

**MOSTLY IAB. CONFERENCE ROOM**

<b>Tuesday 9th</b>	
8.00-9.00	Arrival, checking, posters instalation
9.00-9.20	Opening
9.30-9.50	Or-01 Johannes Hedwig and the founding of bryology Michelle Price
9.50-10.10	Or-02 Schimper, Goebel, and their contributions to bryophyte biology Jeffrey Duckett
10.10-10.30	Coffee break
10.30-10.50	Or-03 The contribution of Richard Spruce to hepaticology and tropical bryology Tamás Pócs
10.50-11.10	Or-04 Victor Brotherus' contribution to world diversity of mosses Timo Koponen
11.10-11.30	Or-05 Sullivant, Lesquereux, and the dawn of bryology in North America Bernard Goffinet, Rafael Medina
11.30-11.50	Or-06 International collaboration among bryologists - past, present and future Robbert Gradstein
11.55-13.00	Posters session 1
13.00-13.55	Lunch
14.00-14.55	Keynote speaker <b>Jill Harrison</b> <b>The genetic basis of body plan evolution in plants</b>
15.00-15.20	Or-24 A new bryophyte Red List and Checklist for Europe N. G. Hodgetts
15.20-15.40	Or-37 Towards a unified bryophyte names index and bryophyte checklist: a community-focused bryophyte resource Michelle J. Price, John J. Atwood, Matt von Konrat, John C. Brinda
15.40-16.00	Or-41 Changes in the nomenclature of liverworts and hornworts 2013-2019. What has happened since the World Check List was finished? Lars Söderström
16.00-16.20	Or-25 The Pyrenean bryoflora: erasing national borders in the FLORAPYR Atlas Marta Infante, Patxi Heras, Montserrat Brugués, Vincent Hugonnot, David G. Long, Benoît Offerhaus, Gordon Rothero, Elena Ruiz
16.20-16.40	Coffee break
16.40-17.00	Or-36 Exploration of the Southeast European bryophyte flora with a special attention to the species of conservation interest Beata Papp
17.00-17.20	Or-19 Recent revisions disclosed a greater difference between eastern and western species in Eurasia Vladimir E. Fedosov, Elena A. Ignatova, Alina V. Fedorova, Michael S. Ignatov
17.20-17.40	Or-42 More, new, and better understood bryophyte taxa in the Netherlands based on integrative taxonomy Michael Stech, Henk Siebel
17.40-18.00	Or-13 Bryophytes underground: diaspore banks in coastal dune systems Des A. Callaghan, Heijno J. During, Laura L. Forrest, Karen Wilkinson
18.00-18.20	Or-78 Do we know all types of the arthroodontous moss peristome? Michael S. Ignatov, Ulyana N. Spirina, Maria A. Kolesnikova, Elena A. Ignatova
18.20-18.40	Information on Frontiers in Plant Sciences special publication

