

The 11th International Conference on Mycorrhiza and The 5th International Molecular Mycorrhiza Meeting

Date: August 1 to 5, 2022



Organizers:

International Mycorrhiza Society
Mycological Society of China
Chinese Society for Plant Biology
Institute of Microbiology, Chinese Academy of Science
CAS Center for Excellence in Molecular Plant Science

Sponsors:

New Phytologist
Pedosphere Journal
Beijing Jinbilai Biotechnology Co., Ltd
Nanjing CHYKINGYOUNG Biological Technology Co.,Ltd
Linqing QingYuanZhengBen Biomedical Technology Co., Ltd.

Co-organizers:

College of resources and environmental Science, China Agricultural University
Beijing Forestry University
Institute of Soil Science, Chinese Academy of Sciences
School of Geographical Sciences, Fujian Normal University
Inner Mongolia University
Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences
College of Geology and Environment, Xi'an University of Science and Technology
The State Key Laboratory of Mycology, Institute of Microbiology, Chinese Academy of Sciences
Wuhan Mushroom Exhibition Service Co., Ltd





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Congress Organization

Organizers:

International Mycorrhiza Society
Mycological Society of China
Chinese Society for Plant Biology
Institute of Microbiology, Chinese Academy of Science
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College of Resources and Environmental Science, China Agricultural University
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The State Key Laboratory of Mycology, Institute of Microbiology, Chinese Academy of Sciences
Wuhan Mushroom Exhibition Service Co., Ltd

Organization Committee

Chair:

Liangdong Guo (*Institute of Microbiology, Chinese Academy of Sciences*)
Ertao Wang (*CAS Center for Excellence in Molecular Plant Science*)

Members:

Marcel van der Heijden (*President of IMS*)
Francis Martin (*Vice-president of IMS*)
Junling Zhang (*China Agricultural University*)
Zhuliang Yang (*Kunming Institute of Botany, Chinese Academy of Sciences*)
Baoming Ji (*Beijing Forestry University*)
Baodong Chen (*Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences*)
Yuying Bao (*Inner Mongolia University*)
Junli Hu (*Institute of Soil Science, Chinese Academy of Sciences*)

Yong Zheng (*Fujian Normal University*)
Yinli Bi (*Xi'an University of Science and Technology*)
Xinhua He (*Southwest University*)
Gu Feng (*China Agricultural University*)
Huyuan Feng (*Lanzhou University*)
Cheng Gao (*Institute of Microbiology, Chinese Academy of Sciences*)

General Secretary:

Cheng Gao (*Institute of Microbiology, Chinese Academy of Sciences*)

Treasurer: Na Jiang (*Office of Mycological Society of China/Institute of Microbiology, Chinese Academy of Sciences*)

Sponsors

New Phytologist
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Information for participants

● Zoom Meeting Room Number

Zoom Meeting Room Number of ICOM11

(Time Zone: UTC+8:00, Beijing)

TIME	Date	Aug 1st	Aug 2nd	Aug 3rd	Aug 4th
07:50-12:00	Plenary Speech Zoom Meeting Room Number: 869 7763 8893 Passwords: 202208				
13:30-15:00	Poster Session				Perspectives & Outlook on Mycorrhizal Research Room Number: 869 7763 8893 Passwords: 202208
15:00-17:30	Session	Mycorrhizal Omics	Biogeography	Mycorrhiza & Global Change	Molecular Biology & Physiology
	Room Number	822 1689 7549 Passwords: 202208	822 1689 7549 Passwords: 202208	822 1689 7549 Passwords: 202208	822 1689 7549 Passwords: 202208
15:00-17:30	Session	Mycorrhiza & Pollution	Mycorrhizas in Restoration & Reforestation	Mycorrhiza & Agriculture	Community Ecology
	Room Number	842 8325 3059 Passwords: 202208	842 8325 3059 Passwords: 202208	842 8325 3059 Passwords: 202208	842 8325 3059 Passwords: 202208
15:00-17:30	Session	Mycorrhizas in Ecosystems	Evolution of Mycorrhizas	Mycorrhizal Function	Edible Mushrooms
	Room Number	851 4222 9439 Passwords: 202208	851 4222 9439 Passwords: 202208	851 4222 9439 Passwords: 202208	851 4222 9439 Passwords: 202208

● **Congress Information**

Please download and install zoom software in advance.

Chairs and Speakers: Please click the button  in the Zoom Meeting room, technicians will open your speaking rights.

