



**Erik C. Andersen**

**Professor**  
**Johns Hopkins University**  
Biology Department



3400 North Charles St.  
UTL 383  
Baltimore, MD 21218  
Office: 410-516-1282  
erik.andersen@jhu.edu  
[www.andersenlab.org](http://www.andersenlab.org)  
[www.elegansvariation.org](http://www.elegansvariation.org)

**DATE UPDATED: November 11, 2024**

## **MAJOR PROFESSIONAL INTERESTS**

Evolutionary genetics; quantitative genetics; molecular genetics; developmental genetics

## **EDUCATION**

- 2008-2013    Post-doctoral fellowship  
Princeton University  
Advisor: Dr. Leonid Kruglyak
- 2000-2008    Ph.D. in Biology  
Massachusetts Institute of Technology (MIT), Cambridge, MA  
Advisor: Dr. H. Robert Horvitz  
Dissertation: The synthetic Multivulva genes and their suppressors regulate opposing cell fates through chromatin remodeling
- 1996-2000    B.S. in Biological Sciences with departmental honors  
Stanford University, Stanford, CA  
Advisor: Dr. Matthew P. Scott  
Dissertation: *in vivo* analysis of *Drosophila* heart-tube formation

## **AWARDS, HONORS, AND FELLOWSHIPS**

- 2022 - 2024    Fulbright Global Scholar (Chile, New Zealand, Taiwan), declined
- 2022 -        Editorial Board Member of *Journal of Nematology*
- 2021        Distinguished Teaching Award, Weinberg College of Arts and Sciences
- 2020 - 2023    Editorial Board Member of *Gene*
- 2019 - 2022    Human Frontiers Science Program Award Recipient
- 2018 - 2023    National Science Foundation CAREER Award Recipient
- 2017 - 2020    Editor Board Member of *BMC Genomics*
- 2015 - 2019    American Cancer Society Research Scholar
- 2015 - 2017    March of Dimes Basil O'Connor Research Scholar
- 2015 -        Editorial Board Member of *Trends in Genetics*
- 2014 - 2018    Pew Scholar in the Biomedical Sciences
- 2012 - 2013    Howard Hughes Medical Institute Post-doctoral Fellow
- 2011 - 2012    National Cancer Institute Post-doctoral Fellow, training grant T32-CA009528
- 2009 - 2011    Ruth L. Kirschstein National Research Service Award Recipient
- 2005 - 2006    Anna Fuller Cancer Graduate Research Fellowship
- 2000        Firestone Medal for Excellence in Undergrad. Research (top Biological Sciences researcher)
- 1999, 1998    Howard Hughes Medical Institute Summer Research Fellowship
- 1998        Stanford University Undergraduate research small grant recipient
- 1996-1998    Robert C. Byrd Honors Scholarship recipient

**EMPLOYMENT**

2023 - Professor of Biology, Johns Hopkins University

2022 - 2023 Professor of Molecular Biosciences, Northwestern University

2022 - 2023 Professor of Cell and Developmental Biology, Feinberg School of Medicine, Northwestern University

2020 - 2022 Associate Professor of Cell and Developmental Biology, Feinberg School of Medicine, Northwestern University

2019 - 2022 Associate Professor of Molecular Biosciences, Northwestern University

2013 - 2023 Preceptor for the Interdisciplinary Biological Sciences Graduate Program (IBiS)  
Resident member of the Chemistry of Life Processes Institute (CLP)  
Full Member of the Robert H. Lurie Comprehensive Cancer Center  
Member of Northwestern Institute on Complex Systems (NICO)

2013 - 2019 Assistant Professor of Molecular Biosciences, Northwestern University

2008 - 2013 Post-doctoral fellow, Princeton University, Princeton, NJ, Advisor: Dr. Leonid Kruglyak

2000 - 2008 Graduate student, Biology Department at Massachusetts Institute of Technology (MIT), Cambridge, MA, Advisor: Dr. H. Robert Horvitz

**RESEARCH SUPPORT****PRESENT**

2024 - 2026 National Institutes of Health (R21 AI180805)  
*Investigating the genetics and genomics of antiparasitic drug responses in a poultry ascarid model*  
PI: Andersen

2023 - 2025 US Poultry and Egg Association  
*Discovery of Novel Anthelmintic Resistance Genes to Reduce Production Loss Caused by Blackhead*  
PI: Andersen

2022 - 2025 National Science Foundation, Capacity: Biological Collections (2224885)  
*Enhancement of the Caenorhabditis Natural Diversity Resource*  
co-PI: Andersen, co-PI: Tanny

2022 - 2024 National Institutes of Health (R21 OD030067) - Office of the Director  
*Genetic and genomic tools for C. briggsae research*  
Lead PI: Chamberlin (OSU), co-PI: Andersen

2020 - 2025 National Institutes of Health (R01 AI153088) - NIAID  
*Discovery of novel benzimidazole resistance mechanisms*  
Lead PI: Andersen, co-PIs: Fraser (UCSF), Gilleard (U Calgary), Kaplan (U Georgia)

2018 - 2024 National Institutes of Health (R01 ES029930) - NIEHS  
*Discovery of conserved molecular mechanisms underlying population-wide variation in toxin responses*  
Lead PI: Andersen, co-PIs: Baugh (Duke), Rockman (NYU)

2018 - 2024 National Science Foundation CAREER Award (1751035)  
*Discovery of the molecular mechanisms underlying microevolution of phenotypic plasticity in a developmental trait*  
PI: Andersen

**PAST**

- 2019 - 2024 Human Frontiers Science Program Research Grant (RGP0001/2019)  
*The repeatability of the genetic mechanisms underlying behavioral evolution*  
Lead PI: Andersen, co-PIs: Brown (Imperial, MRC), Hodgins (Monash)
- 2022 - 2025 National Science Foundation, Research Experiences for Undergraduates (2150134)  
No funding to REU leadership  
*REU Site: Quantitative Biology REU (QBREU) at Northwestern University*
- 2018 - 2023 National Science Foundation (1764421) and Simons Foundation (597491)  
Research Center for Mathematics of Complex Biological Systems  
*Understanding organismal growth and development through quantitative approaches*
- 2022 - 2023 Les Turner ALS Center Pilot Grant  
*Creation of C. elegans ALS models incorporating natural variation*
- 2019 - 2022 National Science Foundation, Collections in Support of Bio. Res. - Living Collections (1930382)  
*Enhancement of the Caenorhabditis Natural Diversity Resource*
- 2017 - 2021 National Institutes of Health (R01 DK115690) - NIDDK  
*Large scale nutrigenetics and genomics in a tractable metazoan model*
- 2015 - 2020 American Cancer Society Research Scholar Grant (127313-RSG-15-135-01-DDC)  
*Elucidating the genetic causes of variation in chemotherapy-based toxicity*
- 2017 - 2020 National Institutes of Health (R21 AG053638) - NIA  
*High-throughput multi-modal analysis of natural variation in C. elegans healthspan*
- 2016 - 2019 National Institutes of Health (R21 AI121836) - NIAID  
*Discovery and validation of avermectin resistance loci in free-living and parasitic nematodes*
- 2014 - 2019 Pew Charitable Trusts, Scholars Program in the Biomedical Sciences  
*Elucidating the genetics of anthelmintic resistance in nematode-borne neglected tropical diseases*
- 2015 - 2017 March of Dimes Basil O'Connor Starter Research Grant  
*Identification of hookworm anthelmintic resistance genes to ameliorate maternal and infant anemia*
- 2014 - 2016 Chicago Biomedical Consortium, Catalyst Grant  
*Uncovering "missing heritability" in an experimentally tractable model organism*

**PUBLICATIONS**

**h-index=42, i10-index=80, link to Google Scholar page ([here](#))**

Andersen lab graduate students denoted in *italics* and post-docs denoted in underline.

**PREPRINTS:**

101. Collins JB, Dilks CM, Hahnel SR, Rodriguez B, Fox BW, Redman E, Yu J, Cooke B, Sihuta K, Zamanian M, Roy PJ, Schroeder FC, Gillard JS, and Andersen EC (2024)  
Naturally occurring variation in a cytochrome P450 modifies thiabendazole responses independent of beta-tubulin  
*bioRxiv*, Posted Sept. 20, 2024  
DOI: <https://doi.org/10.1101/2024.09.23.614411>
100. Fouad AD, Churgin MA, Hayden J, Xu J, Park JI, Liu A, Teng C, Sun H, Parrado M, Bowlin P, La Torre MD, Crombie TA, Sedore CA, Coleman-Hulbert AL, Johnson E, Phillips P, Andersen EC, and Fang-Yen C (2021)  
High-throughput imaging of *Caenorhabditis elegans* aging using collective activity monitoring  
*bioRxiv*, Posted Oct. 19, 2021  
DOI: <https://doi.org/10.1101/2021.10.18.464905>

**PEER-REVIEWED:**

99. *Moya ND*, Yan SM, McCoy RC, and Andersen EC (2024)  
The long and short of hyper-divergent regions  
*Trends in Genetics*, 2024 Nov 15
98. Shaver AO and Andersen EC (2024)  
Integrating metabolomics into the diagnosis and investigation of anthelmintic resistance  
*Trends in Parasitology*, 2024 Nov 1
97. Zhang G, Felix MA, and Andersen EC (2024)  
Transposon-mediated genic rearrangements underlie variation in small RNA pathways  
*Science Advances*, 2024 Sep 20;10(38):eado9461  
DOI: <https://doi.org/10.1126/sciadv.ado9461>
96. Collins JB, Shaver AO, Schaye ES, Volpe T, Nunn LR, Zamanian M, and Andersen EC (2024)  
Lack of correlation between parasite burden and key weight metrics in poultry infected with intestinal ascarids  
*MicroPublication Biology*, 2024 Aug 7;2024:10.17912/micropub.biology.001197.  
DOI: <https://doi.org/10.17912/micropub.biology.001197>
95. Crombie TA, Raja M, Saxena AS, Johnson LM, Saber S, Tanny RE, Ponciano JM, Andersen EC, Zhou J, and Baer CF (2024)  
Direct inference of the distribution of fitness effects of spontaneous mutations from recombinant inbred *C. elegans* mutation accumulation lines  
*Genetics*, 2024 Aug 14:iyae136.  
DOI: <https://doi.org/10.1093/genetics/iyae136>

