


William C. Beckerson, Ph.D. – Curriculum Vitae


Contact Information:

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Research:

 0000-0001-7132-7578

 WCBeckerson/

Socials:

 @WCBeckerson

 @WilliamMycete

 @aBitofBiology

Languages: (CEFR)

 English - C2
Native

 Spanish - A2.1
Elementary

 Dutch - A1.1
Elementary

[What is CEFR?](#)

WilliamCBeckersonPhD.com



EDUCATION

Doctor of Philosophy in Biology  08/2015-08/2020
University of Louisville -  Louisville, Kentucky, USA

Master of Science in Biology  08/2015-05/2017
University of Louisville -  Louisville, Kentucky, USA

Bachelor of Science in Biology / Minor: Business Management  08/2009-12/2013
Georgetown College -  Georgetown, Kentucky, USA

RESEARCH EXPERIENCE

Postdoctoral Research:

[ERC: Marie Skłodowska-Curie Action Postdoctoral Fellowship Awardee](#)

Universiteit Utrecht -  Utrecht, NL  08/2023-07/2025

PI: Sander van den Heuvel

Research project title: Characterizing the neuronal effects of *Ophiocordyceps* secreted proteins using *C. elegans*.

[NSF: Postdoctoral Research Fellowship in Biology Awardee](#)

University of Central Florida -  Florida, USA  08/2021-07/2023

PI: Charissa de Bekker

Research project title: Linking parasite genomes, environmental ques, and host phenomes in *Ophiocordyceps*.

Dissertation Research:

Ruhr-Universität Bochum -  Bochum, DE  08/2018-07/2019

Collaborator: Dominik Begerow

Research project title: Implementation of CRISPR Cas9 in *Microbotryum lychnidis-dioicae*.

[AdF: Chateaubriand Fellowship Awardee](#)

Université Paris-Sud -  Orsay, FR  05/2016-08/2016

Collaborator: Tatiana Giraud

Research project title: Comparative genomics of species-specific effectors in the *Microbotryum* genus.

University of Louisville -  Kentucky, USA  08/2015-08/2020

PI: Michael Perlin

Research project title: Molecular analysis of secreted proteins in the *Microbotryum* genus.

Pedagogical Research:

University of Louisville -  Kentucky, USA  09/2017-07/2021

PI: Deborah Yoder-Himes

Research project title: Analyzing the impact of active learning on different student social personalities.

PUBLICATIONS

Peer Reviewed Research Articles:

- Beckerson WC, Anderson JO, Kulkarni S, Perpich JD, Yoder-Himes D. (2023). It's About Time: Exploring the dose-dependent effects of active learning on students of different social personalities in an upper-level biology course. *Journal of College Science Teaching*.
<https://doi.org/10.1080/0047231X.2024.2316378>
- Will I, Beckerson WC, de Bekker C. (2023). Using machine learning to predict protein-protein interactions between a zombie ant fungus and its carpenter ant host. *Scientific Reports* 13, 13821.
<https://doi.org/10.1038/s41598-023-40764-8>
- Beckerson WC, Krider C, Mohammad UA, de Bekker C. (2023). 28 Minutes Later: Investigating the role of aflatrem-like compounds in *Ophiocordyceps* parasite manipulation of zombie ants. *Animal Behaviour* 203, 225-240. <https://doi.org/10.1016/j.anbehav.2023.06.011>
- De Bekker C, Beckerson WC, Carolyn Elya. (2021). Mechanisms Behind the Madness: How do zombie-making fungal entomopathogens affect host behavior to increase transmission? *mBio* 12(5), e01872-21. <https://doi.org/10.1128/mBio.01872-21>
- Beckerson WC, Anderson JO, Perpich JD, Yoder-Himes D. (2020). An Introvert's Perspective: Analyzing the impact of active learning on social personalities in an upper-level biology course. *Journal of College Science Teaching* 49(3), 47-57. https://doi.org/10.2505/4/jcst20_049_03_47
- Beckerson WC, de la Vega RCR, Hartmann FE, Duhamel M, Giraud T, Perlin MH. (2019). Cause and Effectors: Whole genome comparisons reveal shared but rapidly evolving effector sets among host-specific plant-castrating fungi. *mBio* 10:e02391-19. <https://doi.org/10.1128/mBio.02391-19>
- Kuppireddy VS, Uversky VN, Toh SS, Tsai M-C, Beckerson WC, Cahill CC, Carman B, Perlin MH. (2017). Identification and initial characterization of effectors of an anther smut fungus and the potential host target proteins. *International Journal of Molecular Science* 18, 2489.
<https://doi.org/10.3390/ijms18112489>