● **Program Chart**

Scientific Programme of ICOM11					
TIME UTC+8:00, Beijing	Date	Aug 1st	Aug 2nd	Aug 3rd	Aug 4th
	Topic	Mycorrhizal Omics	Mycorrhizal Diversity and Ecology	Mycorrhiza & Agriculture & Global Change	Cross-Talk and Trade
	Chairs	Francis Martin & Feng Zhang	Ian Dickie & Cheng Gao	Marcel van der Heijden & Gu Feng	Jonathan Plett & Baoming Ji
08:00-08:50	Plenary Speaker	Nicolas Corradi	Maarja Õpik	Miranda Hart	Ertao Wang
08:50-09:30	Keynote Speaker	Pierre-Marc Delaux	Kabir Peay	Stephanie Watts-Williams	Toby Kiers
09:30-10:00	Coffee Break				
10:00-10:35	Keynote Speaker	Annegret Kohler	Cheng Gao	Megan Ryan	Colin Averil
10:35-11:10	Keynote Speaker	Feng Zhang	Anne Pringle	Mayra Elena Gavito	Krista Plett
11:10-11:45	Keynote Speaker	Sara Branco	Martin Bidartondo	Junling Zhang	Carolin Gutjahr
11:45-12:20	Keynote Speaker	Nicole Hynson	Kitty Gehring	Mohammad Bahram	
12:20-13:30	Break & Lunch				
13:30-15:00	Poster Session	Poster Session	Poster Session	Poster Session	IMS general assembly Perspectives & Outlook on Mycorrhizal Research
15:00-17:30	Concurrent Session 1	Mycorrhizal Omics	Biogeography	Mycorrhiza & Global Change	Molecular Biology & Physiology
	Chairs	Gang Wu & Tatsu Ezawa	Maarja Õpik & Colin Averil	Ian Dickie & Yong Zheng	Claire Veneault Fourrey & Feng Zhang
15:00-17:30	Concurrent Session 2	Mycorrhiza & Pollution	Mycorrhizas in Restoration & Reforestation	Mycorrhiza & Agriculture	Community Ecology
	Chairs	Damien Blaudez & Baodong Chen	James D. Bever & Yinli Bi	Junling Zhang & Tim Cavagnaro	Cheng Gao & Jeff Powell
15:00-17:30	Concurrent Session 3	Mycorrhizas in Ecosystems	Evolution of Mycorrhizas	Mycorrhizal Function	Edible Mushrooms
	Chairs	Xubing Liu & Katie Field	Leho Tedersoo & Xiaoke Xing	Justine Karst & David Johnson	Zhuliang Yang & Alessandra Zambonelli

Conference Program

Aug 1st Monday 08:00-12:20

Topic: Mycorrhizal omics **Chairs:** Francis Martin & Feng Zhang

Zoom Meeting Room Number: 869 7763 8893 Passwords: 202208

● 07:50-08:00 Welcome address

Prof. Liangdong Guo (*Chair of ICOM11, President of Mycological Society of China*)

Plenary Speaker

● 08:00-08:50 Nicolas Corradi (*University of Ottawa, Canada*)

The genetics and genome biology of arbuscular mycorrhizal fungi.

Keynote Speaker

● 08:50-09:30 Pierre-Marc Delaux (*Plant Biotechnology Cluster, France*)

Origin and diversification of plant-fungi symbioses.

● 10:00-10:35 Annegret Kohler (*Lorraine University, France*)

The evolution of the mycorrhizal lifestyle: lessons learned from comparative genomics and transcriptomics.

● 10:35-11:10 Zhang Feng (*Lanzhou University, China*)

Investigating the role of symbiosis-regulated CAZymes in the Ectomycorrhizal interaction.

● 11:10-11:45 Sara Branco (*University of Colorado at Denver, USA*)

Suillus as an emerging model for ecology and evolution of plant-fungal mutualisms.

● 11:45-12:20 Nicole Hynson (*University of Hawaii, USA*)

Mycorrhizal -omics as a tool for restoration: what amplicon sequencing can tell us about ecosystem recovery?

Concurrent Session

Session: Mycorrhizal Omics

Zoom Meeting Room Number: 822 1689 7549 Passwords: 202208

August 1st

Session: Mycorrhizal Omics

Chairs

Prof. Tatsuhiro Ezawa (*Hokkaido University, Japan*)

Prof. Gang Wu (*Kunming Institute of Botany, Chinese Academy of Sciences, China*)

