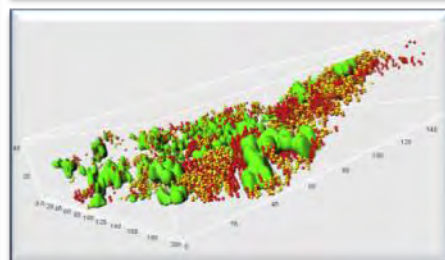
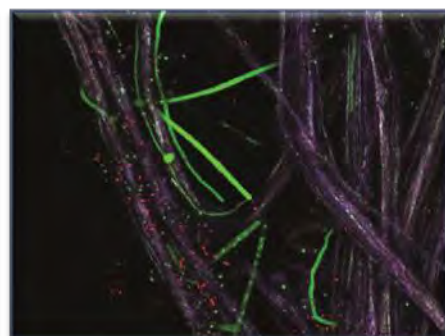


IOBC/WPRS Working Group

"Biological control of fungal and bacterial plant pathogens"

Climate change: challenge or threat to biocontrol?



June 7-11, 2010, Graz, Austria

www.envirochange.eu/english/events_iobc.html

IOBC 2010 in Graz - Final Program

Monday 7 June 2010

TU Graz, Rechbauerstraße 12, 8010 Graz
Aula (first floor, room AT01002)

Afternoon Arrival of participants to Graz

16:00 – 20:00 Registration Desk Open and Poster Set-up (Foyer and corridor)

Opening Session

17:00 – 17:05 Opening Gabriele Berg (Graz, Austria)

17:05 – 17:15 Welcome Rector Univ.Prof.Dipl.Ing.Dr.Hans Sünkel, TU Graz
 Dean of of the Faculty of Technical Chemistry, Chemical & Process Engineering and Biotechnology, TU Graz Prof. Dr. Frank Uhlig

17:15 - 18:15 Key note speakers: Linda Thomashow & David Weller (Pullman, USA)
“Impact of changing management practices and environments on soil-borne plant pathogens of small grains and disease suppression by introduced and indigenous biocontrol agents” (T1)

18:15 – 18:30 IOBC presentation Ilaria Pertot (San Michele, Italy)

18:30 – 20:00 Social: Welcome Reception (Buffet provided)

Tuesday 8 June 2010

TU Graz, Rechbauerstraße 12, 8010 Graz
Foyer / Lecture room 2 (basement, room ATK 1008 H)

8:30 – 12:30

Session 1: Climate change, biocontrol and integrated plant disease management

Chairs: Ilaria Pertot & Yigal Elad

08:30 – 09:00 Key note speaker: Sylvia Blümel (Vienna, Austria)
“Climate change and plant health - increasing importance of biocontrol options for risk management of quarantine pests” (T2)

09:00 – 09:30 Yigal Elad (Bet Dagan, Israel)
“Climate change effect on plant – pathogen – beneficial microorganisms interaction in high humidity-promoted tomato diseases” (T3)

09:30 – 09:50 Willem Ravensberg (Berkel en Rodenrijs, The Netherlands)
“Is the climate really changing in favour of biopesticides?” (T4)

- 9:50 – 10:10 Ilaria Pertot (San Michele, Italy)
“Effect of temperature on microbial biocontrol agents of plant diseases” (T5)
- 10:10 – 10:30 Ulrike Sammer (Jena, Germany)
“Pantoea agglomerans 48b/90 suppresses bacterial plant pathogens in a wide temperature range in planta” (T6)
- 10:30 – 11:00 *Tea/Coffee Break***
- 11:00 – 11:30 Key note speaker: Blanca B. Landa (Cordoba, Spain)**
“Climate change, biocontrol and integrated plant disease management: Problems and perspectives of biocontrol under Mediterranean conditions” (T7)
- 11:30 – 12:00 Key note speaker: Michael Schloter (Neuherberg, Germany)**
“Impact of elevated atmospheric O₃ on the actinobacterial community structure and function in the rhizosphere of European beech (Fagus sylvatica L.)” (T8)
- 12:00 – 12:15 Sabine Zitzenbacher (Graz, Austria)
“New disease in Styrian oilseed pumpkin: analysis and suppression” (T9)
- 12:15 – 12:30 Essaid Ait Barka (Reims, France)
“Priming Vitis vinifera L. with plant growth promoting Burkholderia phytofirmans strain PsJN enhances its acclimation to low non-freezing temperatures” (T10)
- 12:30 – 14:00 *Lunch provided***
- 14:00 – 17:30**
- Session 2: New bio-resources and techniques for biocontrol**
- Chairs: Gabriele Berg & Kornelia Smalla
- 14:00 – 14:45 Key note speaker: Kornelia Smalla (Braunschweig, Germany)**
“The use of molecular tools to unravel the complex interaction of biological control strains, pathogens and indigenous microbial communities” (T11)
- 14:45 – 15:00 Jürgen Köhl (Wageningen, The Netherlands)
“Screening criteria for the development of commercial products for biocontrol of plant pathogens” (T12)
- 15:00 – 15:15 Martin Kirchmair (Innsbruck, Austria)
„Endophytes of grapevine as potential control agents against fungal vine diseases” (T13)
- 15:15 – 15:30 Joeke Postma (Wageningen, The Netherlands)
“Biological control of Rhizoctonia solani by stimulation of naturally present antagonistic Lysobacter spp.” (T14)
- 15:30 – 16:00 *Tea/Coffee Break***

