

R. Blake Billmyre, PhD

443-804-0705

rb2091@stowers.org

316 E Dartmouth Rd

Kansas City, MO, 64113

FACULTY POSITION

Starting 2023 **University of Georgia**, Athens, GA

Assistant Professor

Pharmaceutical and Biomedical Sciences, College of Pharmacy

Infectious Diseases, College of Veterinary Medicine

EDUCATION

2017 **Duke University**, Durham, NC
PhD, Genetics and Genomics
Certificate in Cell and Molecular Biology
“Genome evolution in the fungal pathogen *Cryptococcus deuterogattii*”
Advisor: Dr. Joseph Heitman

2009 **University of Maryland**, College Park, MD
Bachelor of Science, Cell Biology and Molecular Genetics
Honors Citation

RESEARCH EXPERIENCE

2017-2023 **Zanders Lab- Stowers Institute for Medical Research**, Kansas City, MO
Postdoctoral Associate
High-throughput genetics and genome evolution

2010-2017 **Heitman Lab- Duke University**, Durham, NC
Graduate Student
Genomics of the evolution of virulence in fungi

2009-2010 **Mock Lab- National Cancer Institute**, Bethesda, MD
Cancer Research Training Award Fellow
Role of mTOR in a murine model of plasmacytomagenesis

2008 **Baskakov Lab- University of Maryland**, Baltimore, MD
Summer Undergraduate Researcher
Photosynthetic bacterial fuel cells using *Cyanobacterium*

2006-2009 **Cooke Lab- University of Maryland**, College Park, MD
Undergraduate Research Assistant/Summer Undergraduate Research Fellow
Role of polar auxin transport in charophytes

2005-2009 **Gemstone Program- University of Maryland**, College Park, MD
Undergraduate Research Assistant
Aerotolerance of the electrogenic bacterium *Geobacter ferrireducens*

PUBLICATIONS

1. **Billmyre RB***, Eickbush MT*, Craig CJ, Lange JL, Wood C, Helston RM, Zanders SE (2021). Genome-wide identification of sexual-reproduction genes in fission yeast via transposon-insertion sequencing. *bioRxiv*. <https://doi.org/10.1101/2021.08.31.458362> *Authors contributed equally
In press at *PLOS Genetics*
2. **Billmyre RB** (2022). Drug Resistance and Evolvability in an Emerging Human Fungal Pathogen. *mBio*. e01876-22
3. De Carvalho M, Jia GS, Nidamangala Srinivasa A, **Billmyre RB**, Xu YH, Lange JJ, Sabbarini IM, Du LL, Zanders SE (2022). The wtf meiotic driver gene family has unexpectedly persisted for over 100 million years. *eLife*. 11:e81149
4. Lopez Hernandez JF, Helston RM, Lange JJ, **Billmyre RB**, Schaffner SH, Eickbush MT, McCroskey S, Zanders SE (2021). Diverse mating phenotypes impact the spread of wtf meiotic drivers in *S. pombe*. *eLife*. 10:e70812
5. **Billmyre RB***, Clancey SA*, Li L, Doering T, Heitman J (2020). 5-fluorocytosine resistance is associated with hypermutation and alterations in capsule biosynthesis in *Cryptococcus*. *Nature Communications*. 11(127). *Authors contributed equally
6. Vellanki S, **Billmyre RB**, Lorenzen A, Campbell M, Turner B, Huh EY, Heitman J, Lee SC (2020). A novel resistance pathway for calcineurin inhibitors in the human-pathogenic Mucorales *Mucor circinelloides*. *mBio* 11(1), 10.1128/mBio.02949-19.
7. Pianalto KM, **Billmyre RB**, Telzrow CL, Alspaugh JA (2019). Roles for stress response and cell wall biosynthesis pathways in caspofungin tolerance in *Cryptococcus neoformans*. *Genetics* 213(1), 213-227.
8. Chang Z, **Billmyre RB**, Lee SC, Heitman J (2019). Broad antifungal resistance mediated by RNAi-dependent epimutation in the basal human fungal pathogen *Mucor circinelloides*. *PLOS Genetics* 15(2): e1007957.
9. Passer AR, Coelho MA, **Billmyre RB**, Nowrousian M, Mittelbach M, Yurkov AM, Averette AF, Cuomo CA, Sun S, Heitman J (2019). Genetic and genomic analyses reveal boundaries between species closely related to *Cryptococcus* pathogens, *mBio*, 10 (3), e00764-19.
10. Mueller KD, Zhang H, Serrano C, **Billmyre RB**, Huh EY, Wiemann P, Keller NP, Wang Y, Heitman J, Lee SC (2019). Gastrointestinal microbiota alteration induced by *Mucor circinelloides* in a murine model. *Journal of Microbiology*. 57, e1976-3794