Peer Reviewed Teaching Lessons:

- Beckerson WC. (2024). Zombie Ants VR: Using virtual reality to teach about coevolution and extended Phenotypes. *CourseSource*. - **In Preparation**
- Beckerson WC. (2024). Replicating Darwin's Theory: Teaching evolution with microbiology by means of replica plating. *CourseSource*. - **In review**
- Beckerson WC. (2022). Small Organisms with Big Consequences: Understanding the microbial world around us. *CourseSource*. <https://doi.org/10.24918/cs.2022.27>

Textbooks:

- Beckerson WC, Laraba I, Torres-Cruz TJ, Steinkraus D, Hajek A. (2024). *Mechanisms of Host Manipulation and Mimicry in Fungi*. In: Haelewaters D. (ed.) *Biodiversity and Evolution of Fungal Parasites and Pathogens*. Amsterdam, Netherlands: Elsevier. - **In Press**
ISBN: 978032885324
- Savchenko K, Beckerson WC, Aime C. (2024). *Economically Important Plant Parasites: Rusts and smuts*. In: Haelewaters D. (ed.) *Biodiversity and Evolution of Fungal Parasites and Pathogens*. Amsterdam, Netherlands: Elsevier. - **In Press**
ISBN: 978032885324
- Perlin MH, Beckerson WC, Gopinath A, Cobbs G. (2019). *Molecular and Cellular Genetics: Laboratory Studies*. San Diego, California United States: Cognella Academic Publishing. **2nd Edition**
ISBN: 9781793514943
- Perlin MH, Beckerson WC, Gopinath A, Cobbs G. (2018). *Molecular and Cellular Genetics: Laboratory Studies*. San Diego, California United States: Cognella Academic Publishing. **1st Edition**
ISBN: 9781516528288

FUNDING

Extramural Funding and Fellowships (\$147,605 & €203,464):

HORIZON Marie Skłodowska-Curie Actions Postdoctoral Fellowship - ♀NL (€203,464) 📅08/2022

Grant agreement ID: I01108298 (DOI: I0.3030/I01108298)

NSF Postdoctoral Research Fellowship in Biology - ♀USA (\$138,000) 📅06/2021

Award number: 2109435

GSA Fungal Genetics Conference Travel Award - ♀USA (\$250) 📅03/2019

DAAD Short Term Research Grant - ♀DE (\$4,075) 📅11/2018

Chateaubriand STEM Fellowship - ♀FR (\$5,280) 📅05/2016

Intramural Funding: University of Central Florida (\$55,000):

Preeminent Postdoctoral Program - ♀USA (\$55,000) 📅08/2020

Co-written with: Dr. Charissa de Bekker

Intramural Funding: University of Louisville (\$3,236):

Biology 1970's Cohort Fund Grant - ♀USA (\$200) 📅06/2019

Graduate Student Council Travel Grant - ♀USA (\$350) 📅01/2019

Graduate Network of Arts and Science Travel Grant - ♀USA (\$250) 📅01/2019

Graduate Student Council Travel Grant - ♀USA (\$350) 📅05/2018

Arts & Science Research & Creative Activities Grant - ♀USA (\$500) 📅04/2018

Biology Graduate Student Association Travel Grant - ♀USA (\$175) 📅02/2018

Joint Arts & Science Research & Creative Activities Grant - ♀USA (\$1,311) 📅04/2016