- 16:00 – 16:30** **Key note speaker: Christian Kubicek (Vienna, Austria)**
“Genomic and transcriptomic insights into the mycoparasitic lifestyle of Trichoderma biocontrol strains”(T15)
- 16:30 – 16:45 László Kredics (Szeged, Hungary)
“SCAR marker-based PCR primers for the specific detection of a T. harzianum strain with the potential to control rice sheath blight” (T16)
- 16:45 – 17:00 Christin Zachow (Graz, Austria)
“Cooperating bacterial and fungal biocontrol strains with beneficial interactions in sugar beet rhizosphere” (T54)
- 17:00 – 17:15 Jordi Cabrefiga (Gerona, Spain)
“Effect of nutrient amendment and osmoadaptation in blossom colonization of pome fruit trees and efficacy of biocontrol of E. amylovora” (T18)
- 17:10 – 17:30 Habazar Trimurti (Padang, West-Sumatra)
“In planta technique, for screening rhizobacteria as biocontrol agents against bacterial plant pathogens” (T19)
- 17:30 – 18:30** **Poster Session**
- 20:00 – 24:00** **Conference Dinner at Landhauskeller (www.landhauskeller.at)**
 Welcome Kristina Edlinger-Ploder, Minister of Styrian Government (Graz, Austria)

Wednesday 9 June 2010

TU Graz, Rechbauerstraße 12, 8010 Graz
 Foyer / Lecture room HS1 (basement, room ATK 1120)

8:30 – 12:30

Session 3: Molecular mechanisms and signaling in biocontrol

Chairs: Monika Maurhofer & Christin Zachow

- 08:30 – 09:15** **Key note speaker: Leo Eberl (Zürich, Switzerland)**
“Cell-to-cell communication controls biocontrol activities in members of the Burkholderia cepacia complex (Bcc)” (T20)
- 09:15 – 09:30 Leonid Chernin (Jerusalem, Israel)
“Rhizospheric bacteria that suppress crown gall disease produce volatiles which inhibit Agrobacterium growth” (T21)
- 09:30 – 09:45 Isabel Mora (Gerona, Spain)
“Distribution of antimicrobial peptide biosynthetic gene markers in plant-associated Bacillus spp. and relationships with antagonistic activity against bacterial plant pathogens” (T22)

- 09:45 – 10:00 Gholamreza Salchi Jouzani (Karaj, Iran)
“Evaluation of anti-phytoplasma properties of surfactin derived from Iranian native Bacillus subtilis strains using real time PCR technique” (T23)
- 10:00 – 10:15 Marc Ongena (Liege, Belgium)
“Modulation of the lipopeptide pattern secreted by Bacillus subtilis upon colonization of different plant roots” (T24)
- 10:15 – 10:30 Monika Maurhofer (Zürich, Switzerland)
„Insecticidal activity in root-associated, plant-beneficial pseudomonads” (T25)
- 10:30 – 11:00 Tea/Coffee Break**
- 11:00 – 11:30 Key note speaker: Matteo Lorito (Neapel, Italy)**
„From ‘omics to the field: functional genomics and implementation models of Trichoderma BCAs” (T26)
- 11:30 – 11:45 Susanne Zeilinger (Vienna, Austria)
“Role of G protein signalling in host sensing of the mycoparasite Trichoderma atroviride” (T27)
- 11:45 – 12:00 Rainer Schuhmacher (Vienna, Austria)
“Volatile secondary metabolites of the biocontrol fungus Trichoderma atroviride: Profiling by HS-SPME-GC-MS” (T28)
- 12:00 – 12:15 Lorenzo Tosi (San Michele, Italy)
„Identification of Ampelomyces quisqualis genes involved in the early stage of mycoparasitism (host recognition) of powdery mildew” (T29)
- 12:15 – 12:30 Samir Droby (Bet Dagan, Israel)
“Involvement of ROS in mechanism of action of yeast biocontrol agents of postharvest diseases” (T30)
- 13:00 – 22:00 Excursion to Styria (Lunch packet provided): meeting point
 Rechbauerstraße 12
 Dinner at Buschenschank Thaller (www.thaller-wein.at)**

