

# **Ecology of Soil Microorganisms**



**2015**

**November 29 – December 3, 2015**

**Prague, Czech Republic**

	Sunday November 29	Monday November 30	Tuesday December 1	Wednesday December 2	Thursday December 3	
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## WELCOME

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We are pleased to welcome you to the second conference on the Ecology of Soil Microorganisms to be held in November/December 2015 in Prague. This is the second conference on the same topic after the first one organised in 2011 and we are happy to see that it has again attracted the attendance of more than 400 participants from all over the world. The conference should represent an interdisciplinary platform that offers as much interaction among various subjects within microbial ecology as possible. This includes questions addressing individual microbes, microbial communities as well as their interactions with the environment and other soil biota. We hope to link the modern molecular "omics" methods such as metagenomics, metatranscriptomics and metaproteomics with approaches based on soil chemical and biochemical analyses, the exploration of soil fauna and plant ecology. The other important goal of the conference is a wide scope covering the ecology of all microbes: bacteria and fungi as well as archaea and protozoa. Our aim is to bring experts from all these disciplines to a meeting where all can benefit from interactions and to promote in this way the research in the field of soil ecology.

We hope that you enjoy the programme of invited and contributed oral talks as much as we have enjoyed putting it together for you. Unfortunately, the limited time for oral contributions has resulted in several extremely interesting topics having to be presented as posters. Please do not miss either of the two poster sessions that considerably increase the diversity of the topics covered.

We would like to acknowledge the support of all those who have contributed to the conference organization, our sponsors, exhibitors and the members of our scientific committee. However, the major thanks go to all of you – the contributors to our rich five-day scientific programme. The conference is the fruit of your efforts, so please, enjoy it!

**Petr Baldrian**  
Chair of the Organizing Committee

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## GENERAL INFORMATION

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### Organising committee

Petr Baldrian - chair

Institute of Microbiology of the Czech Academy of Sciences

Vídeňská 1083

14220 Prague 4, Czech Republic

Phone: +420723770570

E-mail: info@soilmicrobes.org; baldrian@biomed.cas.cz

### Members

Michael Schloter (Helmholtz Centre, Munich), Vendula Brabcová (Institute of Microbiology of the ASCR, Prague), Tomáš Cajthaml (Charles University, Prague), Alica Chroňáková (Biology Centre ASCR, České Budějovice), Anna Davidová (Institute of Microbiology of the ASCR, Prague), Dana Elhottová (Biology Centre ASCR, České Budějovice), Jan Frouz (Biology Centre ASCR, České Budějovice), Markéta Marečková (Crop Research Institute, Prague), Martin Pospíšek (Charles University, Prague), Hana Šantrůčková (University of South Bohemia, České Budějovice), Martina Štursová (Institute of Microbiology of the ASCR, Prague), Tomáš Větrovský (Institute of Microbiology of the ASCR, Prague)

### Scientific committee

Petr Baldrian (Czech Republic)

Lynne Boddy (United Kingdom)

Jan Frouz (Czech Republic)

George Kowalchuk (The Netherlands)

Paolo Nannipieri (Italy)

Michael Schloter (Germany)

Christoph Tebbe (Germany)

Jan Dirk van Elsas (The Netherlands)

### Keynote lectures

Michael Wagner (Austria): Nitrification revisited: The discovery of Comammox, cyanate-degrading nitrifiers, and reciprocal feeding

Francis Martin (France): Harnessing genomics for understanding tree-microbe interactions in forest ecosystems

### Invited speakers

Jeremy Austin (Australia), Erland Bååth (Sweden), Petr Baldrian (Czech Republic), Lynne Boddy (United Kingdom), Michael Bonkowski (Germany), Bruce Budowle (United States of America), Tomáš Cajthaml (Czech Republic), Jeremy Austin (Australia), Jan Frouz (Czech Republic), Ellen Kandeler (Germany), George Kowalchuk (The Netherlands), Björn Lindahl (Sweden), Mari Moora (Estonia), David Myrold (United States of America), Paolo Nannipieri (Italy), James I. Prosser (United Kingdom), Marc-André Selosse (France), Angela Sessitsch (Austria), Christa Schleper (Austria), Michael Schloter (Germany), Kornelia Smalla (Germany), Søren J. Sørensen (Denmark), Christoph Tebbe (Germany), Leho Tedersoo (Estonia), Jan Dirk van Elsas (The Netherlands), Timothy Vogel (France)

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## **GENERAL INFORMATION**

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**Conference organisation**

Institute of Microbiology of the Czech Academy of Sciences  
Biologicals

**Conference website**

<http://www.soilmicrobes.org>

**Conference Venue**

TopHotel Prague, Blažimská 1781/4, Praha 4, Czech Republic  
<http://www.tophotel.cz/en>

To reach the venue by public transport, take the metro to the station „Chodov“ and from there take the bus No 115 to the station “Městský archiv” (10 min). Bus departures from „Chodov“ are available at:

[http://jrportal.dpp.cz/jrportal/Down.aspx?f=/DataFTP\JRPortalData/115/20141214/115\\_\(52\\_4\)T.pdf](http://jrportal.dpp.cz/jrportal/Down.aspx?f=/DataFTP\JRPortalData/115/20141214/115_(52_4)T.pdf), departures from TopHotel at:

[http://jrportal.dpp.cz/jrportal/Down.aspx?f=/DataFTP\JRPortalData/115/20141214/115\\_\(1132\\_1\)Z.pdf](http://jrportal.dpp.cz/jrportal/Down.aspx?f=/DataFTP\JRPortalData/115/20141214/115_(1132_1)Z.pdf).

Please refer to the map for detail. Paid public parking is available on site.

**Language**

The official language of the conference is English.

**Registration**

Registration desk in Top Hotel Praha will be open in a foyer of the Top Congress Hall.  
Opening hours:

Sunday, November 29	12:00-18:00
Monday, November 30	8:00-11:00
Tuesday, December 1 – Thursday, December 3	8:00-9:00

All participants will receive Certificate of attendance during registration.

**Name badges**

All conference participants, accompanying persons and exhibitors are kindly requested to wear their badges throughout the conference in order to be admitted to the lecture hall and other conference facilities. Name badges will be also required for the admission to the Gala Dinner.

**Oral presentations**

All oral presentations will be held in the Top Congress Hall.

Invited talks are scheduled for 22 minutes + 3 minutes for questions, contributed talks for 12 minutes + 3 minutes for questions. The talks in the “Trainbiodiverse” session will be for 10 minutes + 2 minutes for questions. Presentations should be prepared in Microsoft PowerPoint 2010-compatible format. The authors are responsible for checking the functionality of their presentations. The presenters’ computer will have an Internet access but we strongly recommend saving any web pages in the presentation offline. Speakers’ ready corner will be

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## **GENERAL INFORMATION**

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available to all speakers from the beginning of registration until the end of the day's program. The presentations should be submitted at latest one day before they are scheduled to the organizers in the Speakers' ready corner.

### **Poster presentations**

Poster presentations will be displayed in and around the Top Congress Hall. POSTER NUMBERS CORRESPOND TO THE PAGE NUMBERS IN THIS ABSTRACT BOOK. All posters will be displayed throughout the whole conference, from Sunday, November 29 until Thursday, December 3. The posters can be pinned up from 15:00 on Sunday and must be collected before 14:00 on Thursday. Pins will be provided by the organizers. Poster dimensions should not exceed 90 cm (width) x 150 cm (height). Posters with odd numbers will be presented by their authors during Poster session I (Monday), posters with even numbers during Poster session II (Tuesday). Presenting authors are requested to be available at their posters for informal discussion during their poster session.

