

Taylor K. Dunivin

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PID: A43238151

Education

Michigan State University, East Lansing, Michigan	2014-Present
Graduate program in Microbiology and Molecular Genetics	
Graduate program in Environmental and Integrative Toxicological Sciences	
Cumulative GPA: 3.92	
University of Michigan, Ann Arbor, Michigan	2010-2014
Bachelor of Science in Biology, minor in Environmental Science	
Cumulative GPA: 3.69	

Research Experience

Michigan State University, Department of Microbiology and Molecular Genetics	2014-Present
<i>PhD Candidate – Shade Lab</i>	
University of Michigan Department of Molecular, Cellular, and Developmental Biology	2013-2014
<i>Laboratory Technician – Nielsen Lab</i>	
University of Michigan Department of Ecology and Evolutionary Biology	Fall 2012
<i>Undergraduate Researcher – Duda Lab</i>	
Nova Environmental, Inc., Ann Arbor, Michigan	Summer 2012
<i>Environmental Consultant</i>	

Publications

- Sorensen JW, TK Dunivin, TC Tobin, and A Shade. Genome reduction and genetic pathway enrichment across a thermal gradient of soil metagenomes. *In preparation*.
- Dunivin TK, SY Yeh, and A Shade. A meta-analysis of the distribution and diversity of microbial arsenic resistance genes across soils. *In preparation*.
- Dunivin TK and A Shade. Antibiotic resistance genes over a long-term thermal stressor. *In preparation for EDAR conference proceedings special issue of FEMS Microbiology Ecology*.
- Dunivin TK, J Miller, and A Shade. The diversity of microbial arsenic resistance mechanisms from soil impacted by an ongoing coalmine fire. *Revisions submitted*. Preprint: <https://peerj.com/preprints/2451/>
- Hwang JH, P Dornbos, M Steidemann, TK Dunivin, M Rizzo, and J LaPres. 2016. Mitochondrial-targeted Aryl Hydrocarbon Receptor and the Impact of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin on Cellular Respiration and the Mitochondrial Proteome. *Toxicology and Applied Pharmacology*. **1304**:121-32.
- Hwang JH, P Dornbos, M Steidemann, TK Dunivin, M Rizzo, and J LaPres. 2016. Data of enzymatic activities of the electron transport chain and ATP synthase complexes in mouse hepatoma cells following exposure to 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin (TCDD). Data in brief. **8**, 93-97.
- Antignani V, AL Klocko, G Bak, SD Chandrasekaran, TK Dunivin, and E Nielsen. 2014. Plant U-BOX13 and the PI4Kb1/b2 phosphatidylinositol-4 kinases by the small GTPase rabA4B plays important roles during salicylic acid-mediated plant defense signaling in Arabidopsis. *Plant Cell*. **27**: 243-261.

Oral Presentations

- Dunivin TK. Microbial arsenic resistance in soil above an underground coal mine fire. WiPS. 30 January 2017, East Lansing, MI USA
- Dunivin TK. Microbial arsenic resistance in soil above an underground coalmine fire. Preliminary exam seminar. 23 November 2016, East Lansing, MI USA
- Dunivin TK, A Shade. Ecological dynamics of wild and synthetic microbiomes. MMG UM Retreat. 17 October 2016, East Lansing, MI USA
- Dunivin TK, JW Sorensen, and A Shade. The roles of rare taxa for microbial community dynamics across interfaces. Ecological Society of America Annual Meeting. 7-12 August 2016, Fort Lauderdale, FL USA