Thursday 10 June 2010

TU Graz, Rechbauerstraße 12, 8010 Graz

Lecture room HS1 (basement, room ATK 1120)

8:30 – 13:00

Session 4: Biocontrol agents: Ways to commercialization

Chairs: Helmut Junge & Henry Müller

- 08:30 – 09:00 Key note speaker: Jana Monk (Christchurch, New Zealand)**
“How to deliver beneficial microbes” (T31)

09:00 – 09:20	Rainer Borris (Berlin, Germany) <i>“Experiences in applying Bacillus-based biocontrol agents in Chinese agriculture” (T32)</i>
09:20 – 09:40	Philippe Nicot (Montfavet, France) <i>“Review of factors influencing the success or failure of biocontrol: technical, industrial and socio-economic perspectives” (T33)</i>
09:40 – 10:00	Jaqueline Süß (Lamstedt, Germany) <i>„Registration of plant protection products containing micro-organisms in the EU – changes through the new Regulation 1107/2009” (T34)</i>
10:00 – 10:15	Jolanta Levenfors (Uppsala, Sweden) <i>“Practical use of beneficial rhizosphere bacteria in crop production” (T35)</i>
10:15 – 10:30	Verena Niedermayr (Innsbruck, Austria) <i>“Mass production of ecologically competent Metarhizium anisopliae spores for pest management” (T36)</i>
10:30 – 11:00	Tea/Coffee Break
11:00 – 11:30	Key note speaker: Ben Lugtenberg (Leiden, The Netherlands) <i>„Bacteria controlling cucumber foot and root rot and promoting growth of cucumber plants in salinated soils” (T37)</i>
11:30 – 11:45	Rosario Torres (Lleida, Spain) <i>„Osmotic and heat stress combination improves survival of Pantoea agglomerans CPA-2 cells after fluidized bed drying” (T38)</i>
11:45 – 12:00	Rita Grosch (Großbeeren, Germany) <i>„Effect of fungal and bacterial bio-control strains and Rhizoctonia solani on indigenous microbial community in the lettuce rhizosphere” (T39)</i>
12:00 – 12:15	Andreas von Felten (Zürich, Switzerland) <i>„Impact of a microbial consortium on the native Pseudomonas and mycorrhizal community in the rhizosphere of nine different maize genotypes” (T40)</i>
12:15 – 12:30	Jessica Vallance (Brest, France) <i>„Genetic structure and dynamics of the microbial communities colonizing the rhizosphere and the effluents of hydroponic tomato plants after the introduction of the biocontrol agent Pythium oligandrum” (T41)</i>
12:30 – 12:45	Karin Hage-Ahmed (Vienna, Austria) <i>“The effect of Fusarium oxysporum f. sp. lycopersici and the arbuscular mycorrhizal fungus Glomus mosseae on tomato (Solanum lycopersicum L.) intercropped with cucumber (Cucumis sativus L.)” (T42)</i>
12:30 – 12:45	Henry Müller (Graz, Austria) <i>“All over the plant - Microbial products for enhanced health, fitness and quality” (T43)</i>
13:00 – 14:00	Lunch

