



PBN annual symposium 11-12 November 2021

Thursday 11 November

12:00

Registration and lunch

13:00

Welcome and opening address

13:10

Opening Keynote Presentation

Biocontrol technology: can this realistically be the basis of a new crop protection model? - **Dr. Roma L Gwynn**, Director, Rationale Biopesticide Strategists & Vice-president, International Biocontrol Manufacturers Association (IBMA)

13:55

Coffee break

15:20

Session 1

Breeding for biologicals - **Laura Grenville-Briggs**, Professor of Integrated Plant Protection, Dept. of Plant Protection Biology, Swedish University of Agricultural Sciences

CRISPR, concerns and convergence - **Klemens Kappel**, Professor, Dept. of Communication, Faculty of Humanities, University of Copenhagen

Selected flash talks (please find abstracts on last pages of this program):

- *Impact of root diameter on the recruitment of plant-beneficial Pseudomonas to the wheat rhizosphere* - **Courtney Horn Herms**, Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen
- *University X Industry: A new paradigm for screening large collections of microorganisms for development of the next generation crop protection biologicals* - **Sabrina M. Pittroff**, Department of Biotechnology and Biomedicine, Technical University of Denmark
- *Experimental evolution of Bacillus subtilis on Arabidopsis thaliana roots reveals fast adaptation and improved root colonization in the presence of soil microbes* - **Mathilde Nordgaard**, Bacterial Interactions and Evolution Group, DTU Bioengineering, Technical University of Denmark

16:25	Coffee break Poster session 1 (please find poster abstracts on the last pages in this program)
17:00	<p style="text-align: center;">Session 2</p> <p><i>Biostimulants Regulatory Landscape in the light of the new EU Fertilizing Products Regulation - Lise Deuleran, Regulatory Expert, Novozymes & Mette Walter, Vice Director, DTI</i></p> <p><i>Biocontrolling or Bioststimulating organisms - Background and basis for risk assessment - Niels Bohse Hendriksen, Senior Researcher , Aarhus University</i></p> <p>Selected flash talks (please find abstracts on last pages of this program):</p> <ul style="list-style-type: none"> ○ <i>Bio-priming with plant growth promoting rhizobacteria to stimulate germination of <i>Arabidopsis thaliana</i> at suboptimal temperatures - Chandana Pandey, Dept. of Plant and Environmental Sciences, University of Copenhagen</i> ○ <i>Harnessing beneficial microbes from Danish natural soils to biostimulate plant growth - Deyang Xu, DynaMo Center, Dept. of Plant and Environmental Sciences, University of Copenhagen</i> ○ <i>Application of beneficial rhizobacteria of the genus <i>Pseudomonas</i> for growth promotion, drought stress and insect resilience of tomato - Mengistu F. Mekureyaw, Section of Crop Science, Dept. of Plant and Environmental Sciences, University of Copenhagen</i>
18:05	Transport to symposium dinner venue. Bus transportation to the restaurant will be arranged.
18.30	Symposium dinner Food Club, Sortedam Dossering 7C, 2200 København

Friday 12 November

8:30

Session 3

Helping growers get the best out of biopesticides, the UK AMBER project – **Dr Dave Chandler**, Senior Research Scientist, Warwick Crop Centre School of Life Sciences, University of Warwick (ONLINE PRESENTATION)

Insect Pheromone in Row Crops – A Revolution for Plant Protection – **Kristian Ebbensgaard**, CEO, BioPhero

Selected flash talks (please find abstracts on last pages of this program):

- *The effect of plant resistance inducers on tomato growth and fruit quality* – **Abiyu Solomon**, Department of biology, Kotebe Metropolitan University, Addis Ababa
- *The fungal endophyte *Penicillium olsonii* ML37 reduces *Fusarium* head blight by local induced resistance in wheat spikes* – **Edward C. Rojas**, Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen & Chr. Hansen
- **Bacillus velezensis* stimulates resident rhizosphere *Pseudomonas stutzeri* for plant health through metabolic interactions* – **Xinli Sun**, Bacterial Interactions and Evolution Group, DTU Bioengineering, Technical University of Denmark

9:35

Coffee break

9:55

Session 4

*Development of a plant protection agent based on *Lysobacter enzymogenes* to suppress fungal plant pathogens* – **Dr Ada Linkies**, Head of the Laboratory of Phytopathology, Julius Kühn-Institut

The road to a 50% reduction of pesticide use – solutions from Danish farmers – **Erik Jesper Timmerman**, The Think Tank FREJ

Selected flash talks (please find abstracts on last pages of this program):

- *The microbial BCA *Pythium oligandrum* induces growth promotion in potatoes and causes dynamic changes to the rhizosphere microbiome* – **Christian B. Andersen**, Dept. of Plant Protection Biology, Swedish University of Agricultural Sciences
- *A non-antifungal rhizobacterium stimulates plant immunity to protect tomato and *Kalanchoe* against *Fusarium oxysporum* and wheat against *Zymoseptoria tritici** – **Kenneth Madriz-Ordeñana**, Section for Plant and Soil Science, Dept. of Plant and Environmental Sciences, University of Copenhagen

- *Fungal microorganisms as potential biological control agents of the early blight disease caused by the fungus *Alternaria solani* in tomato* - **Martine E. Fischbach**, Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen & Institute of Phytomedicine, Department of Phytopathology, University of Hohenheim

11:00

Coffee break

Poster session 2 (please find poster abstracts on the last pages in this program.)

