

# NEJC STOPNISEK

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Microbiology and Molecular Genetics  
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## EDUCATION & PROFESSIONAL EXPERIENCE

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<b>Postdoctoral Fellow</b>	Department of Microbiology and Molecular Genetics, Michigan State University, East, Lansing, MI USA Supervisor: <b>Dr. Ashley Shade</b>	2017 - present
<b>Postdoctoral Fellow</b>	Department of Civil and Environmental Engineering, University of Washington, Seattle, WA USA Supervisor: <b>Dr. David A. Stahl</b>	2014 - 2017
<b>Ph.D. Microbiology and Immunology</b>	Institute of Plant Biology, University of Zurich, Zurich, Switzerland Supervisor: <b>Dr. Laure Weisskopf</b>	2010 - 2014
<b>Research Assistant</b>	Department of Microbiology, University of Ljubljana, Ljubljana, Slovenia	2009 - 2010
<b>Diploma</b>	Department of Microbiology, University of Ljubljana, Ljubljana, Slovenia Supervisor: <b>Dr. Ines Mandic Mulec</b>	2004 - 2009
<b>Visiting Scholar</b>	Department of Biology, University of Aberdeen, Aberdeen, UK Supervisor: <b>Dr. James I. Prosser</b>	2009 - 2009

## PUBLICATIONS

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Google Scholar citations:+410, Scopus citations:+300, H-index: 7, \* denotes equal contribution

8. Shade and **Stopnisek** (2019). Abundance-occupancy distributions prioritize core microbiomes from sequencing datasets. *Current Opinion in Microbiology* 49: 50-58.
7. Grady\*, Sorensen\*, **Stopnisek**\*, Guittar, Shade (2019). Assembly and seasonality of core phyllosphere microbiota on perennial biofuel crops. *Nature Communications* 10, Article number: 4135.

\* Highlighted in Nature Reviews Microbiology: Du Toit (2019), Core leaf taxa of biofuel crops. *Nat Reviews Micro* 17: 647.

6. 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.
5. Meinhardt, **Stopnisek**, Pannu, Strand, Fransen, Casciotti, Stahl (2018) Ammonia-oxidizing bacteria are the primary N<sub>2</sub>O producers in an ammonia-oxidizing archaea dominated alkaline agricultural soil. *Environmental Microbiology* 20: 2195-206.
  4. **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.
  3. **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.
  2. 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.
  1. **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 equal contribution

9. **Stopnisek** and Shade. Prioritizing persistent microbiome members in the common bean rhizosphere: an integrated analysis of space, time, and plant genotype. bioRxiv 727461. (revision)
10. Turkarslan\*, **Stopnisek\***, Thompson, Arens, Valenzuela, Wilson, Hunt, Hardwicke, Lim, Seah, Fu, Wu, Zhou, Hillesland, Stahl and Baliga. Synergistic epistasis enhances cooperativity of mutualistic interspecies interactions. bioRxiv 2020.06.22.160184.
11. Colangelo-Lillis, **Stopnisek**, Turkarslan, Elliott, Stahl and Wing. Syntrophy-directed evolution influences isotopic fractionation of sulfur.

## MANUSCRIPTS IN PREPARATION

§ denotes available upon request

- §**Stopnisek**, Turkarslan, Elliot, Dong, Biggin, Jap, Walian, Auer, Hillesland, Zhao, Baliga, Stahl. Mechanism and physiological consequences of the syntrophically evolved microbial partners.
- Stopnisek**, Bandopadhyay, Bintarti, Grady, Hu, Mechan, Sulesky and Shade. Meta-analysis identifies cosmopolitan microbes detected across diverse plant species.

**Stopnisek**, Dooley, Howe and Shade. Distinct functionality of foliar microbiota during plant development.

**Stopnisek** and Shade. Assembly and functionality of the common bean microbiome.

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

## PROFESSIONAL PRESENTATIONS

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### Invited Conference Talks

Ecological Society of America. Salt Lake City, UT, USA (cancelled due COVID-19)	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

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

### Workshop participation

Multiscale Microbial Dynamics Modeling Summer School, online (PNNL organizer), 5 days	2020
Deciphering the Microbiome: Empowering theory, cross-system analyses and innovative analytics to propel advances in microbiome science, 3 days	2019

## TEACHING & MENTORING EXPERIENCE

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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

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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

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### *Workshop Organizer*

**"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). *Due to COVID-19 the workshop is postponed to 2021.*

### *Editorial Board*

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

### *Peer Reviewer*

ISME Journal • *Frontiers in Microbiology* • *Phytobiomes Journal* • *Soil Biology and Biochemistry*  
• *Applied and Environmental Microbiology* • *FEMS Microbiology Ecology* • *Microbial Ecology*  
• *Applied Soil Ecology* • *PeerJ* • *Agronomy* • *Genes* • *Physiological and Molecular Plant Pathology*

### *Society Member*

Slovenian Microbiological Society  
American Society for Microbiology  
British Ecological Society

### *Departmental Engagement*

Seminar committee member (2018-present) • New hire search committee (2019-2020)

## REFERENCES

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**Ashley Shade** (Postdoc advisor)

Department of Microbiology & Molecular Genetics  
Michigan State University  
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**David Stahl** (Postdoc advisor)

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**Laure Weisskopf** (PhD advisor)

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