The organizers are not responsible for any posters that have not been removed in time.

Student poster awards (100 EUR + diploma) will be awarded to five best posters presented by authors that are students. The winners will be announced on December 2 before Lunch.

### **Internet access**

Wireless internet will be available in the conference hotel free of charge to all participants.

### **Exhibitions**

Commercial exhibition will take place during the conference in the lobbies around the Top Congress Hall.

### **Refreshments**

Lunches (hot buffet, Monday - Wednesday) and coffee breaks (coffee and tea) are included in the registration fee. Lunches will be served in the Hall Praha, coffee will be served in the foyer. Name badges should be used during lunches and coffee breaks. Please note that „Ecology of Soil Microorganisms“ is a nonsmoking conference.

### **Wellcome reception**

All conference participants are cordially welcome to join the Welcome reception to be held on Sunday, November 29 from 19:00 till 21:30 in the Hall Praha. The reception is included in the registration fee.

### **Gala dinner**

Gala dinner will take place in the Hall Praha on Wednesday, November 2 between 19:15-22:15. Tickets ordered by the participants will be available at the registration desk. A limited number of tickets will be available for purchase at the registration desk for 1650 CZK.

### **Liability and Insurance**

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## **GENERAL INFORMATION**

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The organizer is not able to take responsibility whatever for injury, damage or loss involving persons and property during Conference. Participants are advised to take out their own personal travel and health insurance for their trip.

### **Public transport in Prague**

There are three metro lines and a number of tramway and bus lines in Prague. Details on city transport system are available at the official Prague Public Transport web site <http://www.dpp.cz/en/>.

#### **Tickets:**

Tickets are sold at yellow ticket machines (also in English, coins only), at ticket offices located at some metro stations, in newspapers stands, and at tourist information centers. Each ticket must be validated upon the entrance to the metro station or in the tram / bus to mark the start of the validity period.

**Tickets cost 24 CZK (30 min) or 32 CZK (90 min since validation).** It is possible to change between buses, trams and metro. This ticket is not valid on night trams and buses, on the Petřín funicular and on ferries. Ticket can be paid by SMS.

#### **Taxi**

You can find the contacts for recommended non-stop taxi call centres in Prague at the official website of Prague: <http://www.praguewelcome.cz/en/>

#### **Currency**

The currency is the Koruna (CZK). 1 EUR is approximately 28 CZK, 1 USD is approximately 25 CZK. Money can be exchanged at numerous exchange offices and in banks, as well as in some hotels, shops and restaurants, Euros can be often used as well (ask in advance). In most shops and restaurants, credit cards can be used.

#### **Emergency call**

112

#### **Call to the Czech Republic**

The international country code of the Czech Republic is 420 (dial either 00420 or +420 if not already included at the beginning of the telephone number).

#### **Electricity**

230 Volts/50 Hz, type E electrical outlet. You can buy plug converters in electronic stores.

#### **Imprint**

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## PRACTICAL INFORMATION

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### CONFERENCE VENUE AND SURROUNDINGS



- 1 – TopHotel Prague, conference venue
- 2 – Bus stop of bus 115 “Městský archiv”
- 3 – Bus stop of bus 115 “Chodov” going to the conference venue; transfer from / to metro line C, shopping centre

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## PRACTICAL INFORMATION

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### Sponsors, Exhibitors and Partners

Amplicon

Biologicals

British Mycological Society

FEMS Journals

Institute of Microbiology of the Czech Academy of Sciences

International Society for Microbial Ecology

International Union of Soil Sciences

Macrogen

Nature Publishing Group

MoBio

Pyroscience

Roche

Terragenome

Trainbiodiverse

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## SCIENTIFIC PROGRAMME

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### SUNDAY, 29 NOVEMBER 2015

12:00-16:30 *Registration*

#### Opening session (**Michael Schloter**)

16:45 **Welcome** - Petr Baldrian

17:15 **Keynote:** Michael Wagner: Nitrification revisited: The discovery of Comammox, cyanate-degrading nitrifiers, and reciprocal feeding

18:00 **Keynote:** Francis Martin: Unearthing the Roots of Fungal Symbioses

19:00-21:30 *Welcome reception*

### MONDAY, 30 NOVEMBER 2015

8:00-11:00 *Registration*

#### Microbial Life in Contaminated and Anthropogenic Soils (**Christoph Tebbe**)

8:45 Michael Schloter: Reconstruction of microbial nutrient cycles in soil using metagenomic approaches (Invited lecture)

9:10 Timothy Vogel: Microbial Social Networks in Contaminated Soils (Invited lecture)

9:35 Tomáš Cajthaml: Insights into ecology during microbial bioremediation as assessed through advanced techniques – case studies (Invited lecture)

10:00 Matthias Kästner: Degradation of  $^{13}\text{C}$ -labelled pyrene in soil-compost mixtures and farmyard fertilized soil – turnover mass balances and community analyses

10:15 Jennifer Wiltshire: Microbial community dynamics in the rhizosphere of a heavy-metal hyper accumulator

10:30 Anja Worrlich: Impact of mycelia-like dispersal networks on bacterial spatiotemporal dynamics linked to biodegradation at varying water potentials

10:45 Antonios Michas: Soil - sediment microbial community adaptation due to a long history of oil contamination

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## SCIENTIFIC PROGRAMME

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11:00 Anne Winding: Biochar for soil carbon sequestration and P fertilization: effects on microbes and fauna

11:15-11:45 Coffee

### Decomposition and Carbon Cycling (Christoph Tebbe)

11:45 Paolo Nannipieri: The microbial origin of humic substances (Invited lecture)

12:10 Ellen Kandeler: Microbial Colonisation and Resource Partitioning in Agricultural Soils (Invited lecture)

12:35 Björn Lindahl: Ectomycorrhizal fungi drive humus decomposition in boreal forest (Invited lecture)

13:00-14:30 Lunch

### Decomposition and Carbon Cycling (Lynne Boddy)

14:30 Rubén López-Mondéjar: What do they eat? Exploring the substrate-specificity of microbial communities in the decomposition of C sources in a forest soil

14:45 Annemieke van der Wal: Similar and contrasting patterns of natural fungal community assembly during initial decay of coniferous and broadleaf tree logs: an experimental common garden approach

15:00 Alexander Guhr: Redistribution of soil water by saprotrophic fungi enhances carbon mineralization

15:15 Ryan Williams: Elucidating microbial drivers of decomposition and the carbon cycle through a co-occurrence framework

15:30 Anders Tunlid: Spectroscopy and transcriptomics provide novel insights into soil organic matter decomposition mechanisms in ectomycorrhizal fungi

15:45 Pankaj Trivedi: Microbial regulation of carbon cycle: evidence from gene-enzyme relationship

16:00 Edith Hammer: Mycorrhizas: Pipeline or Director of Belowground C Fluxes?

