Nejc Stopnisek, Ph.D.

Microbiology and Molecular Genetics
Plant Resilience Institute
Great Lakes Bioenergy Research Center
Michigan State University, 567 Wilson Rd, East Lansing, MI, 48824, USA
stopnisek@msu.edu, +1 206 471 55 07
https://sites.google.com/view/stopnisek

Professional Experience

April 2017 – present	Postdoctoral Scholar	Michigan State University with **Ashley Shade**
November 2014 – March 2017	Postdoctoral Scholar	University of Washington with **David A. Stahl**
September 2010 – October 2014	Research Assistant	University of Zurich and Agroscope Reckenholz with **Laure Weisskopf** and **Leo Eberl**
December 2009 – August 2010	Research Assistant	University of Ljubljana
February 2009 – August 2009	Visiting Scholar	University of Aberdeen with **James I. Prosser**

Education

Doctorate (Ph.D.)	University of Zurich	October 2014
Diploma	University of Ljubljana	November 2009

Publications

Peer-reviewed articles

Kelly A Meinhardt, **Nejc Stopnisek**, Manmeet W Pannu, Stuart E Strand, Steven C Fransen, Karen L Casciotti, David A Stahl (2018). Ammonia-oxidizing bacteria are the primary N2O producers in an ammonia-oxidizing archaea dominated alkaline agricultural soil. Environmental Microbiology; 20(6): 2195-2206. doi:10.1111/1462-2920.14246

Nejc Stopnisek, Daniela Zühlke, Aurelien Carlier, Albert Barberan, Noah Fierer, Dörte Becher, Katharina Riedel, Leo Eberl, Laure Weisskopf (2016). Molecular mechanisms underlying the close association between soil *Burkholderia* and fungi. ISMEJ; 10(1): 253-264. doi: 10.1038/ismej.2015.73

Nejc Stopnisek, Natacha Bodenhausen, Beat Frey, Noah Fierer, Leo Eberl, Laure Weisskopf (2014). Genus-wide acid tolerance accounts for the biogeographical distribution of soil *Burkholderia* populations. Environmental Microbiology;16(6): 1503-1512. doi: 10.1111/1462-2920.12211

Thomas Kost, **Nejc Stopnisek**, Kirsty Agnoli, Leo Eberl, Laure 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 Plant-Microbe Interactions; 4: 1-9. doi: 10.3389/fmicb.2013.00421

Nejc Stopnisek, Cécile Gubry-Rangin, Spela Höfferle, Graeme W Nicol, Ines Mandic-Mulec, James I Prosser (2010). Thaumarchaeal ammonia oxidation in an acidic forest peat soil is not influenced by ammonium amendment. Applied and environmental microbiology; 76(22): 7626-7634. doi: 10.1128/AEM.00595-10

Other academic articles *(full drafts available on request)*

Accepted manuscripts or in review

Terrence Bell, Kevin L Hockett, Ricardo I Alcalá-Briseño, Mary Barbercheck, Gwyn A Beattie, Mary Ann Bruns, John Carlson, Taejung Chung, Alyssa Collins, Bryan Emmett, Paul Esker, Karen A Garrett, Leland Glenna, Beth Gugino, Maria del mar Jimenez-Gasco, Linda Kinkel, Jasna Kovac, Kurt P Kowalski, Gretchen Kuldau, Johan HJ Leveau, Matthew J Michalska-Smith, Jessica Myrick, Kari Peter, Ashley Shade, **Nejc Stopnisek**, Xiaoqing

Tan, Amy T Welty, Kyle Wickings, Etienne Yergeau. Manipulating Wild and Tamed Phytobiomes: Challenges and Opportunities. (accepted for publishing in Phytobiomes)

Keara L Grady*, Jackson W Sorensen*, **Nejc Stopnisek***, Ashley Shade. Assembly and seasonality of core phyllosphere microbiota on perennial biofuel crops. bioRxiv 446369; doi: https://doi.org/10.1101/446369. (resubmitted to Nature Communications) (*equal contribution)

Manuscripts in preparation

N Stopnisek, S Turkarslan, N Elliot, M Dong, M Biggin, B Jap, P Walian, M Auer, K Hillesland, J Zhao, N Baliga, D Stahl. "Mechanism and physiological consequences of the syntrophically evolved microbial partners".