Time (UTC+08:00)	Speakers	Institution	Country/ Region	Title
15:00-15:30	Tatsuhiro Ezawa	Hokkaido University	Japan	Prediction of underground foraging activities by leaf transcriptomes
15:30-15:45	Mathu Malar C	University of Ottawa	Canada	The early branching arbuscular mycorrhizal fungus <i>Paraglomus occultum</i> carries a small and repeat poor genome compared to relatives in the Glomeromycotina
15:45-16:00	Vidya Suseela	Clemson University	USA	Digging deeper to the root of arbuscular mycorrhizal phenotypes using the lens of phytometabolome
16:00-16:15	Ricardo Arraiano Castilho	University of Lausanne	Switzerland	The forgotten kingdom: Exploring metatranscriptomic approaches for the study of mycorrhizal fungal communities.
16:15-16:45	Annie Lebreton	Lorraine University	France	From saprotrophism to symbiosis in the Russulales order with a focus on the ectomycorrhizal <i>Lactarius</i> genus
16:45-17:00	Shingo Miyauchi	Okinawa Institute of Science and Technology Graduate University	Japan	Visual integrative omics of fungi
17:00-17:15	Torda Varga	Biological Research Centre, ELKH	Hungary	Can functional groups of ectomycorrhizal fungi be characterized based on gene copy numbers?
17:15-17:30	Benjamin Dauphin	Research Unit Biodiversity and Conservation Biology	Switzerland	Genomic determinants of ectomycorrhiza formation and transcriptomic imprinting of symbiosis genes in a basidiomycete with poplar

Concurrent Session

Session: Mycorrhiza & Pollution

Zoom Meeting Room Number: 842 8325 3059 Passwords:202208

August 1st				
Session: Mycorrhiza & Pollution				
Chairs:		Prof. Damien Blaudez (<i>Lorraine University, France</i>)		
		Prof. Baodong Chen (<i>Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China</i>)		
Time* (UTC+08:00)	Speaker	Institution	Country/ Region	Title
15:00-15:25	Katarzyna Turnau	Jagiellonian University	Poland	The hidden world of plants in the presence of potentially toxic metals
15:25-15:50	Xin Zhang	Research Center for Eco-Environmental Sciences, CAS	China	Study on the tolerance mechanisms of arbuscular mycorrhizal symbiont under heavy metal contamination
15:50-16:05	Anna Edlinger	Agroscope/University of Zurich	Switzerland	Impact of pesticides on mycorrhizal fungi
16:05-16:20	Hui Li	Jinan University	China	Cell wall modification induced by an arbuscular mycorrhizal fungus enhanced cadmium fixation in rice root
16:20-16:30	Coffee Break			
16:30-16:45	Ruoyu Hu	Lorraine University	France	Mobility and transfer of rare earth elements (REEs) from soil to plants by arbuscular mycorrhizal fungi Funneliformis mosseae
16:45-17:00	Zhen Li	China Agricultural University	China	Arbuscular mycorrhizal fungi enhance organic carbon and nitrogen sequestration in iron ore tailings
17:00-17:15	Marjana Regvar	University of Ljubljana	Slovenia	Novel approaches to the correlative multimodal bioimaging of interkingdom connectivity: the information acquired using micro-PIXE and SEM-EDS
17:15-17:30	Wenbo Yuan	Huazhong Agricultural University	China	Effects of Arbuscular Mycorrhizal Fungi on Bioremediation of Cadmium Contaminated Soil Based on Meta-analysis

* The duration time for each report contains 5 minutes for questions

Concurrent Session

Session: Mycorrhizas in Ecosystems
Zoom Meeting Room Number:851 4222 9439 Passwords: 202208

August 1st				
Session: Mycorrhizas in Ecosystems				
Chairs:			Prof. Xubing Liu (<i>Sun Yat-sen University, China</i>)	
			Prof. Katie Field (<i>University of Sheffield, UK</i>)	
Time (UTC+08:00)	Speaker	Institution	Country/ Region	Title
15:00-15:15	Camille Truong	Royal Botanic Gardens Victoria	Australia	Ectomycorrhizal fungi and the nitrogen economy of <i>Nothofagus</i>
15:15-15:30	César Marín	St. Thomas University	Chile	Gaps in South American mycorrhizal biodiversity and ecosystem function research
15:30-15:45	Tao Zhang	Northeast Normal University	China	Arbuscular mycorrhizal fungi alleviate the negative effect of warming and nitrogen deposition on ecosystem stability in the temperate meadow
15:45-16:00	Ido Rog	Weizmann Institute of Science	Israel	Mycorrhizal associations in the Mediterranean forest, from saplings to mature trees
16:00-16:15	Ian Dickie	University of Canterbury	New Zealand	Ecosystem impacts of the assembly and disassembly of co-invasive ectomycorrhizal fungal communities
16:15-16:30	Yaqin Guo	University of Hohenheim	Germany	Genetic diversity and community composition of arbuscular mycorrhizal fungi associated with the root and rhizosphere soil of the pioneer plant <i>Pueraria phaseoloides</i>
16:30-16:45	Wataru Aoki	Shinshu University	Japan	Morphological comparison of ectomycorrhizae between <i>Tricholoma kakishimeji</i> and its allied species on pine and oak hosts
16:45-17:00	Gaowen Yang	China Agricultural University	China	AMF influence ecosystem stability in grasslands
17:00-17:15	Yi Yang	China Agricultural University	China	Non-host plants: are they mycorrhizal networks players?
17:15-17:30	Discussion			