16:15-16:45 Coffee

### Interactions among Micro- and Macroorganisms I (Lynne Boddy)

16:45 Angela Sessitsch: The Hidden World Within Plants: Ecological Considerations and Functioning of Microbial Endophytes (Invited lecture)

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## SCIENTIFIC PROGRAMME

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- 17:10 Jan Frouz: The effect of soil fauna in decomposition activity of soil microflora (Invited lecture)
- 17:35 Julia Stevens: Recruitment of a beneficial rhizosphere community by the common dandelion (*Taraxacum officinale*) from different soil types
- 17:50 Max-Bernhard Ballhausen: The sapro-rhizosphere concept: Bacteria as secondary consumers of plant-derived carbon
- 18:05-19:45 **Poster session I** (all posters with ODD numbers)

## TUESDAY, 1 DECEMBER 2015

### Biodiversity and Functioning of Forest Soils (Jan Dirk van Elsas)

- 8:45 Petr Baldrian: Forest microbiome - diversity, functioning and dynamics (Invited lecture)
- 9:10 Lynne Boddy: Giants of the soil microbial world: foraging cord-forming fungi (Invited lecture)
- 9:35 Martin Hartmann: A decade of irrigation transforms the soil microbiome of a semi-arid pine forest
- 9:50 Christina Hazard: Genotypic Diversity Matters: Examining the diversity-ecosystem function relationship with ectomycorrhizal fungi
- 10:05 Fabian Bergkemper: Phosphorus depletion in forest soils shapes bacterial communities towards phosphorus recycling systems

10:20-10:50 Coffee

- 10:50 David Myrold: Microbial Community Response to Timber Harvest (Invited lecture)
- 11:15 Leho Tedersoo: Tree diversity and sampling effects on soil fungi, protists and meiofauna as revealed by multiplex ITS metabarcoding (Invited lecture)
- 11:40 Hui Sun: Microbial community shifts in structure and potential function across a boreal forest fire chronosequence
- 11:55 Eva Weber: Unravelling the ecological function of abundant but uncultivated Thaumarchaeota in acidic forest soils

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## SCIENTIFIC PROGRAMME

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12:10 Katerina Soldanova: Can we keep using soil ribosomal RNA as indicator of microbial activity?

12:25-14:00 *Lunch*

### **Soil Biogeochemistry and Nutrient Cycling (Paolo Nannipieri)**

14:00 James Prosser: Bacterial ammonia oxidisers vs. archaeal ammonia oxidisers: who wins in soil, when and why? (Invited lecture)

14:25 Søren Sørensen: The communal gene pool in soil (Invited lecture)

14:50 Sara Hallin: Niche partitioning among  $N_2O$  reducing microorganisms and their importance as  $N_2O$  sinks

15:05 Dagmar Woebken: Combining stable isotope labeling experiments and single-cell analysis techniques to detect active microorganisms in soil

15:20 Constance Roco: The trajectories of denitrifier structure and function demonstrate remarkable differences in soil with a legacy of anoxic spells versus constant oxic conditions

15:35-16:15 *Coffee*

16:15 Jan Dirk van Elsas: The soil fungal-bacterial interactome - Mechanisms of interaction, with special emphasis on *Burkholderia terrae* (Invited lecture)

16:40 Jan Jansa: Arbuscular mycorrhizal fungi proliferate in patches of soil enriched with N-containing organic compounds

16:55 Marie Spohn: Do microbial carbon use efficiency (CUE) and the mean residence time (MRT) of microbial biomass depend on soil stoichiometry?

17:10 Natalie Lim: Regulation of nitrite concentrations in acidic and neutral pH soils by a combination of chemistry and complex bacterial community regulation: A study of kinetics and transcriptomics

17:25 Gu Feng: AM fungal hyphae exudates can prime a bacterium mediated phytate mineralization in hyphosphere

17:40 Joana Falcao Salles: Alien escape: impacts of bacterial invasions on soil microbial communities

18:00-19:40 **Poster session II** (all posters with EVEN numbers)

**WEDNESDAY, 2 DECEMBER 2015**

**Biodiversity and Functioning of Agricultural Soils (Jan Frouz)**

- 8:45 Christoph Tebbe: Microbiology of soil primary organo-mineral complexes and particulate organic matter (Invited lecture)
- 9:10 George Kowalchuk: Links between patterns of soil microbial diversity and sustainable soils (Invited lecture)
- 9:35 Michael Bonkowski: The diversity and functions of protists in soil: problems and progress (Invited lecture)
- 10:00 Dror Minz: What does the microbiome tell us about life in the plant root zone?
- 10:15 Wietse de Boer: Soil Volatile Organic Compounds: Microbial Competition Tools with High Potential for Control of Root-Infecting Pathogens
- 10:30 Germán Bonilla-Rosso: Evolution and Distribution Patterns of Nitrite Reductase (*nirK/nirS*) in Soil Metagenomes suggest Functional Differences Between Lineages
- 10:45 Frances Jones: The diversity of free-living, non-diazotrophic *Bradyrhizobium* from contrasting soils
- 11:00-11:30 Coffee
- 11:30 Zhong Wei: Biodiversity of synthetic microbial communities determines disease suppression
- 11:45 Gera Van Os: An indicator for disease suppression: linking soil chemistry to microbiology using dissolved organic carbon fractionation
- 12:00 Ameni Bahroun: Protozoa induce soil suppressiveness against *Fusarium* wilt

**Interactions among Micro- and Macroorganisms (Jan Frouz)**

- 12:15 Marc-André Selosse: Life strategy and life cycle of *Tuber melanosporum*: a pioneer hermaphrodite with high spore bank and functional dioecism (Invited lecture)

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## SCIENTIFIC PROGRAMME

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12:40 Mari Moora: Arbuscular mycorrhizal fungal communities: global and local patterns and their potential drivers (Invited lecture)

13:05 Aurelie Deveau: From mutualism to antagonism: iron acquisition during soil microbial interactions

13:20 David García de León Hernández: Can arbuscular mycorrhizal fungi drive vascular plant secondary succession in alvar grasslands?

13:35-15:00 *Lunch*

### **Trainbiodiverse – Exploring Soil Biodiversity across Europe (Søren Sørensen)**

15:00 Søren Sørensen: Introduction to TRAINBODIVERSE

15:12 Anne Schöler: DNA extraction methods have little impact on microbial community composition as assessed by amplicon sequencing

15:24 Barbara Bahnmann: Fungal communities across a mixed temperate forest: Are local site properties the most influential or does whose your neighbour matter?

15:36 Claudia De La Cruz Perera: Plasmid community adaptation in long-term copper contaminated soil as revealed by a comparative mobilome approach

15:48 Valentina Imparato: Dynamics of microbial communities in pre-exposed and pristine soils in response to high concentration of biochar

16:00 Inês Nunes: Coping with copper: Soil active bacterial communities following 100 years of exposure

16:12 Samuel Jehan Auguste Jacquinod: TBD

16:24 Irshad Ul Haq: Motility, stress responses and nutrients acquisition revealed by transcriptional profiling of *Burkholderia terrae* upon confrontation with a fungal host

16:36 Jean-Sebastien Beaulne: Large Scale Spatial Analysis of Bacterial Communities in Lake Sediments, the Role of Physico-Chemical Parameters, Spatial Distance, Land Cover and Tropical Storms

16:48 João Raimundo: Disentangling fine soil fauna-microbial interactions in mediating key soil processes under different land-use intensity systems and climate change scenarios

