



Berkeley Science Fellow & Howard Hughes Medical
Institute Awardee of the Life Sciences Research
Foundation. Howard Hughes Medical Institute and
University of California, Berkeley.
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Jacob L. Steenwyk

PROFESSIONAL POSITIONS

Since 2023 Howard Hughes Medical Institute Awardee, Life Sciences Research Foundation

Since 2022 Postdoctoral Associate, Laboratory of Dr. King, University of California, Berkeley

Since 2022 Berkeley Science Fellow, University of California, Berkeley

FIVE HIGHLIGHTED PUBLICATIONS (Trainees and I are in **bold** font.)

1. **Steenwyk, J.L.**, Y. Li, X. Zhou, X.-X. Shen, & A. Rokas (2023). Incongruence in the phylogenomics era. ***Nature Reviews Genetics***. DOI: 10.1038/s41576-023-00620-x
2. **Steenwyk, J.L.**, **M.A. Phillips**, F. Yang, S.S. Date, T. Graham, J. Berman, C.T. Hittinger, & A. Rokas (2022). An orthologous gene coevolution network provides insight into eukaryotic cellular and genomic structure and function. ***Science Advances***. DOI: 10.1126/sciadv.abn0105
3. **Steenwyk, J.L.**[^], T.J. Buida III, A.L. LaBella, Y. Li, X.-X. Shen, & A. Rokas[^] (2021). PhyKIT: a UNIX shell toolkit for processing and analyzing phylogenomic data. [^]Corresponding authors. ***Bioinformatics***. DOI: 10.1093/bioinformatics/btab096
4. **Steenwyk, J.L.**[^], T.J. Buida III, Y. Li, X.-X. Shen, & A. Rokas[^] (2020). ClipKIT: a multiple sequence alignment-trimming software for accurate phylogenomic inference. [^]Corresponding authors. ***PLOS Biology***. DOI: 10.1371/journal.pbio.3001007
5. **Steenwyk, J.L.**^{*}, A.L. Lind^{*}, L.N.A. Ries, T.F. dos Reis, L.P. Silva, F. Almeida, R.W. Bastos, T.F. de Campos Fraga da Silva, V.L.D. Bonato, A.M. Pessoni, F. Rodrigues, H.A. Raja, S.L. Knowles, N.H. Oberlies, K. Lagrou, G.H. Goldman[^], A. Rokas[^] (2020). Pathogenic allodiploid hybrids of *Aspergillus* fungi. ^{*}Equal contributors; [^]Corresponding authors. ***Current Biology***. DOI: 10.1016/j.cub.2020.04.071

AWARDS

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|-------------|---|
| 2024 | Frequency Bio Cohort 10 Member, Pillar Venture Capital |
| 2024 | Trailblazers of Tomorrow National Postdoctoral Symposium, The University of Texas at Austin |
| 2024 | Englund Emerging Scholar Award, Department of Biological Chemistry, Johns Hopkins Medicine |
| 2023 | JXTX + CSHL Genome Informatics Scholarship, Biology of Genomes, Cold Spring Harbor Laboratory |
| 2023 | Honorable mention, Next Generation Faculty Symposium, Stanford.Berkeley.UCSF |
| 2023 | Howard Hughes Medical Institute Awardee, Life Sciences Research Foundation |
| 2022 | Fifty 50 Community Fellow, Fifty Years Industries, LLC |
| 2022 | Berkeley Science Fellow, Berkeley Postdoctoral Entrepreneurship Program, University of California, Berkeley |
| 2022 | Graduate Student Excellence Award Finalist, Society for Molecular Biology and Evolution |

