# Jacob L. Steenwyk

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## PROFESSIONAL POSITIONS

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

**Since 2022** Berkeley Science Fellow, University of California, Berkeley

## ADVISOR POSITIONS

**Since 2023** Advisor, ForensisGroup, Inc.

**2022-2023** Scientific Advisor, WittGen Biotechnologies

**2022-2023** Scientific Consultant, Latch AI Inc.

## EDUCATION

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| 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 |

## AWARDS

**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

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| **2019** | Curb Center Fellow, ArtLab, Vanderbilt University |
| **2018** | *GENETICS* 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 |

## FIVE HIGHLIGHTED PUBLICATIONS

1. **Steenwyk, J.L.**, Y. Li, X. Zhou, X.-X. Shen, & A. Rokas (2023). Incongruence in the phylogenomics era. ***Nature Reviews Genetics***. in press.

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***. PMID: 33560364; PMCID: PMC8388027; 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***. PMID: 33264284; PMCID: PMC7735675; 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***. PMID: 32502407; PMCID: PMC7343619; DOI: 10.1016/j.cub.2020.04.071

## FUNDING

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| **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. |
| **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 co-investigator (shared with Antonis Rokas), 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) |

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| **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 color blind friendly figures with ggplot2. Publication PDF; Documentation & source code

## INVITED TALKS

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| **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** | Lightening 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

## ADVISING

### Graduate Students

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

### Undergraduates

**2023-Pres.** Nhoelle Rocero (co-advised with Nicole King at University of California, Berkeley)
**2022-Pres.** Charu Balamurugan (co-advised with Antonis Rokas at Vanderbilt University)
**2019-2022** Qianhui (Olivia) Zheng (co-advised with Antonis Rokas at Vanderbilt University)
**2018-2021** Megan A. Phillips (co-advised with Antonis Rokas at Vanderbilt University)

## WORKSHOP TEACHING

**2024** 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

**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** 30$^{th}$ Fungal Genetics Conference at Asilomar, Pacific Grove, CA
**2019** Asperfest pre-meeting at 30$^{th}$ 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

## RESEARCH EXPERIENCE

**2022-Pres.** Nicole King Lab at the University of California, Berkeley, and Howard Hughes Medical Institute, Berkeley, CA. Post-doctoral Research. The function and evolution of genomes.

**2016-2022** Antonis Rokas Lab at Vanderbilt University, Nashville, TN. Doctoral Research. Evolution of medically and technologically significant fungi.

**2015-2016** John Gibbons Lab at Clark University, Worcester, MA. Undergraduate and Master's Research. Copy number variation in the human pathogen, *Cryptococcus gattii.*

**2015-2016** Robert Drewell Lab at Clark University, Worcester, MA. Undergraduate and Master's Research. Genome-wide methylation patterns in the social amoeba, *Dictyostelium discoideum.*

**2014** Ite A. Laird-Offringa Lab at the University of Southern California, Los Angeles, CA. Bridging the Gaps Summer Scholar. Mapping the autoimmune triggering epitope of *ELAVL4* in small cell lung cancer.

**2013** John Heidelberg and Eric Webb Labs at the University of Southern California, Los Angeles, CA. Global Environmental Microbiology Summer Scholar. Fresh and marine water microbial diversity.

## SERVICE

**2023-Pres.** Project Partner, Data Science Discovery Program, University of California, Berkeley

**2023-Pres.** Executive Board Member, Berkeley Postdoctoral Entrepreneurship Program, University of California, Berkeley

**2023-Pres.** Representative for Early Career Scientists, Allied Program Committee, The Allied Genetics Conference 2024

**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

**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, MEGA*Microbe*, 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, MEGA*Microbe*, 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, 30$^{th}$ 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, MEGA*Microbe*, Vanderbilt Institute for Infections, Immunology and Inflammation, Nashville, TN
**2017-2018** Secretary, Graduate Student Association, Department of Biological Sciences, Vanderbilt University, Nashville, TN
**2017-2018** Scientific consultant, Little Harpeth Brewing, Nashville, TN
**2017** Vanderbilt Student Volunteers for Science, Volunteer Science Teacher, West End Middle School, Nashville, TN
**2014-2015** Undergraduate 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

## 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; PLOS Pathogens, 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**

6. 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 (2023). *Equal co-first authors; #Equal co-second authors; ^Corresponding authors. Genomic and ecological factors shaping specialism and generalism across an entire subphylum. bioRxiv. DOI: 10.1101/2023.06.19.545611.

5. Liu, C., X. Han, **J.L. Steenwyk**, & X.-X. Shen (2023). Temporal transcriptomics provides insight into host-pathogen interactions: a case study of *Didymella pinodella* and disease-resistant and -susceptible pea varieties. *Submitted*.

4. **Balamurugan, C.**, **J.L. Steenwyk**, G.H. Goldman, & A. Rokas (2023). The evolution of the gliotoxin biosynthetic gene cluster in *Penicillium* fungi. bioRxiv. DOI: 10.1101/2023.01.17.524442.