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Posters and Abstracts

- Dunivin TK and A Shade. Investigation of arsenic and antibiotic resistance gene co-selection over a long term stressor. EDAR Conference. 13-17 August 2017. East Lansing, MI USA
- Yeh S, Dunivin TK, and A Shade. Diversity and abundance of arsenic resistant genes in soil microbiomes. Mid-SURE. 26 July 2017. East Lansing, MI USA
- Dunivin TK and A Shade. The diversity of microbial arsenic resistance mechanisms from soil impacted by an ongoing coalmine fire. ISME Conference. 21-26 August 2016. Montreal, QC Canada
- Dunivin TK, J Chodkowski, JW Sorensen, and A Shade. Microbial community arsenic tolerance and the fate of arsenic in soil. Microbiology and molecular genetics 2nd year poster session. 26 April 2016. East Lansing, MI USA
- Dunivin TK, J Chodkowski, JW Sorensen, and A Shade. Microbial community arsenic tolerance and the fate of arsenic in soil. Argonne Soil Metagenomics Meeting. 21-23 October 2015. Lisle, IL USA
- Dunivin TK, J Chodkowski, JW Sorensen, and A Shade. Microbial community arsenic tolerance and the fate of arsenic in soil. Microbiome Symposium. 10 September 2015. Ann Arbor, MI USA
- Shade A, TC Tobin, TK Dunivin, SH Lee, JW Sorensen, and JR Herr. Microbial Responses to Extreme Disturbance: Insights from the Ongoing Centralia Coal Mine Fire. DOE Joint Genome Institute User's Meeting. 23-27 March 2015. Walnut Creek, CA USA.
- Bursley J, TK Dunivin, S Umthong, JW Zagorski, AE Turley, HE Dover, and CE Rockwell. Activation of Nrf2 by tBHQ upregulates IgM production by LPS-activated mouse splenocytes. The Society of Toxicology National Meeting. 22-26 March 2015. San Diego, California.

Honors and Awards

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| • Ronald M. and Sharon Rogowski fellowship for Food Safety and Toxicology | Fall 2017 |
| • Ronald M. and Sharon Rogowski fellowship for Food Safety and Toxicology | Summer 2016 |
| • Gerhardt travel award | Summer 2016 |
| • NIH BEST Scholar | 2015-Present |
| • Council of Graduate Students travel award | Fall 2015 |
| • University Honors – University of Michigan | 2011-2012 |

Teaching Experience

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| • ACRES REU student mentor – Michigan State University, East Lansing, MI | Summer 2017 |
| • Introductory Laboratory for Microbiology – Michigan State University, East Lansing, MI | Spring 2017 |
| • EDAMAME workshop – Michigan State University, Kellogg Biological Station, Kalamazoo, MI | 2016-2017 |
| • Laboratory in Genomics and Molecular Genetics – Michigan State University, East Lansing, MI | Spring 2016 |
| • Undergraduate student mentor – Michigan State University, East Lansing MI | 2015-2016 |

Service Experience

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| • Reviewer for mSystems | 2017 |
| • Faculty meeting representative – Michigan State University, East Lansing, MI | Fall 2017 |
| • Instructor for R workshop for MMG students – Michigan State University, East Lansing, MI | Fall 2017 |
| • EDAMAME course coordinator – Michigan State University, East Lansing, MI | 2016-2017 |
| • Interview committee for CMSE candidate – Michigan State University, East Lansing | February 2017 |
| • Guide for BMS recruitment – Michigan State University, East Lansing MI | 2015-2017 |
| • Reviewer for Environmental Science and Technology | 2016 |
| • New student Mentor – BMS, Michigan State University, East Lansing MI | August 2016 |
| • Judge for mid-SURE poster session – Michigan State University, East Lansing MI | July 2016 |
| • Panelist for undergraduate ASM meeting – Michigan State University, East Lansing MI | April 2016 |
| • Judge for URAF poster session – Michigan State University, East Lansing MI | May 2015 |

Outreach Experience

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| • Invited speaker – Biology on Tap, Lansing, MI | February 2017 |
| • Mentor and scientific career advisor – Collegiate College Prep and Tutoring, White Lake, MI | July 2016 |
| • Presenter – Science Fest, East Lansing, MI | April 2016 |
| • Director/ Publisher of research video – MSU Global YouTube Channel and GreatLakesEcho.org | April 2015 |