

NEJC STOPNISEK, Ph.D.

Department of Microbial Ecology
NIOO-KNAW
Droevendaalsesteeg 10
Wageningen, Netherlands

nstopnisek@gmail.com
www.microbe-soil-plant.net
(+31) 653 155 072
ORCID ID: 0000-0002-1532-6826

SUMMARY

My research interests revolve around the use of Next-Generation Sequencing approaches, metabolomics techniques, bioinformatics tools, and physiological methods to characterize soil and plant microbial communities, uncover their functional importance in complex ecosystems, and decipher molecular and metabolic mechanisms underpinning their adaptation and stress responses.

EDUCATION & PROFESSIONAL EXPERIENCE

Postdoctoral Fellow	NIOO-KNAW, Wageningen, Netherlands	2021 - present
Postdoctoral Fellow	Supervisor: Dr. Jos Raaijmakers Michigan State University, MI, USA	2017 - 2021
Postdoctoral Fellow	Supervisor: Dr. Ashley Shade University of Washington, WA, USA	2014 - 2017
Ph.D. Microbiology	Supervisor: Dr. David A. Stahl University of Zurich, Switzerland	2010 - 2014
Diploma	Supervisor: Dr. Laure Weisskopf University of Ljubljana, Slovenia	2004 – 2009
Visiting Scholar	Supervisor: Dr. Ines Mandic Mulec University of Aberdeen, UK	2009 - 2009
	Supervisor: Dr. James I. Prosser	

PUBLICATIONS

Google Scholar citations:+580, Scopus citations:+400, H-index:9, * denotes equal contribution

Rizaludin, **Stopnisek**, Raaijmakers, Garbeva (2021). The Chemistry of Stress: Understanding the 'Cry for Help' of Plant Roots. *Metabolites* 11, 357.

Stopnisek and Shade (2021). Persistent microbiome members in the common bean rhizosphere: an integrated analysis of space, time, and plant genotype. *ISMEJ*.

Turkarslan*, **Stopnisek***, Thompson, Arens, Valenzuela, Wilson, Hunt, Seah, Zhou, Stahl, Hillesland, Baliga (2021). Synergistic epistasis enhances the co-operativity of mutualistic interspecies interactions. *ISMEJ*.

- Shade, **Stopnisek** (2019). Abundance-occupancy distributions prioritize core microbiomes from sequencing datasets. *Current Opinion in Microbiology* 49:50-58.
- Grady*, Sorensen*, **Stopnisek***, Guittar, Shade (2019). Assembly and seasonality of core phyllosphere microbiota on perennial biofuel crops. *Nature Communications* 10, 4135.
- Bell, Hockett, Alcalá-Briseño, Barbercheck, Beattie, Bruns, Carlson, Chung, Alyssa Collins, Emmett, Esker, Garrett, Glenna, Gugino, del mar Jimenez-Gasco, Kinkel, Kovac, Kowalski, Kuldau, Leveau, Michalska-Smith, Myrick, Peter, Shade, **Stopnisek**, Tan, Welty, Wickings, Yergeau (2019). Manipulating wild and tamed phytobiomes: challenges and opportunities. *Phytobiomes* 3:3-21.
- Meinhardt, **Stopnisek**, Pannu, Strand, Fransen, Casciotti, Stahl (2018) Ammonia-oxidizing bacteria are the primary N₂O producers in an ammonia-oxidizing archaea dominated alkaline agricultural soil. *Environmental Microbiology* 20: 2195-206.
- Stopnisek**, Zühlke, Carlier, Barberan, Fierer, Becher, Riedel, Eberl, Weisskopf (2016). Molecular mechanisms underlying the close association between soil *Burkholderia* and fungi. *ISMEJ* 10:253-64.
- Stopnisek**, Bodenhausen, Frey, Fierer, Eberl, Weisskopf (2014). Genus-wide acid tolerance accounts for the biogeographical distribution of soil *Burkholderia* populations. *Environmental Microbiology* 16:1503-12.
- Kost, **Stopnisek**, Agnoli, Eberl, Weisskopf (2014). Oxalotrophy, a widespread trait of plant-associated *Burkholderia* species, is involved in successful root colonization of lupin and maize by *Burkholderia phytofirmans*. *Frontiers in Microbiology* 4:1-9.
- Stopnisek**, Gubry-Rangin, Höfferle, Nicol, Mandic-Mulec, Prosser (2010). Thaumarchaeal ammonia oxidation in an acidic forest peat soil is not influenced by ammonium amendment. *Applied and environmental microbiology* 76:7626-34.

MANUSCRIPTS IN REVIEW

§ denotes available upon request

- Chuang Howe, **Stopnisek**, Dooley, Yang, Grady, Shade. Genome-centric analyses of seasonal phyllosphere microbiome activities in perennial crops. *bioRxiv*
doi:10.1101/2021.04.20.440608
- Bintarti, Sulesky-Grieb, **Stopnisek**, Shade. Endophytic microbiome variation at the level of a single plant seed. *bioRxiv* doi: 10.1101/2021.04.27.441449
- §Hunt, Forbes, Taub, Elliott, Hardwicke, Petersen, **Stopnisek**, Beck, Stahl. An automated multiplexed turbidometric and data collection system for measuring growth kinetics of anaerobes dependent on gaseous substrates.