11:35

Session 5

Spotlight on selected projects:

- *Decoding the Rhizobiota Interactome for Improved Crop Resilience (INTERACT)* - **Mette Haubjerg Nicolaisen**, Associate Professor, Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen
- *Molecular Mechanisms and Dynamics of Plant-Microbe Interactions at the Root-Soil Interface (InRoot)* - **Simona Radutoiu**, Associate Professor, Department of Molecular Biology and Genetics, Aarhus University
- *Microbiome Assisted Triticum Resilience In X-dimensions (The MATRIX)* - **Lars Hestbjerg Hansen**, Professor, Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen.
- *EcoSap: triterpenoid saponins as green solutions for future sustainable food production* - **Søren Bak**, Professor, Section for Plant Biochemistry, Dept. of Plant and Environmental Sciences, University of Copenhagen
- *Smarter AgroBiological Screening (SABS)* - **Rasmus John Normand Frandsen**, Associate Professor, Dept. of Biotechnology and Biomedicine, Danish Technical University

12:35

Closing remarks

12:40

Lunch grab bag

Abstracts for flash talk presentations and poster sessions

Poster session 1 - Thursday 11 November

1	<i>Impact of root diameter on the recruitment of plant-beneficial <i>Pseudomonas</i> to the wheat rhizosphere (link to abstract)</i>	Courtney Horn Herms , Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen
2	<i>University X Industry: A new paradigm for screening large collections of microorganisms for development of the next generation crop protection biologicals (link to abstract)</i>	Sabrina M. Pittroff , Department of Biotechnology and Biomedicine, Technical University of Denmark
3	Experimental evolution of <i>Bacillus subtilis</i> on <i>Arabidopsis thaliana</i> roots reveals fast adaptation and improved root colonization in the presence of soil microbes (link to abstract)	Mathilde Nordgaard , Bacterial Interactions and Evolution Group, DTU Bioengineering, Technical University of Denmark
4	<i>Bio-priming with plant growth promoting rhizobacteria to stimulate germination of <i>Arabidopsis thaliana</i> at suboptimal temperatures (link to abstract)</i>	Chandana Pandey , Dept. of Plant and Environmental Sciences, University of Copenhagen
5	<i>Harnessing beneficial microbes from Danish natural soils to biostimulate plant growth (link to abstract)</i>	Deyang Xu , DynaMo Center, Dept. of Plant and Environmental Sciences, University of Copenhagen
6	<i>Application of beneficial rhizobacteria of the genus <i>Pseudomonas</i> for growth promotion, drought stress and insect resilience of tomato (link to abstract)</i>	Mengistu F. Mekureyaw , Section of Crop Science, Dept. of Plant and Environmental Sciences, University of Copenhagen
7	<i>The importance of soil fertility for improving the climate-resilience of cropping systems – an agronomic systems approach (link to abstract)</i>	Janna Macholdt , Justus Liebig University Giessen & Section of Environmental Chemistry and Physics, Dept. of Plant and Environmental Sciences, University of Copenhagen

8	<i>Ethos XB : Maximize root health at planting with combination products (link to abstract)</i>	Yumiko Sakuragi , FMC Agricultural Solutions A/S, European Innovation Center
9	<i>Elicitation of Bacillus subtilis secondary metabolites through biotic and abiotic factors (link to abstract)</i>	Caja Dinesen , Bacterial Interactions and Evolution Group, Technical University of Denmark
10	<i>Microbial predator-prey interactions affected by wheat rhizosphere microbiome exudates (link to abstract)</i>	Christine Lorenzen Elberg , Department of Environmental Science, Aarhus University

Poster session 2 - Friday 12 November

11	<i>The effect of plant resistance inducers on tomato growth and fruit quality (link to abstract)</i>	Abiyu Solomon , Department of biology, Kotebe Metropolitan University, Addis Ababa
12	<i>The fungal endophyte Penicillium olsonii ML37 reduces Fusarium head blight by local induced resistance in wheat spike (link to abstract)</i>	Edward C. Rojas , Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen & Chr. Hansen
13	<i>Bacillus velezensis stimulates resident rhizosphere Pseudomonas stutzeri for plant health through metabolic interactions (link to abstract)</i>	Xinli Sun , Bacterial Interactions and Evolution Group, DTU Bioengineering, Technical University of Denmark
14	<i>The microbial BCA Pythium oligandrum induces growth promotion in potatoes and causes dynamic changes to the rhizosphere microbiome (link to abstract)</i>	Christian B. Andersen , Dept. of Plant Protection Biology, Swedish University of Agricultural Sciences
15	<i>A non-antifungal rhizobacterium stimulates plant immunity to protect tomato and Kalanchoe against Fusarium oxysporum and wheat against Zymoseptoria tritici (link to abstract)</i>	Kenneth Madriz-Ordeñana , Section for Plant and Soil Science, Dept. of Plant and Environmental Sciences, University of Copenhagen

16	<p><i>Fungal microorganisms as potential biological control agents of the early blight disease caused by the fungus <i>Alternaria solani</i> in tomato (link to abstract)</i></p>	<p>Martine E. Fischbach, Section for Microbial Ecology and Biotechnology, Dept. of Plant and Environmental Sciences, University of Copenhagen & Institute of Phytomedicine, Department of Phytopathology, University of Hohenheim</p>
17	<p><i>Biologicals by FMC - Developing Sustainable Solutions for Agriculture (link to abstract)</i></p>	<p>Burghard Liebmann, FMC Agricultural Solutions A/S, European Innovation Center</p>
18	<p><i>Unlock your soil's potential, naturally, with Attis (link to abstract)</i></p>	<p>Jacob Bælum, Chr. Hansen</p>
19	<p><i>Chitosan enhanced growth and physiology of sugar beet (link to abstract)</i></p>	<p>Okanlawon Lekan Jolayemi, Swedish University of Agricultural Sciences</p>