94. Collins JB, Stone S, Koury E, Paredes A, Shao F, Lovato C, Chen M, Shi R, Li A, Candal I, Al Moutaa K, Moya ND, and Andersen EC (2024)  
Quantitative tests of albendazole resistance in beta-tubulin mutants  
*International Journal for Parasitology: Drugs and Drug Resistance*, 2024 Jul 7;25(100556),  
DOI: <https://doi.org/10.1016/j.ijpddr.2024.100556>
93. Yang H, Lee D, Kim H, Cook DE, Paik YK, Andersen EC, and Lee J (2024)  
Glial expression of a steroidogenic enzyme underlies natural variation in hitchhiking behavior  
*PNAS* 2024 Jul 3;121(28)e2320796121, DOI: <https://www.pnas.org/doi/10.1073/pnas.2320796121>
92. Knox J, Burns AR, Cooke B, Cammalleri SR, Kitner M, Ching J, Castelli JMP, Puumala E, Snider J, Koury E, Collins JB, Andersen EC, Stagljar I, Cowen LE, Laurens M, Zasada I, and Roy PJ (2023)  
Diverse plant-parasitic nematodes are selectively killed by oxadiazole thioether pro-nematocides  
*Nature Communications* 2024 July 2;15(5529), DOI: <https://doi.org/10.1038/s41467-024-49738-4>
91. Shaver AO, Miller IR, Schaye ES, Moya ND, Collins JB, Wit J, Blanco AH, Shao FM, Andersen EJ, Khan SA, Paredes G, and Andersen EC (2024)  
Quantifying the fitness effects of resistance alleles with and without anthelmintic selection pressure using *C. elegans*  
*PLoS Pathogens* 2024 May 20;20(5):e1012245, DOI: <https://doi.org/10.1371/journal.ppat.1012245>
90. Lee H, Boor SA, Hilbert ZA, Meisel JD, Park J, Wang Y, McKeown R, Fischer SEJ, Andersen EC, and Kim DH (2023)  
Genetic variants that modify the neuroendocrine regulation of foraging behavior in *C. elegans*  
*Science Advances* 2024 Jun 14;10(20):eadk9481, DOI: <https://doi.org/10.1126/sciadv.adk9481>
89. Iyu H, Moya ND, Andersen EC, and Chamberlin HM (2024)  
Gene duplication and evolutionary plasticity of *lin-12*/Notch gene function in *Caenorhabditis*  
*Genetics* 2024 May 29:iyae064  
DOI: <https://doi.org/10.1093/genetics/iyae064>
88. Wolstenholme AJ, Andersen EC, Choudhary S, Ebner F, Hartmann S, Holden-Dye L, Kashyap SS, Krücken J, Martin RJ, Midha A, Neysum P, Neveu C, Robertson AP, von Samson-Himmelstjerna G, Walker R, Wang J, Whitehead BJ, and Williams PDE  
Getting around the roundworms: Identifying knowledge gaps and research priorities for the ascarids  
*Advances in Parasitology* 2024 Feb 20  
DOI: <https://doi.org/10.1016/bs.apar.2023.12.002>
87. Crombie TA, McKeown R, Moya ND, Evans KS, Widmayer S, LaGrassa V, Roman N, Tursunova O, Zhang G, Gibson S, Buchanan C, Roberto N, Vieira R, Tanny RE, and Andersen EC  
CaenDR, the *Caenorhabditis* Natural Diversity Resource  
*Nucleic Acids Research* 2023 Oct 19; gkad887  
DOI: <https://doi.org/10.1093/nar/gkad887>
86. Moya ND, Stevens L, Miller IR, Galindo JL, Bardas AD, Yeo C, Rozenich AJ, Xu M, Koh ESH, and Andersen EC (2023)  
Novel and improved *Caenorhabditis briggsae* gene models generated by community curation  
*BMC Genomics* 2023 Aug 25;24(1):486  
DOI: <https://doi.org/10.1186/s12864-023-09582-0>

85. Wit J, Dilks CM, Zhang G, Kim Guisbert KS, Zdraljevic S, Guisbert E, and Andersen EC (2023)  
Praziquantel inhibits *Caenorhabditis elegans* development and species-wide differences might be *cct-8*-dependent  
*PLoS ONE* 2023 Aug 10;18(8):e0286473  
DOI: <http://doi.org/10.1371/journal.pone.0286473>
84. Lee D, Fox BW, Palomino DCF, Panda O, Tenjo FJ, Evans KS, Stevens L, Koury E, Rodrigues PR, Kolodziej AR, Schroeder KF, and Andersen EC (2023)  
Natural genetic variation in the pheromone production of *C. elegans*  
*The Proceedings of the National Academy of Sciences* 2023 May 10;120(26):e2221150120  
DOI: <https://doi.org/10.1073/pnas.2221150120>
83. Zhang G and Andersen EC (2023)  
Genome-wide regulatory effects of STRs stabilized by elevated expression of antioxidant genes in *C. elegans*  
*Molecular Biology and Evolution* 2023 Apr 4;40(4):msad067  
DOI: <https://doi.org/10.1093/molbev/msad067>
82. Shaver AO, Wit J, Dilks CM, Crombie TA, Li H, Aroian RV, and Andersen EC (2023)  
Variation in anthelmintic responses are driven by genetic differences among diverse *C. elegans* wild strains  
*PLoS Pathogens* 2023 Apr 3;19(4):e1011285  
DOI: <https://doi.org/10.1371/journal.ppat.1011285>
81. Venkatesan A, Jimenez Castro PD, Morosetti A, Horvath H, Chen R, Redman E, Dunn K, Collins JB, Fraser JS, Andersen EC, Kaplan RM, and Gilleard JS (2023)  
Molecular evidence of widespread benzimidazole drug resistance in *Ancylostoma caninum* from domestic dogs throughout the USA and discovery of a novel  $\beta$ -tubulin benzimidazole resistance mutation  
*PLoS Pathogens* 2023 Mar 2;19(3):e1011146  
DOI: <https://doi.org/10.1371/journal.ppat.1011146>
80. Collins JB and Andersen EC (2022)  
The turkey ascarid, *Ascaridia dissimilis*, as a model genetic system  
*International Journal for Parasitology* 2022 Dec 19;S0020-7519(22)00177-1  
DOI: <https://doi.org/10.1016/j.ijpara.2022.10.005>
79. Lesack K, Mariene GM, Andersen EC, and Wasmuth JD (2022)  
Different structural variant prediction tools yield considerably different results in *Caenorhabditis elegans*  
*PLoS ONE* 2022 Dec 30;17(12):e0278424  
DOI: <https://doi.org/10.1371/journal.pone.0278424>
78. Nyaanga J, Shirman S, Mangan NM, and Andersen EC (2022)  
Characterization of larval growth in *C. elegans* cuticle mutants  
*microPublication Biology* 2022 Nov. 4, 2022:10.17912/micropub.biology.000662  
DOI: <https://doi.org/10.17912/micropub.biology.000662>
77. Gibson S, Ness-Cohn E, and Andersen EC (2022)  
Benzimidazoles cause lethality by inhibiting the function of *Caenorhabditis elegans* neuronal beta-tubulin  
*International Journal for Parasitology: Drugs and Drug Resistance* 2022 Dec;20:89-96  
DOI: <https://doi.org/10.1016/j.ijpddr.2022.10.004>



76. Shaver AO, Garcia BM, Gouveia GJ, Morse AM, Liu Z, Asef CK, Borges RM, Leach FE, Andersen EC, Amster IJ, Fernadez FM, Edison AS, and McIntyre LM (2022)  
An anchored experimental design and meta-analysis approach to address batch effects in large-scale metabolomics  
*Frontiers Molecular Biosciences* 2022 Nov 9;9:930204  
DOI: <https://doi.org/10.3389/fmolb.2022.930204>
75. Zhang G, Wang Y, and Andersen EC (2022)  
Natural variation in *C. elegans* short tandem repeats  
*Genome Research* 2022 Oct;32(10):1852-1861  
DOI: <https://doi.org/10.1101/gr.277067.122>
74. Widmayer SJ, Crombie TA, Nyaanga JN, Evans KS, and Andersen EC (2022)  
*C. elegans* toxicant responses vary among genetically diverse individuals  
*Toxicology* 2022 Aug 20; 479:153292  
DOI: <https://doi.org/10.1016/j.tox.2022.153292>
73. Nyaanga J and Andersen EC (2022)  
Linkage mapping reveals loci that underlie differences in *C. elegans* growth  
*G3* 2022 Sep 30;12(10):jkac207  
DOI: <https://doi.org/10.1093/g3journal/jkac207>
72. Wit J, Workentine ML, Redman E, Laing R, Stevens L, Cotton JA, Chaudry U, Ali Q, Andersen EC, Yeaman S, Wasmuth JD, and Gilleard JS (2022)  
Genomic signatures of selection associated with benzimidazole drug treatments in *Haemonchus contortus* field populations  
*International Journal for Parasitology: Drugs and Drug Resistance* 2022 Sep;52(10):677-689  
DOI: <https://doi.org/10.1016/j.ijpara.2022.07.004>
71. Webster AK, Chitrakar R, Powell M, Chen J, Fisher K, Tanny RE, Stevens L, Evans KS, Antoshechkin I, Andersen EC, and Baugh LR  
Using population selection and sequencing to characterize natural variation of starvation resistance in *Caenorhabditis elegans*  
*eLife* 2022 Jun 21; 11:e80204  
DOI: <https://doi.org/10.7554/eLife.80204>
70. Zhang G, Roberto NM, Lee D, Hahnel SR, and Andersen EC (2022)  
The impact of species-wide gene expression variation on *Caenorhabditis elegans* complex traits  
*Nature Communications* 2022 Jun 16; 13(1):3462  
DOI: <https://doi.org/10.1038/s41467-022-31208-4>
69. Pallotto LM, Dilks CM, Park YJ, Smit RB, Lu B, Gopalakrishnan C, Gilleard JS, Andersen EC, and Mains PE (2022)  
Interactions of *Caenorhabditis elegans*  $\beta$ -tubulins with the microtubule inhibitor and anthelmintic drug albendazole  
*Genetics* 2022 Jul 30; 221(4):iyac093  
DOI: <https://doi.org/10.1093/genetics/iyac093>

68. Fox BW, Ponomarova O, Lee YU, Zhang G, Giese GE, Walker M, Roberto NM, Na H, Reis-Rodriguez P, Curtis BJ, Kolodziej AR, Crombie TA, Zdraljevic S, Yilmaz LS, Andersen EC, Schroeder FC, and Walhout AJM (2022)  
*C. elegans* as a model for inter-individual variation in metabolism  
*Nature* 2022 Jul; 607(7919):571-577  
DOI: <https://doi.org/10.1038/s41586-022-04951-3>
67. Crombie TA, Chikaturudzi C, Cook DE, and Andersen EC (2022)  
An automated approach to quantify chemotaxis index in *C. elegans*  
*microPublication Biology* 2022 May 26; 2022:10.17912/micropub.biology.000567  
DOI: <https://doi.org/10.17912/micropub.biology.000567>
66. Widmayer SJ, Evans KS, Zdraljevic S, and Andersen EC (2021)  
Evaluating the power and limitations of genome-wide association mapping in *C. elegans*  
*G3* 2022 May 10; jkac114  
DOI: <https://doi.org/10.1093/g3journal/jkac114>
65. Nyaanga J, Goss C, Zhang G, Ahmed HN, Andersen EJ, Miller IR, Rozenich JK, Swarthout IL, Vaughn JA, Mangan NM, Shirman S, and Andersen EC (2022)  
Changes in body shape implicate cuticle stretch in *C. elegans* growth control  
*Cells and Development* 2022 Apr 19;170:203780  
DOI: <https://doi.org/10.1016/j.cdev.2022.203780>
64. Stevens L, Moya ND, Tanny RE, Gibson SB, Tracey A, Na H, Han Y, Chitrakar R, Dekker J, Walhout AJM, Baugh LR, and Andersen EC (2021)  
Chromosome-level reference genomes for two strains of *Caenorhabditis briggsae*: an improved platform for comparative genomics  
*Genome Biology and Evolution* 2022 Apr 10;14(4):evac042  
DOI: <https://doi.org/10.1093/gbe/evac042>
63. Crombie TA, Tanny RE, Buchanan CM, Roberto NM, and Andersen EC (2022)  
A highly scalable approach to perform ecological surveys of selfing *Caenorhabditis* nematodes  
*Journal of Visualized Experiments* 2022 Mar 1;(181)  
DOI: <https://doi.org/10.3791/63486>
62. Barlow I, Feriani L, Minga E, McDermott-Rouse A, O'Brien T, Liu Z, Hofbauer M, Stowers JR, Andersen EC, Ding SS, and Brown AEX (2022)  
Megapixel camera arrays for high-resolution animal tracking in multiwell plates  
*Communications Biology* 2022 Mar 23;5(1):253  
DOI: <https://doi.org/10.1038/s42003-022-03206-1>
61. Crombie TA, Battlay P, Tanny RE, Evans KS, Buchanan CM, Cook DE, Dilks CM, Stinson LA, Zdraljevic S, Zhang G, Roberto NM, Lee D, Ailion M, Hodgins KA, and Andersen EC (2022)  
Local adaptation and spatiotemporal patterns of genetic diversity revealed by repeated sampling of *Caenorhabditis elegans* across the Hawaiian Islands  
*Molecular Ecology* 2022 Apr;31(8):2327-2347  
DOI: <https://doi.org/10.1111/mec.16400>
60. Andersen EC and Rockman MV (2022)  
Natural genetic variation as a tool for discovery in *Caenorhabditis* nematodes  
*Genetics* 2022 Jan 4; 220(1):iyab156  
DOI: <https://doi.org/10.1093/genetics/iyab156>



