



# Jacob L. Steenwyk

Howard Hughes Medical Institute  
Gilliam Fellow, Vanderbilt University  
jacob.steenwyk@vanderbilt.edu  
<http://jlsteenwyk.com/>

## EDUCATION

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<b>Present</b>	Ph.D. Candidate, Biological Sciences Advisor: Antonis Rokas GPA: 3.97	<b>Vanderbilt University</b>
<b>2016</b>	M.S. Biochemistry and Molecular Biology Advisor: John G. Gibbons GPA: 3.98	<b>Clark University</b>
<b>2015</b>	B.A. Biochemistry and Molecular Biology Advisor: Denis Larochelle Cumulative GPA: 3.84 Science GPA: 3.84	<b>Clark University</b>

## AWARDS

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<b>2021</b>	Presentation award, Canadian Fungal Research Network and Great Lakes Mycology Conference
<b>2021</b>	Graduate Research Excellence Award in Biological Sciences, Vanderbilt University
<b>2021</b>	Smriti Bardhan Scholarship, Vanderbilt University
<b>2021</b>	Registration award, Science Talk '21
<b>2020</b>	Favorite Artist Award, Catalyst: A Virtual Sci-Art Exhibition
<b>2020</b>	Oral presentation award, SACNAS – The National Diversity in STEM Virtual Conference
<b>2020</b>	Registration scholarship, SACNAS – The National Diversity in STEM Virtual Conference
<b>2020</b>	Best Talk Honorable Mention, Canadian Fungal Research Network Meeting
<b>2020</b>	Trainee-of-the-Year, Vanderbilt Institute for Infection, Immunology and Inflammation
<b>2019</b>	Gilliam Predoctoral Fellowship, Howard Hughes Medical Institute
<b>2019</b>	Ann Bernard Martin Award for Excellence in Graduate Research, Vanderbilt University
<b>2019</b>	Ruth L. Kirschstein National Research Service Award, National Institutes of Health
<b>2019</b>	Ford Foundation Predoctoral Fellowship, Ford Foundation
<b>2019</b>	Graduate student travel grant, Vanderbilt University
<b>2019</b>	Curb Center Fellow, ArtLab, Vanderbilt University
<b>2018</b>	<i>GENETICS</i> Peer Review Training Program, Genetics Society of America
<b>2018</b>	Best poster award, Cellular and Molecular Fungal Biology, Gordon Research Seminar
<b>2018</b>	Best poster award, Cellular and Molecular Fungal Biology, Gordon Research Conference
<b>2018</b>	Best poster award, Department of Biological Sciences, Vanderbilt University
<b>2018</b>	T-shirt design contest winner, Department of Biological Sciences, Vanderbilt University
<b>2017</b>	Graduate student travel grant, Vanderbilt University
<b>2016</b>	Graduate student council travel awards, Clark University
<b>2015</b>	Summa cum laude, Clark University
<b>2014</b>	Summer research scholar, Bridging the gaps, University of Southern California Keck School of Medicine
<b>2013</b>	Global environmental microbiology scholar, Center for dark energy biosphere investigations, University of Southern California
<b>2011</b>	Jonas Clark Scholar, Clark University

## RESEARCH INTERESTS

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- Evolution of technologically and medically significant fungi
- Evolution and function of DNA repair
- Genome and gene evolution
- Phylogenomics and phylogenetics
- Software development

## TEN HIGHLIGHTED PUBLICATIONS (see end of CV for all publications)

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### First author

**Steenwyk, J.L.**<sup>^</sup>, *et al.* (2021) PhyKIT: a UNIX shell toolkit for processing and analyzing phylogenomic data. <sup>^</sup>Corresponding author. *Bioinformatics*. DOI: 10.1093/bioinformatics/btab096

**Steenwyk, J.L.**<sup>^</sup>, *et al.* (2020). ClipKIT: a multiple sequence alignment-trimming software for accurate phylogenomic inference. <sup>^</sup>Corresponding author. *PLOS Biology*. DOI: 10.1371/journal.pbio.3001007

**Steenwyk, J.L.**<sup>\*</sup>, A.L. Lind<sup>\*</sup>, *et al.* (2020). Pathogenic allodiploid hybrids of *Aspergillus* fungi. <sup>\*</sup>Equal contributors. *Current Biology*. DOI: 10.1016/j.cub.2020.04.071