17:00-17:30 *Coffee*

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## SCIENTIFIC PROGRAMME

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- 17:30 Laura Sanguino : Using CRISPRs to learn about virus-host interactions in the environment
- 17:42 Maria de Vries: Phylogenetic and taxonomic diversity of glycoside hydrolase family 5 and 48-cellulase genes in agricultural soil
- 17:54 Salvador Lladó: Are the most abundant bacteria real key players in forest soil processes? A multi-omics approach
- 18:06 Shamina Pathan: Seasonal variation and distribution of total and active microbial community of  $\beta$ -glucosidase encoding genes in coniferous forest soil
- 18:18 Stephanie Jurburg: Autogenic succession in the soil microbial community
- 18:30 Susana Santos: Effects of land use on soil ciliate diversity
- 18:42 Sara Gallego: TBD
- 18:54 Divyashri Baraniya: Proteolytic soil communities and protease activity in rhizosphere of maize plants with different Nitrogen Utilizing Efficiencies(NUE)
- 19:15-22:15 Conference dinner

## THURSDAY, 3 DECEMBER 2015

### **Microbes in the Changing Environment (George Kowalchuk)**

- 8:45 Erland Bååth: Bacterial growth responses to drying/rewetting and freezing/thawing – a tale of two patterns (Invited lecture)
- 9:10 Christa Schleper: Zooming in on the Functional Heterogeneity of Ammonia Oxidizing Archaea in Arctic Soils (Invited lecture)
- 9:35 Kornelia Smalla: Plasmid-mediated adaptation of soil bacteria to pollutants (Invited lecture)
- 10:00 Johannes Rousk: A case-study for traits-based theory and prediction in microbial ecology: colonisation of sterilised soils across a pH gradient
- 10:15 Tim Urich: Metabolic and trophic interactions modulate methane production by arctic peat microbiota in response to warming
- 10:30 Christian Poll: Impact of climate change on carbon cycling and soil microorganisms in an arable ecosystem

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## SCIENTIFIC PROGRAMME

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10:45 Marc Buée: Ectomycorrhizal and non-symbiotic fungi respond differentially to climatic parameters: what is the link with host susceptibility to climate change?

11:00-11:30 Coffee

11:30 Jiří Bártá: Vulnerability of cryoturbated carbon to climate change

11:45 Belinda Ferrari: Metagenomic insights into microbes living in the cold, extreme polar desert soils of Eastern Antarctica

12:00 Mark Anthony: Plant invasion (garlic mustard; *Alliaria petiolata*) alters fungal community composition, increases fungal diversity, and shifts dominant fungal trophic strategy

### **Archaeomicrobiology, Paleomicrobiology and Microbial Forensics (George Kowalchuk)**

12:15 Bruce Budowle: Maturation of the Field of Microbial Forensics (Invited lecture)

12:40 Jeremy Austin: Predicting the origin of soil evidence: high throughput eukaryote sequencing and MIR spectroscopy applied to a crime scene scenario (Invited lecture)

13:05 Sandrine Demaneche: Microbial Soil Community Analyses for Forensic Science - Application to a Blind Test

**13:20-14:00 Conference closing**

LIST OF POSTERS

**Decomposition and Carbon Cycling**

90. Tobias Arnstadt - Log decay of *Fagus sylvatica* in temperate forests and the significance of lignin modifying enzymes for the degradation process
91. Chris Bamminger - Divergent effects of pyrochar and hydrochar on greenhouse gas emissions and microbial abundances in an arable soil
92. Andrea Burešová - Composition and activity of microbial community during decomposition of plant litter on two contrasting localities
93. Juliana Conceição - The management system can influence the physiological function and social interaction of phosphate solubilizing bacteria isolated rhizosphere of *Carica papaya* L.
94. Ivana Eichlerová - Decomposition traits and enzyme production of saprotrophic fungi are shaped by the combination of their ecophysiology and taxonomy
95. Lia del Pilar Fernández - Soil bacterial diversity from different animal settlements in maritime Antarctica
96. Damien Finn - Carbon and nitrogen co-metabolism and microbial nitrogen-mining both determine the extent of plant material decomposition in four Australian pasture soils.
97. Dimitrios Floudas - Evolutionary aspects of atromentin synthesis genes in Agaricomycetes
98. Diana Navrátilová - Spatial heterogeneity of decomposition and fungal community composition within single *Quercus petraea* leaves
99. Kevin Geyer - A comparison of methods for measuring the efficiency of microbial metabolism
100. Ton Gorissen - Uniformly  $^{13}\text{C}$ -Labelled Biomass Tracers - Advances in  $^{13}\text{C}$ -Techniques tracing changes in soil microbial processes and populations
101. Petra Havlíčková - Effects of plants on the structure, function and diversity of bacterial communities
102. Jussi Heinonsalo - Evidences on the ability of mycorrhizal genus *Piloderma* to use organic nitrogen and deliver it to Scots pine
103. Vincent Herve - Ecology and diversity of oxalotrophic bacteria - an in silico analysis
104. Björn Hoppe - Fungal functional diversity and enzyme activity patterns in decaying logs of 13 temperate tree species in an in situ decomposition experiment
105. Aicha Asma Houfani - Enzyme activities of aerobic (hemi)cellulolytic bacteria isolated from Algerian soils and compost
106. Dominika Chmolowska - Cellulose was decomposed faster in fallow soil than in meadow soil because of a quicker start of the process
107. Sarah Johnston - Fungus-Bacteria Interactions in Decomposing Wood
108. Grit Kabiersch - Detection of organotin compounds and degradation by litter-decomposing fungi
109. Katharina Keiblinger - Efficacy of biochar and compost on remediation of copper contamination in vineyard soils - effects on soil microbiology

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## SCIENTIFIC PROGRAMME

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110. Harald Kellner - Fungal research on an artificial deadwood decomposition experiment in the German Biodiversity Exploratories
111. Jaroslav Kukla - The influence of traditional agriculture on soil organic matter in tropical ecosystems of Papua New Guinea
112. Iuliia Kyiashchenko - The effect of soil fertility on fungal communities, enzyme activities and soil carbon dynamics in unmanaged forests
113. Sabrina Leonhardt - Fungal extracellular enzyme activity and biomass in coarse woody debris of 13 tree species in the early phase of decomposition.
114. Katya Litova - Studies on biodegradation of naphthalene and anthracene by *Aspergillus glaucus* strain isolated from Antarctic soil
115. Ashish Malik - Microbial communities' fungal to bacterial dominance alters carbon cycling in soil
116. Tomas Martin-Bertelsen - Towards linking fungal genes to chemical spectra from soil organic matter using machine learning
117. Tijana Martinović - Structure of microbial communities in the environmentally exposed construction wood samples of different species
118. Itamar Melo - Isolation and Screening of Highly Cellulolytic *Trichoderma* spp. from the Amazon Rainforest
119. Sophie Mieszkin - Effect of wood extractives on wood-degrading microorganisms and importance of the ecological niche
120. Karolin Müller - Turnover of Microbial Carbon in the Detritusphere
121. Cesar Nicolas Cuevas - Organic N decomposition by fungal community under fertilized spruce forest
122. Naoise Nunan - Carbon dynamics in Amazonian podzols under climate change
123. Michiel Op De Beeck - Soil organic matter degradation by ectomycorrhizal fungi
124. Tim Philpott - Fungal decomposition of fine roots in response to variable retention silviculture
125. Sebastian Preusser - Reciprocal Soil Transfer Experiments Improve the Understanding of Biological Regulation of Subsoil C-cycling
126. Salvador Rodríguez Zaragoza - Recovering of soil protozoan trophic groups after a strong pulse of hydrocarbon contamination
127. Mikhail Semenov - DNA-based determination of soil microbial biomass carbon under conditions of restricted applicability of substrate-induced respiration and fumigation-extraction
128. Sarker Mohammad Shakil - Characterization of Fe<sup>3+</sup> reductants secreted by the closely related ectomycorrhizal fungus *Paxillus involutus* and the saprotrophic fungus *Hydnomerulius pinastri* during Fenton-based decomposition of organic matter
129. Ana Margarida Soares - Bridging the priming effect into aquatic systems - Primary producer-C stimulates the fungal decomposition of submerged litter
130. Florian Strasser - Influences of carbon substrates and nitrogen availability on microbial-mediated cellulose degradation in an Austrian beech forest soil
131. Lucie Štercová - Fungal biodiversity of wood decomposing species in national nature reservation of Salajka
132. Rodrigo Taketani - Litter decomposition in mangroves - the role of microbes revealed by DNA and mRNA sequencing