59. Gilbert KJ, Zdraljevic S, Cook DE, Cutter AD, Andersen EC, and Baer CF (2021)  
The distribution of mutational effects on fitness in *Caenorhabditis elegans* inferred from standing genetic variation  
*Genetics* 2022 Jan 4; 220(1):iyab166  
DOI: <https://doi.org/10.1093/genetics/iyab166>
58. Dilks CM, Koury EJ, Buchanan CM, and Andersen EC (2021)  
Newly identified parasitic nematode beta-tubulin alleles confer resistance to benzimidazoles  
*International Journal for Parasitology: Drugs and Drug Resistance* 2021 Dec; 17:168-175  
DOI: <https://doi.org/10.1016/j.ijpddr.2021.09.006>
57. Di Bernardo M, Crombie TA, Cook DE, and Andersen EC (2021)  
easyFulcrum: An R package to process and analyze ecological sampling data generated using the Fulcrum mobile application  
*PLoS ONE* 2021 Oct 6; 16(10):e0254293  
DOI: <https://doi.org/10.1371/journal.pone.0254293>
56. Nyaanga J, Crombie TA, Widmayer SJ, and Andersen EC (2021)  
easyXpress: An R package to analyze and visualize high-throughput *C. elegans* microscopy data generated using CellProfiler  
*PLoS ONE* 2021 Aug 12; 16(8):e0252000  
DOI: <https://doi.org/10.1371/journal.pone.0252000>
55. Rajaei M, Saxena AS, Johnson LM, Snyder MC, Crombie TA, Tanny RE, Andersen EC, Joyner-Matos J, and Baer CF (2021)  
Mutability of mononucleotide repeats, not oxidative stress, explains the discrepancy between laboratory-accumulated mutations and the natural allele-frequency spectrum in *C. elegans*  
*Genome Research* 2021 Sep;31(9):1602-1613  
DOI: <https://doi.org/10.1101/gr.275372.121>
54. Evans KS, van Wijk MH, Andersen EC, and Sterken MG (2021)  
From QTL to gene: *C. elegans* facilitates discoveries of the genetic mechanisms underlying natural variation  
*Trends in Genetics* 2021 Jul 3; S0168-9525(21)00164-3  
DOI: <https://doi.org/10.1016/j.tig.2021.06.005>
53. Gibson SB, Harper CS, Lackner LL, and Andersen EC (2021)  
The *Caenorhabditis elegans* and *Haemonchus contortus* beta-tubulin genes cannot substitute for loss of the *Saccharomyces cerevisiae* beta-tubulin gene  
*microPublication* 2021 Jun 20; 2021  
DOI: <https://doi.org/10.17912/micropub.biology.000411>
52. Gouveia GJ, Shaver AO, Garcia BM, Morse AM, Rodriguez B, Park G, Andersen EC, Edison AS, McIntyre LM (2021)  
Long-term metabolomics reference material  
*ACS Analytical Chemistry*, 2021 Jul 6; 93(26):9193-9199  
DOI: <https://doi.org/10.1021/acs.analchem.1c01294>
51. Zhang G, Mostad JD, and Andersen EC (2021)  
Natural variation in fecundity is correlated with species-wide levels of divergence in *Caenorhabditis elegans*  
*G3* 2021 Aug 7;11(8):jkab168  
DOI: <https://doi.org/10.1093/g3journal/jkab168>

50. Wit J, Hahnel SR, Rodriguez BC, and Andersen EC (2021)  
Natural variation in *Caenorhabditis elegans* responses to the anthelmintic emodepside  
*International Journal for Parasitology: Drugs and Drug Resistance* 2021 Apr 17; 16:1-8  
DOI: <https://doi.org/10.1016/j.ijpddr.2021.04.001>
49. Lee D, Zdraljevic S, Stevens L, Wang Y, Tanny RE, Crombie TA, Cook DE, Webster AK, Chirakar R, Baugh LR, Sterken M, Braendle C, Felix M-A, Rockman MV, and Andersen EC (2020)  
Balancing selection maintains hyper-divergent haplotypes in *Caenorhabditis elegans*  
*Nature Ecology and Evolution* 2021 Jun;5(6):794-807  
DOI: <https://doi.org/10.1038/s41559-021-01435-x>
48. Hartman JH, Widmayer S, Bergemann C, King DE, Morton KS, Romersi RF, Jameson LE, Leung MCK, Andersen EC, Taubert S, and Meyer JN (2021)  
Xenobiotic metabolism and transport in *Caenorhabditis elegans*  
*Journal of Toxicology and Environmental Health, Part B: Critical Reviews*, 2021 Feb 17; 24(2):51-94  
DOI: <https://doi.org/10.1080/10937404.2021.1884921>
47. Evans KS, Wit J, Stevens L, Hahnel SR, Rodriguez B, Park G, Zamanian M, Brady SC, Chao E, Introcaso K, Tanny RE, and Andersen EC (2021)  
Two novel loci underlie natural differences in *Caenorhabditis elegans* abamectin responses  
*PLoS Pathogens*, 2021 Mar 15; 17(3):e1009297  
DOI: <https://doi.org/10.1371/journal.ppat.1009297>
46. Noble LM, Yuen J, Stevens L, Moya N, Persaud R, Moscatelli M, Jackson J, Braendle C, Andersen EC, Seidel HS, and Rockman MV (2021)  
Selfing is the safest sex for *Caenorhabditis tropicalis*  
*eLife* 2021 Jan 11;10:e62587  
DOI: <https://doi.org/10.7554/eLife.62587>
45. Wit J, Dilks CM, and Andersen EC (2020)  
Complementary Approaches to Understand Anthelmintic Resistance Using Free-Living and Parasitic Nematodes  
*Trends in Parasitology* Dec 12: S1471-4922(20) 30323-30328  
DOI: <https://doi.org/10.1016/j.pt.2020.11.008>
44. Evans KS and Andersen EC (2020)  
The cadmium-responsive gene, *cdr-6*, does not influence *Caenorhabditis elegans* responses to exogenous zinc  
*MicroPublication Biology* 2020 Sep 14;2020:10.17912/micropub.biology.000305  
DOI: <https://doi.org/10.17912/micropub.biology.000305>
43. Hahnel SR, Dilks CM, Heising I, Andersen EC, and Kulke D (2020)  
*Caenorhabditis elegans* in anthelmintic research - Old model, new perspectives  
*International Journal for Parasitology: Drugs and Drug Resistance* 2020 Dec;14:237-248  
DOI: <https://doi.org/10.1016/j.ijpddr.2020.09.005>
42. Evans KS, Zdraljevic S, Stevens L, Collins K, Tanny RE, and Andersen EC (2020)  
Natural variation in the sequestosome-related gene, *sqst-5*, underlies zinc homeostasis in *Caenorhabditis elegans*  
*PLoS Genetics* 2020 Nov 11;16(11):e1008986  
DOI: <https://doi.org/10.1371/journal.pgen.1008986>

41. *Dilks CM, Hahnel SR, Sheng Q, Long L, McGrath PT, and Andersen EC (2020)*  
Quantitative benzimidazole resistance and fitness effects of parasitic nematode beta-tubulin alleles  
*International Journal for Parasitology: Drugs and Drug Resistance* 2020 Dec;14:28-36  
DOI: <https://doi.org/10.1016/j.ijpddr.2020.08.003>
40. *Shaver AO, Gouveia GJ, Kirby PS, Andersen EC, and Edison AS (2020)*  
Culture and assay of large-scale mixed-stage *Caenorhabditis elegans* populations  
*Journal of Visualized Experiments* 2021 May 5;(171)  
DOI: <https://doi.org/10.3791/61453>
39. *Na H, Zdraljevic S, Tanny RE, Walhout AJM, and Andersen EC (2020)*  
Natural variation in a glucuronosyltransferase modulates propionate sensitivity in a *C. elegans* propionic acidemia model  
*PLoS Genetics* 2020 Aug 28;16(8):e1008984  
DOI: <https://doi.org/10.1371/journal.pgen.1008984>
38. *Archer H, Deiparine S, and Andersen EC (2020)*  
The nematode *Caenorhabditis elegans* nematodes and the terrestrial isopod *Porcellio scaber* likely interact opportunistically  
*PLoS ONE* 2020 Jun 26;15(6):e0235000  
DOI: <https://doi.org/10.1371/journal.pone.0235000>
37. *Evans KS and Andersen EC (2020)*  
The gene *scb-1* underlies variation in *Caenorhabditis elegans* chemotherapeutic responses  
*G3* 2020 Jul 7;10(7):2353-2364  
DOI: <https://doi.org/10.1534/g3.120.401310>
36. *Zhao Y, Long L, Wan J, Biliya S, Brady SC, Lee D, Ojemakinde A, Andersen EC, Vannberg FO, Lu H, and McGrath PT (2020)*  
A spontaneous complex structural variant in *rca-1* increases exploratory behavior and laboratory fitness of *Caenorhabditis elegans*  
*PLoS Genetics* 2020 Feb 24;16(2):e1008606  
DOI: <https://doi.org/10.1371/journal.pgen.1008606>
35. *Bayat M, Tanny RE, Wang Y, Herden C, Daniel J, Andersen EC, Liebau E, Waschke DEJ (2020)*  
Effects of telomerase overexpression in the model organism *Caenorhabditis elegans*  
*Gene* 2020 Mar 30;732:144367  
DOI: <https://doi.org/10.1016/j.gene.2020.144367>
34. *Crombie T, Zdraljevic S, Cook DE, Tanny RE, Brady SC, Wang Y, Evans KS, Hahnel S, Lee D, Rodriguez BC, Zhang G, van der Zwaag J, Kiontke KC, and Andersen EC (2019)*  
Deep sampling of Hawaiian *Caenorhabditis elegans* reveals high genetic diversity and admixture with global populations  
*eLife* 2019 Dec 3;8:e50465  
DOI: <https://doi.org/10.7554/eLife.50465>
33. *Brady SC and Andersen EC (2019)*  
An escape-room inspired game for genetics review  
*Journal of Biological Education* 55:4, 406-417  
DOI: <https://doi.org/10.1080/00219266.2019.1703784>