Wednesday 10th		
8.00-8.55		Keynote speaker <b>Mitsuyasu Hasebe</b> <b>Mechanisms and evolution of land plant development: stem cell formation and cell division orientation</b>
9.00-9.20	Or-32	The development of spatial structure in epiphyll communities in a tropical lowland rainforest Anna Mežaka, Noris Salazar Allen, Glenda Mendieta Leiva, Maaïke Y. Bader
9.20-9.40	Or-11	The rare male enigma in bryophytes – what do geographic scales, environment and life histories tell Irene Bisang, Johan Ehrlén, Lars Hedenäs
9.40-10.00	Or-27	Genetic diversity in bryophyte population with facultative nannandry Annick S. Lang, Thies Gehrmann, Nils Cronberg
10.00-10.20		Coffee break
10.20-10.40	Or-07	Genetic and morphological differentiation in the genus <i>Conocephalum</i> (Hepatics) Hiroyuki Akiyama, Ireneusz J. Odrzykoski
10.40-11.00	Or-16	Divergence and hybridization in the <i>Marchantia polymorpha</i> complex Nils Cronberg, Anna-Malin Linde
11.00-11.20	Or-09	From the South to the North – The evolutionary history of the simple thalloid liverwort <i>Metzgeria</i> ( <i>Metzgeriaceae</i> , <i>Jungermanniopsida</i> ) Julia Bechteler, Martin Nebel, Karola Maul, Alfons Schäfer-Verwimp, Nicole Schütz, Dietmar Quandt
11.20-13.00		Posters session 2
13.00-13.55		Lunch
14.00-14.55		Keynote speaker <b>Silvia Pressel</b> <b>Key land plant innovations in bryophytes: considerations on homology and evolution</b>
15.00-15.20	Or-40	Morphological diversity in the peristome of the Neotropical moss <i>Octoblepharum albidum</i> Hedw. ( <i>Bryophyta</i> , <i>Octoblepharaceae</i> ) Noris Salazar Allen
15.20-15.40	Or-14	Polyphyly of a common biocrust liverwort: <i>Riccia inflexa</i> . D. Christine Cargill, Cécile Gueidan
15.40-16.00	Or-18	A new insight into the genus <i>Pulviger</i> ( <i>Orthotrichaceae</i> ) in North America Isabel Draper, Francisco Lara, Maren Flagmeier, Juan A. Calleja, Vicente Mazimpaka, Ricardo Garilleti
16.00-16.20	Or-43	Disentangling the hidden diversity within the widespread moss <i>Lewinskya affinis</i> ( <i>Orthotrichaceae</i> ). Beatriz Vigalondo, Ricardo Garilleti, Alain Vanderpoorten, Jairo Patiño, Isabel Draper, Juan .A. Calleja, Vicente Mazimpaka, Francisco Lara
16.20-16.40		Coffee break
16.40-17.00	Or-29	Elucidating subcosmopolitan disjunctions: ancient origin, migrations via Bering land bridge and the Miocene diversification of a species-rich liverwort genus <i>Lejeunea</i> Gaik Ee Lee, Fabien L. Condamine, Julia Bechteler, Oscar Alejandro Pérez-Escobar, Armin Scheben, Alfons Schäfer-Verwimp, Tamás Pócs, Jochen Heinrichst
17.00-17.20	Or-31	Which climatic and environmental factors determine liverwort diversity patterns in tropical montane forests? Karola Maul, Yu-Mei Wei, Boon-Chuan Ho, Martin Nebel, Federico Luebert, Michael Kessler, Dietmar Quandt
17.20-17.40	Or-39	Elevational patterns of bryophyte and lichen biomass and species richness on different substrates in the tropical montane forest of Baru volcano, Panama Eyvar E. Rodríguez Quiel, Glenda Mendieta Leiva, Jürgen Kluge, Maaïke Y. Bader
17.40-18.00	Or-26	One Mountain, Two Slopes – Heterogeneity of epiphytic bryophytes communities on Mt. Gede Eka A.P. Iskandar, Michael Stech, Sylvia Mota de Oliveira
18.00-18.20	Or-79	Are all paraphyllia the same? Ulyana N. Spirina, Tatiana V. Voronkova, Michael S. Ignatov

Thursday 11th		
8.00-9.00		Keynote speaker <b>Rubén G. Mateo</b> <b>Projecting bryophytes distributions in space and time: lessons from biological invasions and climate change</b>
9.00-9.20	Or-17	Where, when and what will be the effect of climate change on the distribution of <i>Anthoceros caucasicus</i> Steph.? David Draper, Cesar Garcia, Manuela Sim-Sim, Cecília Sérgio
9.20-9.40	Or-22	Predicting bryophytes' vulnerability to climate change: combination of niche and spatial metrics matter Helena Hespanhol, Katia Cezón, Jesús Muñoz, Rubén G. Mateo, João Gonçalves
9.40-10.00	Or-21	Northern and mountain bryodiversity must be better understood when the climate gets warmer Lars Hedenäs
10-10.20		Coffee break
10.20-10.40	Or-15	Predicting bryophyte species diversity in Canadian boreal forests using remote sensing data Carlos Cerrejón, Osvaldo Valeria, Marion Barbé, Philippe Marchand, Nicole Fenton
10.40-11.00	Or-34	Climate change effects on the carbon balance of tropical lowland bryophytes Nikolic Nada, Elodie Moureau, Gerhard Zotz, Maaïke Y. Bader
11.00-11.20	Or-38	Moss species on the move in East Antarctic terrestrial communities Sharon Robinson, Melinda Waterman, Diana King, Johanna Turnbull, Jessica Bramley-Alves, Michael Ashcroft, Ellen Ryan-Colton, Jane Wasley, Quan Hua
11.20-13.00		Posters session3
13.00-13.55		Lunch
14.00-14.55		Keynote speaker <b>Javier Martínez-Abaigar</b> <b>Bryophyte Ultraviolet-omics</b>
15.00-15.20	Or-30	A study on cryptic peptides biological activity in plants Irina Lyapina, Anna Filippov, Ilya Kirov, Ekaterina Graftskaia, Vasily Lazarev, Victor Zgoda, Igor Fesenko
15.20-15.40	Or-35	Biocontrol Potential of Himalayan Bryophytes against different microorganisms Kavita Negi, Preeti Chaturvedi
15.40-16.00	Or-20	On mosses and springs: environmental, spatial and phylogenetic patterns of aquatic and semi-aquatic mosses Marcos Fernández-Martínez, F. Berloso, J. Corbera, J. Garcia-Porta, C. Preece, F. Sayol, F. Sabater
16.00-16.20	Or-10	Functional traits related to growth and decomposition in Sphagnum Fia Bengtsson
16.20-16.40		Coffee break
16.40-17.00	Or-76	Effect of air pollution on species composition of communities of epiphytic bryophytes with respect to bark chemistry Jana Procházková
17.00-17.20	Or-12	Intraspecific variation in heavy metal tolerance in two terrestrial moss species M. Teresa Boquete, Conchita Alonso, Stuart F. McDaniel, Sarah Carey, Christina L. Richards, Ingeborg Lang, Irene Lichtscheidl, Marieluise Weidinger, Carlos Herrera
17.20-17.40	Or-28	The acrocarp moss <i>Atrichum undulatum</i> tolerates pollution of copper and zinc depending on environmental conditions Ingeborg Lang, Marieluise Weidinger, Aneta D. Sabovljevic, Jelena Stankovic, Wolfram Adlassnig, Marko S. Sabovljevic
17.40-18.00	Or-44	Mosses as Bioindicators of Metal Contamination in Karst Bauxite, northern Guizhou, China Dengfu Wang, Zhaohui Zhang