11. Roth C, Sun S, **Billmyre RB**, Heitman J, Magwene P (2018). A high-resolution map of meiotic recombination in *Cryptococcus deeneoformans* demonstrates decreased recombination in unisexual reproduction. *Genetics* 209(2), 567-578.
12. Yadav V, Sun S, **Billmyre RB**, Thimmappa BC, Bakkeren G, Cuomo C, Heitman J, Sanyal K (2018). RNAi-dependent centromere evolution in closely related fungal species. *PNAS*. 10.1073/pnas.1713725115
13. Persinoti GF, Martinez DA, Li W, Dogen A, **Billmyre RB**, Averette A, Goldberg JM, Shea T, Young S, Zeng Q, Oliver BG, Barton R, Metin B, Hilmioglu-Polat S, Ilkit M, Graser Y, Martinez-Rossi NM, White TC, Heitman J, Cuomo CA (2018). Whole genome analysis illustrates global clonal population structure of the ubiquitous dermatophyte pathogen *Trichophyton rubrum*. *Genetics*. 208 (4) 1657-1669.
14. **Billmyre RB**, Clancey SA, Heitman J (2017). Natural mismatch repair mutations mediate phenotypic diversity and drug resistance in *Cryptococcus deuterogattii*. *eLife*, 6, e28802.
15. **Billmyre RB**, Heitman J (2017). Genetic and epigenetic engines of diversity in pathogenic microbes. *PLoS Pathog* 13(9): e1006468.
16. Hagen F, Lumbsch HT, Arsenijevic VA, Badali H, Bertout S, **Billmyre RB**, Bragulat MR, Cabañes FJ, Carbia M, Chakrabarti A, Chaturvedi S, Chaturvedi V, Chen M, Chowdhary A, Colom M-F, Cornely OA, Crous PW, Cuétara MS, Diaz MR, Espinel-Ingroff A, Fakhim H, Falk R, Fang W, Herkert PF, Rodríguez CF, Fraser JA, Gené J, Guarro J, Idnurm A, Illnait-Zaragozi M-T, Khan Z, Khayhan K, Kolecka A, Kurtzman CP, Lagrou K, Liao W, Linares C, Meis JF, Nielsen K, Nyazika TK, Pan W, Pekmezovic M, Polacheck I, Posteraro B, Telles FdQ, Romeo O, Sánchez M, Sampaio A, Sanguinetti M, Sriburee P, Sugita T, Taj-Aldeen SJ, Takashima M, Taylor JW, Theelen B, Verweij PE, Wahyuningsih R, Wang P, Boekhout T (2017). Importance of Resolving Fungal Nomenclature: The Case of Multiple Pathogenic Species in the *Cryptococcus* Genus. *mSphere*, 2(4), e00238–17.
17. Sun S, Yadav V, **Billmyre RB**, Cuomo CA, Nowrousian M, Wang L, Souciet J-L, Boekhout T, Porcel B, Wincker P, Granek JA, Sanyal K, Heitman J (2017). Fungal genome and mating system transitions facilitated by chromosomal translocations involving intercentromeric recombination. *PLOS Biology* 15(8): e2002527.
18. Chow EWL, Clancey SA, **Billmyre RB**, Averette AF, Granek JA, Mieczkowski P, Cardenas ME, Heitman J (2017). Elucidation of the calcineurin-Crz1 stress response transcriptional network in the human fungal pathogen *Cryptococcus neoformans*. *PLOS Genetics* 13(4): e1006667.