32. Daul AL, Andersen EC, and Rougvie AE (2019)  
The *Caenorhabditis* Genetics Center (CGC) and the *Caenorhabditis elegans* Natural Diversity Resource  
The Biological Resources of Model Organisms, CRC Press, Taylor and Francis Group
31. Webster A, Hung A, Moore B, Guzman R, Jordan J, Kaplan R, Hibshman J, Tanny RE, Cook DE, Andersen EC, and Baugh LR (2019)  
Population selection and sequencing of *C. elegans* wild isolates identifies a region on chromosome III affecting starvation resistance  
*G3* 2019 Oct 7;9(10):3477-3488  
DOI: <https://doi.org/10.1534/g3.119.400617>
30. Lee D, Zdraljevic S, Cook DE, Frezal L, Hsu JC, Sterken MG, Riksen JAG, Wang J, Kammenga JE, Braendle C, Felix MA, Schroeder FC, and Andersen EC (2019)  
Selection and gene flow shape niche-associated variation in pheromone response  
*Nature Ecology and Evolution* 2019 Oct;3(10):1455-1463  
DOI: <https://doi.org/10.1038/s41559-019-0982-3>
29. Bernstein MR, Zdraljevic S, Andersen EC, and Rockman MV (2019)  
Tightly linked antagonistic-effect loci underlie polygenic demographic variation in *C. elegans*  
*Evolution Letters* 2019 Sep 11;3(5):462-473  
DOI: <https://doi.org/10.1002/evl3.139>
28. Gimond C, Vielle A, Silva Soares N, Zdraljevic S, McGrath PT, Andersen EC, and Braendle C (2019)  
Natural variation and genetic determinants of *Caenorhabditis elegans* sperm size  
*Genetics* 2019 Oct;213(2):615-632  
DOI: <https://doi.org/10.1534/genetics.119.302462>
27. Brady SC, Zdraljevic S, Bisaga KW, Tanny RE, Cook DE, Lee D, Wang Y, Andersen EC (2019)  
A novel gene underlies bleomycin-response variation in *Caenorhabditis elegans*  
*Genetics* 2019 Aug;212(4):1453-1468  
DOI: <https://doi.org/10.1534/genetics.119.302286>
26. Kim C, Kim J, Kim S, Cook DE, Evans KS, Andersen EC, and Lee J (2019)  
Long-read sequencing reveals intra-species tolerance of substantial structural variations and new subtelomere formation in *C. elegans*  
*Genome Research* 2019 Jun;29(6):1023-1035  
DOI: <https://doi.org/10.1101/gr.246082.118>
25. Zdraljevic S, Fox BW, Strand C, Panda O, Tenjo-Castano FJ, Brady SC, Crombie TA, Doench JG, Schroeder FC, and Andersen EC (2019)  
Natural variation in arsenic toxicity is explained by differences in branched chain amino acid catabolism  
*eLife* 2019 Apr 8;8:e40260  
DOI: <https://doi.org/10.7554/eLife.40260>
24. Hahnel SR, Zdraljevic S, Rodriguez BC, Zhao Y, McGrath PT, and Andersen EC (2018)  
Extreme allelic heterogeneity at a *Caenorhabditis elegans* beta-tubulin locus explains natural resistance to benzimidazoles  
*PLoS Pathogens* 2018 Oct 29;14(10):e1007226  
DOI: <https://doi.org/10.1371/journal.ppat.1007226>

23. Evans KS, Brady SC, Bloom JS, Tanny RE, Cook DE, Giuliani SE, Hippleheuser SW, Zamanian M, and Andersen EC. (2018)  
Shared genomic intervals underlie natural variation in diverse toxin responses  
*Genetics* 2018 Dec;210(4):1509-1525  
DOI: <https://doi.org/10.1534/genetics.118.301311>
22. Zamanian M, Cook DE, Zdraljevic S, Brady SC, Lee D, Lee J, and Andersen EC (2018)  
Discovery of genomic intervals that underlie nematode responses to benzimidazoles  
*PLoS Neglected Tropical Diseases* 2018 Mar 30;12(3):e0006368  
DOI: <https://doi.org/10.1371/journal.pntd.0006368>
21. Zdraljevic S and Andersen EC (2017)  
Natural diversity facilitates the discovery of conserved chemotherapeutic response mechanisms  
*Current Opinions in Genetics and Development* 2017 Dec;47:41-47  
DOI: <https://doi.org/10.1016/j.gde.2017.08.002>
20. Zdraljevic S, Strand C, Seidel HS, Cook DE, Doench JG, and Andersen EC (2017)  
Natural variation in a single amino acid substitution underlies physiological responses to topoisomerase II poisons  
*PLoS Genetics* 2017 Jul 12;13(7):e1006891  
DOI: <https://doi.org/10.1371/journal.pgen.1006891>
19. Lee D, Yang H, Kim J, Brady SC, Zdraljevic S, Zamanian M, Kim H, Paik Y, Kruglyak L, Andersen EC, and Lee J (2017)  
The genetic basis of natural variation in a phoretic behavior  
*Nature Communications* 2017 Aug 17;8(1):273  
DOI: <https://doi.org/10.1038/s41467-017-00386-x>
18. Laricchia KM, Zdraljevic S, Cook DE, and Andersen EC (2017)  
The causes and consequences of natural variation in the distribution and abundance of transposable elements across the *Caenorhabditis elegans* species  
*Molecular Biology and Evolution* 2017 Sep 1;34(9):2187-2202  
DOI: <https://doi.org/10.1093/molbev/msx155>
17. Garcia-Gonzalez AP, Ritter AD, Shrestha S, Andersen EC, Yilmaz LS, Walhout AJM (2017)  
Bacterial metabolism affects the *C. elegans* response to cancer chemotherapeutics  
*Cell* 2017 Apr 20;169(3):431-441.e8  
DOI: <https://doi.org/10.1016/j.cell.2017.03.046>
16. Cook DE and Andersen EC (2017)  
VCF-kit: Assorted utilities for the variant call format  
*Bioinformatics* 2017 May 15;33(10):1581-1582  
DOI: <https://doi.org/10.1093/bioinformatics/btx011>
15. Mashock MJ, Zanon T, Kappell AD, Petrella LN, Andersen EC, Hristova KR (2016)  
Copper oxide nanoparticles impact several toxicological endpoints and cause neurodegeneration in *Caenorhabditis elegans*  
*PLoS ONE* 2016 Dec 2;11(12):e0167613  
DOI: <https://doi.org/10.1371/journal.pone.0167613>



14. Evans KS, Zhao Y, Brady SC, Long L, McGrath PT, Andersen EC (2016)  
Correlations of genotype with climate parameters suggest *Caenorhabditis elegans* niche adaptations  
*G3* 2017 Jan 5;7(1):289-298  
DOI: <https://doi.org/10.1534/g3.116.035162>
13. Cook DE, Zdraljevic S, Roberts JP, Andersen EC (2016)  
CeNDR, the *Caenorhabditis elegans* Natural Diversity Resource.  
*Nucleic Acids Research* 2017 Jan 4;45(D1):D650-D657  
DOI: <https://doi.org/10.1093/nar/gkw893>
12. Cook DE, Zdraljevic S, Tanny RE, Seo B, Riccardi DD, Noble LM, Rockman MV, Alkema MJ, Braendle C, Kammenga JE, Wang J, Kruglyak L, Felix MA, Lee J, Andersen EC (2016)  
The genetic basis of natural variation in *Caenorhabditis elegans* telomere length  
*Genetics* 2016 Sep;204(1):371-83  
DOI: <https://doi.org/10.1534/genetics.116.191148>
11. Large EE, Xu W, Zhao Y, Brady SC, Long L, Butcher RA, Andersen EC, McGrath PT (2016)  
Selection on a Subunit of the NURF Chromatin Remodeler Modifies Life History Traits in a Domesticated Strain of *Caenorhabditis elegans*  
*PLoS Genetics* 2016 Jul 28;12(7):e1006219  
DOI: <https://doi.org/10.1371/journal.pgen.1006219>
10. Zamanian M and Andersen EC. (2016)  
Prospects and challenges of CRISPR/Cas genome editing for the study and control of neglected vector-borne nematode diseases  
*FEBS* 2016 Sep;283(17):3204-21  
DOI: <https://doi.org/10.1111/febs.13781>
9. Farhadifar R, Ponciano JM, Andersen EC, Needleman DJ, Baer CF. (2016)  
Mutation Is a Sufficient and Robust Predictor of Genetic Variation for Mitotic Spindle Traits in *Caenorhabditis elegans*  
*Genetics* 2016 Aug;203(4):1859-70  
DOI: <https://doi.org/10.1534/genetics.115.185736>
8. Sterken MG, Snoek LB, Kammenga JE, Andersen EC. (2015)  
The laboratory domestication of *C. elegans*  
*Trends in Genetics* 2015 May;31(5):224-31  
DOI: <https://doi.org/10.1016/j.tig.2015.02.009>
7. Thompson OA, Snoek LB, Nijveen H, Sterken MG, Volkers RJM, Brenchley R, van't Hof A, Bevers RPJ, Cossins AR, Yanai I, Hajnal A, Schmid T, Perkins JD, Spencer D, Kruglyak L, Andersen EC, Moerman DG, Hillier LW, Kammenga JE, Waterston RH. (2015)  
Remarkably divergent regions punctuate the genome assembly of the *Caenorhabditis elegans* Hawaiian strain CB4856  
*Genetics* 2015 Jul;200(3):975-89  
DOI: <https://doi.org/10.1534/genetics.115.175950>
6. Andersen EC, Shimko TC, Crissman JR, Ghosh R, Gerke JP, Seidel HS, Kruglyak L. (2015)  
A powerful new quantitative genetics platform combining *Caenorhabditis elegans* high-throughput fitness assays with a large collection of recombinant strains  
*G3* 2015 Mar 13;5(5):911-20  
DOI: <https://doi.org/10.1534/g3.115.017178>



5. Farhadifar R, Baer CF, Valfort AC, Andersen EC, Muller-Reichert T, Delattre M, Needleman DJ. (2015)  
Scaling, Selection, and Evolutionary Dynamics of the Mitotic Spindle  
*Current Biology* 2015 Mar 16;25(6):732-740  
DOI: <https://doi.org/10.1016/j.cub.2014.12.060>
4. Balla K, Andersen EC, Kruglyak L, Troemel E. (2015)  
A wild *C. elegans* strain has enhanced epithelial immunity to a natural microsporidian parasite  
*PLoS Pathogens* 2015 Feb 13;11(2):e1004583  
DOI: <https://doi.org/10.1371/journal.ppat.1004583>
3. Etienne V, Andersen EC, Ponciano JM, Blanton D, Cadavid A, Joyner-Matos J, Matsuba C, Tabman B, Baer CF. (2015)  
The Red Death Meets the Abdominal Bristle: Polygenic Mutation for Susceptibility to a Bacterial Pathogen in *Caenorhabditis elegans*  
*Evolution* 2015 Feb;69(2):508-19  
DOI: <https://doi.org/10.1111/evo.12585>
2. Shimko TC, Andersen EC. (2014)  
*COPASutils*: an R package for reading, processing, and visualizing data from COPAS large-particle flow cytometers  
*PLoS ONE* 2014 Oct 20;9(10):e111090  
DOI: <https://doi.org/10.1371/journal.pone.0111090>
1. Andersen EC, Bloom JS, Gerke JP, Kruglyak L. (2014)  
A variant in the neuropeptide receptor *npr-1* is a major determinant of *Caenorhabditis elegans* growth and physiology  
*PLoS Genetics* 2014 Feb 27;10(2):e1004156  
DOI: <https://doi.org/10.1371/journal.pgen.1004156>

### **Publications from research prior to first tenure-track position:**

- Felix MA, Jovelín R, Ferrari C, Han S, Cho YR, Andersen EC, Cutter AD, Braendle C. (2013)  
Species richness, distribution and genetic diversity of *Caenorhabditis* nematodes in a remote tropical rainforest  
*BMC Evolutionary Biology*, Jan 12;13:10.
- Ghosh R, Andersen EC, Shapiro JA, Gerke JP, Kruglyak L. (2012)  
Natural variation in a chloride channel subunit confers avermectin resistance in *C. elegans*  
*Science*, 335(6068): 574-578.
- Andersen EC\*, Gerke JP\*, Shapiro JA\*, Crissman JR, Ghosh R, Bloom JS, Felix MA, Kruglyak L. (2012)  
Chromosome-scale selective sweeps shape *Caenorhabditis elegans* genomic diversity  
*Nature Genetics*, 44(3): 285-290. \*equal contribution
- Andersen EC. (2011)  
PCR-directed *in vivo* plasmid construction using homologous recombination in baker's yeast  
*Molecular Methods for Evolutionary Genetics*, 772; 409-421. \*Invited book chapter
- Raj A, Rifkin SA, Andersen EC, van Oudenaarden A. (2010)  
Variability in gene expression underlies incomplete penetrance  
*Nature*, 463(7283): 913-918.