14:00 – 16:00

Session 5: Short overview about new biocontrol studies

Chairs: Eckehard Koch & Jana Monk

- 14:00 – 14:10 Eckehard Koch (Darmstadt, Germany)
*„Biology of black rot of grapevine (*Guignardia bidwellii*) and approaches towards its control by non-chemical methods” (T44)*
- 14:10 – 14:20 Markus Neureiter (Vienna, Austria)
*“Isolation, characterisation, and identification of antagonistic bacteria against *Fusarium head blight*” (T45)*
- 14:20 – 14:30 Suswati (Medan, Indonesia)
„Biological control of blood disease bacterium pathogen in banana cv. kepok by using mycorrhizal arbuscular fungi indigenous in BDB” (T46)
- 14:30 – 14:40 Sigrid Neuhauser (Innsbruck, Austria)
*“Control of *Plasmodiophora brassicae* – literature review and future prospects” (T47)*
- 14:40 – 14:50 Caterina Matasci (Nyon, Switzerland)
“Powdery mildew on cereals – an increasing problem in triticale cultures” (T48)
- 15:00 – 15:10 Christina Schuster (Darmstadt, Germany)
*“Control of downy mildew on cucumber (*Pseudoperonospora cubensis*) by plant extracts and a bacterial preparation” (T49)*
- 15:10 – 15:20 Alba Marina Cotes (Bogota, Colombia)
*“Evaluation of naturally occurring *Pseudomonas* spp. and a biopesticide based on *Trichoderma koningiopsis* as potential biological control agents of *Olpidium virulentus* in Figue *Furcraea* spp.” (T50)*
- 15:20 – 15:30 Yael Meller-Harel (Bet Dagan, Israel)
“Induced systemic resistance to disease in plants by biochar” (T51)
- 15:30 – 15:40 Fatimah (Padang, West Sumatra)
*“Mechanisms physiology induction resistance chilli with inoculation isolate *Pseudomonas fluorescens* to anthracnose diseases (*Colletotrichum capsicum*)” (T52)*
- 15:40 – 15:50 Doris Pester (Vienna, Austria)
“Acidic pH supports efficient antagonist-based control of the bacterial plant disease fire blight” (T53)
- 15:50 – 16:00 Dario Angeli (Zürich, Switzerland)
*“Selecting highly effective strains of *Ampelomyces quisqualis* for the control of powdery mildews”*
- 17:00 – Open End Visiting of the Institute of Environmental Biotechnology, Petersgasse 12 (A)
Barbecue at the terrace of the chemistry building, Stremayrgasse 16 (B)**

Excursion

A) TU Graz

Rechbauerstraße 12, A-8010 Graz

B) Thaller Buschenschank and vineyard

East of Styria "Thermenland", Maierhofbergen 24, A-8263 Großwilfersdorf, Tel. +43 (0) 33872924, Email: koarl@weingut-thaller.at



C) Zotter chocolate company

East of Styria, south east of Graz; Bergl 56, A-8333 Riegersburg, Tel. +43 (0) 315255422, Email: schokolade@zotter.at

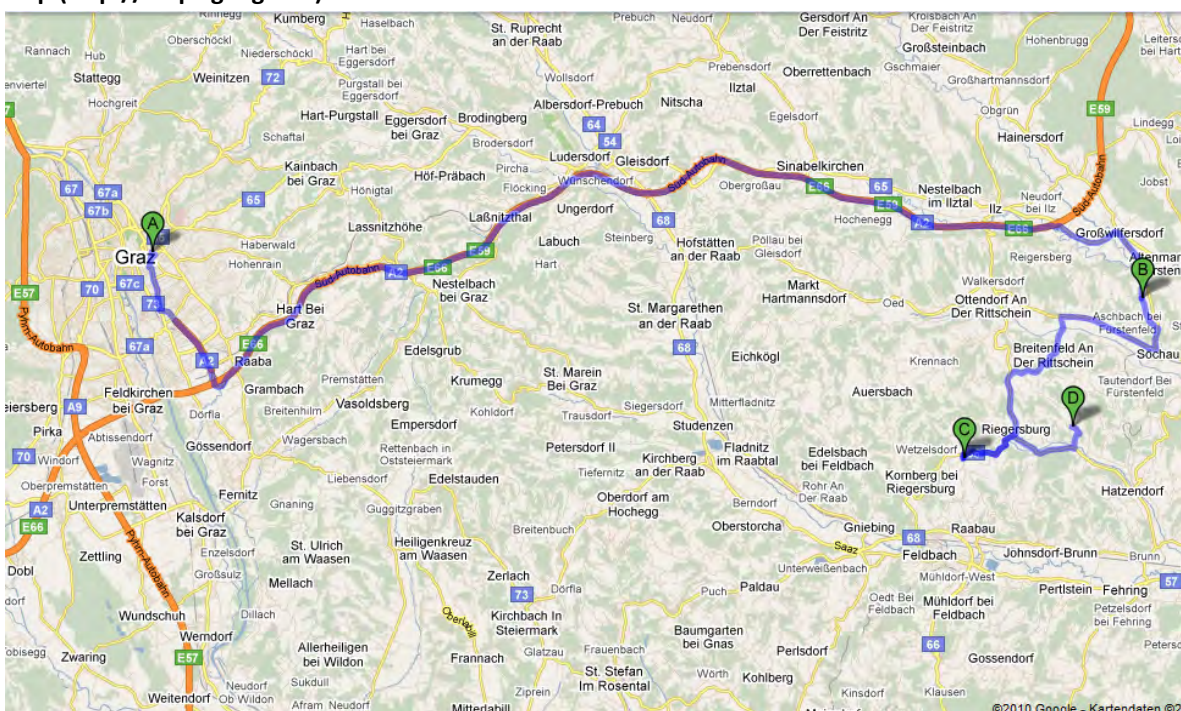


D) Gölles Schnaps Distillery & Vinegar Production

East of Styria, south east of Graz; Stang 52, A-8333 Riegersburg, Tel. +43 (0) 315375530, Email: obst@golles.at