19. Zhu Y*, Engström PG*, Tellgren-Roth C, Baudo C, Kennell JC, Sun S, **Billmyre RB**, Schroeder M, Andersson A, Holm T, Sigurgeirsson B, Wu G, Sankaranarayanan SR, Siddharthan R, Sanyal K, Lundeberg J, Nystedt B, Boekhout T, Dawson TL, Heitman J, Scheynius A, Lehtiö J (2017). Proteogenomics produces comprehensive and highly accurate protein-coding gene annotation in a complete genome assembly of *Malassezia sympodialis*. *Nucleic Acids Research*, 45(5), 2629–2643. *Authors contributed equally
20. Rayner S, Bruhn S, Vallhov H, Andersson A, **Billmyre RB**, Scheynius A (2017). Identification of small RNAs in extracellular vesicles from the commensal yeast *Malassezia sympodialis*. *Scientific Reports*, 7, 39742.
21. Gladieux P, Byrnes EJ, Aguilera G, Fisher M, **Billmyre RB**, Heitman J, Giraud T (2017). Epidemiology and evolution of fungal pathogens in plants and animals. *Genetics and Evolution of Infectious Diseases*. 71-98.
22. Kingsbury JM, Shamaprasad N, **Billmyre RB**, Cardenas ME, Heitman J (2016). Cancer-associated mitochondrial isocitrate dehydrogenase mutations induce mitochondrial DNA instability in *Saccharomyces cerevisiae*. *Human Molecular Genetics*
23. Feretzaki M*, **Billmyre RB***, Clancey SA, Wang X, Heitman J (2016). Gene network polymorphism illuminates loss and retention of novel RNAi silencing components in the *Cryptococcus* pathogenic species complex. *PLOS Genetics*, 12:e1005868. *Authors contributed equally
24. Wu G, Zhao H, Li C, Rajapakse MP, Wong WC, Xu J, Saunders CW, Reeder NL, Reilman RA, Scheynius A, Sun S, **Billmyre RB**, Li W, Averette A, Mieczkowski P, Heitman J, Theelen B, Schroder M, Sessions PFD, Butler G, Maurer-Stroh S, Boekhout T, Nagarajan N, Dawson TL (2015). Genus-wide comparative genomics of *Malassezia* delineates its phylogeny, physiology, and niche adaptation on human skin. *PLOS Genetics*, 11:e1005614.
25. Fu C, Sun S, **Billmyre RB**, Roach KC, Heitman J (2015). Unisexual versus bisexual mating in *Cryptococcus neoformans*: Consequences and biological impacts. *Fungal Genetics and Biology*, 78, 65-75.
26. Sun S, **Billmyre RB**, Mieczkowski P, Heitman J (2014). Unisexual reproduction drives meiotic recombination and phenotypic and karyotypic plasticity in *Cryptococcus neoformans*. *PLOS Genetics*, 10, e1004849
27. **Billmyre RB**, Croll D, Li W, Mieczkowski P, Carter D, Cuomo CA, Kronstad JW, Heitman J (2014). Highly recombinant VGII *Cryptococcus gattii* population develops clonal outbreak clusters through both sexual

macroevolution and asexual microevolution. *mBio*, 5, e01494-14.