- Bessler JB, Andersen EC, Villeneuve AB. (2010)  
Differential localization and independent acquisition of the H3K9me2 and H3K9me3 chromatin modifications in the *Caenorhabditis elegans* adult germ line  
*PLoS Genetics*, 6(1): e1000830
- Reddy KC\*, Andersen EC\*, Kruglyak L, and Kim DH. (2009)  
A polymorphism in *npr-1* is a behavioral determinant of pathogen susceptibility in *C. elegans*  
*Science*, 323(5912): 382-384. \*equal contribution
- Andersen EC, Saffer AM, and Horvitz HR. (2008)  
Multiple levels of redundant processes inhibit *Caenorhabditis elegans* vulval cell fates  
*Genetics*, 179(4): 2001-2012.
- Andersen EC and Horvitz HR. (2007)  
Two *C. elegans* histone methyltransferases repress *lin-3* EGF transcription to inhibit vulval development  
*Development*, 134(16): 2991-2999.
- Reddien PW, Andersen EC, Huang M, and Horvitz HR. (2007)  
DPL-1 DP, LIN-35 Rb, and EFL-1 E2F act with the MCD-1 Zinc-finger protein to promote programmed cell death in *C. elegans*  
*Genetics*, 175(4): 1719-1733.
- Andersen EC, Lu X, and Horvitz HR. (2006)  
*C. elegans* ISWI and NURF301 antagonize an Rb-like pathway in the determination of multiple cell fates  
*Development*, 133(14): 2695-2704
- Furlong EE, Andersen EC, Null B, White KP, and Scott MP. (2001)  
Patterns of gene expression during *Drosophila* mesoderm development  
*Science*, 293(5535): 1629-1633

## PROFESSIONAL SEMINARS

### Departmental seminars and invited conference presentations (not including trainees):

- 2025 Dept. of Biology, Univ. of Buffalo, Buffalo, NY  
EMBO Workshop on Wild Frontiers of Model Organisms, Heidelberg, Germany  
Les Treilles Foundation meeting on nematode evolution, Nice, France
- 2024 Molecular genetics, genomics, microbiology, University of Strasbourg, Strasbourg, France  
Dept. of Biology, Lehigh University, Lehigh, PA  
Dept. of Biochemistry, Cellular, and Molecular Biology, Univ. of Tennessee, Knoxville, TN  
Dept. of Human Genetics, University of California - Los Angeles  
Evolution of *Caenorhabditis* and other nematodes, Vienna, Austria  
Poultry Science Dept., Univ. of Veterinary Medicine - Vienna, Vienna, Austria  
NIH, Laboratory of Parasitic Diseases, Bethesda, MD  
Carnegie Institute of Embryology, Baltimore, MD  
Baltimore Worm Club
- 2023 Chicago Area Worm Meeting (keynote)  
Zoom about Parasites (ZaP worms), virtual seminar  
Latin American Worm Meeting, Valparaiso, Chile
- 2022 Institute for Integrative Genome Biology, Univ. of California - Riverside, Riverside, CA

- 2022 International Congress of Toxicology, Maastricht, Netherlands  
Human Frontiers Research Symposium, Paris, France  
The *C. elegans* Metabolism, Aging, Pathogenesis, Stress and Small RNAs  
Genetics and Molecular Biology seminar series, University of North Carolina - Chapel Hill  
Dept. of Biology, Oklahoma University, Norman, OK  
Wellcome Evolutionary Systems Biology
- 2021 The Ascarid Research and Training Initiative, Lyon, France (Keynote)  
Bridging the Divide: International Worm Meeting (Keynote)  
66th Annual Meeting of the American Association of Veterinary Parasitologists (Keynote)  
Max Planck Institute for Evolutionary Biology, Plön, Germany  
Institut de Biologie Valrose, Nice, France
- 2020 American Society of Tropical Medicine and Hygiene, symposium on genetic crosses  
Dept. of Molecular Medicine, Univ. of Massachusetts Medical School, Worcester, MA  
Oakton Community College, Des Plaines, IL  
Chengdu Research Base of Giant Panda Breeding, Chengdu, People's Republic of China
- 2019 Netherlands Institute for Ecology (NIOO-KNAW), Wageningen, Netherlands  
Dept. of Genetics, Wageningen Univ. and Research, Wageningen, Netherlands  
Dept. of Nematology, Wageningen Univ. and Research, Wageningen, Netherlands  
Dept. of Genome Sciences, Univ. of Washington, Seattle, WA  
Institute of Molecular Biology, Academia Sinica, Taiwan  
Dept. of Genetics, Univ. of Georgia, Athens, GA  
Dept. of Infectious Diseases, Univ. of Georgia, Athens, GA  
Dept. of Biology, Georgia Institute of Technology, Atlanta, GA  
Ingram Cancer Center, Vanderbilt University, Nashville, TN
- 2018 Max Planck Institute for Developmental Biology, Tübingen, Germany  
Dept. of Evolutionary Ecology and Genetics, Christian-Albrechts-Universität, Kiel, Germany  
Berlin Seminar for Resistance Research, Freie Universität Berlin, Berlin, Germany  
Robert H Lurie Comprehensive Cancer Center, Northwestern University, Chicago, IL  
Dept. of Genetics, Washington University School of Medicine, St. Louis, MO  
Dept. of Genetics, University of Pennsylvania, Philadelphia, PA  
Dept. of Pathobiology, University of Pennsylvania, Philadelphia, PA  
Dept. of Microbiology, Seoul National University, Seoul, Korea  
Dept. of Biology, University of Oregon, Eugene, OR  
Dept. of Biological Sciences, University of Southern California, Los Angeles, CA  
Dept. of Cell Biology and Anatomy, Rosalind Franklin University, Chicago, IL  
New York Univ. Center for Genomics and Sys. Bio. Parasite Workshop, Abu Dhabi, UAE  
Department of Biology, Univ. of California - San Diego, San Diego, CA  
Department of Biology, Duke University, Durham, NC  
Donnelly Centre for Cellular And Biomolecular Research, University of Toronto, Toronto, ON  
Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY  
Medical Research Council, London Institute of Medical Sciences, London, UK  
Department of Biology, Carnegie Mellon University, Pittsburgh, PA  
Host-Parasite Interactions, University of Calgary, Banff, Canada  
Florida Area Worm Meeting (Keynote), Florida Institute of Technology, Melbourne, FL  
Department of Biology, Skirball Institute, New York University Medical School, New York, NY  
Department of Biology, University of Minnesota, Minneapolis, MN
- 2017 Department of Biology, Indiana University, Bloomington, IN  
New York University Center for Genomics and Systems Biology Symposium in Abu Dhabi, UAE
- 2016 Midwest Quantitative Biology at Purdue University, West Lafayette, IN  
Molecular and Cellular Biology of Helminth Parasites X, Hydra, Greece  
Computational Research Day, Northwestern University, Evanston, IL  
Evolutionary Biology of *Caenorhabditis* and other nematodes (Keynote), CSHL, Cold Spring Harbor, NY

- 2016 Department of Genetics, University of Utah, Salt Lake City, UT  
 Department of Biology, University of Iowa, Iowa City, IA  
 Department of Biomedical Sciences, Iowa State University, Ames, IA  
 Anthelmintics: Discovery to Resistance II, San Diego, CA  
 Program in Systems Biology, University of Massachusetts Medical School, Worcester, MA
- 2015 Evolution seminar series, University of Wisconsin, Madison, WI  
 Biotechnology Training Program, Northwestern University, Evanston, IL  
 Department of Biology, Johns Hopkins University, Baltimore, MD  
 Department of Biology, University of Maryland, College Park, MD  
 Department of Pharmacology, Feinberg School of Medicine, Northwestern University, Chicago, IL  
 Midwest Neglected Infectious Disease Meeting, Notre Dame University, South Bend, IN  
 Quantitative genetics workshop, 20th International *C. elegans* meeting, UCLA, Los Angeles, CA  
 Michigan Area Worm Meeting, van Andel Institute, Grand Rapids, MI
- 2014 Northwestern Institute on Complex systems, Northwestern University, Evanston, IL  
 Fondation de Treilles: Revisiting the roles of phenotypic plasticity in evolution, Provence, France  
 Biology Department, Marquette University, Milwaukee, WI  
 Pharmacogenomics group, University of Chicago, Chicago, IL

*Seminars before starting at first faculty position:*

- 2013 Quantitative genetics workshop, 19th International *C. elegans* meeting, UCLA, Los Angeles, CA  
 Molecular Bioscience Department, Northwestern University, Evanston, IL  
 Program in Systems Biology, University of Massachusetts Medical School, Worcester, MA
- 2012 Biology Department, Dartmouth University, Hanover, NH  
 Human Genetics Department and Life Sciences Institute, University of Michigan, Ann Arbor, MI  
 Genetics Department, University of Georgia, Athens, GA  
 Biology Department, Case Western Reserve University, Cleveland, OH  
 Biology Department and BioDesign Institute, Arizona State University, Phoenix, AZ  
 Center for Computational and Integrated Biology, Rutgers University, Camden, NJ  
 Biology Department, University of Florida, Gainesville, FL
- 2011 Evolution workshop, 18th International *C. elegans* meeting, UCLA, Los Angeles, CA  
 Laboratory of Toxicology, NIEHS, Research Triangle Park, NC
- 2010 Institute for Evolutionary Biology Department, University of Edinburgh, Edinburgh, UK
- 2008 Featured talk at *C. elegans* Aging, Stress, and Pathogenesis meeting, Madison, WI
- 2000 Undergraduate research symposium, Stanford University, Stanford, CA

## PEER REVIEW AND RELATED ACTIVITIES

### Editorial Board:

- 2022 - *Journal of Nematology*  
 2020 - 2023 *Genes*  
 2015 - *Trends in Genetics*

### Associate Editor:

- 2017 - 2019 *BMC Genomics (Multicellular invertebrate genomics)*

### Guest Associate Editor:

*PLoS Genetics, eLife, PLoS Pathogens, PLoS Neglected Tropical Disease, Genetics*