Map (<http://maps.google.at>)



Posters

P 1: Rudi Aerts, Bjorn Seels, Liesbeth Vogels, Tom Beyers, Kathleen Heyens. **Screening of new *Trichoderma* spp. isolates**

P 2: Falih H Saeed, Hadi M Aboud, Usama A Alwan, Husain N Kashmer. **The effect of *Trichoderma harzianum* on delivery systems in enhancing in enhancing seeds germination and seedlings growth of sour orange (*Citrus aurantium*)**

P 3: Dario Angeli, Monika Maurhofer, Susanna Micheli, Cesare Gessler, Ilaria Pertot. **Influence of temperature on morphology and physiology of different isolates of *Ampelomyces quisqualis***

P 4: Dario Angeli, Monika Maurhofer, Cesare Gessler, Ilaria Pertot. **Selecting highly effective strains of *Ampelomyces quisqualis* for the control of powdery mildews**

P 5: Birgit Antlinger, Sabine Fruehauf, Marc Lemmens, Rudolf Braun, Markus Neureiter. **Microbial diversity and populations-dynamics of the wheat phyllosphere analysed by denaturing gradient gel electrophoresis (DGGE)**

P 6: Shcherbakov A, Kuzmina E, Chebotar V. **Microorganisms associated with *Sphagnum* mosses as perspective objects for agricultural microbiology**

P 7: Fadeeva M, Shcherbakov A, Chebotar V. **Study of interaction between toxigenic fungi and endophytic bacteria in the wheat grain for development of the methods for control of toxigenic infections and production of high quality foodstuffs**

P 8: Shashidar Yadav Asari, Sarosh Bejai, Johan Meijer. **Priming – an eco-friendly strategy to improve abiotic stress tolerance of oilseed rape (*Brassica napus*)**

P 9: Lea Atanasova, Walter M Jaklitsch, Monika Komon-Zelazowska, Christian P Kubicek, Irina S Druzhinina. **A new cellulase producing species *Trichoderma parareesei* nom. prov. reveals high antagonistic potential against soil and plant pathogenic fungi**

P 10: Essaid Ait Barka, Stéphane Compant, Fabienne Bailleul, Christophe Clément. **The induction of resistance in inflorescences of *Vitis vinifera* L. by *Burkholderia phytofirmans* strain PsJN against *Botrytis cinerea* Pers.**

P 11: Astrid Bauer, Peter Büttner, Michael Schloter, Luitgardis Seigner. **Field studies of epidemiological development of *Fusarium* sp. in wheat during growing period and in harvested crops with molecular methods**

P 12: Élide B Corrêa, José Abrahão H Galvão, Wagner Bettiol. **Biological control of root rot caused by *Pythium aphanidermatum* and growth promotion in hydroponic cucumber with microorganisms from mangrove**

P 13: Marcelo AB Morandi, Carlos EO Silva, Lúcio B Costa, Wagner Bettiol. ***Coniothyrium minitans* reduce the emission of apothecia of *Sclerotinia sclerotiorum***

P 14: Livia Mendes, Raquel Ghini, Wagner Bettiol. **Effects of elevated atmospheric carbon dioxide on the biological control of coffee leaf rust**

P 15: Harlen SA Silva, João PL Tozzi, César RF Terrasan, Wagner Bettiol. **Endophytic microorganisms isolated from coffee leaves, roots and branches as plant growth promoters and biocontrol agents of coffee leaf rust**