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## SCIENTIFIC PROGRAMME

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133. Aloysius Teo - Using teabags to estimate decomposition rates across primary and secondary tropical forests, and investigating the functional role of termites
134. Vojtěch Tláskal - Linking deadwood age with inhabiting bacterial community
135. Tomas Větrovský - Sequence processing fast and easy - SEED a GUI based user friendly sequence editor and pipeline for high-throughput amplicon processing
136. Alexandra Wolf - Agro-ecosystem type and soil aggregate size impact soil carbon dynamics
137. Ilya Yevdokimov - Microbial immobilization and incorporation into DNA of inorganic  $^{33}\text{P}$ -labelled phosphorus
138. Lucia Žifčáková - Correlation of lignocellulolytic genes expression and their activity in ME fungal cultures

### **Soil Biogeochemistry and Nutrient Cycling**

139. Roey Angel - Optimizing the toolbox to investigate free-living diazotrophs in soil - from bulk measurements to single-cell analysis.
140. Doreen Babin - Effect of phenanthrene on the release of mobile organic matter and the bacterial community structure in soil
141. Paul Bodelier - Unexpected stimulation of soil methane uptake by bio-based residue application - An emerging property of agricultural soils offsetting greenhouse gas balance
142. Runa Boeddinghaus - Land-use intensity and physico-chemical soil properties have distinct effects on microbial communities and enzyme activities of grassland soils
143. Ivano Brunner - Shifts of C and N isotopes in fruiting bodies of fungi after 12 years of irrigation of a semi-arid pine forest
144. Elisa Catão - Ammonia oxidizers in a non-nitrifying Brazilian savannah soil
145. Maria Cucu - Different agricultural practices drive aerobic and anaerobic ammonia oxidisers niche segregation in a temperate paddy soil
146. Andreas Demey - Impact of bioavailable phosphorus on plant and soil microbial communities in grassland under restoration management
147. Stefan Forstner - How does long-term nitrogen input influence stoichiometric relationships between soil microbes and their resources?
148. Bo Fu - The effect of temperature on the carbon isotope value of acetate in Philippine rice field soil
149. Ahlam Hamim - Phosphate solubilizing microorganisms isolated from root and rhizosphere soil of ericaceous shrubs in the north of Morocco.
150. Christine Heuck - Soil microbial biomass C:N:P stoichiometry and microbial use of organic phosphorus
151. Jiezhong Chen - The Expression Analysis of Plasma Membrane Aquaporin Gene EjPIP2 in Eriobotrya japonica After AM Fungi Inoculation
152. María Irisarri - Do soil type, rice cultivar and water management affect the bacterial denitrifying community of a paddy soil?

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153. Sheku Kanu - Interactive effects of *Bacillus subtilis* and seaweed (kelpak) on the growth, metabolites and yield of potato (*Solanum tuberosum* L.) under glasshouse conditions
154. Késia Lourenço - Effect of regular or concentrate vinasse on greenhouse gases emissions from soil with sugarcane
155. Sven Marhan - Nutrient limitation of soil microorganisms - effects of grassland land-use intensity
156. Dora Neina - Restoring the functional integrity of a Technosol with native organic materials
157. Maximilian Nepel - Identifying potential key players of N<sub>2</sub> fixation in European biological soil crusts
158. Laurent Philippot - Recently identified microbial guild mediates soil N<sub>2</sub>O sink capacity
159. Frank Rasche - Lasting influence of biochemically contrasting organic inputs on abundance and community structure of total and proteolytic bacteria in tropical soils
160. Karolina Tahovská - Microbial activity in the context of acid deposition – field manipulations with sulphur and/or nitrogen inputs to the forest soils
161. Irina Tanuwidjaja - Influence of different clay minerals on the microbiome of soils and its functionality in simplified artificial systems
162. Cecile Thion - Predicting temporal and spatial variations in bacterial phylogenetic and phenotypic community structure in glacier forefield chronosequences
163. Yang Zhou - The functional profiles of soil microbial communities are determined by soil chemical properties but not community composition

### **Biodiversity and Functioning of Agricultural Soils**

164. Pilar Andrés - Effect of biochar application to soil on soil microbial communities structure and feeding habits - a field study in Mediterranean soils
165. Olubukola Babalola - Metal tolerant, plant growth promoting soil bacteria protected plants against the toxic effects of heavy metals (Cd, Cr, and Ni)
166. Guillaume BAY - Effects of cropping system, depth, and sampling time on soil microbial communities
167. Andrew Bissett - Effects of temporal pH shifts on ammonia oxidiser community structure and function
168. Ian Clark - Response of Bacterial and Archaeal nitrifying populations to changing landscapes
169. Benjamin Costerousse - Characterization of the bacterial processes responsible for zinc solubilization in wheat rhizosphere
170. Florine Degrune - The influence of soil tillage on microbial communities changes along the soil profile
171. Anderson Ferreira – Soil bacterial community under integrative production system at biomes savanna and Amazon
172. Davide Francioli - Rhizosphere microbiome, plant community and soil nutrient availability - a new approach to survey the bacterial assemblage in soil

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173. Mercedes García Sánchez - Digestate and fly ash applications in agricultural soils - impact in the biomass and biodiversity of fungal communities.
174. Aurelia Gebala - Does Land-Use Intensity Influence Microbial Resource Partitioning and Microbial Colonization Strategies of Organo-Mineral Complexes in Grassland Soils?
175. Mariangela Girlanda - Plant genotype control over the recruitment of the tomato fungal microbiota
176. Daniel Graf - Community assembly processes of N<sub>2</sub>O reducing prokaryotes in the rhizosphere- effect of edaphic factors and plant species
177. Yian Gu - Pathogen-induced shifts in exudation alter the rhizosphere microbiome
178. Moritz Hallama - Soil Microbial Phosphorus Dynamics are Affected by Cover Crops and Minimum Tillage
179. Penny Hirsch - Abundance and activity of soil microbial communities revealed by metagenomics and metatranscriptomics
180. Anna-Sofia Hug - Soil microbial diversity patterns at Sites of the Swiss Soil Monitoring Network
181. Christopher Jones - Field-scale spatial variation in co-occurrence patterns of ammonia and nitrite oxidizing communities.
182. Milko Jorquera - Exploring rhizobacterial community composition associated with plants grown in Chilean extreme environments using 16S rRNA-based molecular approaches
183. Hans-Martin Krause - Influence of soil management history on microbial N<sub>2</sub>O production and reduction
184. Iva Krizkova-Kudlikova - Characterization of Actinomycetes Antagonistic to Streptomyces spp.
185. Martin Krsek - Bead-beating and isolation of environmental nucleic acids
186. Volery Lara - Effects of management on soil microorganism communities in Swiss vineyards
187. Guillaume Lentendu - Alfalfa root symbionts under soil nutrient pressure - cooperation or competition?
188. Hongwei Liu - Activation of salicylic acid defence signalling pathway reduced Archaea abundance and genes involved in nitrogen and carbon cycling in wheat rhizosphere
189. Paweł Lycus - Newly isolated denitrifiers from low and high pH soil show little correlation between genotype and phenotype
190. Jarmila Makovníková – The potential of agroecosystem services in relation to land use and biodiversity
191. Lokeshwaran Manoharan - Enzymes related to organic matter degradation and agricultural management
192. Shinsuke Mori - Changes in the oxidation-reduction potential and in bacterial profiles in the soil around direct-seeded rice under submerged conditions
193. Esther Muema - Biochemically contrasting organic inputs combined with mineral nitrogen fertilizer shape the temporal variation of ammonia-oxidizing prokaryotic communities in an agricultural soil
194. Mary Musyoki - Soil type, season and crop growth stage exert a stronger effect on rhizosphere microbial dynamics than the fungal biocontrol agent *Fusarium oxysporum* f.sp. *strigae*