Co-written with: Venkata S. Kuppireddy

Graduate Network of Arts and Sciences Research Fund - ♀USA (\$100) 📅01/2016

Significant Contributions to Other Grants (\$313,369):

NSF Gordon Research Seminar Standard Grant - ♀USA (\$16,480) 📅04/2024

Co-written with: Andrew Swafford & Anna Selmecki Award number: 242438I

NSF Track I International Research Experience for Students - ♀USA (\$296,889) 📅08/2018

Co-written with: (PI) Dr. Michael H. Perlin Award number: I82485I

TEACHING EXPERIENCE

Teaching Qualifications:

In addition to experience as an instructor, I have also received formal teaching training in the United States of America and the European Union.

Universiteit Utrecht Teaching Qualification Program (UTQ) - ♀Utrecht University, NL 📅02/2024-12/2024

Official certification can be found at: <https://www.williambeckersonphd.com/copy-of-research>

Formal certification to teach at the university level in the Netherlands with the following modules:

The impact of online learning and AI on teaching methodologies, Evidence-informed course design, Formulating learning objectives, Reflective teaching practices, and Peer-review strategies

Preparing Tomorrow's Faculty Program - ♀University of Central Florida, USA 📅08/2021-12/2021

Official certification can be found at: <https://www.williambeckersonphd.com/copy-of-research>

A course on teaching at the college level for UCF Graduate Students and postdocs including the following modules:

Student learning and motivation, Integrated course design, Teaching pedagogies, Assessment and feedback, Course climate, Career development

Teaching Experience:**MSCA Postdoctoral Research Fellow - ♡ Universiteit Utrecht, NL**

🏠08/2023-07/2025

MBLS-107: Functional Biology

2 sections 120 min/class 5 & 5 students Once/month Spring 2024

B-MEBIFB19: Fungal Biology

1 section 105 min/class 13 students Twice/week Autumn 2023

NSF Postdoctoral Research Fellow - ♡ University of Central Florida, USA

🏠08/2021-07/2023

Concurrent teaching for the duration of a PRFB fellowship is prohibited as outlined on pg. 15 of the administrative guide:

<https://www.nsf.gov/pubs/2021/nsf21081/nsf21081.pdf>**Adjunct Faculty of Record - ♡ Georgetown College, USA**

🏠08/2019-04/2020

BIO 100: Introductory Biology for Non-Majors (100% Remote Learning)

1 section 75 min/class 24 students Four/week Summer 2020

BIO 111: Introductory Biology for Majors

1 section 75 min/class 24 students Twice/week Autumn 2019

BIOL 111: Introductory Biology Lab

1 section 110 min/class 24 students Once/week Autumn 2019

Invited Group Lecturer for Biotechnology Methods - ♡ University of Louisville, USA

🏠08/2018-12/2018

BIOL 416: Biotechnology Methods

2 sections 240 min/class 4 & 5 students Twice/week Autumn 2018

Teaching Innovation Learning Lab in Microbiology - ♡ University of Louisville, USA