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- P 16: Bisutti Isabella Linda, Stephan Dietrich. **Biocontrol activity of different *Pseudomonas* spp. against *Verticillium dahliae* microsclerotia**
- P 17: Bonilla N, Landa B, Hermoso JM, González J, Cazorla FM, Martínez M, Gaju N, de Vicente A. **Suppressive organic amendments for biological control of avocado root rots**
- P 18: Pier Luigi Burzi, AnnaRita Veronesi, Roberta Roberti, Stefania Galletti, Claudio Cerato. **Tomato proteome changes following soil application of *Pseudomonas* spp.**
- P 19: Claudia E Calderon, Eva Arrebola, Cayo Ramos, Clara Pliego, Alejandro Pérez-García, Antonio de Vicente, Francisco M Cazorla. **Characterization of defective mutants in antifungal production of biocontrol rhizobacteria *Pseudomonas fluorescens* PCL1606**
- P 20: Clara Pliego, Jose I Crespo, Cayo Ramos, Francisco M Cazorla. **STM of *Pseudomonas pseudoalcaligenes* to identify genes involved in the interaction with *Rosellinia necatrix***
- P 21: Natela Toklikishvili, Tamar Eliashvili, Tinatin Khukhunashvili, George Tsertsvadze, Marina Tediashvili, Erno Szegedi, Alexander Vainshtein, Leonid Chernin. **Biocontrol activity of *Agrobacterium* bacteriophages**
- P 22: Natela Toklikishvili, Marina Tediashvili, Alexander Vainstein, Susan Lurie, Erno Szegedi, Bernard R Glick, Leonid Chernin. **Suppression of *Agrobacterium* caused crown gall disease of tomato by rhizosphere bacteria and transgenic plants producing ACC deaminase**
- P 23: Paola Elisa Corneo, Alberto Pellegrini, Monika Maurhofer, Claudia Maria Oliveira Longa, Cesare Gessler, Ilaria Pertot. **Influence of altitude on soil microbial community**
- P 24: Paula Andrea Blanco, Camilo Rubén Beltrán, Carlos Andrés Moreno, Laura Villamizar, Alba Marina Cotes. **Biological control of *Rhizoctonia solani* and growth promoting activity of *Trichoderma koningiopsis* Th003 and *Trichoderma asperellum* Th034 formulations in potato (*Solanum tuberosum*)**
- P 25: Jennie Ramírez, Carlos Andrés Moreno, Jimmy Zapata, Andrés Díaz, Alba Marina Cotes. **Selection of yeast isolate for the biological control of *Botrytis cinerea* in tomato based on its eco-physiological characteristics**
- P 26: Jezic M, Krstin Lj, Novak-Agbaba S, Celepirovic N, Rigling D, Curkovic-Perica M. **High population diversity of *Cryphonectria parasitica* in Croatia might hinder natural biological control of chestnut blight**
- P 27: Cuong Nguyen Duc, Mette Haubjerg Nicolaisen, Stefan Olsson and Jan Sørensen. **Hyphae-colonizing bacteria a new course of biological control agents (BCA) against rice sheath blight disease**
- P 28: Hananel Ben Kalifa, Dalia Rav David, Menahem Borenshtein, Ran Shulchany, Yigal Elad. **Climate change effect on plant – pathogen – beneficial microorganisms interaction in high humidity-promoted tomato diseases**
- P 29: Hellen Angelica Quiñonez Gutierrez, Yael Meller-Harel, Dalia Rav David, Menahem Borenshtein, Ran Shulchany, Yigal Elad. **Effect of climate parameters on induced resistance in strawberry powdery mildew**
- P 30: Laura García-Gutiérrez, Houda Zeriuoh, Antonio de Vicente, Alejandro Pérez-García. **Biocontrol of powdery mildew fungi by plant growth promoting rhizobacteria**
- P 31: Katarina Gašić, Milan Ivanović, Anđelka Čalić, Aleksa Obradović. **Control of pepper bacterial spot with bacteriophages**