**Steenwyk, J.L.**, *et al.* (2020). Biosynthetic gene clusters, secondary metabolite profiles, and cards of virulence in the closest nonpathogenic relatives of *Aspergillus fumigatus*. *Genetics*. DOI: 10.1534/genetics.120.303549

**Steenwyk, J.L.**, *et al.* (2019). Extensive loss of cell cycle and DNA repair genes in an ancient lineage of bipolar budding yeasts. *PLOS Biology*. DOI: 10.1371/journal.pbio.3000255

**Steenwyk, J.L.**, *et al.* (2019). A robust phylogenomic timetree for biotechnologically and medically important fungi in the genera *Aspergillus* and *Penicillium*. *mBio*. DOI: 10.1128/mBio.00925-19

### Middle author

Shen, Xing-Xing<sup>^</sup>, **J.L. Steenwyk**, & A. Rokas (2021). Dissecting incongruence between concatenation- and quartet-based approaches in phylogenomic data. <sup>^</sup>Corresponding author. *Systematic Biology*. DOI: 10.1093/sysbio/syab011

Li, Y., **J.L. Steenwyk**, *et al.* (2021). A genome-scale phylogeny of the kingdom Fungi. *Current Biology*. DOI: 10.1016/j.cub.2021.01.074

Shen, X.-X.<sup>^</sup>, **J.L. Steenwyk**, *et al.* (2020). Genome-scale phylogeny and contrasting modes of genome evolution in the fungal phylum Ascomycota. <sup>^</sup>Corresponding author. *Science Advances*. DOI: 10.1126/sciadv.abd0079

Shen, X.-X.<sup>\*</sup>, D.A. Opulente<sup>\*</sup>, J. Kominek<sup>\*</sup>, X. Zhou<sup>\*</sup>, **J.L. Steenwyk**, *et al.* (2018). <sup>\*</sup>Equal contributors. Tempo and mode of genome evolution in the budding yeast subphylum. *Cell*. DOI: 10.1016/j.cell.2018.10.023

## SOFTWARE

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ClipKIT: a multiple sequence alignment-trimming software for accurate phylogenomic inference. [Publication PDF](#); [Documentation](#); [Source code](#)

PhyKIT: a UNIX shell toolkit for processing and analyzing phylogenomic data. [Publication PDF](#); [Documentation](#); [Source code](#)

orthofisher: a broadly applicable tool for automated gene identification and retrieval. [Documentation](#); [Source code](#)

treehouse: a user-friendly application to obtain subtrees from large phylogenies. [Publication PDF](#);

## [Documentation & source code](#)

ggpubfigs: an R package for creating color blind friendly figures with ggplot2. [Zenodo record](#);  
[Documentation & source code](#)

## SOCIETIES

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

## FUNDING

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<b>Howard Hughes Medical Institute</b>	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
<b>National Institutes of Health</b>	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)
<b>Ford Foundation Predoctoral Fellow</b>	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)
<b>Curb Center ArtLab Fellow</b>	Principal investigator, 12/18-04/19, Bridging the gap between artist and scientist, ArtLab, Vanderbilt University, \$300

## INVITED TALKS

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<b>2021</b>	Artist-in-Residence program, Vanderbilt Institute for Infection, Immunology and Inflammation
<b>2021</b>	CanFunNet and Great Lakes Mycology Conference
<b>2021</b>	Sandler Fellows Seminar, University of California, San Francisco
<b>2021</b>	Department of Ecology, Evolution, and Organismal Biology, Iowa State University
<b>2021</b>	Medical Mycology Trainee Seminar Series, University of Utah ( <a href="#">Link</a> )
<b>2021</b>	Mycology Graduate Student Organization, University of Georgia
<b>2021</b>	MicroSeminar, International Society for Microbial Ecology ( <a href="#">Link</a> )
<b>2021</b>	Alliance for Diversity in Science and Engineering, Young Researchers Conference
<b>2021</b>	Andrew Murray Lab seminar, Harvard University, Cambridge
<b>2020</b>	Institute of Insect Sciences, Zhejiang University
<b>2020</b>	Evan Eichler Lab seminar, University of Washington, Seattle
<b>2020</b>	Genetics Society of America, Early Career Scientist Seminar Series
<b>2020</b>	Nicole King Lab seminar, University of California Berkeley
<b>2020</b>	The National Diversity in STEM Conference, SACNAS
<b>2020</b>	Canadian Fungal Research Network Meeting
<b>2020</b>	Trainee-of-the-year talk, Vanderbilt Institute for Infection, Immunology and Inflammation
<b>2020</b>	Day of Wond'ry, Vanderbilt University, Nashville, TN
<b>2019</b>	Genetics Society of America, Early Career Scientist Seminar Series
<b>2019</b>	Gordon Research Conference, Molecular Mechanisms in Evolution, Easton, MA
<b>2019</b>	Gordon Research Seminar, Molecular Mechanisms in Evolution, Easton, MA (declined)
<b>2019</b>	Focal Point, ArtLab, Vanderbilt University, Nashville, TN