S Turkarslan*, **N Stopnisek***, N Elliot, K Hillesland, J Zhao, N Baliga, D Stahl. "Interspecies interactions during evolution of obligate syntrophy." (*equal contribution).

N Stopnisek and A Shade. "The common bean (*Phaseolus vulgaris* L.) core rhizosphere microbiota is well defined and abundant regardless of the US bean growing region."

N Stopnisek and A Shade. "Everything is everywhere; identical microbial membership in the rhizosphere of diverse plants."

Teaching and Mentoring Experience

Systemic microbiology (Lab course, UZH) 2011 – 2012

- 4 week long intensive laboratory course (28h/week) (6 ETCS)
- Sole instructor and mentor for group of 2-3 students throughout the course duration
- Obligations:
  - developing projects
  - teaching intermediate to advanced molecular techniques
  - teaching scientific writing
  - teaching basic bioinformatic skills
  - student evaluation based on performance in the laboratory, understanding of the research project/problem and final presentation

Molecular biology and Microbiology (Lab course, UZH) 2011 – 2013

- Course developed for introducing biology students to the basic laboratory skills (4 laboratory sessions, requirement for all BSc Biology students, 3 ETCS)
- Instructor for group of 6-8 students (total 180 students)
- Obligations:
  - explaining the daily requirements and basic concepts of microbiology (sterility, sporulation, antibiotic resistance, bacterial diversity)
  - assisting students with the experiments
  - evaluating final reports

Mentoring undergraduate and master students

Rezan Al-Harti | MSU	2019-present
Karly Kruger | MSU	2018-present
Blake Bezemek | MSU	2017-present
Wassem Syed | MSU	2017-2018
Anjali Rupela | UW	2016-2017
Thomas Kost | UZH	2011-2012

Scientific outreach

Invited talks

Phytohormones can resuscitate dormant environmental bacteria.

3. Ecological Society of America 2018, New Orleans, LA, USA; 08/2018.

Abiotic and biotic factors influence soil Burkholderia sp.

2. Guest lecture at the University of Ljubljana, host: Dr. Ines Mandic-Mulec; 03/2016

1. IBCWG 19th Meeting Conference, Vancouver, Canada; 04/2015.

Conference presentations *[ ] denote poster*

*Field study shows that phylogenetically redundant root microbiota is recruited by the common beans (*Phaseolus vulgaris *L.) across US bean growing regions.*

[7.] PSU Plant biology symposium, State College, PA, USA; 06/2018.

Phenotypic heterogeneity in anaerobic microbial communities.

6. ENIGMA meeting, Berkeley, USA; 08/2016.

Identifying adaptive mutations in the evolution of a microbial mutualism.

[5.] ISME16, Montreal, Canada; 08/2016.

Genus-wide acid tolerance accounts for the biogeographical distribution of soil Burkholderia *populations.*

[4.] BAGECO12, Ljubljana, Slovenia; 06/2013.

Biogeography of soil Burkholderia *populations.*

3. SME 2013, Murten Switzerland; 02/2013.

[2.] ISME14, Copenhagen, Denmark; 08/2012.

Influence of acidity on the abundance and diversity of soil Burkholderia *populations.*

[1.] Ecology of Soil Microorganisms, Prague, Czech Republic; 05/2011.

Public outreach

Presenter and demonstrator for the Great Lakes Bioenergy Research Center.

"*Bioenergy crops - Solution for the future."* - MSU Science Festival, April 2018 (attendance number >1000)

'*The mystery of the plant microbiome*' – MSU Science Festival, April 2019

Awarded grants/fellowships

2015	Discovery project entitled "Quantification of phenotypic heterogeneity in microbial communities" – internal project of ENIGMA consortium (funded by DOE)	$80,000
2013	Travel grant from the Life Science Graduate School Zurich	€600
2009	Undergraduate scholarship from ERASMUS MUNDUS	€3500

Professional activities and services

Committee membership:

Member of the Department of Microbiology and Molecular Genetics Seminar Committee (https://mmg.natsci.msu.edu/events-seminars/)

Society memberships:

Slovenian Microbiological Society (since 2012), American Society for Microbiology (since 2014), British Ecological Society (since 2018)

Reviewing activities:

The ISME Journal (1), Soil Biology and Biochemistry (2), Applied and Environmental Microbiology (1), FEMS Microbiology Ecology (3), Microbial Ecology (3), Applied Soil Ecology (1), Physiological and Molecular Plant Pathology (1)