**MOSTLY iMOSS - SEMINAR ROOM**

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13.00-13.55	Lunch
14.00-14.55	Keynote speaker <b>Jill Harrison</b> <b>The genetic basis of body plan evolution in plants</b>
15.00-15.40	iMoss assembly
15.40-16.00	Or-73 Geometric cues forecast the switch from 2D-to-3D growth in Physcomitrella patens Han Tang, Kilian Duijts, Magdalena Bezanilla, Ben Scheres, Joop E.M. Vermeer, Viola Willemsen
16.00-16.20	Or-53 The gene regulatory map of Physcomitrella patens life cycle reveals key components of the developmental transitions modulated by membrane-anchored calpain DEFECTIVE KERNEL 1 Viktor Demko, Tatiana Belova, Pierre-François Perroud, Thorgeir R. Hvidsten, Wenche Johansen, Boris Bokor, Maxim Messerer, Klaus Mayer, Odd-Arne Olsen, Daniel Lang
16.20-16.40	Coffee break
16.40-17.00	Or-58 Strigolactones signalling repression in land plants: Is SMXL function conserved between vascular plants and the moss Physcomitrella patens? Guillory Ambre, Lopez-Obando Mauricio , de Saint Germain Alexandre, Boyer François-Didier, Rameau Catherine , Bonhomme Sandrine
17.00-17.20	Or-47 Light and phyto-hormone interplay in development of Physcomitrella patens Durga Prasad Biswal, Kishore CS Panigrahi
17.20-17.40	Or-57 Investigating Myosin XI function in Physcomitrella patens tip growth by conditional mutagenesis Giulia Galotto, Jeffrey Bibeau, Yen-Chun Liu, Pattipong Wisanpitayakorn, Sayed Iman Mousavi, Erkan Tüzel, Luis Vidali
17.40-18.00	Or-69 A trans-kingdom Myosin XI interaction with a RabE GTPase is essential for polarized growth Robert Orr
18.00-18.20	Or-62 Network of Epigenetic Regulators in Physcomitrella patens Kapoor Meenu, Parihar Vimala, Tyagi Vidhi, Walia Akanksha, Arya Deepshikha
18.20-18.40	Information on Frontiers in Plant Sciences special publication

