

Kirsten Gotting

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Education

Ph.D. Genetics, University of Wisconsin Madison, Laboratory of Genetics	2022
M.S. Genetics, University of Wisconsin Madison, Laboratory of Genetics	2019
M.S. Biology, University of Oregon, Department of Biology	2014
B.A. Biology, University of Oregon, Department of Biology	2013

Experience

Pre-doctoral Fellow, Wcislo Lab, Smithsonian Tropical Research Institute 2021 - Present

Designed, funded, and led a grant to study fungal parasites of fungus-growing ants in the Panamanian rain forest.

Graduate Researcher, Currie Lab, University of Wisconsin Madison 2018 - Present

Designed, implemented, and led a cross-departmental collaboration team studying yeast antimicrobial resistance evolution.

Led comparative genomics study showing ancient symbiosis between fungus-growing ants and their parasites (in review).

Bioinformaticist, Sánchez Lab, Stowers Institute for Medical Research 2014 – 2017

Collaborated with scientists to interpret high throughput sequencing data with interactive data analysis applications.

Created data driven websites and applications for sharing analyses and code, e.g., <https://mnemiopsis.github.io/>

Bioinformatics Intern, Sánchez Lab, Stowers Institute for Medical Research 2014

Developed a self-documenting non-model organism RNA-seq analysis pipeline with compute-cluster implementation.

Created interactive data analysis applications.

Undergraduate Research Assistant, Selker Lab, University of Oregon 2012

Created *Neurospora crassa* mutants as part of a forward genetics screen selecting for defects in methylation.

Line/Lab Assitant, Zebrafish International Resource Center 2010 - 2013

Worked to maintain and propagate zebrafish lines for shipping to research labs.

Publications

Gotting, K., May, D. S., Sosa-Calvo, J., Khadempour, L., Francoeur, C.B., Thairu, M.W., Sandstrom, S., Carlson, C., Chevrette, M.G., Tallerico Pupo, M., Bugni, T., Schultz, T.,

- Johnston, J.S., Currie, C. R. "Genomic diversification of the specialized parasite of the fungus-growing ant symbiosis." *In Review at PNAS*.
- Francoeur, C. B., Khadempour, L., Moreira-Soto, R.D., **Gotting, K.**, Book, A.J., Pinto-Tomás, A.A., Keefover-Ring, K., and Currie, C.R. "Bacteria contribute to plant secondary compound degradation in a generalist herbivore system." *mBio* (2020): 865212.
- Klocko, A.D., Summers, C.A., Glover, M.L., Parrish, R., Storck, W.K., McNaught, K.J., Moss, N., **Gotting, K.**, Stewart, A., Marrison, A.M., Payne, L., Hatakeyama, S., Selker, E.U. (2020) "Selection and characterization of mutants defective in DNA methylation in *Neurospora crassa*." *Genetics*.
- Wang, W., Hu, C., Zeng, A., Gibbon, D., Hu, D., **Gotting, K.**, Granillo Ortega, A., Wang, Y., Robb, S., Schnittker, R., Zhang, S., Alegre, D., Li, H., Ross, E., Zhang, N., Brunet, A., Sánchez Alvarado A. (2020) "Changes in injury-responsive enhancers shape regenerative capacities in vertebrates." *Science* 369, no. 6508.
- Zhang S., Guo L., Guerrero-Hernández C., Ross E.J., **Gotting, K.**, McKinney S.A., Wang W., Xiang Y., Hawley S.R., and Sánchez Alvarado A. (2018) "A nuclear hormone receptor and lipid metabolism axis are required for the maintenance and regeneration of reproductive organs." *bioRxiv*: 279364.
- Davies, E.L., Lei K., Seidel C.W., Kroesen A.E., McKinney S.A., Guo L., Robb S.M.C., Ross E.J., **Gotting, K.**, and Sánchez Alvarado A. (2017) "Embryonic origin of adult stem cells required for tissue homeostasis and regeneration." *eLife* 6: e21052.
- Luttrell, S.M., **Gotting, K.**, Ross E.J., Sánchez Alvarado A., and Swalla B.J. (2016) "Head Regeneration in Hemichordates Is Not a Strict Recapitulation of Development." *Developmental Dynamics*.
- Lei, K., Vu H.T., Mohan R.D., McKinney S.A., Seidel C.W., Alexander R., **Gotting, K.**, Workman J.L., and Sánchez Alvarado, A. (2016) "Egf Signaling Directs Neoblast Repopulation by Regulating Asymmetric Cell Division in Planarians." *Developmental Cell* 38, no. 4: 413-429.
- Robb, S., **Gotting, K.**, Ross, E.J., and Sánchez Alvarado, A. (2015) "SmedGD 2.0: The Schmidtea mediterranea genome database." *genesis* 53, no. 8: 535-546.

