one with Francis Martin on their latest article in *Nature Communications* reporting on the evolution of the mycorrhizal symbioses, and an interview with Nahuel Policelli on mycorrhizal invasions. The Tools section provides useful links to methods and databases for mycorrhizal research, and in the events section we highlight conferences and meetings linked to mycorrhizal research. Please do contact us if you have useful information that you wish to be mentioned in the “Tools” or “Events” sections.



We would like to congratulate Andrea Genre *et al.* (2020) for their nomination to the best mycorrhizal paper of the last 4 months. Their appealing article discusses recent phylogenomic, molecular, and cell biology studies, and presents the current state of knowledge of the origin of mycorrhizal fungi and the evolutionary history of their relationship with land plants (*Nat Rev Microbiol* 18: 649-660). Further highlights can be found in Sugiura *et al.* (2020), elucidating important steps to grow arbuscular mycorrhizal fungi without hosts plants on agar media (which was not possible until recently), and in Miyauchi *et al.* (2020) describing dozens of new mycorrhizal genomes and the evolutionary pathways leading to symbiosis in several fungal orders. See this newsletter for the complete list of the Top 10 papers. We are delighted to

see a diverse range of mycorrhizal research papers being published in top-tier scientific journals. We are also very happy to welcome four further members in the panel selecting the best mycorrhizal paper: Bala Chaudhary, Joseph Cooper, Annegret Kohler, and Junling Zhang.

This issue also contains four short research articles. One by Pierre-Marc Delaux from Toulouse University, France, who recently was awarded a prestigious European Research Council grant, and senior author of the best mycorrhizal paper of the May 2020 issue. Here, he discusses the origins and evolution of intracellular symbioses in plants. A second nice research article is written by Jan Clavel from Belgium on the role of arbuscular mycorrhizal fungi in non-native plant invasion along mountain roads. The third research article by Tanel Vahter from Estonia demonstrates very clearly and convincingly that the addition of native arbuscular mycorrhizal fungi together with plant seeds, can greatly enhance plant species richness in barren post-mining landscapes. The fourth article by Tania Ho-Plágaro and José Manuel García-Garrido dives into the molecular mechanisms explaining signalling between plants and arbuscular mycorrhizal fungi.

The world is still badly hit by the covid-19 pandemic and we wish you and your families all strength and perseverance, and sincerely hope vaccination in the mid-term will help to solve the pandemic. Please do register and schedule for the next meeting of the International Mycorrhiza Society (ICOM11), which is scheduled next year (2022) in Beijing, China.

Marcel G.A. van der Heijden, President
César Marín, Editor
Francis Martin, Vice & Past-President