<b>Wednesday 10th</b>	
8.00-8.55	Keynote speaker <b>Mitsuyasu Hasebe</b> <b>Mechanisms and evolution of land plant development: stem cell formation and cell division orientation</b>
9.00-9.20	Or-74 Genetic pathways controlling meristematic activity and differentiation in hornwort-sporophytes Manuel Waller, Alexander Kirbis, Anna Neubauer, Ana Marcela Florez Rueda, Ueli Grossniklaus, Péter Szövényi
9.20-9.40	Or-68 High efficient and precise base editing in <i>Physcomitrella patens</i> genome using modified CRISPR/Cas9 systems Fabien Nogué, Anouchka Guyon-Debast, Zoé Terret, Florence Charlot, Jean-Luc Gallois
9.40-10.00	Or-23 Dissecting the genetic basis of seasonal reproduction in a basal land plant, the moss <i>Physcomitrella patens</i> Karen A. Hicks, Viktoriya Coneva, Keith Adler, Kiersten Bell, Kristen Edgeworth, Jonathan Flowers, Alex Freidinger, Hannah Hertz, Katherine Lang, Carter Powell, Shawn Ruiz, Maria Sorkin
10.00-10.20	Coffee break
10.20-10.40	Or-59 Single nucleotide polymorphism charting of <i>Physcomitrella patens</i> accessions Fabian B. Haas, Noe Fernandez-Pozo, Rabea Meyberg, Pierre-François Perroud, Stefan A. Rensing
10.40-11.00	Or-55 PEATmoss ( <i>Physcomitrella</i> Expression Atlas Tool): a unified gene expression atlas and gene model lookup database for <i>Physcomitrella patens</i> Noe Fernandez-Pozo, Fabian B. Haas, Rabea Meyberg, Kristian K. Ullrich, Manuel Hiss, Pierre-François Perroud, Sebastian Hanke, Viktor Kratz, Adrian Powell, Eleanor F. Vesty, Chris Daum, Matt Zane, Anna Lipzen, Avinash Sreedasyam, Jane Grimwood, Juliet C. Coates, Kerrie Barry, Jeremy Schmutz, Lukas A. Mueller, Stefan A. Rensing
11.00-11.20	Or-60 A cis-acting bidirectional transcription switch regulates sexual dimorphism in <i>Marchantia</i> Tetsuya Hisanaga, Keitaro Okahashi, Shohei Yamaoka, Tomoaki Kajiwara, Ryuichi Nishihama, Masaki Shimamura, Katsuyuki T. Yamato, John L. Bowman, Frederic Berger, Takayuki Kohchi, Keiji Nakajima
11.20-13.00	Posters session 2
13.00-14.00	Lunch
14.00-14.55	Keynote speaker <b>Silvia Pressel</b> <b>Key land plant innovations in bryophytes: considerations on homology and evolution</b>
15.00-15.20	Or-45 Molecular basis of convergent evolution: parallel reduction of the sporophyte phase in mosses Alexander Kirbis, Manuel Waller, Anna Neubauer, Stefan A Rensing, Nico van Gessel, Ralf Reski, Daniel Lang, Karen Hicks, Péter Szövényi
15.20-15.40	Or-66 Phylogenomic analyses of ancient sex chromosomes in <i>Ceratodon purpureus</i> highlight the dynamism of sexual systems in bryophytes Stuart F. McDaniel, Sarah B. Carey, Ceratodon Genome Consortium
15.40-16.00	Or-51 A cost reduced variant of epi-GBS for studying DNA methylation in non-model organisms Olaf Werner, Ángela S. Prudencio, Elena de la Cruz-Martínez, Marta Nieto-Lugilde, Pedro Martínez-Gómez, Rosa M. Ros
16.00-16.20	Or-54 Chromosomal-scale assembly of the <i>M. polymorpha</i> genome reveals similarities and differences to <i>P. patens</i> and <i>A. thaliana</i> genomes with respect to DNA-methylation and recombination rate Seydina Issa Diop, Oliver Subotic, Alejandro Giraldo-Fonseca, Manuel Waller, Alexander Kirbis, Anna Neubauer, Rachel Murray-Watson, Filip Boskovic, Zoe Bont, Zsofia Hock, Adam C Payton, Danny Duijsings, Walter Pirovano, Elena Conti, Ueli Grossniklaus, Stuart F McDaniel, Péter Szövényi
16.20-16.40	Coffee break

16.40-17.00	Or-70	The first high-quality reference genome for hornworts ( <i>Anthoceros</i> ) reveals drastically different genome structure from those of mosses and liverworts Péter Szövényi, Fay-Wei Li, Tomoaki Nishiyama, Keiko Sakakibara, Juan-Carlos Villareal, Mareike Schallenberg-Rüdiger, Stefan Rensing, Anna Neubauer, Manuel Waller, Alexander Kirbis, Seydina Issa Diop
17.00-17.20	Or-71	The genome of the moss <i>Funaria hygrometrica</i> provides insights into chromosomal-scale genome evolution in Funariid mosses Péter Szövényi, Yang Liu, Nasim Rahmatpour, Alexander Kirbis, Manuel Waller, Jill Wegrzyn, Bernard Goffinet
17.20-17.40	Or-46	Testing the evolutionary history of <i>Ceratodon purpureus</i> , the sister species <i>C. amazonum</i> , and the recombinant <i>C. xconicus</i> Marta Nieto-Lugilde, Olaf Werner, Sarah B. Carey, Stuart F. McDaniel, Rosa M. Ros
17.40-18.00	Or-52	Speciation with gene flow in peatmosses - using whole genome sequencing to explore gene flow within and among species Olena Meleshko, Michael D. Martin, Péter Szövényi, Hans K. Stenøien, Kristian Hassel