### Reviewing activity: Grants and fellowships

- 2025 *Ad hoc* reviewer NIH Pathogenic Eukaryotes (PTHE) Study Section  
 2024 NIH F30/F31/F32 fellowship review panel ZRG F05-Q

- 2024 *Ad hoc* reviewer Fulbright Fellowship  
International Research Olympiad Advisory Board  
*Ad hoc* reviewer Japan Society for the Promotion of Science  
*Ad hoc* reviewer BBSRC UK  
*Ad hoc* reviewer Swiss National Science Foundation  
NIH F30/F31/F32 fellowship review panel
- 2023 *Ad hoc* reviewer Dept. of Defense - Neurotoxicity  
NIH F30/F31/F32 fellowship review panel  
*Ad hoc* reviewer NIH ViCTER Award  
Panel reviewer NSF EDGE  
*Ad hoc* reviewer NIH NIDA Avenir Award  
*Ad hoc* reviewer Dept. of Defense - Neurotoxicity
- 2022 NIH F30/F31/F32 fellowship review panel ZRG F05-Q  
*Ad hoc* BBSRC grant reviewer  
Katholieke Universiteit Leuven grant reviewer  
*Ad hoc* reviewer National Science Foundation (IOS)  
*Ad hoc* reviewer NIH NIDA Avenir Award  
Scientific Advisory Board for P01AI127338 (PI Michael Ferdig, Notre Dame Univ.)
- 2021 ERC Consolidator Grant reviewer (COI, declined)  
NIH F30/F31/F32 fellowship review panel ZRG F05-Q  
Canada Foundation for Innovation reviewer  
NSF reviewer  
Scientific Advisory Board for P01AI127338 (PI Michael Ferdig, Notre Dame Univ.)
- 2020 NIH Special Emphasis panel ZRG IFCN-C (02)  
NIH Special Emphasis panel ZRG ETTN-N (02)  
Scientific Advisory Board for P01AI127338 (PI Michael Ferdig, Notre Dame Univ.)
- 2019 *Ad hoc* reviewer for Wellcome Trust Early Career Grant  
Panel reviewer on NASA, Flight and Ground Space Biology  
*Ad hoc* reviewer for Agence Nationale de la Recherche  
*Ad hoc* reviewer for Univ. of Wisconsin - Milwaukee Catalyst grant  
Panel reviewer on NIH NIAID R13  
*Ad hoc* reviewer National Science Foundation (CAREER)  
*Ad hoc* reviewer for Swiss 3R Competence Centre  
*Ad hoc* reviewer for Austrian Science Foundation  
Scientific Advisory Board for P01AI127338 (PI Michael Ferdig, Notre Dame Univ.)
- 2018 *Ad hoc* reviewer for Alzheimer's Society  
*Ad hoc* reviewer National Science Foundation (IOS)  
*Ad hoc* reviewer National Science Foundation (CAREER)  
Scientific Advisory Board for P01AI127338 (PI Michael Ferdig, Notre Dame Univ.)  
*Ad hoc* reviewer for Bill and Melinda Gates Foundation
- 2016 ERC COST grant reviewer
- 2015 *Ad hoc* reviewer for National Toxicity Program, project assessment
- 2014 *Ad hoc* reviewer for Human Frontiers Science Program  
*Ad hoc* reviewer for National Science Foundation (IOS)



## PROFESSIONAL AFFILIATIONS AND SERVICE

### Membership in Professional Societies:

Genetics Society of America  
 Society of Molecular Biology and Evolution (lifetime)  
 Society for Evolution (lifetime)  
 Society for Integrative and Comparative Biology  
 World Association for the Advancement of Veterinary Parasitology  
 American Association of Veterinary Parasitologists  
 Society of Nematologists

### Mentorship and Diversity training:

2024 Johns Hopkins University, Center for the Improvement of Mentored Experiences in Research (CIMER), virtual  
     - Building Trust Through Effective Communication  
     - Creating a Culture of Inclusion in your Lab  
     - Aligning Expectations to Promote Independence

2022 Univ. of Wisconsin - Madison, Center for the Improvement of Mentored Experiences in Research (CIMER), in-person  
 Arizona State Univ., Culturally Aware Mentoring, virtual

2021 Univ. of Southern California, Strategies for Equity-based Holistic Review in Graduate Admissions  
 Northwestern Univ., Diversity, equity, and inclusion in hiring decisions

2020 NIH OITE training on Health and Wellness of Trainees

### Professional service:

2024 External thesis committee member for Victor Loegler (Schacherer lab, Univ. of Strasbourg)  
*C. elegans* Community Faculty Mentor, Genetics Society of America  
 External thesis committee member for Maria Mercado (Fraser lab, Univ. of Toronto)  
 External thesis committee member for Youn Jae Kang (Ding lab, Max Planck Institute of Animal Behavior)

2023 External thesis examiner for Nikita Jhaveri (Gupta lab, McMaster Univ.)  
 Worm Board *ex officio* member Nematode Genomes  
*C. elegans* Community Faculty Mentor, Genetics Society of America  
 External thesis committee member for Youn Jae Kang (Ding lab, Max Planck Institute of Animal Behavior)

2022 *C. elegans* Community Faculty Mentor, Genetics Society of America  
 External thesis committee member for Leonor Gianechini (Moorhead lab, Univ. of Georgia)  
 External thesis committee member for Youn Jae Kang (Ding lab, Max Planck Institute of Animal Behavior)  
 External thesis committee member for Amanda Shaver (Edison lab, Univ. of Georgia)  
 Worm Board *ex officio* member Nematode Genomes  
 Organizing committee Anthelmintics V: Resistance and vaccines  
 Scientific Advisory Board Member for P01AI127338 (PI Dr. Michael Ferdig, Notre Dame Univ.)

2021 Worm Board *ex officio* member Nematode Genomes  
 Co-organizer of the Chicago Area Worm Meeting (ChAWM, [www.chawm.org](http://www.chawm.org))  
 Scientific Advisory Board Member for P01AI127338 (PI Dr. Michael Ferdig, Notre Dame Univ.)

2020 Worm Board *ex officio* member Nematode Genomes  
 Co-organizer of the Chicago Area Worm Meeting (ChAWM, [www.chawm.org](http://www.chawm.org))  
 Scientific Advisory Board Member for P01AI127338 (PI Dr. Michael Ferdig, Notre Dame Univ.)



- 2019 External thesis committee examiner for Yiru Wang (Kammenga lab, Wageningen Univ. and Research)  
 External thesis committee member for Amanda Shaver (Edison lab, Univ. of Georgia)  
 External thesis committee examiner for Aurian Garcia-Gonzalez (Walhout lab, UMMS)  
 Co-organizer of the Chicago Area Worm Meeting (ChAWM, [www.chawm.org](http://www.chawm.org))  
 Scientific Advisory Board Member for P01AI127338 (PI Dr. Michael Ferdig, Notre Dame Univ.)
- 2018 Organizing committee for *C. elegans* dev., cell bio., and gene exp. meeting (Barcelona, Spain)  
 Chair of the Natural Variation session, *C. elegans* dev., cell bio., and gene exp. meeting  
 Co-organizer of the Chicago Area Worm Meeting (ChAWM, [www.chawm.org](http://www.chawm.org))  
 Scientific Advisory Board Member for P01AI127338 (PI Dr. Michael Ferdig, Notre Dame Univ.)  
 Organizing committee for Parasitic Nematodes meeting, NYU Abu Dhabi  
 External thesis committee member for Victoria Vu (Fraser lab, University of Toronto)  
 Poster judge, Northwestern Undergraduate Research Symposium
- 2017 Organizing committee for the 21st International *C. elegans* meeting  
 Chair of the Evolution and Ecology parallel session, 21st International *C. elegans* meeting
- 2015 Organizing committee for the 20th International *C. elegans* meeting  
 Poster judge, 20th International *C. elegans* meeting - Evolution and Genomics section  
 Genetics Soc. of America Mentor Lunch, *Postdoc search*, 20th International *C. elegans* meeting
- 2014 Panelist, NUIN Post-doc Association, *Interviews and Start-up packages*  
 Poster judge, Northwestern Undergraduate Research Symposium  
 Panelist, Pathways to the Professoriate, *How to prepare for a job interview?*
- 2013 Poster judge, Northwestern Undergraduate Research Symposium  
 Panelist, Bioscientist Freshman seminar; *How to find a research lab?*  
 Poster judge, 19th International *C. elegans* meeting - Evolution and Genomics section

### ***C. elegans* community service and open-science software:**

- 2016 - Creator and advisor board member of the *C. elegans* Natural Diversity Resource (CeNDR, [link](#))  
 This resource organizes and disseminates wild *C. elegans* strains, whole-genome sequence data, and enables genome-wide association mappings through a cloud-based service.

## **TEACHING AND ADVISING**

### **Undergraduate teaching:**

- 2024 AS.020.314: *Biology of Disease* (fall semester, 180 students)  
 AS.020.303: *Genetics* (spring semester, 465 students)
- 2023 Biological Sciences 203: *Genetics and Evolution* (winter, 285 students)  
 Biological Sciences 398: *Independent Research* (Fiona Shao, Alyssa Blanco)  
 Biological Sciences 399: *Independent Research* (Andrea Phung, Cassia Yeo, Sharik Khan)
- 2022 **New course: Biological Sciences 203: *Genetics and Evolution* (winter, 379 students)**  
 Biological Sciences 398: *Independent Research* (Andrea Phung)
- 2021 **Biological Sciences 393: *Genetic Analysis* (spring, 31 students)**  
 Biological Sciences 399: *Independent Research* (Karan Gowda, Kailyn Parham, Katie Introcaso)
- 2020 **Biological Sciences 215: *Genetics and Molecular Biology* (spring, 492 students)**  
 Biological Sciences 399: *Independent Research* (Anna Derrick, Emily Jahn, Jake Mostad, Kailyn Parham)
- 2019 **Biological Sciences 393: *Biomedical Genetics* (spring, 19 students)**  
 Biological Sciences 398: *Tutorial in Biology* (Anna Derrick, Emily Jahn, Kailyn Parham)  
 Biological Sciences 399: *Independent Research* (Karol Bisaga, Grace Park, Jake Mostad)

- 2018 **Biological Sciences 393: *Genetic Analysis* (winter, 28 students)**  
 Biological Sciences 398: *Tutorial in Biology* (Karol Bisaga)  
 Biological Sciences 399: *Independent Research* (Karol Bisaga, Kimberly Collins, Selina Deiparine, Grace Park)
- 2017 **Biological Sciences 393: *Genetic Analysis* (spring, 22 students)**  
 Biological Sciences 398: *Tutorial in Biology* (Kimberly Collins)  
 Biological Sciences 399: *Independent Research* (Selina Deiparine, Samuel Hamilton, Grace Park)
- 2016 **Biological Sciences 393: *Genetic Analysis* (spring, 17 students)**  
 Biological Sciences 398: *Tutorial in Biology*  
 (Sarah Bier, Mattlyn Cordova, Selina Deiparine, Samuel Hamilton, Grace Park)
- 2015 *Guest Lecture: University of Wisconsin-Madison Biology 675 - Evolution seminar*  
 (fall, 8 students)  
**New course: Biological Sciences 393: *Genetic Analysis* (spring, 10 students)**  
 Biological Sciences 398: *Tutorial in Biology* (Lautaro Cilenti)  
 Biological Sciences 399: *Independent Research* (Kreena Patel, Hillary Tsang)
- 2014 Biological Sciences 398: *Tutorial in Biology* (Mazeed Aro-Lambo, Kreena Patel, Hillary Tsang)