2022	Hanna H. Gray Fellows Finalist, Howard Hughes Medical Institute
2022	Edward Ferguson Jr. Graduate Award, Graduate School, Vanderbilt University
2022	James F. Crow Early Career Researcher Award Finalist, Genetics Society of America
2022	Harold M. Weintraub Graduate Student Award, Fred Hutchinson Cancer Research Center
2021	Sandler Fellows Finalist, University of California, San Francisco
2021	Honorable mention, Next Generation Faculty Symposium, Stanford.Berkeley.UCSF
2021	Presentation award, Canadian Fungal Research Network and Great Lakes Mycology Conference
2021	Graduate Research Excellence Award in Biological Sciences, Vanderbilt University
2021	Smriti Bardhan Scholarship, Vanderbilt University
2021	Registration award, Science Talk '21
2020	Favorite Artist Award, Catalyst: A Virtual Sci-Art Exhibition
2020	Oral presentation award, SACNAS – The National Diversity in STEM Virtual Conference
2020	Registration scholarship, SACNAS – The National Diversity in STEM Virtual Conference
2020	Best Talk Honorable Mention, Canadian Fungal Research Network Meeting
2020	Trainee-of-the-Year, Vanderbilt Institute for Infection, Immunology and Inflammation
2019	Gilliam Predoctoral Fellowship, Howard Hughes Medical Institute
2019	Ann Bernard Martin Award for Excellence in Graduate Research, Vanderbilt University
2019	Ruth L. Kirschstein National Research Service Award, National Institutes of Health
2019	Ford Foundation Predoctoral Fellowship, Ford Foundation
2019	Graduate student travel grant, Vanderbilt University
2019	Curb Center Fellow, ArtLab, Vanderbilt University
2018	<i>GENETICS</i> Peer Review Training Program, Genetics Society of America
2018	Best poster award, Cellular and Molecular Fungal Biology, Gordon Research Seminar
2018	Best poster award, Cellular and Molecular Fungal Biology, Gordon Research Conference
2018	Best poster award, Department of Biological Sciences, Vanderbilt University
2018	T-shirt design contest winner, Department of Biological Sciences, Vanderbilt University
2017	Graduate student travel grant, Vanderbilt University
2016	Graduate student council travel awards, Clark University
2015	Summa cum laude, Clark University
2014	Bridging the gaps scholar, University of Southern California Keck School of Medicine
2013	Global environmental microbiology scholar, Center for Dark Energy Biosphere Investigations, University of Southern California
2011	Jonas Clark Scholar, Clark University

FUNDING

Life Sciences Research Foundation	Principal investigator, 08/23-08/26, Investigating the molecular underpinnings of complex traits like multicellularity, \$231,000. Funding generously provided by the Howard Hughes Medical Institute.
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Howard Hughes Medical Institute	Principal investigator, 09/22, The evolution of pathways responsible for genome integrity in early animals and close relatives, Hanna H. Gray Finalist, \$10,000
Howard Hughes Medical Institute	Principal investigator, 09/19-09/22, Examining the loss of diverse DNA repair genes and long-term hypermutation in a lineage of budding yeasts, Gilliam Fellowship, Individual Predoctoral Fellowship, \$150,000
National Institutes of Health	Principal investigator, 08/19-08/22, Examining the loss of diverse DNA repair genes and long-term hypermutation in a lineage of budding yeasts, Ruth L. Kirschstein National Research Service Award, Individual Predoctoral Fellowship (Parent F31), \$88,128 (declined)
Ford Foundation Predoctoral Fellow	Principal investigator, 08/19-08/22, The consequences of aberrant cell cycle and DNA repair processes in budding yeast, Individual Predoctoral Fellowship, \$72,000 (declined)
Curb Center ArtLab Fellow	Principal investigator, 12/18-04/19, Bridging the gap between artist and scientist, ArtLab, Vanderbilt University, \$300

SOFTWARE

- 1) ClipKIT: a multiple sequence alignment-trimming software for accurate phylogenomic inference. [Publication PDF](#); [Documentation](#); [Source code](#)
- 2) PhyKIT: a UNIX shell toolkit for processing and analyzing phylogenomic data. [Publication PDF](#); [Documentation](#); [Source code](#)
- 3) BioKIT: a versatile toolkit for processing and analyzing diverse types of sequence data. [Publication PDF](#); [Documentation](#); [Source code](#)
- 4) OrthoSNAP: a tree splitting and pruning algorithm for retrieving single-copy orthologs from gene family trees. [Publication PDF](#); [Documentation](#); [Source code](#)
- 5) orthofisher: a broadly applicable tool for automated gene identification and retrieval. [Publication PDF](#); [Documentation](#); [Source code](#)
- 6) LVBRs: a cloud-based suite of workflows for bulk RNA-seq quality control, analysis, and functional enrichment. [Publication PDF](#); [Documentation](#); [Source code](#)
- 7) treehouse: a user-friendly application to obtain subtrees from large phylogenies. [Publication PDF](#); [Documentation & source code](#)
- 8) ggpubfigs: an R package for creating colorblind friendly figures with ggplot2. [Publication PDF](#); [Documentation & source code](#)