Conference Program

Aug 2nd Tuesday 08:00-12:20

Topic: Mycorrhizal Diversity and Ecology **Chairs:** Ian Dickie & Cheng Gao

Zoom Meeting Room Number: 869 7763 8893 Passwords: 202208

Plenary Speaker

● 08:00-08:50 Maarja Öpik (*University of Tartu, Estonia*)

Mycorrhizal diversity: the diversity of mycorrhizal plants, fungi and interactions

Keynote Speaker

● 08:50-09:30 Kabir Peay (*Stanford University, USA*)

Mycorrhizal community dynamics in the global change era

● 10:00-10:35 Cheng Gao (*Institute of Microbiology, CAS, China*)

Assembly & Consequences of Fungal Communities under Stress

● 10:35-11:10 Anne Pringle (*University of Wisconsin Madison, USA*)

Rethinking Baker's articulation of an "ideal weed": what kinds of fungi are ideal invasives" and do they damage local ecosystems?

● 11:10-11:45 Martin Bidartondo (*Imperial College London & Royal Botanic Gardens, UK*)

Mycorrhizal tipping points

● 11:45-12:20 Kitty Gehring (*Northern Arizona University, USA*)

Drought, invasive species and fire: Can understanding mycorrhizal fungi help address key challenges in a warming world?

Concurrent Session

Session: Biogeography
Zoom Meeting Room Number: 822 1689 7549 Passwords: 202208

August 2nd				
Session: Biogeography				
Chairs:			Prof. Colin Averill (ETH Zurich, Switzerland)	
			Prof. Maarja Öpik (University of Tartu, Estonia)	
Time* (UTC+08:00)	Speakers	Institution	Country/ Region	Title
15:00-15:20	Adriana Corrales	University of Rosario	Colombia	Diversity patterns of ectomycorrhizal fungi across tropical regions
15:20-15:35	YanlongLi	China Agricultural University	China	Spatial Distribution Patterns of Arbuscular Mycorrhizal Fungi Extraradical Biomass in Typical Farmland Soils in North China Plain—A Case Study of Quzhou County
15:35-15:50	Yuguang Fan	Hainan Medical University	China	Using ITS sequence data to unveil the host range and geographical distribution of <i>Mallocybe</i> (Inocybaceae, Agaricales, Basidiomycota), a genus of ectomycorrhizal fungi
15:50-16:05	Yiming Meng	University of Tartu	Estonia	Phylogenetic conservatism and environmental conditions shape plant mycorrhizal traits across the world's flora
16:05-16:20	John Davison	University of Tartu	Estonia	Large-scale structure of mycorrhizal fungal communities within the global microbiome
16:20-16:40	Camille Delavaux	ETH Zurich	Switzerland	Mycorrhizal feedbacks linked to global forest biodiversity gradient

*The duration time for each report contains 5 minutes for questions.

Concurrent Session

Session: Mycorrhizas in Restoration & Reforestation
 Zoom Meeting Room Number: 842 8325 3059 Passwords:202208

August 2nd				
Session: Mycorrhizas in Restoration & Reforestation				
Chairs:			Prof. James D. Bever (<i>University of Kansas, USA</i>)	
			Prof. Yinli Bi (<i>Xi'an University of Science and Technology, China</i>)	
Time (UTC+08:00)	Speakers	Institution	Country/ Region	Title
15:00-15:35	Tao Li	Yunnan University	China	Bioaugmentation and contribution of mycorrhizal fungi to the phyto-management of metal-polluted soils
15:35-16:10	Liz Koziol	University of Kansas	USA	Long-term effects of native mycorrhizal fungal addition in tallgrass prairie restoration
16:10-16:30	Xiao Li	Xi'an University of Science and Technology	China	Mycorrhizal fungi reclamation promotes litter decomposition and soil organic carbon accumulation in mining area: a case study in northern Loess Plateau of China
16:30-16:50	James Bever	University of Kansas	USA	Plant life history and phylogeny as predictors of mycorrhizal fungal community divergence and feedback
16:50-17:10	Pu Jia	South China Normal University	China	Diversity, community assembly of mycorrhizal fungi and interactions with other functional fungi in mine tailings ponds
17:10-17:30	Thomas Horton	Department of Forest Biology, SUNY-ESF	USA	Restoration of Ectomycorrhizal Forest Communities