MANUSCRIPTS IN PREPARATION

Stopnisek, Bandopadhyay, Bintarti, Grady, Hu, Sulesky and Shade. Meta-analysis identifies cosmopolitan microbes detected across diverse plant species.

Stopnisek, Shade. Functionality of the common bean microbiome changes throughout the plant development.

Stopnisek, Quigley, Chittwood, Kravchenko and Shade. The influence of soil micro-niches on microbial diversity and function.

PROFESSIONAL PRESENTATIONS

Invited Conference Talks

Ecological Society of America. Salt Lake City, UT, USA (virtual participation)	2020
International Plant & Animal Genome XXVIII. San Diego, CA, USA	2020
LabRoots, virtual event (www.labroots.com)	2019
American Phytopathological Society. Cleveland, OH, USA	2019
Ecological Society of America. New Orleans, LA, USA	2018
International <i>Burkholderia cepacia</i> Working Group. Vancouver, BC, Canada	2015

Invited Seminars

Pennsylvania State University. State College, PA, USA	2021
Colorado State University. Fort Collins, CO, USA	2020
Michigan State University. East Lansing, MI, USA	2018
University of Ljubljana. Ljubljana, Slovenia	2016
Ecosystems and Networks Integrated with Genes and Molecular Assemblies. Berkeley, USA	2016
Swiss Microbial Ecology Meeting, Murten, Switzerland	2013

Poster Presentations

Pennsylvania State University Plant biology symposium, State College, PA, USA	2018
International Society for Microbial Ecology 16, Montreal, QC, Canada	2016
Ecosystems and Networks Integrated with Genes and Molecular Assemblies. Berkeley, USA	2015
Symposium on Bacterial Genetics and Ecology 12, Ljubljana, Slovenia	2013
International Society for Microbial Ecology 14, Copenhagen, Denmark	2012
Association for General and Applied Microbiology, Tuebingen, Germany	2012
Ecology of Soil Microorganisms, Prague, Czech Republic	2011
Soil Metagenomics, Braunschweig, Germany	2010

TEACHING & MENTORING EXPERIENCE

Guest Lectures (MSU)	Integrative Microbial Biology (MMG801); <i>Microbial Ecology of plant and soil microbiomes</i>	Dec 2019
Guest lecture (MSU)	Microbial Ecology (MMG425); <i>Plant-microbe interactions</i>	Nov 2019

Teaching Assistant	Molecular biology and microbiology (3 ETCS), University of Zurich	2011, 2012, 2013
Teaching Assistant	Systemic microbiology (6 ETCS), University of Zurich	2011, 2012
Mentoring	University of Zurich: Thomas Kost	2011 – 2012
	University of Washington: Anjali Rupela	2016 – 2017
	Michigan State University: Waseem Syed, Karly Kruger, Blake Bezemek, Alina Castagna, Maddison Agustin	2017 – 2020

GRANTS & AWARDS

Discovery project, internal Ecosystems and Networks Integrated with Genes and Molecular Assemblies consortium funding (\$80,000)	2015
Life Science Graduate School Zurich travel award (\$700)	2013
Undergraduate scholarship from ERASMUS MUNDUS (\$4000)	2009

PROFESSIONAL ACTIVITIES

Workshop Organizer (cancelled due to COVID-19)

"Omics in Plant Microbiome studies". Plant Health 2020. Denver, CO, USA. Aug 2020. Hands-on workshop on sequencing data analysis for plant-microbe interaction studies. The workshop is supported by the *Agricultural Microbiome Research Coordination Network* lead by Dr. Linda Kinkel (University of Minnesota).

Editorial Board

Understanding Biodiversity (specialty section of *Frontiers for Young Minds*)

Peer Reviewer

ISMEJ • *Frontiers in Microbiology* • *Phytobiomes Journal* • *Soil Biology and Biochemistry* • *Applied and Environmental Microbiology* • *FEMS Microbiology Ecology* • *Microbial Ecology* • *Science of the Total Environment* • *Applied Soil Ecology* • *PeerJ* • *Agronomy* • *Genes* • *Physiological and Molecular Plant Pathology*

Society Member

Slovenian Microbiological Society
American Society for Microbiology

Departmental Engagement

MSU Seminar committee member (2018-2021)
MSU New hire search committee (2019-2020)

REFERENCES

Ashley Shade (Postdoc advisor)

Department of Microbiology & Molecular Genetics
Michigan State University
East Lansing, MI 48824
Phone: +1 517 884-5399
E-mail: shadeash@msu.edu

David Stahl (Postdoc advisor)

Civil and Environmental Engineering Department
University of Washington
Seattle, 98105, WA
Phone: +1 206 685-8502
E-mail: dastahl@uw.edu

Laure Weisskopf (PhD advisor)

Department of Biology
University of Fribourg
Rue A.-Gockel 3, 1700 Fribourg
Switzerland
Phone: +41 26 300 8811
E-mail: laure.weisskopf@unifr.ch