INVITED TALKS

2024	Bioinformatics Group, Wageningen University, Netherlands
2024	Evolutionary Rate covariation and Related Methods Workshop, Oregon State University and Colorado State University
2024	Biochemistry, Molecular, and Structural Biology Graduate Program, the University of California, Los Angeles
2024	Southern California Evolutionary Genetics and Genomics Meeting, Caltech's Center for Evolutionary Science and the University of California's Center for Ecological and Evolutionary Dynamics, Caltech

2024 Postdoc Research Showcase, Molecular and Cell Biology Department, University of California, Berkeley
2024 Trailblazers of Tomorrow National Postdoctoral Symposium, The University of Texas at Austin
2024 Englund Emerging Scholar Symposium, Department of Biological Chemistry, Johns Hopkins Medicine
2024 32st Fungal Genetics Conference at Asilomar, Pacific Grove, CA
2023 Seminar, Stowers Institute
2023 Innovative Genomics Institute and the Department of Electrical Engineering and Computer Sciences, University of California, Berkeley
2023 CanFunNet, Acadia University
2023 Lightning Talk, Southern California Systems Biology Conference, University of Southern California
2023 Departmental Seminar, Plant Pathology and Environmental Microbiology, The Pennsylvania State University
2022 Biology Department, Loras College
2022 Yeast Genetics Meeting, Genetics Society of America
2022 Hanna H. Gray Fellows Finalists Meeting, Howard Hughes Medical Institute
2022 Molecular mycology meeting, Technion - Israel Institute of Technology
2022 Evolution, Am. Soc. of Naturalists, Soc. for the Study of Evo., and the Soc. of Sys. Biologists, Cleveland, OH (declined due to scheduling conflict)
2022 James F. Crow Early Career Researcher Award Finalist, Genetics Society of America
2022 Department of Biological Sciences, George Washington University
2022 31st Fungal Genetics Conference at Asilomar, Pacific Grove, CA
2021 Artist-in-Residence program, Vanderbilt Institute for Infection, Immunology and Inflammation
2021 CanFunNet and Great Lakes Mycology Conference
2021 Sandler Fellows Finalists Seminar, University of California, San Francisco
2021 Department of Ecology, Evolution, and Organismal Biology, Iowa State University
2021 Medical Mycology Trainee Seminar Series, University of Utah ([Link](#))
2021 Mycology Graduate Student Organization, University of Georgia
2021 MicroSeminar, International Society for Microbial Ecology ([Link](#))
2021 Alliance for Diversity in Science and Engineering, Young Researchers Conference
2021 Andrew Murray Lab seminar, Harvard University, Cambridge
2020 Institute of Insect Sciences, Zhejiang University
2020 Evan Eichler Lab seminar, University of Washington, Seattle
2020 Genetics Society of America, Early Career Scientist Seminar Series
2020 Nicole King Lab seminar, University of California Berkeley
2020 The National Diversity in STEM Conference, SACNAS
2020 Canadian Fungal Research Network Meeting
2020 Trainee-of-the-year talk, Vanderbilt Institute for Infection, Immunology and Inflammation
2020 Day of Wond'ry, Vanderbilt University, Nashville, TN
2019 Genetics Society of America, Early Career Scientist Seminar Series
2019 Gordon Research Conference, Molecular Mechanisms in Evolution, Easton, MA
2019 Gordon Research Seminar, Molecular Mechanisms in Evolution, Easton, MA (declined)
2019 Focal Point, ArtLab, Vanderbilt University, Nashville, TN
2019 30th Fungal Genetics Conference at Asilomar, Pacific Grove, CA