*The duration time for each report contains 5 minutes for questions

Concurrent Session

Session: Evolution of Mycorrhizas
 Zoom Meeting Room Number: 851 4222 9439 Passwords: 202208

August 2nd				
Session: Evolution of Mycorrhizas				
Chairs:			Prof. Leho Tedersoo (<i>University of Tartu, Estonia</i>)	
			Prof. Xiaoke Xing (<i>The Institute of Medicinal Plant Development, China</i>)	
Time (UTC+08:00)	Speaker	Institution	Country/ Region	Title
15:00-15:20	Mark Brundrett	University of Western Australia	Australia	Resolving issues with mycorrhizal data reveals the global importance of associations and amazing evolutionary complexity in a biodiversity hotspot
15:20-15:40	Leho Tedersoo	University of Tartu	Estonia/Europe	undetermined
15:40-16:00	Marc André Selosse	National Museum of Natural History	France	Origins of the mycorrhizal associations : the waiting room hypothesis
16:00-16:20	Benoît Perez-Lamarque	Paris Sciences & Lettres-PSL University	France	Diversification slowdown in Glomeromycotina
16:20-16:40	Lei Tian	Northeast Institute of Geography and Agroecology, CAS	China	Rice domestication influenced its symbiotic relationship with arbuscular mycorrhizal fungi
16:40-17:00	Deyi Wang	Leiden University	The Netherlands	Orchid Mycorrhizas: Tangled Evolutionary Shifts in Plant Physiology and Symbiotic Interaction
17:00-17:20	Anna Yang	Anhui Normal University	China	AM fungi diversity and coevolution character in Magnoliaceae

Conference Program

Aug 3rd Wednesday 08:00-12:20

Topic: Mycorrhiza & agriculture & global change **Chairs:** van der Heijden & Gu Feng

Zoom Meeting Room Number: 869 7763 8893 Passwords: 202208

Plenary Speaker

● 08:00-08:50 Miranda Hart (*The University of British Columbia, Canada*)

A framework for understanding invasions below ground

Keynote Speaker

● 08:50-09:30 Stephanie Watts-Williams (*University of Adelaide, Australia*)

The effects of AM fungi on cereal crops: looking beyond grain yield to biofortification potential.

● 10:00-10:35 Megan Ryan (*University of Western Australia, Australia*)

Assembly of Fungal Communities under Stress

● 10:35-11:10 Mayra Elena Gavito (*Universidad Nacional Autonoma de Mexico, Mexico*)

Arbuscular mycorrhizal function in human-modified soils: breaking bad, or in bad environments?

● 11:10-11:45 Junling Zhang (*China Agricultural University, China*)

Mycorrhiza mediate N₂O production in agroecosystems

● 11:45-12:20 Mohammad Bahram (*Swedish University of Agricultural Sciences/ Tartu University, Swedish*)

How mycorrhizal types affect the soil microbiome.

Concurrent Session

Session: Mycorrhiza & Global Change
 Zoom Meeting Room Number: 822 1689 7549 Passwords: 202208

August 3rd				
Session: Mycorrhiza & Global Change				
Chairs:			Prof. Ian Dickie (University of Canterbury, New Zealand)	
			Prof. Yong Zheng (Fujian Normal University, China)	
Time (UTC+08:00)	Speakers	Institution	Country/ Region	Title
15:00-15:30	Stephanie Kivlin	University of Tennessee	USA	Climatic niches of mycorrhizal fungi may predict their response to global change
15:30-16:00	Alison Bennett	The Ohio State University	USA	Climate changes and land management alter AM fungal-plant interactions and AM fungal traits
16:00-16:15	Songmei Shi	Southwest University	China	Arbuscular Mycorrhization improves growth and NPK accumulation in wheat by facilitating soil nutrient uptake under elevated CO ₂ at daytime, not nighttime
16:15-16:30	Fabian Weikl	Institute of Biochemical Plant Pathology/Technical University of Munich	Germany	Quantitatively reduced root fungal communities of beech and spruce retained their potential during five years of severe drought.
16:30-16:45	Nan Cui	Northeast Normal University	China	Arbuscular mycorrhizal fungi accelerate soil nitrogen (N) turnover and reduce N loss under global changes in temperate meadow ecosystems
16:45-17:00	Yunliu Hu	South China Botanical Garden, Chinese Academy of Sciences	China	Mycorrhiza-mediated trade-off between cellulase and ligninase under nitrogen addition
17:00-17:30	Discussion / Questions from all speakers			