28. Springer DJ, **Billmyre RB**, Filler E, Voelz K, Pursall R, Mieczkowski P, Larsen R, Dietrich F, May R, Filler S, Heitman J (2014). *Cryptococcus gattii* VGIII isolates causing infections in HIV/AIDS patients in Southern California: Identification of the local environmental source as arboreal. *PLOS Pathogens*, 10, e1004285.
29. Lee SC, **Billmyre RB**, Li A, Carson S, Sykes SM, Huh EY, Mieczkowski P, Ko D, Cuomo CA, Heitman J (2014). Analysis of a foodborne fungal pathogen outbreak: virulence and genome of a *Mucor circinelloides* isolate from yogurt. *mBio*, 5, e01390-14.
30. Janbon G, Ormerod KL, Paulet D, Byrnes EJ, Yadav V, Chatterjee G, Mullapudi N, Hon C, **Billmyre RB**, Brunel F, Bahn YS, Chen W, Chen Y, Chow EWL, Coppee JY, Floyd-Averette A, Gaillardin C, Gerik KJ, Goldberg J, Gonzalez-Hilarion S, Gujja S, Hamlin JL, Hsueh YP, Ianiri G, Jones S, Kodira CD, Kozubowski L, Lam W, Marra M, Mesner LD, Mieczkowski P, Moyrand F, Nielsen K, Proux C, Rossignol T, Schein JE, Sun S, Wollschlaeger C, Wood IA, Zeng Q, Neuveglise C, Newlon C, Perfect JR, Lodge JK, Idnurm A, Stajich JE, Kronstad JW, Sanyal K, Heitman J, Fraser JA, Cuomo CA, Dietrich FS (2014). Analysis of the genome and transcriptome of *Cryptococcus neoformans* var. *grubii* reveals complex RNA expression and microevolution leading to virulence attenuation. *PLOS Genetics*, 10, e1004261.
31. **Billmyre RB**, Calo S, Feretzaki M, Wang X, Heitman J (2013). RNAi function, diversity, and loss in the fungal kingdom. *Chromosome Research*, 21, 561-572.
32. Calo S, **Billmyre RB**, Heitman, J (2013). Generators of phenotypic diversity in the evolution of pathogenic microorganisms. *PLOS Pathogens*, 9, e1003181.
33. Springer DJ, Phadke S, **Billmyre RB**, & Heitman J (2012). *Cryptococcus gattii*, no longer an accidental pathogen? *Current Fungal Infection Reports*, 6, 245-256.
34. Zou Y, Pisciotta J, **Billmyre RB**, & Baskakov IV (2009). Photosynthetic microbial fuel cells with positive light response. *Biotechnology and Bioengineering*, 104, 939-946.

PRESENTATIONS AND POSTERS

- 2022 **High throughput transposon mutagenesis and essential gene discovery in *Cryptococcus neoformans***
Talk, Stowers Research Conference: Genetics and Genomics- Stuck on Repeat, Kansas City, MO

- 2022 **High throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, Pennsylvania State University, State College, PA
- 2022 **High throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, Virginia Tech, Blacksburg, VA
- 2022 **High throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, Fungal Biology Group, University of Georgia, Athens GA
- 2022 **High-throughput genetics and essential gene discovery in *Cryptococcus neoformans***
Poster, 31st Fungal Genetics Conference, Asilomar CA
- 2022 **Genome-wide identification of sexual-reproduction genes in fission yeast via transposon-insertion sequencing**
Poster, 31st Fungal Genetics Conference, Asilomar CA
- 2022 **High throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, University of Georgia, Athens GA
- 2022 **High throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, University of Massachusetts Medical School, Worcester, MA
- 2022 **Genome-wide identification of sexual-reproduction genes in fission yeast via transposon-insertion sequencing**
Talk, Sporulation Meeting, Virtual
- 2021 **High-throughput genetics and essential gene discovery in *Cryptococcus neoformans***
Poster, Molecular Mycology 25th Reunion and Conference, Woods Hole, MA
- 2021 **High-throughput genetics and essential gene discovery**
Talk, Mycology Working Group, Virtual
- 2021 **Using transposons to identify sex and meiosis genes**
Talk, Young Investigators Science Retreat, Kansas City, MO
- 2021 **Genome-wide identification of sexual-reproduction genes in fission yeast via transposon-insertion sequencing**
Talk, Mayosis series, Virtual

- 2021 **Designing high throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, Translational Research Seminar, Kansas City, MO
- 2021 **Transposon mutagenesis in two fungi: sex and silencing**
Talk, Duke University Mycology Unity, Durham, NC
- 2021 **Using transposons to identify sex and meiosis genes**
Talk, Friday Science Club, Kansas City, MO
- 2020 **Designing high throughput genetic approaches to understand drug resistance in a human fungal pathogen**
Talk, Friday Science Club, Kansas City, MO
- 2019 **Using transposon-insertion sequencing to identify genes required for sexual reproduction across the *Schizosaccharomyces* genus**
Flash Talk and Poster, EMBO Comparative Genomics of Eukaryotic Microbes, Sant Feliu de Guixols, Spain
- 2019 **Building a transposon-insertion sequencing approach for high-throughput genetics in eukaryotic microbes**
Poster, Young Investigator's Science Retreat, Kansas City, MO
- 2019 **Promiscuous retrotransposition and intron evolution in the *Cryptococcus* genus**
Poster, 30th Fungal Genetics Conference, Asilomar CA
- 2018 **Using long reads to tell one WTF from another WTF**
Talk and Poster, Nanopore Community Meeting, San Francisco, CA
- 2018 **Collateral mutations caused by promiscuous retrotransposons**
Poster, Young Investigator's Science Retreat, Kansas City, MO
- 2018 **Collateral mutations caused by promiscuous retrotransposons**
Talk, Open Mic Talk series, Kansas City, MO
- 2017 **Natural mismatch repair mutations mediate phenotypic diversity and drug resistance in *Cryptococcus deuterogattii***
Talk, EMBO Comparative Genomics of Eukaryotic Microbes: Dissecting Sources of Evolutionary Diversity, Sant Feliu de Guixols, Spain
- 2017 **Naturally occurring mismatch repair mutants mediate rapid phenotypic changes and drug resistance in the Pacific Northwest *Cryptococcus gattii* outbreak**
Poster, First Annual EPIC Symposium, Durham, NC