2019 Phylogenomics and Evolution Group, North Carolina State University, Raleigh, NC
2018 ArtLab Seminar Series, Vanderbilt University, Nashville, TN
2015 TedXClarkUniversity, Clark University, Worcester, MA

CONTRIBUTED TALKS

2023 Plant and Microbial Biology, Postdoc Seminar Series, University of California, Berkeley, Berkeley, CA
2021 Students' Mycology Colloquium, Mycological Society of America
2020 Evolution Seminar Series, Vanderbilt University ([Link](#))
2019 DNA Damage and Response Journal Club, Vanderbilt University, Nashville, TN
2019 Research in Progress Seminar, Vanderbilt University, Nashville, TN
2019 Biological Sciences Annual Retreat, Vanderbilt University, Nashville, TN
2019 Science club at the library, Nashville Public Library, Nashville, TN
2018 Nashville Science Club, Jackalope Brewing Company, Nashville, TN
2017 Mycological Society of America, University of Georgia, Athens, GA
2016 Mycological Society of America, University of California Berkeley, Berkeley, CA
2016 Graduate Student Multidisciplinary Conference, Clark University, Worcester, MA

TRAINEE ADVISING

Graduate Students

2023-Pres. Saelin Bjornson, University of Melbourne (co-advised with Heroen Verbruggen)

Undergraduates

2024-Pres. Veronica L Uy, University of California, Berkeley
2022-2024 Charu Balamurugan, Vanderbilt University (co-advised with Antonis Rokas)
2019-2022 Qianhui (Olivia) Zheng, Vanderbilt University (co-advised with Antonis Rokas)
2018-2021 Megan A. Phillips, Vanderbilt University (co-advised with Antonis Rokas)

COMPANY ADVISING

Since 2023 Advisor, ForensisGroup, Inc., Pasadena, CA
2022-2023 Scientific Advisor, WittGen Biotechnologies, CA
2022-2023 Scientific Consultant, Latch AI Inc., San Francisco, CA
2017-2018 Scientific Consultant, Little Harpeth Brewing, Nashville, TN

WORKSHOP TEACHING

2024 Instructor, Methods for Biological Data Workshop, University of Wisconsin-Madison
2024 Instructor, Phylogenomics and Population Genomics: Inference and Applications, University of Barcelona, Barcelona, Spain
2024 Lead instructor, Workshop on Phylogenomics, Evolution and Genomics, Český Krumlov, Czech Republic
2019 Organizer and instructor, Values-based leadership, Vanderbilt University, Nashville, TN
2019 Founder and instructor, 'A beginner's guide to making figures in R,' Vanderbilt University, Nashville, TN
2019 Instructor, Workshop on Phylogenomics, Evolution and Genomics, Český Krumlov, Czech Republic
2019 Instructor, Workshop on Genomics, Evolution and Genomics, Český Krumlov, Czech Republic

TEACHING EXPERIENCE

- 2020** Guest lecture, Science Communication Tools and Techniques, Vanderbilt University, Nashville, TN
- 2017-2019** Teaching Assistant, Introductory Biology Lab, Vanderbilt University, Nashville, TN
- 2016** Teaching Assistant, Introduction to Biostatistics, Clark University, Worcester, MA
- 2014-2015** Teaching Assistant, Cell Biology, Clark University, Worcester, MA