Concurrent Session

Session: Mycorrhiza & Agriculture

Zoom Meeting Room Number: 842 8325 3059 Passwords: 202208

August 3rd				
Session: Mycorrhiza & Agriculture				
Chairs:			Prof. Timothy Cavagnaro (<i>The University of Adelaide, Australia</i>)	
			Prof. Junling Zhang (<i>China Agricultural University, China</i>)	
Time * (UTC+08:00)	Speakers	Institution	Country/ Region	Title
15:00-15:30	Matt Salonmon	The University of Adelaide	Australia	Commercial mycorrhizal inoculants for sustainable food production: A long way to go
15:30-16:00	Lin Zhang	China Agricultural University	China	The mechanism of arbuscular mycorrhizal fungi-bacteria interaction on improving phosphorus use efficiency in agricultural soil
16:00-16:20	Cameron Wagg	Fredericton Research and Development Center	Canada	Ecologically engineering soil communities to promote agroecosystem services: The role of mycorrhizal fungi
16:20-16:40	Xianan Xie	South China Agricultural University	China	AM fungal phosphate transporters handle phosphate export and homeostasis at the symbiotic interface of arbuscular mycorrhizas
16:40-17:00	Elisa Pellegrino		Italy	
17:00-17:20	Lixing Yuan	China Agricultural University	China	A Mycorrhiza-Specific Ammonium Transporter ZmAMT3;1 Mediates Mycorrhiza-dependent Nitrogen Uptake in Maize Roots

* The duration time for each report contains 5 minutes for questions

Concurrent Session

Session: Mycorrhizal Function

Zoom Meeting Room Number: 851 4222 9439 Passwords:202208

August 3rd

Session: Mycorrhizal Function

Chairs:

Prof. David Johnson (*The University of Manchester, UK*)

Prof. Justine Karst (*University of Alberta Canada*)

Time (UTC+08:00)	Speaker	Institution	Country/ Region	Title
15:00-15:25	Justine Karst	University of Alberta	Canada	The decay of the wood-wide web?
15:25-15:50	Ylva Lekberg	MPG Ranch/University of Montana	USA	Exchange ratios in AM depend on resource availability and differ among co-occurring plants
15:50-16:15	Silvia Perotto	University of Torino	Italy	Dissection of plant-fungus interactions in orchid mycorrhiza through transcriptomics and laser microdissection approaches
16:15-16:30	Jan Jansa	Institute of Microbiology, Czech Academy of Sciences	Czech Republic	Arbuscular mycorrhizal hyphosphere as a soil organic nutrient turnover hotspot
16:30-16:45	NingkangSun	China Agricultural University	China	Hyphal exudates of an arbuscular mycorrhizal fungus <i>Rhizophagus irregularis</i> induce phosphate-solubilizing bacterium <i>Rahnella aquatilis</i> to swim towards its hyphae
16:45-17:00	John Ramana	University of Canterbury	New Zealand	Plants can't choose their root traits, but can they choose fungal partners?
17:00-17:15	Emiko Stuart	Western Sydney University	Australia	How ectomycorrhizal fungi and soil bacteria play synergistic roles in increasing soil phosphorus availability for forest trees
17:15-17:30	Awagul Awaydul	Zhejiang University/ Hunan University	China	Reciprocal mutualism may lead to the unequal nutrient distribution of common mycorrhizal networks between an invasive plant, <i>Solidago canadensis</i> , and a native plant, <i>Kummerowia striata</i>

Conference Program

Aug 4th Thursday 08:00-12:20

Topic: Cross-Talk and Trade **Chairs:** Jonathan Plett & Baoming Ji
Zoom Meeting Room Number: 869 7763 8893 Passwords: 202208

Plenary Speaker

● 08:00-08:50 Er-Tao Wang (*Shanghai Institute of life sciences, CAS, China*)

Keynote Speaker

● 08:50-09:30 Toby Kiers (*Vrije University Amsterdam, Netherlands*)

Quantifying complex flows and structure of arbuscular mycorrhizal networks

● 10:00-10:35 Colin Averil (*ETH Zürich, Switzerland*)

Forest mycobiome composition dictates tree growth and carbon capture across Europe

● 10:35-11:10 Krista Plett (*Western Sydney University, Australia*)

Putting together the pieces: building the nutrient trading picture in ectomycorrhizal symbioses

● 11:10-11:45 Carolin Gutjahr (*Technical University of Munich, Germany*)

Regulation of root colonization by arbuscular mycorrhiza fungi

Conference Program

Aug 4th Thursday 14:00-15:00

IMS general assembly Perspectives & Outlook on Mycorrhizal Research

Zoom Meeting Room Number: 869 7763 8893 Passwords: 202208

● 13:30-14:00 IMS general assembly, IMS Elections, IMS awards and more

● 14:00-15:00 Perspectives & Outlook on Mycorrhizal Research

Francis Martin (*ARBRE, France*)

