Jacob Steenwyk

Graduate Student
Evolutionary genomics

Dept. Biological Sciences, Vanderbilt University
Email: jacob.steenwyk@vanderbilt.edu
Website: jlsteenwyk.github.io

Education

Present	Graduate Student Biological Sciences Advisor: Antonis Rokas Current GPA: 3.97	**Vanderbilt University**
2016	M.S. Biochemistry and Molecular Biology Advisor: John G. Gibbons GPA: 3.98	**Clark University**
2015	B.A. Biochemistry and Molecular Biology Advisor: Denis Larochelle Cumulative GPA: 3.84 Science GPA: 3.84	**Clark University**

Awards

2018	Best poster award, Gordon Research Seminar, Holderness, NH
2018	Best poster award, Gordon Research Conference, Holderness, NH
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	Summer research scholar, Bridging the gaps, 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

Publications

Preprint: Eidem H.R., **Steenwyk J.L.**, Wisecaver J., Capra J.A., Abbot P., and Rokas A. (2018). integRATE: a desirability-based data integration framework for the prioritization of candidate genes across heterogeneous 'omics and its application to preterm birth

Preprint: **Steenwyk J.**, St. Denis J., Dresch J., Larochelle D., Drewell R. (2017). Whole genome bisulfite sequencing reveals a sparse, but robust pattern of DNA methylation in the *Dictyostelium discoideum* genome. bioRxiv. doi: 10.1101/166033

In review: Shen X.-X. and 24 others including **Steenwyk J.L.** Tempo and mode of genome evolution in the budding yeast subphylum

(3) **Steenwyk J.L.**, Rokas A. (2018). Copy number variation in fungi and its implications for wine yeast genetic diversity and adaptation. Frontiers in Microbiology. doi: https://doi.org/10.3389/fmicb.2018.00288

(2) **Steenwyk J.**, Rokas A. (2017). Extensive Copy Number Variation in Fermentation-Related Genes among *Saccharomyces cerevisiae* Wine Strains. G3: Genes|Genomes|Genetics. doi: 10.1534/g3.117.040105

(1) **Steenwyk J.L.**, Soghigian J.S., Perfect J.R. and Gibbons J.G. (2016). Copy number variation contributes to cryptic genetic variation in outbreak lineages of *Cryptococcus gattii* from the North American Pacific Northwest. BMC Genomics. doi: 10.1186/s12864-016-3044-0

Contributed Talks

2017 Mycological Society of America, Univ. of Georgia, Athens, GA
Extensive Copy Number Variation in Fermentation-Related Genes Among *Saccharomyces cerevisiae* Wine Strains

2016 Mycological Society of America, Univ. of California Berkeley, Berkeley, CA
Population structure and copy number variation in the fungal pathogen *Cryptococcus gattii*

2016 Graduate Student Multidisciplinary Conference, Clark University, Worcester, MA
Population structure and copy number variation in the fungal pathogen *Cryptococcus gattii*

2015 TedXClarkUniversity, Clark University, Worcester, MA
Instinct and Intelligence

Poster Presentations

2018 Cellular and Molecular Fungal Biology, Gordon Research Conference, Holderness, New Hampshire

2018 Cellular and Molecular Fungal Biology, Gordon Research Seminar, Holderness, New Hampshire

2018 Department of Biological Sciences Annual Retreat, Vanderbilt University, Nashville, TN

2018 Exploring the intersection between Art and Science, ArtLab, Vanderbilt University, Nashville, TN

2015 Bumpus Symposium, Clark University, Worcester, MA
Population structure and copy number variation in the fungal pathogen *Cryptococcus gattii*

2015 Traina Scholars Presentation, Clark University, Worcester, MA
Mapping the Auto-Immune Triggering Epitope of ELAVL4

2015 Summer Research Presentation, Clark University, Worcester, MA
Mapping the Auto-Immune Triggering Epitope of ELAVL4

Research Experience

2016-Pres.	Antonis Rokas Lab at Vanderbilt University, Nashville, TN.
2015-16	John Gibbons Lab at Clark University, Worcester, MA. Investigation of copy number variation in the human pathogen, *Cryptococcus gattii.*
2015-16	Robert Drewell Lab at Clark University, Worcester, MA. Investigation of genome-wide methylation patterns in *Dictyostelium discoideum.*
2014	Ite A. Laird-Offringa Lab at University of Southern California, Los Angeles, CA. Bridging the Gaps Summer Scholar. Project aim was to map 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. Investigation of fresh and marine water microbial diversity.

Teaching Experience

2017-Pres.	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

Service

2018-Pres.	Co-chair, MEGA*Microbe*, Vanderbilt Institute for Infections, Immunology and Inflammation, Nashville, TN
2017-Pres.	Communications chair, Inequalities in Biological Sciences Association, Vanderbilt University, Nashville, TN
2017-Pres.	Secretary, Graduate Student Association, Department of Biological Sciences, Vanderbilt University, 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
2017-Pres.	Scientific consultant, Little Harpeth Brewing, Nashville, TN
2017	Vanderbilt Student Volunteers for Science, Volunteer Science Teacher, West End Middle School, Nashville, TN
2017	Educational outreach booth design and execution, MEGA*Microbe*, Nashville, TN
2014-15	Undergraduate Subcommittee for Department of Chemistry, Biochemistry and Molecular Biology Faculty Search Committee, Clark University, Worcester, MA
2014-15	Science Education Outreach Blogger, C-DEBI Sci-Curious Blog

Manuscript reviewer

Systematic Biology, Molecular Genetics and Genomics, BMC Genomics, PLoS One, Young Scientists Journal, Scholarly Undergraduate Research Journal