POSTER PRESENTATIONS

- 2024** Life Sciences Research Foundation Fellows Annual Meeting, Chicago, IL
- 2023** Genome Informatics, Cold Spring Harbor Laboratory
- 2023** The International Choanoflagellates & Friends Workshop
- 2022** Decoding the Genome, Howard Hughes Medical Institute
- 2021** Gilliam Fellows Meeting, Howard Hughes Medical Institute
- 2021** Biology of Genomes, Cold Spring Harbor Laboratories
- 2021** Science Talk '21, Science Talk
- 2020** Gilliam Fellows Meeting, Howard Hughes Medical Institute
- 2020** Vanderbilt Institute for Infection, Immunology and Inflammation Annual Symposium, Virtual Conference
- 2020** The Allied Genetics Conference, Virtual Conference
- 2019** Investigators Science Meeting, Howard Hughes Medical Institute, Bethesda, MD
- 2019** Gilliam Fellows Annual Meeting, Howard Hughes Medical Institute, Bethesda, MD
- 2019** Molecular Mechanisms in Evolution, Gordon Research Conference, Easton, MA
- 2019** Molecular Mechanisms in Evolution, Gordon Research Seminar, Easton, MA
- 2019** 30th Fungal Genetics Conference at Asilomar, Pacific Grove, CA
- 2019** Asperfest pre-meeting at 30th Fungal Genetics Conference at Asilomar, Pacific Grove, CA
- 2018** Cellular and Molecular Fungal Biology, Gordon Research Conference, Holderness, NH
- 2018** Cellular and Molecular Fungal Biology, Gordon Research Seminar, Holderness, NH
- 2018** Department of Biological Sciences Annual Retreat, Vanderbilt University, Nashville, TN
- 2015** Bumpus Symposium, Clark University, Worcester, MA
- 2015** Traina Scholars Presentation, Clark University, Worcester, MA
- 2015** Summer Research Presentation, Clark University, Worcester, MA

EDUCATION

Vanderbilt University	Biological Sciences	Ph.D., GPA: 3.97	2016–2022
Clark University	Biochemistry and Molecular Biology	M.S., GPA: 3.98	2015–2016
Clark University	Biochemistry and Molecular Biology	B.A., GPA: 3.84	2011–2015

SERVICE

- 2024-Pres.** Member, Conferences Committee, Genetics Society of America
- 2024-Pres.** Co-chair, Postdocs Research Showcase, Molecular and Cell Biology, University of California, Berkeley
- 2023-Pres.** Mentor, Alumni Mentorship Program Early Career Mentorship Program, Genetics Society of America
- 2023-Pres.** Project Partner, Data Science Discovery Program, University of California, Berkeley

2023-Pres. Chair of Alumni Affairs, The Evolutionary Studies Initiative at Vanderbilt, Vanderbilt University, Nashville, TN

2020-Pres. Founder and Chief Officer, SciArt with Purpose, <https://jlsteenwyk.com/sciart.html>

2023-2024 Executive Board Member, Berkeley Postdoctoral Entrepreneurship Program, University of California, Berkeley

2023-2024 Chair, TAGC Undergraduate Travel Award Subcommittee, Genetics Society of America

2023-2024 Representative for Early Career Scientists, Allied Program Committee, The Allied Genetics Conference 2024, Genetics Society of America

2022 Panelist at the Diversity, Equity, and Inclusion Discussion, Yeast Genetics Conference, Genetics Society of America

2022 Scientist-Artist: Embracing Duality, ArtLab, Vanderbilt University

2019-2022 Member, Steering Committee, Early Career Leadership Program, Genetics Society of America

2019-2022 Inclusion Coordinator, The Evolutionary Studies Initiative at Vanderbilt, Vanderbilt University, Nashville, TN

2019-2022 Graphic Illustrator, The Evolutionary Studies Initiative at Vanderbilt, Vanderbilt University, Nashville, TN

2017-2022 Educational outreach booth design and execution, MEGAMicrobe, Nashville, TN

2017-2022 Member of the Dean of Graduate Student's survey quantitative analysis subgroup, Graduate Diversity and Inclusion Committee, Vanderbilt University, Nashville, TN

2017-2022 Judge, Middle Tennessee Science and Engineering Fair, Belmont University, Nashville, TN

2019-2021 Co-chair, Communication and Outreach Subcommittee, Genetics Society of America

2018-2021 Volunteer Deputy, American Society of Microbiology Vanderbilt University Chapter, Nashville, TN

2017-2021 Communications chair, Inclusivity in Biosciences Association, Vanderbilt University, Nashville, TN

2020 Panelist at the Communication and Outreach Workshop, The Allied Genetics Conference, Genetics Society of America

2019-2020 President, Inclusivity in Biosciences Association, Vanderbilt University, Nashville, TN

2019-2020 Co-chair, MEGAMicrobe, Vanderbilt Institute for Infections, Immunology and Inflammation, Nashville, TN