Genomics & Physiology of Mycorrhizae

Marcel van der Heijden (*Agroscope, Zurich, Switzerland*)

Ecology & Agriculture of Mycorrhiza

Concurrent Session

Session: Molecular Biology & Physiology
Zoom Meeting Room Number: 822 1689 7549 Passwords: 202208

August 4th				
Session: Molecular Biology & Physiology				
Chairs:			Prof. Claire Veneault Fourrey (INRAE Lorraine University, France)	
			Prof. Feng Zhang (Lanzhou University, China)	
Time* (UTC+08:00)	Speakers	Institution	Country/ Region	Title
15:00-15:25	Claire Veneault-Fourrey	INRAE Lorraine University	France	The study of symbiotic effectors: what's next?
15:25-15:50	Rytas Vilgalys	Duke University	USA	Interrogating the poplar fungal microbiome interactions using meta-transcriptomics and constructed communities
15:50-16:10	Katsuharu Saito	Shinshu University	Japan	Utilization of myristate and palmitate as carbon sources in arbuscular mycorrhizal fungi
16:10-16:30	Johanna Wong-Bajracharya	Elizabeth Macarthur Agricultural Institute	Australia	The roles of small RNA during Eucalyptus root colonization by diverse isolates of the ectomycorrhizal fungus <i>Pisolithus microcarpus</i>
16:30-16:50	Wei Xie	Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences	China	Increased carbon partitioning to secondary metabolites under phosphorus deficiency in <i>Glycyrrhiza uralensis</i> Fisch. is modulated by plant growth stage and arbuscular mycorrhizal symbiosis
16:50-17:10	Ronelle Roth	University of Oxford	UK	Identifying biomarkers of AM symbiosis-specific extracellular vesicles in Medicago

* The duration time for each report contains 5 minutes for questions

Concurrent Session

Session: Community Ecology
Zoom Meeting Room Number: 842 8325 3059 Passwords: 202208

August 4th				
Session: Community Ecology				
Chairs:		Prof. Jeff Powell (<i>Hawkesbury Institute for the Environment, Western Sydney University, Australia</i>)		
		Prof. Cheng Gao (<i>Institute of Microbiology, Chinese Academy of Sciences, China</i>)		
Time (UTC+08:00)	Speaker	Institution	Country/ Region	Title
15:00-15:30	Bala Chaudhary	Dartmouth College	USA	What are mycorrhizal traits?
15:30-16:00	Hirokazu Toju	Kyoto University	Japan	Integration of mycology, ecology, and genomics for disentangling plant-fungus community processes
16:00-16:30	Laura van Galen	University of Otago	New Zealand	Environment and host effects on New Zealand <i>Nothofagus</i> ectomycorrhizal fungal community assembly
16:30-16:42	Wei Fu	Research Center for Eco-Environmental Sciences, CAS	China	Community response of arbuscular mycorrhizal fungi to grassland extreme drought
16:42-16:54	Takahiko Koizumi	BioResource Research Center, RIKEN	Japan	Mycelial growth phenology of ectomycorrhizal fungi at a <i>Pinus thunbergii</i> coastal forest in Japan
16:54-17:06	Stav Livne-Luzon	Weizmann Institute of Science	Israel	The ectomycorrhizal community composition of <i>Pinus halepensis</i> and <i>Cedrus deodara</i> and how it changes with host age
17:06-17:18	Jiachao Zhou	China Agricultural University	China	Arbuscular mycorrhizal fungal species coexistence is enabled by fungal species-specific hyphosphere microbiomes
17:18-17:30	Anjar Cahyaningtyas	Graduate School of Agriculture Hokkaido University	Japan	Selection of the arbuscular mycorrhizal fungi that regenerate rapidly via soil propagules and intraradical mycelia in a sand-dune ecosystem

Concurrent Session

Session: Evolution of Mycorrhizas
Zoom Meeting Room Number: 851 4222 9439 Passwords: 202208