- 2017 **Naturally occurring mismatch repair mutants mediate rapid phenotypic changes and drug resistance in the Pacific Northwest *Cryptococcus gattii* outbreak**
Talk, Eukaryotic Pathogens Investigators Club (EPIC), Durham, NC
- 2017 **Naturally occurring mismatch repair mutants mediate rapid phenotypic changes and drug resistance in the Pacific Northwest *Cryptococcus gattii* outbreak**
Talk and Poster, 29th Fungal Genetics Conference, Asilomar, CA
- 2017 **Addition by subtraction: RNAi loss and mycoviruses**
Talk, University Program in Genetics and Genomics Recruitment, Durham, NC
- 2017 **Genome evolution in the fungal pathogen *Cryptococcus deuterogattii***
Talk, Thesis Defense, Durham, NC
- 2016 **Natural strains of *Cryptococcus* with defects in mismatch repair exhibit enhanced phenotypic diversity**
Poster, Molecular Genetics and Microbiology Retreat, Wrightsville Beach, NC
- 2016 ***Cryptococcus gattii* in North America**
Talk, University Program in Genetics and Genomics Retreat, Haw River, NC
- 2016 **Whole genome typing of *Cryptococcus gattii* in North America: Mitotic microevolution and sexual macroevolution contributed to the development of an outbreak**
Poster, Calcineurin as the Target for Antifungal Drug Development Symposium, Durham, NC
- 2015 **Gene network polymorphism illuminates loss and retention of novel RNAi silencing components in the *Cryptococcus* pathogenic species complex**
Talk and Poster, Inaugural Center for Host Microbial Interactions Symposium, Durham, NC
- 2015 **Gene network polymorphism illuminates loss and retention of novel RNAi silencing components in the *Cryptococcus* pathogenic species complex**
Talk and Poster, EMBO Exploring the genomic complexity and diversity of eukaryotes, Sant Feliu de Guixols, Spain
- 2015 **Whole genome insights into the micro and macroevolution of the Pacific Northwest *Cryptococcus gattii* outbreak**
Talk, University Program in Genetics and Genomics Student Seminar, Durham, NC
- 2015 **Gene network polymorphism illuminates loss and retention of novel RNAi silencing components in the *Cryptococcus* pathogenic species complex**

- Talk, Genomics of Microbial Systems work in progress meeting, Durham, NC
- 2015 **Gene network polymorphism illuminates loss and retention of novel RNAi silencing components in the *Cryptococcus* pathogenic species complex**
Talk, Molecular Genetics and Microbiology Retreat, Wrightsville Beach, NC
- 2015 **Whole genome sequencing of the *Mucor circinelloides* species complex: identification of yogurt contaminants associated with GI illness in consumers**
Talk, University Program in Genetics and Genomics Retreat, Lake Lure, NC
- 2015 **Whole genome sequencing of the *Mucor circinelloides* species complex: identification of yogurt contaminants associated with GI illness in consumers**
Talk, 19th International Society for Human and Animal Mycology Congress, Melbourne, Australia
- 2015 **Whole genome typing of *Cryptococcus gattii* in North America: Mitotic microevolution and sexual macroevolution contributed to the development of an outbreak**
Talk and poster, 19th International Society for Human and Animal Mycology Congress, Melbourne, Australia
- 2015 **Whole genome insights into the micro and macroevolution of the Pacific Northwest *Cryptococcus gattii* outbreak**
Talk, Small Eukaryotes Meeting, Durham, NC
- 2015 **Evolution of an outbreak: Hypermutators and the *Cryptococcus gattii* outbreak**
Talk and Poster, 28th Fungal Genetics Conference, Asilomar, CA
- 2015 **A hypermutator lineage preceded the Pacific Northwest outbreak of *Cryptococcus gattii***
Poster, Antifungal Drug Development Symposium, Durham, NC
- 2015 **Origins of an outbreak: Hypermutators in the Pacific Northwest outbreak of *Cryptococcus gattii***
Talk, Molecular Genetics and Microbiology Departmental Seminar, Durham, NC
- 2014 **A hypermutator lineage preceded the Pacific Northwest outbreak of *Cryptococcus gattii***
Poster, Molecular Genetics and Microbiology Retreat, Wrightsville Beach, NC
- 2014 **Anatomy of an outbreak: Recombining clonal clusters comprise the VGII *Cryptococcus gattii* population**