2018-2019 Vice President, Inclusivity in Biosciences Association, Vanderbilt University, Nashville, TN

2013-2019 Administrator and Owner, Molecular Biology and Biochemistry for Researchers and Students Group, LinkedIn

2019 Peer review workshop leader, 30th Fungal Genetics Conference at Asilomar, Pacific Grove, CA

2018-2019 Vice President, Graduate Student Association, Department of Biological Sciences, Vanderbilt University, Nashville, TN

2018-2019 Vice co-chair, MEGAMicrobe, Vanderbilt Institute for Infections, Immunology and Inflammation, Nashville, TN

2017-2018 Secretary, Graduate Student Association, Department of Biological Sciences, Vanderbilt University, Nashville, TN

2017 Vanderbilt Student Volunteers for Science, Volunteer Science Teacher, West End Middle School, Nashville, TN

2014-2015 Director, Clark University Emergency Medical Services, Clark University, Worcester, MA
2014-2015 Subcommittee for Department of Chemistry, Biochemistry and Molecular Biology Faculty Search Committee, Clark University, Worcester, MA
2014-2015 Science Education Outreach Blogger, C-DEBI Sci-Curious Blog
2013-2014 Secretary, Clark University Emergency Medical Services, Clark University, Worcester, MA

SOCIETIES

Genetics Society of America, Society of Systematic Biologists, American Society for Microbiology, Mycological Society of America, Society for the Advancement of Chicanos/Hispanics and Native Americans in Science

MANUSCRIPT REVIEWER

Nature Communications; Proceedings of the National Academy of Sciences, Molecular Biology and Evolution; Systematic Biology; Current Biology; PLOS Pathogens, GigaScience, Methods in Ecology and Evolution; Genome Biology and Evolution; Genetics; G3 Genes|Genomes|Genetics; FEMS Yeast Research; and others

ART SHOWS

2021 Science Talk '21, Science Talk
2020 Catalyst: A Virtual Sci-Art Exhibition, Michigan State University
2020 Day of Wond'ry, Vanderbilt University, Nashville, TN
2020 Fire-Exhibition, Kefi Collective at Vanderbilt University, Nashville, TN
2019 Biomedical Sciences Winter Show, Vanderbilt University, Nashville, TN
2019 Focal point, ArtLab, Vanderbilt University, Nashville, TN
2019 Connecting the Dots, ArtLab, Vanderbilt University, Nashville, TN
2018 ArtLab opening reception, ArtLab, Vanderbilt University, Nashville, TN
2018 The Intersection between Art and Science, ArtLab, Vanderbilt University, Nashville, TN

POPULAR SCIENCE ARTICLES

6. **Steenwyk, J.L.** & K. Giffin. The silver lining of bioinformatics. *Genes to Genomes*. September 12, 2022
5. Simopoulos, M.A.C., A.F. Cisneros, A.D. Mendoza, C. Bautista, **J.L. Steenwyk**, N. Ahmad. Hurdles and advances to making science gender-neutral, *ecrLife*. November 26, 2020
4. Mendoza, A.D., C. Bautista, E.A. Marnik, C.M.A. Simopoulos, & **J.L. Steenwyk**. Navigating fake news as a scientist, *ecrLife*. October 8, 2020
3. **Steenwyk, J.L.** & M. Jonika. How to get started in science communication, *ecrLife*. August 21, 2020
2. **Steenwyk, J.L.** & A. Rokas. A new hybrid fungus is found in hospitals and linked to lung disease, *The Conversation*. June 4, 2020
1. **Steenwyk, J.L.** & A. Rokas. An outlaw yeast thrives with genetic chaos – and could provide clues for understanding cancer growth, *The Conversation*. May 21, 2019

PUBLICATIONS (Trainees and I are in **bold** font.)