August 4th				
Session: Edible Mushrooms				
Chairs:			Prof. Zhuliang Yang (<i>Kunming Institute of Botany, Chinese Academy of Sciences, China</i>)	
			Prof. Alessandra Zambonell (<i>University of Bologna, Italy</i>)	
Time (UTC+08:00)	Speaker	Institution	Country/ Region	Title
15:00-15:30	Alexis Guerin-Laguette	Mycotree	New Zealand	The emerging art of cultivating edible mycorrhizal fungi (EMF): advances and challenges
15:30-15:45	Juan Chen	Chinese Academy of Medical Sciences & Peking Union Medical College	China	Change in metabolites and bioactivity during the development and mature process of Chinese black truffle
15:45-16:00	Mara Rondolini	University of Perugia	Italy	Monitoring and innovative approaches applied in <i>Tuber magnatum</i> production areas
16:00-16:15	Jianzhao Qi	Northwest A&F University	China	Chromosome-level genome sequencing, comparative genomic analysis, and mining biosynthetic potential of secondary metabolites for medicinal and edible fungi <i>Laetiporus sulphureus</i>
16:15-16:30	Coffee Break			
16:30-17:00	Asunción Morte	University of Murcia	Spain	Abiotic and biotic factors affecting fruiting of desert truffles in semiarid areas
17:00-17:15	Yang Wang	Jilin Agricultural University	China	Four new ectomycorrhizal fungi from northern China
17:15-17:30	Zhanling Xie	Qinghai University	China	The molecular mechanism of yellow mushroom (<i>Floccularia luteovirens</i>) response to strong UV radiation on the Qinghai-Tibet Plateau

Conference Program

Aug 5th Friday 08:00-12:20

Specific day for 5th iMMM (Beijing 15:30, London 08:30)		
Zoom ID: 869 7763 8893 Passwords:202208		
15:30-15:40	Welcome address	
Session: Fungal and host communication		Session Chair
15:40-16:00	Benoit Lefebvre	Plant chitoooligosaccharide and lipochitoooligosaccharide receptors involved in arbuscular mycorrhiza
16:00-16:20	Xinran Li	Nutrient regulation of lipochitoooligosaccharide recognition in plants via <i>Nodulation signaling pathway (NSP)1</i> and <i>NSP2</i>
16:20-16:40	Erik Limpens	Phosphate sensing SPX proteins control arbuscule life-time in Medicago
16:40-16:55	Xiaowei Zhang	Auxin regulates arbuscule mycorrhizal symbiosis
16:55-17:10	Yanhong Zhou	Light-dependent activation of HY5 promotes mycorrhizal symbiosis in tomato by systemically regulating strigolactone biosynthesis
17:10-17:30	Break	
		Uta Paskowski
Session: Cellular and molecular mycorrhizal symbiosis I		
17:30-17:55	Andrea Genre	Long-term effect of chito-oligosaccharide application on strigolactone biosynthesis and fungal accommodation promotes AM development
17:55-18:15	Didier Reinhardt	Nutrient Exchange in Arbuscular Mycorrhiza: Tracing Carbon Supply from Host to Fungus
18:15-18:35	Guohua Xu	Mycorrhizal route of nitrogen acquisition by plants
18:35-18:50	Yina Jiang	Medicago AR2/ERF transcription complex loop regulates arbuscule development
18:50-19:05	MaraSgROI	Invisible to Arbuscular Mycorrhizal Fungi: positional cloning and characterisation of the ina arbuscular mycorrhizal mutant in Zea mays
19:05-19:30	Break	
		Andrea Genre
Session: Fungal effectors and signals		
19:30-19:50	Sebastian Schornack	Structures and activities of FOLD effector candidates from arbuscular mycorrhiza fungi and fungal plant pathogen
19:50-20:10	Masayoshi Kawaguchi	Kayo HASHIMOTO will present the talk: Production of a large number of infection-competent spores in asymbiotic cultures of <i>Rhizophagus clarus</i>
20:10-20:30	Luisa Lanfranco	Preliminary evidence of cross-kingdom RNA interference in the arbuscular mycorrhizal symbiosis
20:30-20:45	Li Xue	Receptor-like cytoplasmic kinases regulating arbuscular mycorrhizal symbiosis
20:45-21:00	Marco Giovannetti	Quantitative Analysis of Intracellular Calcium Dynamics Unlock Early Plant Symbiotic and Immunity Signalling in Response to Fungal Mole
21:00-21:40	Long Break	
		Luisa Lanfranco
Session: Cellular and molecular mycorrhizal symbiosis II		
21:40-22:00	Uta Paszkowski	Spatio-temporal expression of nutrient transporters at the peri-arbuscular membrane in rice
22:00-22:20	Maria Harrison	Dissecting the VAPYRIN ankyrin repeat domain and its role in intracellular accommodation of AM fungi
22:20-22:40	Henrik V.Scheller	Reprogramming sphingolipid glycosylation is required for endosymbiont persistence in Medicago truncatula
22:40-22:55	Bin Wang	OsADK1 and OsCSLH3, two genes affecting different stages of mycorrhizal symbiosis in rice
22:55-23:10	DebatoshDas	Deciphering the molecular role of ethylene in arbuscular mycorrhiza symbiosis
		Caroline Gutjahr
		Jeremy Murray
Session		
Closing remark		
23:10-23:20	Closing remark (***) on behalf of International Advisory Committee)	
		Ertao Wang