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195. Lidia Nicola - Fumigation with Dazomet modifies soil bacterial and fungal communities in soil of apple orchards affected by Specific Replant Disease
196. Ansa Palojärvi - Improved general plant pathogen suppressiveness by agricultural management practices
197. Martina Putz - Long-term nitrogen fertilization affects microbial communities regulating N<sub>2</sub>O emissions in arable soils
198. Vivian Rincon Florez - Impact of strategic tillage on nitrogen cycle genes (*amoA* and *nifH*) in no-till systems in Queensland, Australia
199. Jenna Ross - Isolation of a novel ammonia oxidising archaeon, representative of the Nitrososphaera 'sister' lineage
200. Suikinai Nobre Santos - Annotation of gene cluster Involved phenazine biosynthesis in Streptomyces CMAA 1322 also too structural elucidation of 1,6 dimethoxyphenazine.
201. Rumakanta Sapkota - Soil oomycete community structure association with cavity spot disease of carrot
202. Alise Senberga - Evaluation of Effectiveness of Rhizobia and Plant Interaction in Different Soil Types
203. Abhi Shah – Microbial activity along a continuous subsurface core from an agriculture field at the estuarine region of Mahi river: correlation with sediment characteristics
204. Hannes Schmidt - Diversity and spatial distribution of diazotrophs associated with micro-environments of wetland rice
205. Elvira Schnyder - Methanotroph diversity increases methane oxidation
206. Susanne Schreiter - Roots of decline? – The SARISA project
207. Magdalena Steiner - Microbial diversity and ecosystem functioning in vineyards
208. Nicolas Theodorakopoulos - Microorganism's enzymes implication in nitrous oxide emissions in a natural agricultural field at a fine time scale study
209. Maaike van Agtmaal - Exploring the phytopathogenic seedbank of agricultural soils - diversity of soil borne plant pathogens in relation to edaphic properties and the soil microbial community
210. Wu Xiong - Effects of black pepper-vanilla rotation on vanilla rhizosphere fungal communities in relation to Fusarium wilt disease
211. Tianjie Yang - Trophic network architecture of root-associated bacterial communities determines pathogen invasion and plant health
212. Qing Yao - The functional profiles of soil microbial communities are determined by soil chemical properties but not community composition
213. Judith Zimmermann - The biocontrol agent *Fusarium oxysporum* f.sp. *strigae* – its detection and effects on beneficial indigenous microorganisms in a maize rhizosphere
214. Josephine Zimudzi - The microbial communities associated with potato rhizosphere under different seasonal conditions in South Africa

### Biodiversity and Functioning of Forest Soils

215. Sarah Addison - Soil microbes and their importance in shaping our forests using qPCR

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216. Toke Bang-Andreasen - Responses in Active Microbial Communities and Expression of Important Functional Genes in Forest and Agricultural Field Soil after Wood Ash Addition Revealed by Metatranscriptomics
217. Tommaso Bardelli - Complex effects of altitude and exposure on microbial communities in (sub)alpine soils
218. Felipe Bastida - Landscape proteogenomics - explaining the functional-phylogenetic relationships of microbial communities by gradients of organic C availability in soil
219. Garazi Benito Carnero - Tree species effect on soil microbial community
220. Monique Carnol - Carbon substrate utilization and microbial biomass in European forest soils are related to tree species diversity
221. Carles Castaño Soler - Drying treatment of soil samples affects DNA recovery but does not change the fungal community structure by metagenomic analysis
222. Carla Cruz-Paredes - Using fungal and bacterial growth to evaluate the effects of ash application on forest soils
223. Timo Domisch - Winter in a changing climate affecting the survival of Scots pine seedlings
224. Beat Frey - Pyrosequencing based assessment of bacterial and fungal community compositions in compacted and regenerated forest soils
225. Anna Frymark-Szymkowiak - Soil  $\beta$ -Glucosidase activity under canopy of White Poplar in riparian forests.
226. Kezia Goldmann - Spatial variation of the fungal metagenome in temperate beech forests across Germany
227. Erika Gömöryová - Soil microbial community changes in the disturbed Norway spruce stands during a 10-years period
228. Sue Grayston - CH<sub>4</sub> and N<sub>2</sub>O microbial communities respond to site preparation and fertilization in wet forests
229. Michal Choma - Recovery of ectomycorrhizal community of a boreal forest after three decades of N fertilisation
230. Leticia Izquierdo - A new promising molecular marker to study the functional diversity of fungal communities - the glycosyl hydrolase 63 gene
231. Veronika Jílková - Methane flux in wood ant (*Formica polyctena*) nests and the surrounding forest floor
232. Jan Kopecký - Metabolite profiles of soil actinobacteria follow their phylogeny and environmental factors at the isolation sites
233. Diego Leiva Cáceres - Relations between *Peltigera* lichen's derived factors and its associated bacterial communities
234. Sandrine Malchair - Spatial variability of soil microbial processes in a temperate mixed forest
235. Oscar Martínez - Fungal communities associated with rhizosphere of *Nothofagus alpina* from different volcanic ash-derived soils in southern Chile
236. David Myrold - Development and Decline of Microbial Communities Associated with Ectomycorrhizal Mats
237. Pascal Nassal - The importance of fungal-fungal and bacterial-fungal interactions for phosphorus dynamics in forest soils
238. Mike Ogden - Fine scale modification of soil physical properties by fungi - reinforcement and repellency in the hyphosphere