🏠08/2017-12/2019

BIO 357: General Microbiology

1 section 75 min/class 64 students Eight/Semester Autumn 2019

BIO 357: General Microbiology

1 section 75 min/class 49 students Four/Semester Autumn 2018

BIO 357: General Microbiology

1 section 75 min/class 43 students Four/Semester Spring 2018

BIO 357: General Microbiology

1 section 75 min/class 65 students Four/Semester Autumn 2017

Graduate Teaching Assistant - ♡ University of Louisville, USA

🏠08/2015-04/2020

BIOL 331: Genetics and Molecular Biology

2 sections 110 min/class 20 & 20 students Twice/week Spring 2020

BIOL 331: Genetics and Molecular Biology

2 sections 110 min/class 20 & 22 students Twice/week Autumn 2019

BIOL 331: Genetics and Molecular Biology

2 sections 110 min/class 20 & 22 students Twice/week Spring 2019

BIOL 331: Genetics and Molecular Biology

1 section 110 min/class 19 students Twice/week Autumn 2018

BIOL 104: introduction to Biological Systems

2 sections 110 min/class 14 students Three/week Summer 2018

BIOL 331: Genetics and Molecular Biology

2 sections 110 min/class 20 & 21 students Twice/week Spring 2018

BIOL 331: Genetics and Molecular Biology

1 section 110 min/class 8 students Twice/week Autumn 2017

BIOL 258: Microbiology

2 sections 90 min/class 15 & 6 students Four Days/week Summer 2017

BIOL 331: Genetics and Molecular Biology

2 sections 110 min/class 17 & 21 students Twice/week Spring 2017

BIOL 331: Genetics and Molecular Biology

1 section 110 min/class 16 students Twice/week Autumn 2016

BIOL 244: Principles of Biology

2 sections 110 min/class 27 & 28 students Twice/week Spring 2016

BIOL 104: Introduction to Biological Systems

3 sections 110 min/class 33, 33, & 33 students Once/week Autumn 2015

STUDENTS MENTORED

I have supervised a diverse group of students including 6 masters students and 11 undergraduates, 10 of whom identify as female, 6 as male, and 1 as transgender female, 11 of whom described themselves as Caucasian, 5 black, and 1 middle eastern, and 11 who were citizens of the USA, 4 of the Netherlands, 1 of Germany, and 1 of Spain.

CONFERENCE PRESENTATIONS

Conference Chair:

Gordon Research Seminar: Cellular Molecular Fungal Biology - ♡ New Hampshire, USA 📅07/2022-06/2024
Chair with co-chair Andrew Swafford

Oral Presentations:

- 8th Conference on Physiology of Yeasts and Filamentous Fungi - ♡ Cork, IR 📅06/2023
Using Yeast to heterologously study the behavior-modifying effects of recalcitrant zombie fungi biomolecules
- Gordon Research Seminar: Cellular Molecular Fungal Biology - ♡ New Hampshire, USA 📅06/2022
28 Minutes Later: Analyzing the role of aflatrem-like effectors in the behavioral manipulation of Zombie Ants
- Animal Behavior Society Online Conference - ♡ Online 📅08/2021
28 Minutes Later: The role of secreted effectors in the behavioral manipulation of zombie ants
- Ruhr-Universität Bochum *Microbotryum* Symposium - ♡ Bochum, DE 📅07/2019
An Unorthodox CRISPR Approach for an Unorthodox Fungus
- Asilomar Fungal Genetics Conference: Smut Convergence - ♡ California, USA 📅03/2019
Cause and Effectors: Secretome comparison of members from the anther-smut pathogen species complex, *Microbotryum violaceum*
- Gordon Research Seminar Cellular Molecular Fungal Biology - ♡ New Hampshire, USA 📅06/2018
The First Cut is the Deepest: Implementing CRISPR Cas9 as a transformation system for site specific gene disruptions in the fungal pathogen species complex *Microbotryum violaceum*
- Kentucky Academy of Science Conference - ♡ Kentucky, USA 📅11/2016
Identifying unique small-secreted proteins in divergent species of the fungal pathogen complex *Microbotryum violaceum*
- Ruhr-Universität Bochum *Microbotryum* Symposium - ♡ Bochum, DE 📅06/2016
Analyzing the role of protein-protein interactions in host/pathogen co-evolution

Poster Presentations:

- European Conference on Fungal Genetics - ♡ Innsbruck, AT 📅03/2023
28 Minutes Later: A proof of concept for testing behavior-manipulating compounds from zombie-making fungi
- Gordon Research Conference Cellular Molecular Fungal Biology - ♡ New Hampshire, USA 📅06/2022
28 Minutes Later: Analyzing the role of aflatrem-like effectors in the behavioral manipulation of Zombie Ants
- National Association of Biology Teachers: Professional Conference - ♡ Gorgia, USA 📅11/2021
It's About Time: Exploring the dose-dependent effects of active learning on student social personality in an upper-level biology course
- National Association of Biology Teachers: Professional Conference - ♡ Gorgia, USA 📅11/2021
The Zombie Fungus Foray: Community science outreach using iNaturalist to discover Zombie Ants
- National Association of Biology Teachers: Professional Conference - ♡ Illinois, USA 📅11/2019
An Introvert's Perspective: Analyzing the impact of active learning on multiple levels of class social personalities in an upper-level biology course
- Asilomar Fungal Genetics Conference - ♡ California, USA 📅03/2019
Cause and Effectors: Secretome comparison of members from the anther-smut pathogen species complex, *Microbotryum violaceum*
- Gordon Research Conference Cellular Molecular Fungal Biology - ♡ New Hampshire, USA 📅06/2018
The First Cut is the Deepest: Implementing CRISPR Cas9 as a transformation system for site specific gene disruptions in the fungal pathogen species complex *Microbotryum violaceum*