#### Graduate teaching:

- 2024 CMDB RCR course - *Collaborative Science*  
 (one lecture, 22 students)
- 2022 Driskill Graduate Program 430: *Genetic Analysis - Leveraging Big Data and Model Organisms*  
 (spring, one guest lecture, 12 students)
- 2021 **New course: Interdisciplinary Biological Sciences: *Introduction to R for biologists***  
 (fall, Five students)  
 Driskill Graduate Program 430: *Genetic Analysis - Leveraging Big Data and Model Organisms*  
 (spring, one guest lecture, 16 students)
- 2020 Interdisciplinary Biological Sciences 423: *Ethics of collaboration*  
 (fall, one guest lecture, 45 students)
- 2019 Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*  
 (summer, one guest lecture, 17 students)
- 2018 Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*  
 (summer, one guest lecture, 25 students)  
 Interdisciplinary Biological Sciences/Chemistry 416: *Practical Training in Chemical Biology Methods and Experimental Design*  
 (spring, five lectures, 10 students)
- 2017 Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*  
 (summer, one guest lecture, 15 students)  
 Interdisciplinary Biological Sciences/Chemistry 416: *Practical Training in Chemical Biology Methods and Experimental Design*  
 (spring, five lectures, 8 students)  
 Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*  
 (spring, one guest lecture, 5 students)
- 2016 Interdisciplinary Biological Sciences: *Graduate Computational Biology Bootcamp*  
 (fall, 3 days, eight hours per day, 19 students) - [www.GitHub.com/AndersenLab/IBiS-Bootcamp](http://www.GitHub.com/AndersenLab/IBiS-Bootcamp)
- 2015 Interdisciplinary Biological Sciences 402: *Eukaryotic Molecular Biology*  
 (fall, one guest lecture, 22 students)  
 Interdisciplinary Biological Sciences: *Graduate Computational Biology Bootcamp*  
 (fall, 3 days, eight hours per day, 22 students) - [www.GitHub.com/AndersenLab/IBiS-Bootcamp](http://www.GitHub.com/AndersenLab/IBiS-Bootcamp)
- 2015 Interdisciplinary Biological Sciences 423: *Ethics of peer review*  
 (spring, one guest lecture, 41 students)

- 2014 Interdisciplinary Biological Sciences 402: *Eukaryotic Molecular Biology*  
(fall, one guest lecture, 16 students)  
**New course:** Interdisciplinary Biological Sciences: *Graduate Computational Biology Bootcamp*  
(fall, 3 days, eight hours per day, 16 students) - [www.GitHub.com/AndersenLab/IBiS-Bootcamp](https://www.GitHub.com/AndersenLab/IBiS-Bootcamp)  
Interdisciplinary Biological Sciences 423: *Ethics of peer review*  
(spring, one guest lecture, 42 students)
- 2013 Interdisciplinary Biological Sciences 402: *Eukaryotic Molecular Biology*  
(fall, one guest lecture, 24 students)

**K-12 advising:**

Colin Lily, Baltimore Polytechnic Institute (2024- )  
Jinghan (Jonathan) Xiao, Lake Forest Academy (2022-2023)  
Anwyn Zhou, New Trier High School (2022)  
Richelle Lee, Adlai E. Stevensen High School (2022)  
Preeti Rao, Adlai E. Stevensen High School (2022)  
Ned Koh, Lake Forest Academy (2021-2022)  
Yahya Junejo, Hinsdale Central High School (2020)  
Shanthi Hegde, Lambert High School (2020 - 2021)  
Aarnav Patel, Barrington High School (2020)  
Justine Rozenich, Saint Ignatius College Preparatory (2020-2022)  
Hannah Ahmed, Normal Community High School (2019-2020)  
Ally Bardas, New Trier High School (2019-2021)  
*Regeneron Science Talent Search Finalist 2021*  
Sarosh Nagar, Glenbrook North High School (2018-2019 academic year)  
Britney Sun, Glenbrook North High School (summer 2018)  
Ethan Schonfeld, Glenbrook North High School (summer 2018)  
Lillian Tushman, Oak Park and River Forest High School (2016-2017 academic year)  
Caitlin Westerfield, Evanston Township High School (2015-2016 academic year)  
Matteo di Bernardo, Evanston Township High School (2015-2016 academic year)  
Ainsley Tran, Oak Park and River Forest High School (2015-2016 academic year)  
Lauren Mann, Oak Park and River Forest High School (2014-2015 academic year)  
Jacob Cruger, Latin School of Chicago (summers 2013, 2014)  
Gina Liu, Illinois Math and Science Academy (2013-2014 academic year)

**Undergraduate advising:**

Kate Stone (2024 - , Class of 2027), Cell and Molecular Biology Major  
Rohan Shrishrimal (2024 - , Class of 2028), Cell and Molecular Biology Major  
Joyce Reyes-Otero (2024, Class of 2025), Industrial Microbiology Major, Univ. of Puerto Rico - Mayagüez  
*2024 Johns Hopkins Biology Summer REU recipient*  
Alyssa Blanco (2023 - 2024, Class of 2025), Biological Sciences Major, Northwestern University  
*2023 PBS Summer grant recipient*  
*2024 Johns Hopkins Biology Summer REU recipient*  
Fiona Shao (2022 - 2023, Class of 2024), Biological Sciences Major  
*2023 Summer URG recipient*  
Gracie Paredas (2022 - 2023, Class of 2025), Biological Sciences Major  
*2023 Summer URG recipient*  
Michael Chen (2022, Class of 2024), Biological Sciences Major, University of Southern California  
Crystal Lovato (2022, Class of 2023), Biological Sciences Major, Idaho State University  
*2022 SROP student*

Andrew Yang (2022, Class of 2025), Math Major, Brown University  
*2022 Quantitative Biology REU student*

Sharik Khan (2022 - 2023, Class of 2024), Biological Sciences Major  
*2022 Summer URG recipient, 2023 Summer URG recipient*

Skyler Stone (2022 - 2024, Class of 2025), Biological Sciences Major  
*2022 Posner Fellow, 2023 Summer URG recipient*

Andrea Phung (2021 - 2024, Class of 2025), Biological Sciences Major  
*2022 AYURG recipient, 2022 Summer URG recipient*

Cassia Yeo (2021 - 2024, Class of 2025), Biological Sciences Major  
*2022 Summer URG recipient, 2022 Academic Year URG recipient,  
2023 Summer Advanced URG recipient, 2023 National Collegiate Undergraduate Research Award*

Chloe Sokol (2021 - 2022, Class of 2024), Data Sciences Major

Nicole Banks (2021 - 2022, Class of 2022), Biological Sciences Major

Joey Gallindo (2021, Class of 2024), Engineering Major  
*2021 Summer URG recipient*

Jordan Vaughn (2020 - 2021, Class of 2023), Biological Sciences Major  
*2021 WCAS Baker Family Summer Grant recipient*

Karan Gowda (2020 - 2021, Class of 2022), Biological Sciences Major  
*2020 Center for Quantitative Biology Summer Grant recipient, 2021 Academic Year URG recipient*

Iris Swarthout (2020 - 2021, Class of 2023), Biological Sciences Major  
*2020 Summer Internship Grant Program recipient, 2021 Summer URG recipient*

Raghav Gupta (2020, Class of 2022), Biological Sciences Major

Isabella Miller (2020 - , Class of 2023), Biological Sciences and Hispanic studies double major, Bowdoin Coll.  
*2022 Summer research grant recipient*

Emily Jahn (2019 - 2020, Class of 2020), Biological Sciences Major  
*2019 Weinberg College Summer Grant recipient*

Kailyn Parham (2019 - 2021, Class of 2021), Biological Sciences Major  
*2019 Summer URG recipient, 2020 Academic Year URG Recipient, 2021 Acad. Year URG Recipient*

Anna Derrick (2019 - 2020, Class of 2021), Biological Sciences Major  
*2019 Weinberg College Summer Grant recipient*

Jake Mostad (2018 - 2020, Class of 2020), Biological Sciences Major  
*2019 Summer URG recipient*

Katie Introcaso (2018 - 2022, Class of 2022), Biological Sciences Major  
*2020 Summer URG recipient, 2021 WCAS Baker Family Summer Grant recipient*

Ellen Chao (2018 - 2021, Class of 2021), Biological Sciences Major  
*2018 Summer URG recipient, 2019 Chemistry of Life Processes Lambert Fellow*

Karol Bisaga (2017 - 2019, Class of 2020), Biological Sciences Major  
*2017 NU Bioscientist Summer Grant recipient*

Tim Sheng (2018 - 2019, Class of 2019), Biological Sciences Major  
*2018 Summer URG recipient*

Grace Park (2016 - 2019, Class of 2019), Biological Sciences Major  
*2016 Posner Fellowship recipient, 2017 Program in Biological Sciences Summer Grant recipient,  
Natural Sciences and Engineering 2nd place poster prize recipient*

Zyneb Adewusi (2018, Class of 2018), Biological Sciences Major, Moraine Valley Community College  
*2018 Summer Research Opportunities Program (SROP) recipient 2019 Northwestern Undergraduate*

Yihong Hu (2018 - 2019, Class of 2021), Biological Sciences Major  
*2018 Program in Biological Sciences Summer Grant recipient*

Chido Chikaturudzi (2017-2018, Class of 2018), Biological Sciences Major, Northeastern Illinois Univ.

Peter Finnegan (2017 - 2018, Class of 2020), Biological Sciences Major  
*2017 Program in Biological Sciences Summer Grant recipient*

Kimberly Collins (2016 - 2018, Class of 2020), Biological Sciences Major  
*2017 NU Bioscientist Summer Grant recipient*



Selina Deiparine (2016 - 2018, Class of 2018), Biological Sciences Major  
*2016 Summer URG recipient, 2016 Academic URG recipient*

Rohit Rastogi (2016 - 2017, Class of 2019), Computer Science and Statistics Majors

Sarah Bier (2016 - 2017, Class of 2019), Biological Sciences Major  
*2016 Summer URG recipient*

Mattlyn Cordova (2016 - 2017, Class of 2019), Gender Studies Major  
*2016 Program in Biological Sciences Summer Grant recipient*

Joshua Roberts (2015-2016, Class of 2016), Computer Science Major

Nicholas Irons (2015, Class of 2018), Physics Major  
*2015 Summer URG recipient*

Annika Zhang (2014-2015, Class of 2018), Biological Sciences Major  
*2015 Weinberg College Summer Grant recipient*

Tyler Shimko (summers 2012, 2013, 2014, 2015, University of Utah Class of 2015), Biology Major  
*Barry Goldwater Scholarship recipient*  
*Myriad Academic Scholarship recipient*  
*Thomas Verender Hanks Scholarship recipient*  
*National Science Foundation Graduate Research Fellowship recipient*  
*Department of Energy Computational Science Graduate Fellowship Honorable Mention*

Mazeed Aro-Lambo (2014, Class of 2017), Biological Sciences Major  
*2014 NU Bioscientist Summer Grant recipient*

Stevie Hippleheuser (2014 - , Class of 2017), Biological Sciences Major  
*2016 Program in Biological Sciences Summer Grant recipient*  
*2015 Summer URG recipient*  
*2014 Weinberg College Summer Grant recipient*

Camille Calvin (2014, Class of 2017), Mechanical Engineering Major  
*2014 Posner fellowship recipient*

Hillary Tsang (2013 - 2016, Class of 2016), Biological Sciences Major  
*2015 Weinberg Summer Grant recipient*  
*2014 Summer URG recipient*  
*2014 Academic URG recipient*