**2019** 30<sup>th</sup> 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

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**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

## UNDERGRADUATE ADVISING

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**2019-Pres.** Olivia Zheng  
**2018-2021** Megan A. Phillips  
**2018-2019** Benjamin Buckman  
**2018** Devin G. Arrants

## WORKSHOP TEACHING

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**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

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**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

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**2021** Biology of Genomes, Cold Spring Harbor Laboratories  
**2021** Science Talk '21, Science Talk  
**2020** HHMI 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** HHMI 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<sup>th</sup> Fungal Genetics Conference at Asilomar, Pacific Grove, CA  
**2019** Asperfest pre-meeting at 30<sup>th</sup> 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

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**2016-Pres.** 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 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 University of Southern California, Los Angeles, CA. Global Environmental Microbiology Summer Scholar. Fresh and marine water microbial diversity.

## SERVICE

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**2020-Pres.** Founder and Chief Officer, SciArt with Purpose, <https://jlsteenwyk.com/sciart.html>  
**2019-Pres.** Co-chair, Communication and Outreach Subcommittee, Genetics Society of America  
**2019-Pres.** Member, Steering Committee, Early Career Leadership Program, Genetics Society of America  
**2019-Pres.** Inclusion Coordinator, The Evolutionary Studies Initiative at Vanderbilt, Vanderbilt University, Nashville, TN  
**2019-Pres.** Graphic Illustrator, The Evolutionary Studies Initiative at Vanderbilt, Vanderbilt University, Nashville, TN  
**2017-Pres.** Educational outreach booth design and execution, MEGAMicrobe, Nashville, TN  
**2017-Pres.** Member of the Dean of Graduate Student's survey quantitative analysis subgroup, Graduate Diversity and Inclusion Committee, Vanderbilt University, Nashville, TN  
**2017-Pres.** Judge, Middle Tennessee Science and Engineering Fair, Belmont University, Nashville, TN  
**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, 30<sup>th</sup> 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
- 2017-2018** 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

## ART SHOWS

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- 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

## MANUSCRIPT REVIEWER

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*Nature Communications; Molecular Biology and Evolution; Systematic Biology; Methods in Ecology and Evolution; Genome Biology and Evolution; Genetics; G3: Genes | Genomes | Genetics; FEMS Yeast Research; BMC Genomics; Nature Communications Biology; PLOS One; Molecular Genetics and Genomics; and others*

## POPULAR SCIENCE ARTICLES

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- (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

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### Preprints

- (4) P.A. de Castro, Moraes, A., Colabardini, A.C., Horta, M.A.C., Knowles, S.L., Raja, H.A., Oberlies, N.H., Koyama, Y., Ogawa, M., Gomi, K., **Steenwyk, J.L.**, Rokas, A., Ries, L.N.A., Goldman, G.H. (2021). Regulation of gliotoxin biosynthesis and protection in *Aspergillus* species. bioRxiv. DOI: 10.1101/2021.08.16.456458.
- (3) **Steenwyk, J.L.**, M.A. Phillips, F. Yang, S.S. Date, T. Graham, J. Berman, C.T. Hittinger, A. Rokas (2021). A gene coevolution network provides insight into eukaryotic cellular and genomic structure and function. bioRxiv. DOI: 10.1101/2021.07.09.451830.
- (2) Phillips, M.A., **J.L. Steenwyk**<sup>^</sup>, X.-X. Shen, & A. Rokas<sup>^</sup> (2021). Examination of gene loss in the DNA mismatch repair pathway and its mutational consequences in a fungal phylum. (<sup>^</sup>Corresponding authors). bioRxiv. DOI: 10.1101/2021.04.13.439724.
- (1) **Steenwyk, J.**, J. St. Denis, J. Dresch, D. Larochelle, & R. Drewell (2017). Whole genome bisulfite sequencing reveals a sparse, but robust pattern of DNA methylation in the *Dictyostelium discoideum* genome. bioRxiv. DOI: 10.1101/166033