PROFESSIONAL PRESENTATIONS

Universiteit Utrecht Faculty Pedagogical Journal Club - ♡ Utrecht, NL	📅02/2024
The dose-dependent effect of group-based active learning on students with different social personalities.	
Arkansas State University Queretaro STEM Week Invited Speaker - ♡ Queretaro, MX	📅02/2023
Real-life Zombies and Where to Find Them: How fungi manipulate animal behavior!	
Utrecht U. Molecular Life Sciences Honors Program Invited Speaker - ♡ Utrecht, NL	📅10/2022
Observations from the Crypt: The science behind zombie ants and their fungal parasites	
University of Oxford Invited Speaker - ♡ Oxford, UK	📅09/2022
28 Minutes Later: The role of secreted effectors in the behavioral manipulation of zombie ants	
University of Louisville Invited Speaker Series - ♡ Kentucky, USA	📅09/2020
Comparative secretomics and functional analysis of effectors utilized by the <i>Microbotryum</i> genus of anther-smut fungal pathogens, and their role in host-specificity	
University of Central Florida Invited Speaker Series - ♡ Florida, USA	📅09/2020
Comparative secretomics and functional analysis of effectors utilized by the <i>Microbotryum</i> genus of anther-smut fungal pathogens, and their role in host-specificity	
Georgetown College Invited Speaker Seminar - ♡ Kentucky, USA	📅11/2019
Cause and Effectors: How rapidly evolving effectors lead to host-specificity between <i>Microbotryum</i> and Caryophyllaceae	
Belknap Academic Building Anniversary Event - ♡ Kentucky, USA	📅08/2019
An Introvert's Perspective: Analyzing the impact of active learning on multiple levels of class social personalities in an upper-level biology course	
Ruhr-Universität Bochum Invited Speaker - ♡ Bochum, DE	📅06/2019
The History and Future of CRISPR Cas9	
Ruhr-Universität Bochum Invited Speaker - ♡ Bochum, DE	📅06/2018
The First Cut is the Deepest: CRISPR Cas9 and how to get started	
Georgetown College Invited Speaker Seminar - ♡ Kentucky, USA	📅10/2016
Here and Back Again: A GCPALS tale	
Université du Paris Sud Chateaubriand Fellowship Invited Speaker - ♡ Orsay, FR	📅05/2016
Identification of Small-Secreted Proteins in the <i>Microbotryum</i> genus	

PROFESSIONAL DEVELOPMENT & SERVICES

Training/Workshops/Conferences:

Teaching and Learning Inspiration Days Conference - ♡ Utrecht, NL	📅01/2024-02/2024
Jan 29 th Education with societal partners in practice	
Jan 30 th AR/VR: Experience the future of learning	
Feb 1 st Evidence-informed educational change	
Feb 1 st Using open educational resources	
Parametric Modeling for 3D Printing w/ Fusion – Basics Workshop - ♡ Utrecht, NL	📅01/2024
Fused Deposition Modeling for 3D Printing – Basics Workshop - ♡ Utrecht, NL	📅12/2023
2023 Royal Dutch Association for Microbiology Mycology Conference - ♡ Utrecht, NL	📅11/2023
“Fungal anarchy – do fungi obey the rules of the game?”	
Public Engagement Academy for Postdocs - ♡ Utrecht, NL	📅11/2023-07/2024
Founding member of an academy to teach and facilitate outreach by postdoctoral scholars including the following modules:	
Jan 9 th Impact measurements	
2024 Public communication skills	
2024 Engaging children	
2024 Media training Popular science writing,	
2024 Dialogue training	
Wetenschnapps: Public Engagement - recognition and rewards in practice - ♡ Utrecht, NL	📅11/2023
Universiteit Utrecht Professional Media Communication Training - ♡ Utrecht, NL	📅11/2023
2022 Royal Dutch Association for Microbiology Mycology Conference - ♡ Utrecht, NL	📅11/2022
“We Will Meet Again: Fungi and the world around them”	