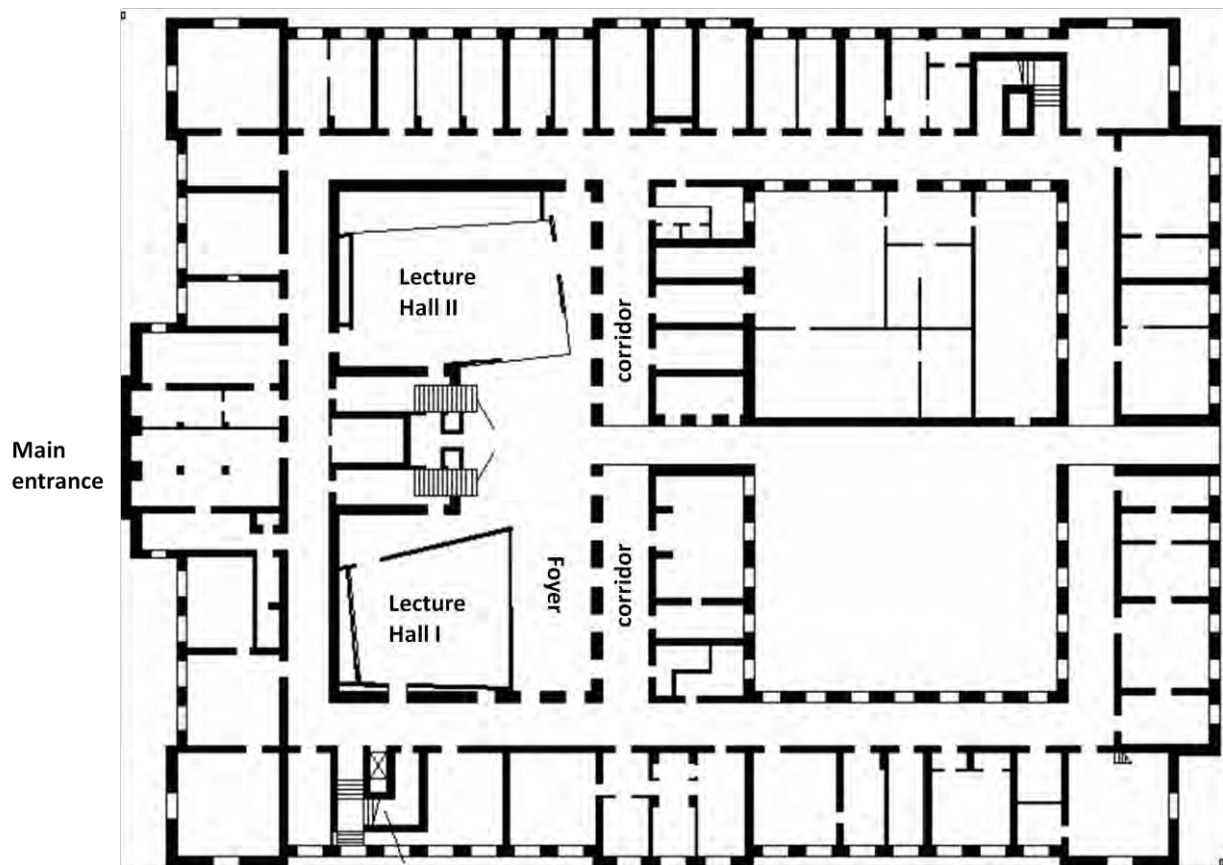
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- P 32: Nataša Duduk, Mirko Ivanović, Katarina Gašić, Aleksa Obradović. ***In vitro* antifungal activity of Brassicaceae spp. tissue compounds on strawberry root pathogens**
- P 33: Katarina Gašić, Milan Ivanović, Anđelka Čalić, Aleksa Obradović. **Isolation and characterization of bacteriophages specific to *Xanthomonas euvesicatoria***
- P 34: Thomas Paternoster, Urska Vrhovsek, Fulvio Mattivi, Cesare Gessler, Ilaria Pertot. **Nicotinic acid and nicotinamide on pear and apple, analyzed in terms of cultivar and blossom age, are not limiting factors for *Erwinia amylovora* growth**
- P 35: Ramona Held, Sigrid Neuhauser, Martin Kirchmair. **Natural antagonists of the grapevine root rot fungus *Roesleria subterranea***
- P 36: Alexandra Horner, Karin Hage-Ahmed, Ingrid Langer, Siegrid Steinkellner. **Alteration of the morphology of tomato roots due to *Fusarium oxysporum* f. sp. *lycopersici*, arbuscular mycorrhizal fungi and phosphorus supply**
- P 37: Fatemeh Jamali, Abbas Sharifi-Tehrani, Monika Maurhofer. **Screening of *Pseudomonas fluorescens* strains isolated from Iranian soils for their potential to produce antifungal metabolites and to control Rhizoctonia root rot of bean**
- P 38: Charlotte Jensen, Lisa Munk, Eigil de Neergaard, Kenneth Høegh, Peter Stougaard. **Biocontrol bacteria isolated from potato fields in Greenland**
- P 39: Birgit Jensen, Inge MB Knudsen, Dan Funck Jensen, Birgitte Andersen, Kristian Fog Nielsen, Ulf Thrane, John Larsen. **The importance of applied biocontrol agents (BCAs) and their metabolites compared to that of the natural microbiota on strawberry**
- P 40: Beatrice Berger, Helmut Junge, Silke Ruppel. **Bio-products for ecologically sound and sustainable horticultural production – Investigations into *Enterobacter radicincitans* on radish**
- P 41: Sanaa S Kabeil, Sawsan A Abdelatif, Sahar A Zaki. **Screening for hydrolytic enzymes produced from indigenous bacterial isolates**
- P 42: Sanaa S Kabeil, Fayed MI, Amer MA, Daba AS, AL- Far EM. **Biological control of fire blight disease using *Pantoea agglomerans* strain WX112 isolated from Egyptian soil**
- P 43: Grammatiki Kanini, Efstathios Katsifas, Dimitris G Hatzinikolaou, Amalia D Karagouni. **Biochemical characterization of antifungal metabolites produced from Greek indigenous Streptomycetes, examined as biocontrol agents**
- P 44: Sergio Aranda, Miguel Montes-Borrego, Rafael M Jiménez-Díaz, Blanca B Landa. **Exploiting natural biodiversity within wild olives havens for selecting rhizobacteria with antagonistic potential against *Verticillium dahliae* Kleb.**
- P 45: Sergio Aranda, Blanca B Landa. **Identification and characterization of purple-pigmented bacteria from rhizosphere of wild and cultivated olives in Andalusia, Spain**
- P 46: Juan A Navas-Cortés, Blanca B Landa. **Potential climatic suitability for Fusarium wilt of chickpeas and its biocontrol agents under current and future climatic change scenarios**
- P 47: Thomas Leichtfried. **Detection of the fire blight pathogen *Erwinia amylovora* from bees with molecular tools as part of an alternative forecasting method**