### Peer Review Published

- (41) Santos, R.A.C., M.E. Mead, **J.L. Steenwyk**, O. Rivero-Menéndez, A. Alastruey-Izquierdo, G.H. Goldman<sup>^</sup>, & A. Rokas<sup>^</sup> (2021). Examining signatures of natural selection in antifungal resistance genes across *Aspergillus* fungi. <sup>^</sup>Corresponding authors. *Frontiers in Fungal Biology*. DOI: 10.3389/ffunb.2021.723051
- (40) **Steenwyk, J.L.** & A. Rokas (2021). orthofisher: a broadly applicable tool for automated gene identification and retrieval. *G3 Genes|Genomes|Genetics*. DOI: 10.1093/g3journal/jkab250.
- (39) Ries, L., P. de Castro, L. Silva, C. Valero, T. dos Reis, R. Saborano, I. Duarte, G. Persinoti, **J.L. Steenwyk**, A. Rokas, F. Almeida, J. Costa, T. Fill, S.S.W. Wong, V. Aimaniananda, F. Rodrigues, R. Gonçalves, C. Duarte-Oliveira, A. Carvalho, & G.H. Goldman (2021). *Aspergillus fumigatus* acetate utilization impacts virulence traits and pathogenicity. *mBio: in press*.
- (38) Mead, M.E.\* , **J.L. Steenwyk\***, L.P. Silva, P.A. de Castro, N. Saeed, F. Hillmann, G.H. Goldman, & A. Rokas (2021). An evolutionary genomic approach reveals both conserved and species-specific genetic elements related to human disease in closely related *Aspergillus* fungi. \*Equal contributors. *Genetics*. PMID: 33944921; PMCID: PMC8225353; DOI: 10.1093/genetics/iyab066
- (37) **Steenwyk, J.L.**, M.E. Mead, P.A. Castro, C. Valero, A. Damasio, R.A.C. Santos, A.L. LaBella, Y. Li, S.L. Knowles, H.A. Raja, N.H. Oberlies, X. Zhou, O.A. Cornely, F. Fuchs, P. Koehler<sup>^</sup>, G.H. Goldman<sup>^</sup>, A. Rokas<sup>^</sup> (2021). Genomic and phenotypic analysis of COVID-19-associated pulmonary aspergillosis isolates of *Aspergillus fumigatus*. <sup>^</sup>Corresponding authors. *Microbiology Spectrum*. PMID: 34106569; DOI: 10.1128/Spectrum.00010-21
- (36) LaBella, A.L., D. Oputente, **J.L. Steenwyk**, C.T. Hittinger, & A. Rokas (2021). Signatures of optimal codon usage in metabolic genes inform budding yeast ecology. *PLOS Biology*. PMID: 33872297; PMCID: PMC8084343; DOI: 10.1371/journal.pbio.3001185
- (35) **Steenwyk, J.L.** (2021). Evolutionary divergence in the DNA damage response among fungi. *mBio*. PMID: 33727357; PMCID: PMC8092291; DOI: 10.1128/mBio.03348-20



