**Joshua A. Jones**

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Department of Biology

Program in Evolution,   
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**Research Interests**

Host-Microbe Interactions

Environmental Microbiology

**Education**

2019-present: Graduate student (PhD), Indiana University, Department of Biology, Program in *Evolution, Ecology, and Behavior* (EEB),

Minor in Microbiology

Advisor: Dr. Armin Moczek

2015-19 **BS**, Biological Sciences, University of Missouri

**Fellowships and Awards**

College of Arts and Sciences Travel Award (2023)

Carl Storm Underrepresented Minority Fellowship (2023)

Outstanding Student Presentation Award, ASM – Microbe (2022)

National Science Foundation Graduate Research Fellowship (2021-2025)

Indiana University Graduate Scholar’s Fellowship (2019-25)

Research Experience for Undergraduates (REU) Fellowship (2018)

Stipend through Exposure to Research for Science Students Fellows Program (2017-19)

Life Sciences Undergraduate Research Opportunity Program (LS UROP, 2017)

**Publications**

*- In press -*

Rohner PT, **Jones JA**, Moczek AP. Roles of - and interactions among - plasticity, symbionts, and niche construction in dung beetle development and evolution.  *Journal of Experimental Biology* (invited contribution, in prep.).

*- In review -*

**Jones JA**, Irene IG, Moczek AP. The dynamic dung beetle microbiome: insights into life stage bottlenecks, microbiome assembly, and host-constructed microbial refugia.

**Presentations**

*- Oral presentations -*

Jones, J., Newton, I., & Moczek, A. 2023. Metamorphosis Matters: Investigating the Dynamic Microbiome of Onthophagus Dung Beetles. EEB Retreat, Bloomington, MO

Jones, J., Newton, I., & Moczek, A. 2022. Intra- and transgenerational maintenance and function of dung beetle microbiota. Beneficial Microbes, Madison, WI

*- Poster presentations -*

Jones, J., Newton, I., & Moczek, A. 2023. Transgenerational microbiota maintenance

and function in a dung beetle. Gordon Research Conference, Lucca (Barga), LU, Italy

Jones, J., Newton, I., & Moczek, A. 2023. Transgenerational microbiota maintenance

and function in a dung beetle. Gordon Research Seminar, Lucca (Barga), LU, Italy

Jones, J., Newton, I., & Moczek, A. 2022. Intra- and transgenerational maintenance and function of dung beetle microbiota. Beneficial Microbes, Madison, WI

Jones, J., Newton, I., & Moczek, A. 2022. Intra- and transgenerational maintenance of dung beetle microbiota. American Society for Microbiology – Microbe, Washington, DC

Jones, J., & Leal, M. 2019. An experimental approach to evaluate problem solving in the lizard *Anolis sagrei.* Spring Undergraduate Research, Columbia, MO.

Jones, J., Lyons, C., & Shiaris M. 2018. Effect of temperature and salinity on gill microbiome in the Eastern oyster, *Crassostrea virginica*. Annual Biomedical Conference for Minority Students, Indianapolis, IN.

Jones, J., Lyons, C., & Shiaris M. 2018. Effect of temperature and salinity on gill microbiome in the Eastern oyster, *Crassostrea virginica*. UMass Boston Summer Research Symposium, Boston, MA.

Jones, J., & Leal, M. 2018. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Spring Undergraduate Research Forum, Columbia, MO.

Jones, J., & Leal, M. 2018. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Missouri Life Science Week, Columbia, MO.

Jones, J., & Leal, M. 2017. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Annual Biomedical Conference for Minority Students, Phoenix, AR.

Jones, J., & Leal, M. 2017. Does color matter? Prey selection by the Bold Jumping Spider (*Phidippus audax*). Summer Undergraduate Research Forum, Columbia, MO.

**Teaching, Outreach, and Service**

2024 Associate Instructor for Honors Evolution course

2023 Associate Instructor for Biology of the Senses course

2023 James Holland RISE program presenter

2022 Guest lecture for Entomology course

2021 - 22 Reviewer for Molecular Ecology

2021 GROUPs Summer Mentor

2017 - 19 Peer mentor for Exposure to Research for Science Students

2018 - 19 Lang Middle School STEM outreach

**Techniques**

Molecular Techniques

* DNA extraction using QIAGEN kits and Phenol:Chloroform
* PCR; qPCR
* Library preparation for amplicon-based and whole genome sequencing with Illumina
* Insect immunity assays: phenol-oxidase activity, lysozyme-like activity, protein concentration, hemocyte morphology and abundance

Bioinformatics

* 16S analysis with QIIME2 & Mothur
* Metagenome analysis with SPAdes, MEGAHIT, QUAST, SAMtools, MetaBAT, CONCOCT, CheckM, Kraken2, and Prokka via KBASE or a supercomputer

Programming Languages

* Basic programming in R and Perl
* Microsoft Office (Excel, Word, PowerPoint, OneNote)
* Terminal/Bash for supercomputer utilization