**Thursday 11th**

8.00-9.00		Keynote speaker <b>Rubén G. Mateo</b> <b>Projecting bryophytes distributions in space and time: lessons from biological invasions and climate change</b>
9.00-9.20	Or-33	Adaptation of regulatory mechanisms of photosynthesis upon land colonization Tomas Morosinotto, Mattia Storti, Alessandro Alboresi
9.20-9.40	Or-61	Evolution of MurE functions from moss plastid division to angiosperm chloroplast development Ichiro Kajisa, Xiaofei Lin, Yilan E, Hiromi Kudo, Susumu Takio, Katsuaki Takechi, Hiroyoshi Takano
9.40-10.00	Or-56	Evolutionarily distinct pathways are present to regulate chloroplast proliferation in the moss <i>Physcomitrella patens</i> Tomomichi Fujita, Prapaporn Pongthai, Huong Thi Do, Natsumi Inoue, Yasushi Yoshioka, Hiroyoshi Takano
10-10.20		Coffee break
10.20-10.40	Or-63	A knockout of PpMED18 enhances salt tolerance in the moss <i>Physcomitrella patens</i> Chandra Shekar Kenchappa, Mikael Ulfstedt, Guo-Zhen Hu, Hans Ronne
10.40-11.00	Or-65	De novo genome assembly of <i>Sanionia uncinata</i> (Amblystegiaceae: Hypnales), a pleurocarpous moss dominant in Antarctica Hyoungseok Lee, Hyun Park, Mi Young Byun, Mira Park, Jungeun Lee
11.00-11.20	Or-72	The monophyly of Bryophytes is supported by nuclear and plastidial protein phylogenies Filipe de Sousa, Cymon J. Cox
11.20-13.00		Posters session3
13.00-14.00		Lunch
14.00-14.55		Keynote speaker <b>Javier Martínez-Abaigar</b> <b>Bryophyte Ultraviolet-omics</b>
15.00-15.20	Or-67	Expanded delimitation of <i>Physcomitrium</i> (Funariaceae) based on targeted sequencing of nuclear exons and their flanking regions Rafael Medina, Matthew G. Johnson, Yang Liu, Norman J. Wickett, A. Jonathan Shaw, Bernard Goffinet
15.20-15.40	Or-08	UV tolerance in Mojave Desert biocrust mosses Jenna T. B. Ekwealor, Suzanne Kosina, Trent Northen, Brent D. Mishler
15.40-16.00	Or-48	Gene transfer across species boundaries in bryophytes: evidence from major life cycle stages in <i>Homalothecium lutescens</i> and <i>H. sericeum</i> Weerachon Sawangproh, Lars Hedenäs, Annick. S. Lang, Bengt Hansson, Nils Cronberg
16.00-16.20	Or-64	The monthly transcriptome dynamics of Antarctic moss, <i>Sanionia uncinata</i> (Hedw.) Loeske, throughout the year in natural environments, reveals seasonal adaptation of extremophile plants Jungeun Lee, Hyoungseok Lee, Dockyu Kim
16.20-16.40		Coffee break
16.40-17.00	Or-49	Population genomics of a Southern Appalachian bryophyte with extreme sex allopatry J.C. Villarreal, Marta Alonso García, Kenneth McFarland, Bernard Goffinet
17.00-17.20	Or-50	Comparative genomic analysis and genetic variation within the leafy liverwort genus <i>Scapania</i> Adam Vivian-Smith, David Long, Maren Flagmeier, Jørund Rolstad, Kristian Hassel
17.20-17.40	Or-75	DNA double strand break (DSB) repair in protonema tissue of the moss <i>Physcomitrella patens</i> Karel J. Angelis, Radka Vágnerová, Marcela Holá
17.40-18.00	Or-77	The ratio between bryophyte functional groups impacts vascular plants in rich fens Patrícia Singh