NSF Improving Undergraduate STEM Education Program - ♡ Florida, USA		📅03/2022-05/2022
2022	The Inclusive STEM Teaching Project	
Collaborative Institutional Training Initiative - ♡ Florida, USA		📅01/2021-03/2021
2021	Human Subjects Research – Group 2	
	Social/Behavioral Research Investigators and Key Personnel	
2021	Communicating Research Findings	
2021	Conflict of Interest	
NIH Grant Writing Virtual Conference - ♡ Florida, USA		📅05/2020
Training with Remote Teaching Options for COVID-19 - ♡ Kentucky, USA		📅02/2020
Research Academy RUHR: Open Access Science Workshop - ♡ Bochum, DE		📅08/2019
Faculty Search Committee: Diversity Training - ♡ Kentucky, USA		📅02/2019
Professional Societies/Organizations:		
Animal Behavior Society		📅08/2021-2023
National Association of Biology Teachers		📅11/2019-2023
2021-2022	Justices, Equity, Diversity, and Inclusion Committee	
2019-2020	Community Science Committee	
Genetics Society of America		📅03/2018-current
2022	Science Communication Virtual Networking Moderator for the 31 st FGC	
Kentucky Academy of Science		📅11/2014-7/2020
University Services:		
Selective Life Sciences Extra Curricular Track selection committee - ♡ Utrecht, NL		📅11/2023-1/2024
2022 University of Louisville Biology Alumni Advice Panel - ♡ Kentucky, USA		📅11/2022
2021 University of Louisville Biology Alumni Advice Panel - ♡ Kentucky, USA		📅08/2021
Chair of the University of Central Florida Invited Speaker Series - ♡ Florida, USA		📅08/2021-04/2022
Diversity, Equity, and Inclusion: Classroom Isolation Subcommittee - ♡ Florida, USA		📅02/2021
Biology Undergraduate Student Association: Graduate Student Panel - ♡ Kentucky, USA		📅10/2019
Biology Faculty Search Committee: Graduate Student Representative - ♡ Kentucky, USA		📅02/2019
Student Grievance & Discipline Committee - ♡ Kentucky, USA		📅08/2016-4/2017
2016-2017	Natural Science Division Representative	
Graduate Network of Arts & Sciences - ♡ Kentucky, USA		📅08/2016-4/2018
2017-2018	Vice President	
2017	Natural Science Rep. for Grant Review Committee	
2016-2018	Department of Biology Representative	
Biology Graduate Student Association - ♡ University of Louisville, USA		📅08/2015-7/2020
2019-2020	President	
2018-2019	Graduate Student Rep.	
2016-2017	Social Chair	
2016-2020	Member	
Community Services:		
Florida Undergraduate Research Conference Abstract Reviewer - ♡ Florida, USA		📅06/2021
UCF Student Scholar Symposium for Undergraduate Research Judge - ♡ Florida, USA		📅03/2021
DuPont Manual Regional Science Fair Judge - ♡ Kentucky, USA		📅06/2019
DuPont Manual Regional Science Fair Judge - ♡ Kentucky, USA		📅06/2018
Louisville Regional Science & Engineering Fair Judge - ♡ Kentucky, USA		📅03/2018
Peer Review Services:		
Genome Biology and Evolution	1 primary research article	📅2024
Molecular Ecology	2 primary research articles	📅2022-2023
CourseSource	3 primary research articles	📅2020-2024
	1 conference publication	
Society for Molecular Plant-Microbe Interactions	1 primary research article	📅2020