- (34) Shen, Xing-Xing, **J.L. Steenwyk**, & A. Rokas (2021). Dissecting incongruence between concatenation- and quartet-based approaches in phylogenomic data. *Systematic Biology*. PMID: 33616672; DOI: 10.1093/sysbio/syab011
- (33) **Steenwyk, J.L.**^, T.J. Buida III, A.L. LaBella, Y. Li, X.-X. Shen, & A. Rokas^ (2020). PhyKIT: a UNIX shell toolkit for processing and analyzing phylogenomic data. ^Corresponding authors. *Bioinformatics*. PMID: 33560364; DOI: 10.1093/bioinformatics/btab096
- (32) Li, Y., **J.L. Steenwyk**, Y. Chang, Y. Wang, T.Y. James, J.E. Stajich, J.W. Spatafora, M. Groenewald, C. Dunn, C.T. Hittinger, X.-X. Shen^, A. Rokas^ (2020). A genome-scale phylogeny of the kingdom Fungi. ^Corresponding authors. *Current Biology*. PMID: 33607033; DOI: 10.1016/j.cub.2021.01.074
- (31) **Steenwyk, J.L.** (2021). A portrait of budding yeasts: A symbol of the arts, sciences and a whole greater than the sum of its parts. *Yeast*. PMID: 32869892; DOI: 10.1002/yea.3518
- (30) **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
- (29) Li, Y., K.T. David, X.-X. Shen, **J.L. Steenwyk**, K.M. Halanych, & A. Rokas (2020). Feature Frequency Profile-based phylogenies are inaccurate. *Proceedings of the National Academy of Sciences of the United States of America*. PMID: 33234569; PMCID: PMC7749326; DOI: 10.1073/pnas.2013143117
- (28) Shen, X.-X.^, **J.L. Steenwyk**, A.L. LaBella, D.A. Ofulente, X. Zhou, J. Kominek, Y. Li, M. Groenewald, C.T. Hittinger, & A. Rokas^ (2020). Genome-scale phylogeny and contrasting modes of genome evolution in the fungal phylum Ascomycota. ^Corresponding authors. *Science Advances*. PMID: 33148650; PMCID: PMC7673691; DOI: 10.1126/sciadv.abd0079
- (27) Santos, R.A.C., O. Rivero-Menendez, **J.L. Steenwyk**, M.E. Mead, G.H. Goldman^, A. Alastruey-Izquierdo, & A. Rokas^ (2020). Draft genome sequences of four *Aspergillus* section *Fumigati* clinical strains. ^Corresponding authors. *Microbiology Resource Announcements*. PMID: 33004453; PMCID: PMC7530925; DOI: 10.1128/MRA.00856-20
- (26) Filho, A.P.C., G.T.P. Brancini, P.A. de Castro, J.A. Ferreira, L.P. Silva, M.C. Rocha, I. Malavazi, J.G.M. Pontes, T. Fill, R. Silva, F. Almeida, **J.L. Steenwyk**, A. Rokas, T.F. dos Reis, L.N.A. Ries, & G.H. Goldman (2020). *Aspergillus fumigatus* G-protein coupled receptors GprM and GprJ are important for the regulation of the cell wall integrity pathway, secondary metabolite production, and virulence. *mBio*. PMID: 33051372; PMCID: PMC7554674; DOI: 10.1128/mBio.02458-20
- (25) **Steenwyk, J.L.**, M.E. Mead\*, S.L. Knowles\*, H.A. Raja, C.D. Roberts, O. Bader, J. houbraken, G.H. Goldman, N.H. Oberlies, & A. Rokas (2020). Biosynthetic gene clusters, secondary metabolite profiles, and cards of virulence in the closest nonpathogenic relatives of *Aspergillus fumigatus*. \*Equal contributors. *Genetics*. PMID: 32817009; PMCID: PMC7536862; DOI: 10.1534/genetics.120.303549
- (24) Ries, L.N.A., L. Pardeshi, Z. Dong, K. Tan, **J.L. Steenwyk**, A.C. Colabardini, J.A.F. Filho, P.A. de Castro, L.P. Silva, N.W. Preite, F. Almeida, L.J. de Assis, R.A.C. dos Santos, P. Bowyer, M. Bromley, R.A. Owens, S. Doyle, M. Demasi, D.C.R. Hernández, L.E.S. Netto, M.T. Pupo, A. Rokas, F.V. Loures, K.H. Wong, & G.H. Goldman (2020). The *Aspergillus*



*fumigatus* transcription factor RglT is important for gliotoxin biosynthesis and self-protection, and virulence. PLOS Pathogens. PMID: 32667960; PMCID: PMC7384679; DOI: 10.1371/journal.ppat.1008645

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