Preprints/Submitted

8. Delbaje, E., L. Pontes, J. Rhodes, **J.L. Steenwyk**, L. Lu, T.F. dos Reis, A. Rokas & G.H. Goldman (2024). *Aspergillus fumigatus* mitogenomes and their influence on azole-resistant and -susceptible populations. **Submitted.**
7. Feng, B.* , Y. Li*, H. Liu*, **J.L. Steenwyk**, K.T. David, X. Tian, B. Xu, C. Gonçalves, D.A. Opulente, A.L. LaBella, M.-C. Harrison, J.F. Wolters, S. Shao, Z. Chen, K.J. Fisher, M. Groenewald, C.T. Hittinger, X.-X. Shen, A. Rokas^, X. Zhou^, & Y. Li^ (2024). *Equal contributors; ^Corresponding authors. Unique trajectory of gene family evolution from genomic analysis of nearly all known species in an ancient yeast lineage. **bioRxiv.** DOI: 10.1101/2024.06.05.597512.
6. O. Lemke*, B.M. Heineike*, S. Viknander, N. Cohen, **J.L. Steenwyk**, L. Spranger, F. Li, F. Agostini, C.T. Lee, S.K. Aulakh, J. Nielsen, A. Rokas, J. Berman, A. Zelezniak, T.I. Gossmann, & M. Ralser (2024). *Equal contributors. The Role of Metabolism in Shaping Enzyme Structures Over 400 Million Years of Evolution. **bioRxiv.** DOI: 10.1101/2024.05.27.596037
5. Li, N., D.M. Geiser, **J.L. Steenwyk**, C. Tsuchida, S. Koike, S. Slinski, & F.N. Martin (2024). A systematic approach for identifying unique genomic sequences for *Fusarium oxysporum* f. sp. *lactucae* race 1 and development of molecular diagnostic tools. **Submitted.**
4. Fan, Y., M. Du, W. Zhang, W. Deng, E. Yang, S. Wang, L. Yan, L. Zhang, S. Kang, **J.L. Steenwyk**, Z. An, X. Liu, & M. Xiang (2024). The Genomes of Nematode-Trapping Fungi Provide Insights into the Origin and Diversification of Fungal Carnivorism. **bioRxiv.** DOI: 10.1101/2024.03.21.586190.
3. Turnbull, R.* , **J.L. Steenwyk***, S. Mutch, P. Scholten, V.W. Salazar, J.L. Birch, & H. Verbruggen (2023). *Equal contributors. Orthoflow: phylogenomic analysis and diagnostics with one command. **Research Square.** DOI: 10.21203/rs.3.rs-3699210/v1
2. Le, H.G.B.H.^*, **J.L. Steenwyk***, N. Manske, M. Smolin, A. Abdulali, A. Kamat, R. Kanchana, K. Giffin, A. Andere, & K. Workman^ (2022). *Equal contributors; ^Corresponding authors. Latch Verified Bulk-RNA Seq toolkit: a cloud-based suite of workflows for bulk RNA-seq quality control, analysis, and functional enrichment. **bioRxiv.** DOI: 10.1101/2022.11.10.516016.
1. **Zheng, Q., J.L. Steenwyk**^, & A. Rokas^ (2022). Lack of universal mutational biases in a fungal phylum. ^Corresponding authors. **bioRxiv.** DOI: 10.1101/2022.03.29.486229

Peer Review Published

75. **Steenwyk, J.L.**, S. Knowles, R.W. Bastos, **C. Balamurugan**, D. Rinker, M.E. Mead, C.D. Roberts, H.A. Raja, Y. Li, A.C. Colabardini, P.A. de Castro, T.F. dos Reis, D. Canóvas, R.L. Sanchez, K. Lagrou, E. Torrado, F. Rodrigues, N.H. Oberlies, X. Zhou, G.H. Goldman^, & A. Rokas^ (2024). ^Corresponding authors. Evolutionary origin, population diversity, and diagnostics for a cryptic hybrid pathogen. **Nature Communications:** in press.
74. Gonçalves, C., M.-C. Harrison, **J.L. Steenwyk**, D.A. Opulente, A.L. LaBella, J.F. Wolters, X. Zhou, X.-X. Shen, M. Groenewald, C.T. Hittinger, & A. Rokas (2024). Diverse signatures of convergent evolution in cacti-associated yeasts. **PLOS Biology:** in press.
73. **Bjornson, S.**, H. Verbruggen, N. Upham^, & **J.L. Steenwyk**^ (2024). ^Corresponding authors. Reticulate Evolution: Detection and Utility in the Phylogenomics Era. **Molecular**

Phylogenetics and Evolution: in press.