HONORS & AWARDS

UU News: MSCA Fellowships for five Universiteit Utrecht researchers - ♣ Utrecht, NL	📅03/2023
https://www.uu.nl/en/news/marie-sklodowska-curie-actions-fellowships-for-five-utrecht-university-researchers	
UCF Today: Stories of Impact + Innovation - ♣ Florida, USA	📅02/2021
https://www.ucf.edu/news/ucf-doctoral-scholar-named-national-science-foundation-biology-fellow/	
Graduate Dean's Citation - ♣ Kentucky, USA	📅12/2020
Graduate Student Publication Award - ♣ Kentucky, USA	📅04/2020
Graduate School of Arts and Sciences Student Spotlight - ♣ Kentucky, USA	📅03/2020
https://louisville.edu/graduate/student-spotlight/student-spotlight-february-2020	
Introductory Biology Lab Development Award - ♣ Kentucky, USA	📅07/2019
Graduate Student Research Presentation Award - ♣ Kentucky, USA	📅04/2019
Biology Department Service Award - ♣ Kentucky, USA	📅04/2019
College of Arts and Science Student Profile - ♣ Kentucky, USA	📅02/2016
https://louisville.edu/artsandsciences/academics/graduate-education/student-profiles/beckerson	

OUTREACH

hyperlinks imbedded in the logos

Virtual Reality Videogame Project: **Zombie Ants VR**

-Storyboard Developer/Voice Acting Coach-

Website: <https://www.williambeckersonphd.com/copy-of-research>

Steam download: https://store.steampowered.com/app/2416150/Zombie_Ants_VR/

Zombie Ants VR is a short (5-10 minute) educational experience that takes the player through the life cycle of Ophiocordyceps, a fungus that drives creatures (in this case ants) to change their behavior in order to propagate the fungus then ultimately kills them. This fungus was a large inspiration for the video game series Last of Us and is often affectionately referred to as the "Zombie Fungus".



Community Science Initiative: **the Zombie Fungus Foray**

-Creator-

Website: <https://wbeckerson.wixsite.com/thezombiefungusforay>

iNaturalist: <https://www.inaturalist.org/projects/the-zombie-fungus-foray>



K-12 Classroom Outreach:

📅10/2022	Amsterdam International Community School - ♣ Amsterdam, NL
📅10/2021	Wharton High School: National Honor Society - ♣ Tampa, FL, USA
📅10/2021	Freedom High School: Environmental Science Periods I-7 - ♣ Tampa, FL, USA
📅10/2021	Wharton High School: SPLASH Club, and Biology Sections I-6 - ♣ Tampa, FL, USA
📅2/2021	Mica Mountain High School: Sections III & VI - ♣ Tucson, AR, USA
📅10/2020	Jackson Heights Middle School: Ecology - ♣ Oviedo, FL, USA
📅10/2020	Oviedo High School: Sophomore Biology Sections 2, 3, 6, & 7 - ♣ Oviedo, FL, USA
📅10/2020	Oviedo High School: AP Biology Sections I & II - ♣ Oviedo, FL, USA



iNaturalist Curator:

📅8/2020-current	Website curator for the <i>Ophiocordyceps unilateralis</i> species complex
📅8/2020	The Zombie Fungus Foray Project Creator



Seminole County Parks Partnership:

📅10/2021	Chuluota Wilderness Area Guided Hike for Zombie Ants - ♣ Geneva, Florida, USA
📅7/2021	Eco Camp: Grossology Week Guide to Zombie Ants - ♣ Geneva, Florida, USA
📅6/2021	Eco Camp: Biology Bootcamp Guide to Zombie Ants - ♣ Geneva, Florida, USA



Orlando Science Center Partnership:

- 📅 2/2022 Otronicon: 3-day Alpha testing of ZombieAntVR with kids - 📍 Orlando, Florida, USA
- 📅 10/2021 Pumpkins and Protons Halloween Party Exhibit - 📍 Orlando, Florida, USA
- 📅 10/2019 Spooky Science Week Exhibit: Real-life Zombie Ants! - 📍 Orlando, Florida, USA



stemCONNECT Partnership:

- 📅 10/2021 Spooky Themed Month Virtual Presentation - 📍 Orlando, Florida, USA
Real-life Zombies and Where to Find Them
- 📅 4/2021 EARTH DAY Virtual Presentation - 📍 Orlando, Florida, USA
Real-life Zombies and Where to Find Them



TikTok:

- 📅 6/2021-2022 @TheZombieFungusForay <https://www.tiktok.com/@thezombiefungusforay?lang=en>

Other Outreach:

- Pint of Science Festival - 📍 Utrecht, NL 📅 05/2024
A Fungus and its Zombie Ant: A very real example of zombie-making parasites
<https://pintofscience.nl>
- Interview with a student from Russelberg Highschool - 📍 Tessenderlo, BE 📅 04/2024
What is *Ophiocordyceps*, how does it infect ants, and is it similar to the *Cordyceps* in “The Last of Us”
- Adaptation of our publications for Science Journal for Kids and Teens - 📍 Texas, USA 📅 11/2023
<https://www.sciencejournalforkids.org/articles/how-do-some-fungi-turn-insects-into-zombies/>
- Museum of Natural Sciences: International Microorganism Day - 📍 Brussels, BE 📅 10/2023
In collaboration with the Young Belgian Society for Microbiology
- Guest on Val 202’s Frekvenca X show about “The Last of Us” - 📍 SI 📅 03/2023
<https://val202.rtvslo.si/podcast/frekvenca-x/31057643/1749+I558>
- Guest on NPR’s The Colin McEnroe Show about “The Last of Us” - 📍 Connecticut, USA 📅 02/2023
<https://www.ctpublic.org/show/the-colin-mcenroe-show/2023-02-06/the-fungus-among-us>
- Correspondent for Inverse on the science behind “The Last of Us” - 📍 New York, USA 📅 01/2023
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- Orlando Taste of Science - Science Festival, Scientists Inc. - 📍 Florida, USA 📅 04/2022
Real-life Zombies and Where to Find Them
-  TikTok: 📅 12/2021-082022
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- Orlando MegaCon Panelist - 📍 Florida, USA 📅 08/2021
The Last Damn Zombie Science Panel You’ll Ever Need!
- Interview a Biologist - 📍 Vermont, USA 📅 10/2021
with Stacey Grimaldo Garcia of Middlebury College
- Skype a Scientist Live: Orlando - 📍 Florida, USA 📅 02/2021
Spooky Science: Real Life Zombies and Where to Find Them
<https://www.youtube.com/watch?v=7WGJZG4DjjQ>
- Beer with a Scientist: Monnik Beer Company - 📍 Kentucky, USA 📅 03/2020
Our Friends the Fungi: The many types of fungi and the history of how we’ve used them
- Skype a Scientist 📅 04/2019-10/2021
 - 10/2020 Creekside Middle School: Sixth Grade Class – Bentonville, Arizona, USA
 - 5/2019 Marie Curie Institute: Fourth and Fifth Grade Class – Amsterdam, New York, USA
 - 5/2019 Corry Area High School: Ninth Grade Class – Corry, Pennsylvania, USA
 - 4/2019 Newark Central: Second Grade Class – Newark, New York, USA
 - 4/2019 E.K. Powe Elementary School: First Grade Class (AKA the Sea Crew) – Durham, North Carolina, USA
 - 4/2019 Annunciation Catholic School: Seventh Grade Class – Denver, Colorado, USA

Guest Speaker at University of Louisville: Meet the Professor - ♡ Kentucky, USA Science Information Literacy & Oral Communication	📅04/2019
Guest Speaker at Lexington Christian Academy High School - ♡ Kentucky, USA The history of genetic modification of our food	📅12/2018
Guest Speaker at Lexington Christian Academy High School - ♡ Kentucky, USA What is a GMO?	📅02/2016
ExBEERiment: Socialize with Science at Louisville Science Center - ♡ Kentucky, USA The science of brewing beer	📅09/2016

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