3. **Steenwyk, J.L.**, **C. Balamurugan**, H.A. Raja, C. Goncalves, N. Li, F. Martin, J. Berman, N.H. Oberlies, J.G. Gibbons, G.H. Goldman, D.M. Geiser, D.S. Hibbett, & A. Rokas (2022). Phylogenomics reveals extensive misidentification of fungal strains from the genus *Aspergillus*. bioRxiv. DOI: 10.1101/2022.11.22.517304

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**

56. **Steenwyk, J.L.**, Y. Li, X. Zhou, X.-X. Shen, & A. Rokas (2023). Incongruence in the phylogenomics era. Nature Reviews Genetics: *in press*

55. Drewell, R.A., T.C. Cormier, **J.L. Steenwyk**, J. St. Denis, J.F. Tabima, J.M. Dresch, & D.A. Larochelle (2023). The *Dictyostelium discoideum* genome lacks significant DNA methylation and uncovers palindromic sequences as a source of false positives in bisulfite sequencing. NAR Genomics and Bioinformatics. DOI: 10.1093/nargab/lqad035.

54. Mead, M.E., P.A. de Castro, **J.L. Steenwyk**, J. Gangeux, M. Hoenigl, J. Prattes, R. Rautemaa-Richardson, H. Guegan, C.B. Moore, C. Lass-Flörl, F. Reizine, C. Valero, N. Van Rhijn, M.J. Bromley, A. Rokas, G.H. Goldman, & S. Gago (2023). COVID-19 Associated Pulmonary Aspergillosis isolates are genomically diverse but similar to each other in their responses to infection-relevant stresses. mSpectrum. DOI: 10.1128/spectrum.05128-22.

53. Sierra-Patev, S., B. Min, M. Naranjo-Ortiz, B. Looney, Z. Konkel, J.C. Slot, Y. Sakamoto, **J.L. Steenwyk**, A. Rokas, J. Carro, S. Camarero, P. Ferreira, G. Molpeceres, F.J. Ruiz-Dueñas, A. Serrano, B. Henrissat, E. Drula, K.W. Hughes, J.L. Mata, N.K. Ishikawa, R. Vargas-Isla, S. Ushijima, C.A. Smith, S. Ahrendt, W. Andreopoulos, G. He, K. LaButti, A. Lipzen, V. Ng, R. Riley, L. Sandor, K. Barry, A.T. Martínez, Y. Xiao, J.G. Gibbons, K. Terashima, I.V. Grigoriev, & D. Hibbett (2023). A Global Phylogenomic Analysis of the Shiitake Genus *Lentinula*. Proceedings of the National Academy of Sciences of the United States of America (PNAS). DOI:

10.1073/pnas.2214076120.

52. **Steenwyk, J.L.**^ & A. Rokas^ (2023). The dawn of relaxed phylogenetics. ^Corresponding authors. PLOS Biology. DOI: 10.1371/journal.pbio.3001998

51. Li, Y.^, H Liu, **J.L. Steenwyk**, A.L. LaBella, M.C. Harrison, M. Groenewald, X. Zhou, X.-X. Shen, T. Zhao, C.T. Hittinger, & A. Rokas^ (2022). ^Corresponding authors. Contrasting modes of macro- and micro-synteny evolution in a eukaryotic subphylum. Current Biology. DOI: 10.1016/j.cub.2022.10.025

50. **Steenwyk, J.L.**^, D.C. Goltz, T.J. Buida III, Y. Li, X.-X. Shen, & A. Rokas^ (2021). OrthoSNAP: a tree splitting and pruning algorithm for retrieving single-copy orthologs from gene family trees. ^Corresponding authors. PLOS Biology. DOI: 10.1371/journal.pbio.3001827

49. Brown, A., M.E. Mead, **J.L. Steenwyk**, G.H. Goldman, & A. Rokas (2022). Extensive sequence divergence of non-coding regions between *Aspergillus fumigatus*, a major fungal pathogen of humans, and its relatives. Frontiers in Fungal Biology. DOI: 10.3389/ffunb.2022.802494

48. Horta, M.A., **J.L. Steenwyk**, M.E. Mead, L.H.B. dos Santos, S. Zhao, J.G. Gibbons, M. Marcet-Houben, T. Gabaldón, A. Rokas^, & G.H. Goldman^ (2022). Examination of genome-wide ortholog variation in clinical and environmental isolates of the fungal pathogen *Aspergillus fumigatus*. ^Corresponding authors. mBio. DOI: 10.1128/mbio.01519-22

47. **Steenwyk, J.L.**^, T.J. Buida III, C. Gonçalves, D.C. Goltz, G. Morales, M. Mead, A.L. LaBella, C.M. Chavez, J.E. Schmitz, M. Hadjifrangiskou, Y. Li, & A. Rokas^ (2022). BioKIT: a versatile toolkit for processing and analyzing diverse types of sequence data. ^Corresponding authors. Genetics. DOI: 10.1093/genetics/iyac079

46. **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

45. Bradley, N.P.*, K.L. Wahl*, **J.L. Steenwyk**, A. Rokas, & B.F. Eichman (2022). Resistance-guided mining of bacterial genotoxins defines a family of DNA glycosylases. *Equal contributors. mBio. DOI: 10.1128/mbio.03297-21

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