72. **Steenwyk, J.L.**, G.I. Martínez-Redondo, T.J. Buida III, E. Gluck-Thaler, X.-X. Shen, T. Gabaldón, A. Rokas, & R. Fernández (2024). PhyKIT: A Multitool for Phylogenomics. **Current Protocols: in press.**
71. Liu, H., **J.L. Steenwyk**, X. Zhou, D.T. Schultz, K.M. Kocot, X.-X. Shen, A. Rokas[^], & Y. Li[^] (2024). A taxon-rich and genome-scale phylogeny of Opisthokonta. **PLOS Biology: in press.**
70. Pinzan, C.F., C. Valero, P.A. de Castro, J. Luiz da Silva, K. Earle, H. Liu, M.A.C. Horta, O. Knemeyer, T. Krüger, A. Pschibul, D.N. Cömert, T. Heinekamp, A.A. Brakhage, **J.L. Steenwyk**, M.E. Mead, N. Hermsdorf, S.G. Filler, N.G. da Rosa-Garzon, E. Delbaje, M.J. Bromley, H. Cabral, C. Diehl, C.B. Angeli, G. Palmisano, A.S. Ibrahim, D.C. Rinker, T.J.C. Sauters, K. Steffen, A. Gumilang, A. Rokas[^], S. Gago[^], & T.F. dos Reis[^], G.H. Goldman[^] (2024). [^]Corresponding authors. Aspergillus fumigatus conidial surface-associated proteome reveals factors for fungal evasion and host immunity modulation. **Nature Microbiology**. DOI: 10.1038/s41564-024-01782-y
69. Zhang, W., Y. Fan, W. Deng, Y. Chen, S. Wang, S. Kang, **J.L. Steenwyk**, M. Xiang, & X. Liu (2024). Characterization of Genome-wide Phylogenetic Conflict Uncovers Evolutionary Modes of Carnivorous Fungi. **mBio**. DOI: 10.1128/mbio.02133-24.
68. **Steenwyk, J.L.** (2024). The discovery of a new lifespan-extending gene in insects. **Crop Health**. DOI: 10.1007/s44297-024-00032-1.
67. **Steenwyk, J.L.** & N. King (2024). The Promise and Pitfalls of Synteny in Phylogenomics. **PLOS Biology**. DOI: 10.1371/journal.pbio.3002632.
66. Brown, A., **J.L. Steenwyk**, & A. Rokas (2024). Genome-wide patterns of non-coding sequence variation in the major fungal pathogen *Aspergillus fumigatus*. **G3 Genes/Genomes/Genetics**. DOI: 10.1093/g3journal/jkae091
65. Opulente, D.A.^{*}, A.L. LaBella^{*}, M.-C. Harrison[#], J.F. Wolters[#], C. Liu, Y. Li, J. Kominek, **J.L. Steenwyk**, H.R. Stoneman, J. VanDenAvond, C.R. Miller, Q.K. Langdon, M. Silva, C. Goncalves, E.J. Ubbelohde, Y. Li, K.V. Buh, M. Jarzyna, M.A.B. Haase, C.A. Rosa, N. Cadez, D. Libkind, J.H. DeVirgilio, A.B. Hulfachor, C.P. Kurtzman, J.P. Sampaio, P. Goncalves, X. Zhou, X.-X. Shen, M. Groenewald, A. Rokas[^], & C.T. Hittinger[^] (2024). ^{*}Equal co-first authors; [#]Equal co-second authors; [^]Corresponding authors. Genomic factors shape carbon and nitrogen metabolic niche breadth across Saccharomycotina yeasts. **Science**. DOI: 10.1126/science.adj4503.
64. **Balamurugan, C.**, **J.L. Steenwyk**[^], G.H. Goldman, & A. Rokas[^] (2024). [^]Corresponding authors. The evolution of the gliotoxin biosynthetic gene cluster in *Penicillium* fungi. **G3 Genes/Genomes/Genetics**. DOI: 10.1093/g3journal/jkae063
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