Awards and Honors

Smithsonian Tropical Research Institute Pre-doctoral Fellowship	2021
University of Wisconsin Madison Genetics Schlimgen Award	2020

Teaching Experience

University of Wisconsin - Madison	
Teaching Assistant, General Genetics 2	Spring 2019
Cold Spring Harbor Laboratory	
Teaching Assistant, Programming for Biology	2018, 2019, 2020**

University of Oregon

Graduate Teaching Fellow, **Cells**

Fall 2013

Undergraduate Teaching Assistant, **Evolution, Diversity & Ecology** Spring 2013

Departmental Service

Genetics Diversity Committee

2020 - 2021

J.F. Crow Institute Evolution Coordinating Committee

2019 - 2021

Genetics Admissions Committee

2019

Genetics Graduate Student Committee

2018 - 2019

Genetics Retreat Committee

2018 - 2019

Mentoring

University of Wisconsin Madison

Nat Zeng

Spring 2021 - Present

Lynne Harrow

Spring 2020 - Fall 2020

Soleil Young

Spring 2019 - Present

Hezekiah Gilles

Fall 2019 - Fall 2020

Stowers Institute for Medical Research

Lauren Wolfe

2016

Dana Gibbon

2016

Leadership

University of Wisconsin

Co-chair/Co-founder, **Scientific Accountability Working Group** 2020 - 2021

Organized twice monthly meetings to discuss how the field of Genetics perpetuates bias in academia.

Co-chair, **ComBEE** (Computational Biology, Ecology, and Evolution) 2018 - Present

Organized monthly speaker series and coding working and learning groups.

R Study Group Leader, **ComBEE**

Spring 2018

Led a coding study group to teach the R programming language.

The Stowers Institute for Medical Research

Organizer/Founder, **UO Data Working Group**

2014 - 2017

Organized and led a learning and working group for junior bioinformaticists.

Workshops and Courses

University of Wisconsin Madison Delta Program on Integrating Research, Teaching and Learning

Designing and Facilitating Remote Discussions	2021
Fundamentals of Online Learning and Teaching	2020
Teaching college students on the autism spectrum	2018

Outreach

Currie Lab Leaf-Cutter Ant Display Colony

Organizer; Activity Leader, UW-Madison Science Expeditions	2018; 2019
Organizer and Activity Leader, Wisconsin Science Festival	2018

Conferences Attended

Mycological Society of America	2019, 2020, 2021
Beneficial Microbe	2018
Madison Microbiome Meeting	2018
useR!	2016
North American Planarian Meeting	2015

Presentations

The University of Wisconsin Madison

Genomic diversification of the parasite *Escovopsis* across the evolutionary history of the fungus-growing ant-microbe symbiosis

Smithsonian Tropical Research Institute Tupper Talks Talk	2022
UW-Madison Fungal Biology Super Group Talk	2020
UW-Madison Evolution Seminar Series Talk	2020
Mycological Society of America Poster	2020
Laboratory of Genetics Graduate Seminar Series Talk	2020
Beneficial Microbes**	2020
Kenneth B. Raper Symposium, Department of Bacteriology Poster	2019

The Stowers Institute for Medical Research

Designing an RNA-seq Pipeline for Non-Model Organisms Talk	2014
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Skills

Computational

Linux/Unix
Parallel Computing
Git
MySQL

Programming Languages

- R
- Python
- Bash
- AWK

Data Analytics

- Machine Learning
- Data Visualization
- RShiny

Bioinformatic

- Phylogenomics
- Comparative Genomics
- RNA-seq Analysis
- Genome Annotation
- Differential Isoform Analysis
- Gene Ontology Enrichment
- Motif Finding
- MudPIT Proteomics Analysis

- Bioconductor
- Metagenomics
- Sequence Analysis
- Variant Calling
- Ancestral State Reconstruction
- Phylogenetic Dating

Languages

- English (native)
- Spanish (conversational)

**denotes events cancelled due to COVID19

References

Cameron R. Currie

Ira L. Baldwin Professor of Bacteriology, University of Wisconsin Madison
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