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- 239. Jade O'Leary - Multi-dimensional mycelia interactions
- 240. Xavier Parlade – Dynamics of *Boletus edulis* extraradical soil mycelium and sporocarp production in managed forests
- 241. Taina Pennanen - Virus host switches between pathogenic, mycorrhizal and saprotrophic fungal species in a boreal forest
- 242. Camilla Pereira – Arbuscular mycorrhizal fungi in protected areas of northeastern Brazil
- 243. Diogo Pinho - A first look at the *Quercus suber* (cork oak) root microbiome - differences between healthy and declined trees
- 244. Flavia Pinzari - Overlap in the metabolic functions of cellulose-decomposing leaf litter fungi
- 245. Tereza Poláčková - Ecology of soil yeast communities in mixed temperate forest soils
- 246. Daria Rapoport - Isolation and cultivation of actinobacteria from acid soils with high occurrence of Trepon clade
- 247. Ana Rincón - Fire recurrence effects over the structure and activity of ectomycorrhizal fungal communities in Mediterranean pine forests
- 248. Alice Roy-Bolduc - High richness of ectomycorrhizal fungi and low host specificity in a coastal sand dune ecosystem
- 249. Minna Santalahti - Revealing sources of biological methane production in boreal upland forest
- 250. Outi-Maaria Sietiö - The effect of photosynthesis-derived C flow on the microbial community structure and enzymatic activities in boreal forest
- 251. José A. Siles - Archaeal, bacterial and fungal abundance and diversity along an altitudinal gradient in Alpine forest soils
- 252. Izabela Sondej - Impact of wild boar (*Sus scrofa*) rooting on the soil seed bank in Białowieża Forest.
- 253. Martina Štursová - Spatial heterogeneity of mountainous soil is associated with high beta diversity of microbial community
- 254. Martina Vašutová - Mycorrhizal community structure across an alpine tree line ecotone
- 255. Christina Weißbecker - Patterns of soil fungal communities in subtropical Chinese forests in relation to plant diversity

### **Interactions among Micro- and Macroorganisms**

- 256. Ina Alsina - The yield of onions and its quality depending on mycorrhiza inoculation
- 257. Lucas Braga – Earthworm-microbe interaction can be associated to less harsh conditions in green sugarcane systems
- 258. Ana Correia - Carbon source and availability influence the production of antimicrobial compounds
- 259. Alper Dede – Rhizosphere of olive tree: a source of plant growth promoting bacteria
- 260. Laila Dubova - The effects of michorhyza fungy on the tomatoe plant water retention ability
- 261. Iva Cholakova - Characterization of plant-associated bacteria isolated from highly drought tolerant *Pistacia lentiscus*

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- 262. Polina Ivanova - Antibiotic activity of actinobacteria associated with millipedes and earthworms
- 263. Xianwang Kong - Effects of the nitrification inhibitor 3,4-dimethylpyrazole phosphate (DMPP) on N<sub>2</sub>O emissions from clover residues and interaction with the earthworm *Lumbricus terrestris*
- 264. Tat'yan Kotova - Suppressive activity of the intestinal fluid of diplopods against yeasts
- 265. Ines Mandic Mulec - Kin discrimination between sympatric soil isolates of *Bacillus subtilis*
- 266. Lucas Mendes - The role of rhizosphere microbiome in soilborne fungal disease suppression in common bean
- 267. Anna Rawlings - Decay in the canopy
- 268. Ruth Schmidt - Microbial airborne talk - effect of fungal volatiles on bacteria
- 269. Ana Soares - Specificity and biotic local selection in *Streptomyces* interactions influences antimicrobial activity
- 270. Tamara Těšitelová - Two widespread green *Neottia* species (Orchidaceae) show mycorrhizal preference for *Sebacinales* in various habitats and ontogenetic stages
- 271. Sannakaisa Velmala - Function by form - a tentative insight to the link between growth and the diversity of ectomycorrhizal fungi
- 272. Zhihui Xu - Comparative proteomics analysis of *Bacillus amyloliquefaciens* SQR9 revealed the key proteins involved in in situ root colonization

### **Microbes in the Changing Environment**

- 273. Abdulmajeed Al Khajeh - Fish emulsion as a food base for halophilic actinomycetes promoting growth of *Salicornia bigelovii* in a sandy soil in the United Arab Emirates
- 274. Rana Shahbaz Ali - Effects of substrate complexity and temperature on growth of different microbial groups
- 275. Sawa ARAI - Carbon-starvation in light induced tolerance to hyperosmotic stress in purple photosynthetic bacterium *Rhodopseudomonas palustris*
- 276. Andrea Borsodi - Microbial communities inhabiting the rhizosphere of halophyton plants living nearby Hungarian soda lakes
- 277. Tabitha Bucher - Disturbance of the bacterial cell wall specifically interferes with biofilm formation
- 278. Cristina Cruz - Alleviating the N limitation expands the possibilities for structuring soil bacterial communities - evidence based on the impacts of 5 years' manipulation of N dose and form in a Mediterranean ecosystem
- 279. Jonathan De Long - Soil microbial and nematode communities respond differently to warming and plant functional group removal across a post-fire boreal forest successional gradient
- 280. Teresa Dias - Impacts of N enrichment on Mediterranean biological soil crusts community and functions - the unseen evidence from soil pigments
- 281. Francisco Dini-Andreote - Unveiling the blueprint of marine-terrestrial transition in bacterial adaptation and evolution

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282. Dana Elhottová - Bacterial antibiotic resistance heterogeneity in natural subterranean habitats
283. Huyuan Feng - Influences of Long-term Nitrogen Fertilization on Fungal Endophyte Community of Three Grasses in an Alpine Meadow
284. Nawras Ghanem - The transport of marine phages in soil as a tool of understanding the interaction of surface-subsurface events
285. Osnat Gillor - Hydration dynamics in desert soil mediate antagonism of actinobacteria
286. Sydney Glassman - Ectomycorrhizal fungal spore bank recovery after a severe forest fire: Some like it hot
287. Catarina Gouveia - Effect of Increased N availability on Ammonium oxidizing bacteria populations – A possible Bioindicator in Mediterranean ecosystem
288. Kelly Gravuer - Phylogenetic estimation of ecologically important traits illuminates microbial community responses to change in natural and agro-ecosystems
289. Stefan Green - Methodological Improvements to Amplicon-Based Surveys of Microbial Community Structure
290. Jeremiah Henning - Fungi on mountainsides - contrasting elevational and seasonal patterns among root-associated fungal groups.
291. Andreas Herrmann - Spatial and seasonal variability of the microbial community in forest fen soils on North-East-Germany
292. Jana Judova - The Contingency of some Biotic and Abiotic Parameters in Arable Land and Permanent Grasslands
293. Tatiana Khomutova – Characterization of microbial pool in sub-kurgan paleosols of different ages in desert-steppe zone in relation to the holocene dynamics of climate
294. Sara König - Hot spots and cold spots – modelling biodegradation dynamics under disturbance regimes
295. Ramóna Kovács - Characterization of mycorrhizosphere in a Hungarian saline-sodic grassland
296. Anna Kuznetsova - The first study of actinomycetes complexes in Prietonie region soil
297. Xiaofei Lyu - Soil bacterial community along a successional series of tidal flats in the Yellow River Delta
298. Aurora MacRae-Crerar - Ecological determinants of soil bacterial community structure across multiple scales in a Mongolian global change experiment
299. Marta Misiak - Soil fungal responses to warming in polar regions
300. Luis Morgado - Compositional shifts in arctic ectomycorrhizal fungal community in response to long-term increased snow depth in Northern Alaska
301. Eric Morrison - Soil warming changes litter chemistry and fungal community composition but not decomposition rate
302. Sally Otto - Catch me if you can – The impact of mycelia-based dispersal on predator-prey interactions and biodegradation of soil contaminants
303. Prashant Pant - 16S rRNA gene family based microbial typing of rhizospheric communities of a native legume *Alysicarpus vaginalis* (L.), fam. Fabaceae.
304. Elizaveta Pershina - Looking for the core microbiome of the main types of soils in Russia
305. Kristin Rath - The influence of salinity on saprotrophic fungi and bacteria in soil
306. Klára Řeháková - Potential activity of microbial community in the Biological Soil Crusts