Talk and Poster, 9th International Conference on *Cryptococcus* and Cryptococcosis, Amsterdam, The Netherlands

- 2013 **Development of an outbreak: Whole genome analysis of population Structure in *C. gattii***
Talk, Genomics of Microbial Systems work in progress meeting, Durham, NC
- 2013 **RNAi loss in *Cryptococcus gattii*: Don't know what you've got till it's gone**
Talk, Cell and Molecular Biology Student Seminar, Durham, NC
- 2013 **Loss of the RNAi pathway in VGII *Cryptococcus gattii* sheds light on the intact system in *Cryptococcus neoformans***
Poster, Molecular Genetics and Microbiology Retreat, Wrightsville Beach, NC
- 2013 **RNAi loss in *Cryptococcus gattii*: Don't know what you've got till it's gone**
Talk, Genomics of Microbial Systems work in progress meeting, Durham, NC
- 2013 **RNAi loss in *Cryptococcus gattii*: Don't know what you've got till it's gone**
Talk, University Program in Genetics and Genomics Retreat, Lake Lure, NC
- 2013 **Loss of the RNAi pathway in VGII *Cryptococcus gattii* sheds light on the intact system in *Cryptococcus neoformans***
Poster, 27th Fungal Genetics Conference, Asilomar, CA
- 2012 **Addition by Subtraction: RNAi loss in *Cryptococcus gattii***
Poster, Duke Epigenetics and Epigenomics Colloquium, Durham, NC
- 2012 **RNAi loss in *Cryptococcus gattii*: addition by subtraction?**
Talk, Molecular Genetics and Microbiology Retreat, Durham, NC
- 2012 **Addition by Subtraction: RNAi loss in *Cryptococcus gattii***
Poster, Duke Symposium in Celebration of Mycology and Mycologists, Durham, NC
- 2012 **Addition by Subtraction: RNAi loss in *Cryptococcus gattii***
Talk, Young One's Student Seminar, Durham, NC
- 2011 **Addition by Subtraction: RNAi loss in *Cryptococcus gattii***
Talk, University Program in Genetics and Genomics Student Seminar, Durham, NC
- 2008 **Examining the Roots of Plant Evolution: Polar Auxin Transport in Charophytes**
Poster, American Society of Plant Biology International Meeting, Merida, Mexico

TEACHING EXPERIENCE

- 2019 **Guest Lecture- Genetics Module**
Stowers Institute Graduate School, Kansas City, MO
- 2018 **Guest Lecture- Genetics Module**
Stowers Institute Graduate School, Kansas City, MO
- 2015 **Guest Lecture- Frontiers in Medicine**
Duke University, Durham, NC
Gave a guest lecture on fungal pathogens for a non-major biology class
- 2015 **Teaching Assistant- Whole Genome Analysis Workshop**
Duke University, Durham, NC
Helped run a one-day genome analysis workshop focusing on RNAseq analysis
- 2013 **Teaching Assistant – Ethics Retreat**
Duke University Marine Lab, Beaufort, NC

MENTORING

Mentored technicians

- 2020-2022 Caroline Craig
2018- current Michael Eickbush
2013-2017 Shelly Clancey