- P 48: Cleusa MM Lucon, Érica AS Pedro, Luiz A Fukuhara. **Biological control of soybean white mold by *Trichoderma* spp. isolates**
- P 49: Matthias Peter Lutz, Vincent Michel, Cédric Camps. **Lactic acid bacteria for use in the biological control of soil-borne pathogens**
- P 50: László Manczinger, Enikő Sajben, Adrienn Berki, Sándor Kocsubé, Csaba Vágvölgyi. **Antagonism spectra and production of antibiotics and extracellular enzymes by *Bacillus* strains isolated from tomato rhizosphere and wheat compost**
- P 51: Martin Mariutto, Francéline Duby, Marie-Laure Fauconnier, Marc Ongena, Philippe Thonart, Patrick du Jardin, Jacques Dommes. **The induction of systemic resistance by *Pseudomonas putida* BTP1 in tomato is associated with transcriptomic, enzymatic and metabolic changes of the lipoxigenase pathway**
- P 52: Meyer J, Keel C, Maurhofer M. **Impact of genetically modified wheat on the frequency and genetic diversity of root colonizing *Pseudomonads* associated with soil fertility**
- P 53: Montealegre JR, Sánchez S, Pérez LM, Rivera L. **Effectiveness of *Trichoderma* spp. in the yield of table grapes affected by *Cylindrocarpon macrodydimum* in a semi arid region of Chile**
- P 54: Riccarda Moser, Ilaria Pertot, Roberta Raffaelli. **Consumers' attitude to fruit produced by using biocontrol agents and climate change mitigation practices**
- P 55: Irum Mukhtar. **Comparison of Phytochemical and chemical control of *Fusarium oxysporium* f. sp. *ciceri***
- P 56: Neupane S, Högberg N, Alström S, Andersson B, Finlay R. **Functional characterization of four *Serratia* isolates in relation to their biocontrol efficacy against *Rhizoctonia solani***
- P 57: M Cristina Palmieri, Michele Perazzolli, Vittoria Metafora, Angela Bachi, Ilaria Pertot. **Proteomic approach to characterize the biocontrol mechanism of *Trichoderma harzianum* T39 in grapevine**
- P 58: Alberto Pellegrini, Daniele Prodorutti, Ilaria Pertot. **Mulching highbush blueberry with *Trichoderma atroviride* SC1-inoculated barks controls *Armillaria* root rot**
- P 59: Alberto Pellegrini, Daniele Prodorutti, Ilaria Pertot. **Effect of temperature on the antagonism between some biocontrol agents and *Cylindrocarpon destructans***
- P 60: Alberto Pellegrini, Veronica Leoni, Ilaria Pertot. **Survival of *Trichoderma atroviride* SC1 on grapevine pruning wounds and efficacy against Esca disease agents**
- P 61: Michele Perazzolli, Benedetta Roatti, Oscar Giovannini, Ilaria Pertot. **Dissecting positive or negative effects of abiotic stress on grapevine self protection induced by *Trichoderma harzianum* T39**
- P 62: Claudia Maria Oliveira Longa, Ilaria Pertot. **Temperature affects antagonism of *Trichoderma* spp. against *Armillaria mellea* in soil**
- P 63: Benedetta Roatti, Giovanni Broggin, Michele Perazzolli, Cesare Gessler, Ilaria Pertot. **Effect of temperature on induced systemic resistance on grape against *Plasmopara viticola* and on pathogen's population**
- P 64: Michelina Ruocco, Marina Tucci, Luigi De Masi, Monica de Palma, Matteo Lorito. **The plant genotype affects the outcome of the beneficial interaction between tomato and selected *Trichoderma* spp. strains**

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