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- 307. Nermina Saronjic - How do soil microbial communities react on droughts and heavy rainfall events?
- 308. Philipp-André Schmidt - Response of Soil Fungal Communities to Extended Drought
- 309. Frank Solano-Campos - Preliminary data of soil nematode communities along a rainfall gradient in Costa Rica.
- 310. Afnan Suleiman - Active microbial community resilience in disturbed soil with nitrogen source enrichment and nitrification inhibitor
- 311. Tibor Szili-Kovács – Genetic diversity and catabolic activity profiles of rhizosphere bacterial communities during dry and wet seasons in a solonchak grassland, Hungary
- 312. Alexandra Šimonovičová - Spatial distribution of microscopic fungi under old environmental burdens
- 313. Adam Šťovíček - Bacterial response to rainfall and draught cycles in desert soil
- 314. Daniela Trojan - Investigating the ecophysiology of the ubiquitous Acidobacteria in the dynamic soil environment
- 315. Tushar Yadav - Effect of Cosmetic Based Nanowaste on Sludge and Soil Microflora
- 316. Baogui Zhang - Response characteristics of soil microorganism to permafrost degradation in the upstream regions of the Shule river basin, Qinghai-Tibetan Plateau
- 317. Junling Zhang - Unexplored Biodiversity and Function of arbuscular mycorrhizal fungi on the Tibetan Plateau

### **Microbial Life in Contaminated and Anthropogenic Soils**

- 318. Valeria Ancona - Microbiological indicators to evaluate soil quality of degraded areas in Southern Italy after compost addition
- 319. Thomas Banitz - Spatial metrics indicate bacterial degradation benefits from mycelial networks
- 320. Angelantonio Calabrese - Use of molecular techniques to characterize the microbial communities for soil ecology assessment in degraded sites.
- 321. Juan Campos - Soil dehydrogenase activity under the presence of some exobiotics. A toxicity index is proposed.
- 322. Stefano Covino - A pyrosequencing-based metagenomic study of microbial communities during co-composting of creosote-impregnated wood and green wastes
- 323. Sabrina Festa - Monitoring the impact of bioaugmentation with a PAH-degrading strain on different soil microbiomes using pyrosequencing
- 324. Alena Filipová - A novel bioaugmentation approach for PAH-degrading bacteria in soil: Adaptability as assessed by molecular biology techniques
- 325. Fanny Flores - Microbial activity of chromium polluted soil from Guanajuato México, during in situ biostimulation assay.
- 326. Ulrike Gerber - Interactions of natural occurring eukaryotic microorganisms with uranium(VI)
- 327. Paola Grenni - Effects of compost addition and *Medicago sativa* occurrence on PCB biodegradation in a historically contaminated soil

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- 328. Anna Grobelak - The possible application of microorganisms in promoting plant growth and improving plant biomass in the phytoremediation of anthropogenic and contaminated soils
- 329. María Gutiérrez Núñez - Non-target effects of pesticides on the microbial activity in agricultural soil
- 330. Lenka Harantová - Factors influencing microbial community development during primary succession on spoil heaps after brown coal mining
- 331. Karin Hellauer - Sequential managed aquifer recharge leads to a high diverse microbial community resulting in a better attenuation of moderate degradable trace organic chemicals (TOrC)
- 332. Anne Houles - Ecological restoration of nickel mine sites in New Caledonia - Characterisation of ectomycorrhizal fungal community the key enabling the monitoring of facilitation process between plants.
- 333. Alica Chroňáková - Boreal acid sulphate soils – changes in bacterial communities along vertical profile and between total and active pools
- 334. Inge Jambon - Bioremediation of chlorendic acid, a highly chlorinated organic pollutant, by exploiting a fungal-bacteria consortium native to the contaminated field
- 335. Michal Kaminski - Omics approach in analysis of *Pseudomonas mandelii* ssp. capable of bioaccumulating hexachlorocyclohexane
- 336. Hülya Kaplan - Diversity of bacteria involved in <sup>13</sup>C-labelled wheat root decomposition and efflux-mediated metal resistance in metal contaminated soils remediated with amendments
- 337. Paweł Krawczyk - Bioinformatic approach to analysis of plasmid pool in metagenomes from polluted soils
- 338. Jennifer Mesa Marin - Ecology of soil bacteria in bioremediation - indigenous plant growth promoting rhizobacteria in native *Spartina maritima* as a tool for the restoration of heavy metal polluted salt marshes
- 339. Zuzana Michalková - Interactions of nano zerovalent iron with *Acidithiobacillus ferrooxidans* – Implications for soil remediation
- 340. Annett Mikolasch - Oil-degrading bacteria isolated from the rhizosphere of plants growing in oil-contaminated soils from Kazakhstan
- 341. Irma Morelli - Pyrosequencing reveals bioaugmentation impact on the dynamics of bacterial community on phenanthrene-contaminated soil
- 342. Marta Moreno Valencia - Effect of olive and vine wood ashes on the dehydrogenase activity in a crop land.
- 343. Martina Plačková - Bacterial community characteristics under decades-lasting antibiotics selection pressures
- 344. Thomas Pommier - Response of soil microbial community to titanium dioxide nanoparticles - a cascading pitch on the nitrogen cycle
- 345. Pavla Průchová - Composition and activity of microbial communities in soil contaminated by heavy metals
- 346. Rashmi Saikia - Influence of sources of carbon in growth media on the yield of biosurfactant by the microbe isolated from crude oil contaminated soil
- 347. Hokyung Song - Abandoned tropical tin mine site shows changes in microbial community with restoration

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- 348. Gangavarapu Subrahmanyam - Abundance and diversity of ammonia oxidizing archaea and bacteria in long-term industrial effluent polluted soils, Gujarat, Western India
- 349. Karel Švec - Composition of fungal and bacterial communities in mercury polluted areas
- 350. María Touceda-González - Molecular characterization of the rhizobacterial communities of two Ni-hiperaccumulating subspecies of *Alyssum serpyllifolium* endemic to the Iberian Peninsula.
- 351. Gustavo Valdecantos - Biotic and abiotic factors affect the colonization and the dynamics of bacterial community assemblage in irradiated soil microcosms
- 352. María Vásquez Murrieta – Metal tolerance and biosorption potential of endophytic fungi isolated from Bahia absinthifolia
- 353. Carl-Eric Wegner - Persisting in slag – insights into aluminium resistance from early industrial mineral leaching
- 354. Franco Widmer - Effects of different nanoparticles on soil microbial community structures and plant-microbe interactions
- 355. Yucheng Wu - Responses of Thaumarchaeotal community in agricultural soils to acidification and polycyclic aromatic hydrocarbons contamination
- 356. Lijuan Yan - Comparative phylogenetic analysis of bacterial community dynamics during multi-year bioremediation of oil-contaminated soil in a boreal climate

### **Archaeomicrobiology, Paleomicrobiology and Microbial Forensics**

- 357. Cecile Gubry-Rangin - Molecular adaptation of the ammonia monooxygenase amoA gene during the ancient and rapid diversification of terrestrial Thaumarchaeota
- 358. Eline van Asperen - Establishing dung fungal spores as a proxy for herbivore abundance - an experimental approach