Mentored visiting Masters Students

- 2019 Maya Houmel
2018 Shona Gray-Switzman

Mentored Rotation Students

- 2016 Kayla Sylvester
2015 Woonyung Hur
2015 Shelby Priest
2014 Jon Kastan
2014 Andrew Passer

Mentored Undergraduate Researchers

- 2009-2010 Erin Ong
2010 Lindsey Draper

SERVICE

- 2019 **Session Chair – Sex, mating and meiosis - EMBO Comparative Genomics of Eukaryotic Microbes**
Sant Feliu de Guixols, Spain
- 2015-2017 **Cofounder/organizer – Eukaryotic Pathogens Investigator Club (EPIC)**
Duke University, Durham, NC

- 2017 **Organizer and chair – First Annual EPIC Symposium**
Duke University, Durham, NC
- 2014-2016 **Distinguished Lecture Series Committee**
Duke University, Durham, NC
- 2014 **Molecular Genetics and Microbiology Retreat Committee**
Duke University, Durham, NC
- 2010-2012 **Cell and Molecular Biology Recruitment Committee**
Duke University, Durham, NC

OUTREACH

- 2019 **DNA Day Visiting Scientist**
Northgate Middle School, Kansas City, MO
Visited a local middle school for DNA day to talk to local students about biology, DNA, and careers in science
- 2019-2021 **Project Lead the Way Biomed Contest Judge**
Kansas City, MO
Served as a judge for portfolios submitted for a Project Lead the Way high school biomedical research competition
- 2010 & 2011 **Teaching Assistant- Microbial Stress Responses**
North Carolina School of Science and Mathematics, Durham, NC
Helped develop course material for a miniterm (~2 weeks) course for gifted high school students and taught a unit on bioinformatics

AWARDS

- 2021 Best Postdoc Talk, Young Investigators Science Retreat
- 2019 Finalist, Life Sciences Research Fellowship
- 2017 Speaker Award – EMBO Comparative Genomics of Eukaryotic Microbes: Dissecting Sources of Evolutionary Diversity
- 2016 Speaker Award – UPGG Student Retreat
- 2015 Poster Award – EMBO Exploring the Genomic Complexity and Diversity of Eukaryotes
- 2015 Mitchell Meritorious Research Travel Award
- 2015 EMBO Travel Award

- 2015 DeLill Nasser Award for Professional Development in Genetics, GSA
- 2015 Young ISHAM Travel Award
- 2014 Mitchell Meritorious Research Travel Award
- 2013 Asilomar Fungal Genetics Meeting Travel Grant
- 2009-2010 Cancer Research Training Award Fellowship
- 2009 Best Thesis Presentation- Gemstone Program
- 2007-2009 Howard Hughes Medical Institute Undergraduate Research Fellowship
- 2007 American Society of Plant Biologists Summer Undergraduate Research Fellowship
- 2005-2009 Maryland Regents' Scholar
- 2005-2009 National Merit Scholar
- 2005-2009 Banneker/Key Scholar
- 2005-2009 Maryland Distinguished Scholar

SPECIAL COURSES/CERTIFICATIONS

- 2021 Mental Health First Aid
Bert Nash Community Mental Health Center
- 2013 Molecular Mycology: Current Approaches to Fungal Pathogenesis
Marine Biological Lab, Woods Hole, MA

SOCIETY MEMBERSHIP

- 2012-current Member, Genetics Society of America
- 2022-current Member, American Society for Cell Biology
- 2015-2017 Member, International Society for Human and Animal Mycology

REVIEWING

Guest editor:
PLOS Genetics

Guest grant reviewer:
National Science Foundation

Reviewer:

PLOS Genetics

PLOS Pathogens

mBio

Microbiology Spectrum

mSphere

Microbial Genomics

Genetics

G3

Genome Biology and Evolution

Molecular Biology and Evolution

New Phytologist

BMC Evolutionary Biology

International Journal of Molecular Sciences

Microorganisms

Pathogens

Journal of Fungi

Microbiology and Molecular Biology Reviews

REFERENCES

Dr. SaraH Zanders

Postdoctoral Advisor

sez@stowers.org

816-926-4114

Dr. Joseph Heitman

Thesis Advisor

heim001@duke.edu

919-684-2824

Dr. Andrew Alspaugh

Thesis Committee Chair

andrew.alspaugh@duke.edu

919-684-0045