Lautaro Clienti (2013 - 2015, Class of 2017), Mechanical Engineering Major  
*2014 Academic URG recipient*

Kreena Patel (2013 - 2015, Class of 2015), Biological Sciences and Psychology Double Major  
*2015 Emmanuel Margoliash Prize for Basic Research recipient*  
*Winfred Hill Award recipient*  
*James Alton James Scholar*  
*Ellen Taus Scholarship recipient*  
*J.G. Nolan Scholarship recipient*  
*2014 Academic URG recipient*

Zifan Xiang (2014 - 2015, Class of 2015), Biomedical Engineering Major

Stephen Chan (2013 - 2014, Class of 2014), Computer Science Major  
*2013 Summer URG recipient*

### **Graduate student and post-doctoral advising:**

#### **Masters student advising:**

Caroline Bond (Quantitative and Systems Biology Masters), 2021-2022

Anita Huang (Biotechnology Program), 2018 - 2020

Ryan (Heechul) Chung (Quantitative and Systems Biology Masters), 2018 - 2019

Suma Aldakeel (advisor, Cindy Voisine - Northeastern Illinois Univ.), 2016 - 2017

Kristen Larrichia (advisor, Nyree Zerega – Program in Plant Biology and Conservation), 2014 - 2015

Lucie Bastin-Heline (Master's exchange student, Ecole Normale Superior, Paris, France), 2014

**Graduate PhD candidates (Current position):**

Maya Mastranardo (2024 - ), Ph.D. student, Cell, Molecular, Biophysics, and Developmental Biology Program

Lance O'Connor (2024 - ), Ph.D. student, Cell, Molecular, Biophysics, and Developmental Biology Program

Ryan McKeown (2022 - ), Ph.D. student, Interdisciplinary Biological Sciences Program

*Funded by the NIH Biotechnology Training grant full member (2022-2024)*

Nic Moya (2020 - ), Ph.D. student, Interdisciplinary Biological Sciences Program

*Funded by the NIH Biotechnology Training grant full member (2021-2022)*

Joy Nyaanga (2019 - 2022), Ph.D. student jointly advised with Niall Mangan, Interdisciplinary Bio. Sci. Program

*Funded by NSF-Simons Center for Quantitative Biology (2019-2022)*

**(Lead bioinformaticist, Lurie Children's Hospital)**

Loraina Stinson (2019 - 2021), Ph.D. student - left with Masters, Interdisciplinary Biological Sciences Program

*Funded by the Cell and Molecular Basis of Disease NIH Training grant (2019-2021)*

Clayton Dilks (2018 - 2021), Ph.D. student, Interdisciplinary Biological Sciences Program

*Funded by the NIH Biotechnology Training grant cluster (2019)*

*Funded by the NIH Biotechnology Training grant full member (2020)*

*Recipient of travel award from WAAVP (2019)*

*Recipient of Burroughs-Wellcome Travel Award (2019)*

**(Senior scientist, Evozyne)**

Ye Wang (2017 - 2019), Visiting Ph.D. student, Sichuan Agricultural University, China

*Funded by China Scholarship Council (2017-2019)*

**(Program Director for Panda Genomes, the Chengdu Panda Base)**

Kathryn Evans (2016 - 2020), Ph.D. student, Interdisciplinary Biological Sciences Program

*Funded by the NSF-Simons Center for Quantitative Biology (2020)*

*Funded by the Cell and Molecular Basis of Disease NIH Training grant (2017-2019)*

*Recipient of travel awards from IBiS and the Northwestern Graduate School (2017)*

*Recipient of Biotechnology NIH Training grant cluster member, declined (2017)*

**(Bioinformaticist, Precision Biosciences, Inc.)**

Shannon Brady (2015 - 2019), Ph.D. student, Interdisciplinary Biological Sciences Program

*Recipient of the Dr. John N. Nicholson Fellowship (2018-2019)*

*Funded by the Biotechnology NIH Training grant (2015-2017)*

*National Science Foundation Graduate Research Fellowship Program (Honorable Mention)*

*Recipient of travel award from Union Biometrika (2016)*

*Recipient of travel awards from IBiS and the Northwestern Graduate School (2017)*

*Poster first prize winner Northwestern Computational Research Day (2017)*

*Poster prize winner 21st International C. elegans meeting*

*Best TA award IBiS Graduate Program (2017)*

**(Consultant, Boston Consulting Group)**

Daniel Cook (2014 - 2018), Ph.D. student, Driskill Graduate Program

Current position: Senior Programmer at Google, Mountain View, CA

*Northwestern Graduate School Outstanding Thesis Award (2018)*

*Funded by a National Science Foundation Pre-doctoral Fellowship (2015-2018)*

*Northwestern Presidential Fellowship Finalist (2017)*

*Recipient of travel awards from IBiS and the Northwestern Graduate School (2016)*

**(Genomics team lead, Google)**



Stefan Zdraljevic (2014 - 2019), Ph.D. student, Interdisciplinary Biological Sciences Program  
*Recipient of the Widom Award for Research Excellence (2019)*  
*Northwestern Graduate School Outstanding Thesis Award (2019)*  
*Recipient of the IBiS Rappaport Award for Research Excellence (2018)*  
*Funded by the Cell and Molecular Basis of Disease NIH Training grant (2015-2017)*  
*Recipient of travel awards from Northwestern Center for Genetic Medicine (2016, 2017)*  
*Recipient of travel awards from IBiS and the Northwestern Graduate School (2015, 2017)*  
*Chemistry of Life Processes Drug Discovery Scholar (2017)*  
**(Post-doctoral fellow at UCLA and HHMI, Kruglyak lab)**

#### **Additional rotation graduate students:**

Izabella Mastroianni (2024), Mingling (Derek) Hui (2024), Tabor Rodriguez (2024), Francesca Batelli (2024), Jake Gavin (2024), Maya Mastronardo (2024), Lance O'Connor (2023), Corinne Croslyn (Spring, 2022), Ryan McKeown (Spring, 2022), Brooke Angel (Winter, 2021), Jack Sumner (Winter, 2021), Nic Moya (Winter, 2020), Joy Nyaanga (Spring, 2019), Loraina Stinson (Winter, 2019), Emily Czajkowski (Fall, 2018), Julie Liang (Spring, 2018), Elan Ness-Cohn (DGP, Spring, 2018) Kyle Siegel (Spring, 2018), Clayton Dilks (Winter, 2018), Garth Fisher (Fall, 2017), Nicholas Sepulveda (Spring, 2017), Michael Schamber (Winter, 2017), Evan Buechel (Spring, 2016), Nic Daffern (Spring, 2016), Bryan Eder (Winter, 2016), Ryan Abdella (Winter, 2015), Erin Baker (Fall, 2014), Alex Karge (Spring, 2014), Saiorse McSharry (Winter, 2014), Amy Nilles (Fall, 2013), Ian Wolff (Summer, 2013)

#### **Post-doctoral researchers (Current position):**

Nikita Jhaveri (2024 - ), Ph.D. from McMaster University, advisor Dr. Bhagwati Gupta  
 Bowen Wang (2024 - ), Ph.D. from Northeast Forestry University, advisor Dr. Ling Ma  
 Amanda Shaver (2022 - ), Ph.D. from Univ. of Georgia, advisor Dr. Arthur Edison

*Janelia Leading Edge Fellow, 2024*  
*Chair of the National Post-doctoral Council*  
*NIH F32 Post-doctoral fellow (2024-2027)*

José Luis Tellez Arreola (2022), Ph.D. from Universidad Autonoma de Mexico, advisor Dr. Ataulfo Torres  
**(Research Assistant Professor, National University Autonomous of México)**

JB Collins (2021 - ), Ph.D. from Univ. of Georgia, advisor Dr. Ray Kaplan  
 Janneke Wit (2019 - 2021), Ph.D. from Aarhus Univ., advisor Dr. Volker Loeschcke  
 Sam Widmayer (2019 - 2022), Ph.D. from North Carolina State Univ., advisor Dr. David Aylor  
**(Associate Computational Scientist, The Jackson Laboratory)**

Gaotian Zhang (2018 - 2023), Ph.D. from Ecole Normale Supérieure, Paris, advisor Dr. Marie-Anne Felix  
**(La Fondation pour la Recherche Médicale, CNRS, Ecole Normale Supérieure - Paris)**

Timothy Crombie (2017 - 2023), Ph.D. from University of Florida, advisor Dr. David Julian  
**(Assistant Professor of Biology, Florida Institute of Technology)**

Lewis Stevens (2019 - 2020), Ph.D. from Univ. of Edinburgh, advisor Dr. Mark Blaxter  
**(Bioinformaticist, Wellcome Trust Sanger Institute, Hinxton, England)**

Steffen Hahnel (2017 - 2018), Ph.D. from Justus-Liebig University, advisor Dr. Christoph Grevelding  
*Recipient of DFG German Science Fellowship (2018-2020)*  
*Recipient of Northwestern Post-doctoral Travel Award (2018)*  
*Recipient of Burroughs-Wellcome Travel Award (2018)*  
**(Scientist, Boehringer Ingelheim Health, Germany)**

Daehan Lee (2017 - 2020), Ph.D. from Seoul National University, advisor Dr. Junho Lee  
**(Assistant Professor of Biological Sciences, Sungkyunkwan University, South Korea)**

Mostafa Zamanian (2014 - 2016), Ph.D. from Iowa State University, advisor Dr. Timothy Day  
*Recipient of NIH/NIAID K22 Career Transition Award (2016)*  
*Recipient of Northwestern Post-doctoral Travel Award (2016)*  
*Funded by the Bill and Melinda Gates Foundation (2014)*  
**(Associate Professor of Pathobiological Sciences, University of Wisconsin - Madison)**

Bryn Gaertner (2014), Ph.D. from University of Oregon, advisor Dr. Patrick Phillips  
*(Associate Scientific Director at Ashfield, part of UDG Healthcare PLC)*

#### **Graduate thesis committee memberships:**

Calvin Runnels (advisor, Andrew Gordus) 2024 -  
 Harjit Khaira (advisor, Nichole Broderick) (chair) 2024 -  
 Mao-Jan Lin (advisor, Ben Langmead) (chair) 2024 -  
 Nick Wong (advisor, Will Ludington) 2024 -  
 Sara Carioscia (advisor, Rajiv McCoy) 2024 -  
 Corinne Croslyn (advisor, Shelby Blythe) 2022 - 2023 (no longer IBiS preceptor)  
 Feihong Xu (advisor, Luis Amaral) (chair) 2021 - 2023 (no longer IBiS preceptor)  
 Elias Guan (advisor, Chris Petersen) (chair) 2021 - 2023 (no longer IBiS preceptor)  
 Reese Richardson (advisor, Luis Amaral) (chair) 2021 - 2023 (no longer IBiS preceptor)  
 Idalis Ramirez (advisor, Rick Morimoto) 2021  
 Taojunfeng Su (advisor, Neil Kelleher) (chair) 2021 - 2023 (no longer IBiS preceptor)  
 Emily Czajkowski (advisor, Sadie Wignall) 2020 - 2023 (no longer IBiS preceptor)  
 Elan Ness-Cohn (advisor, Rosemary Braun - DGP, Feinberg School of Medicine) (chair) 2019 - 2021  
 Gabriel Cavin (advisor, Sadie Wignall) 2019 - 2022  
 Hannah Horton (advisor, Sadie Wignall) 2019 - 2023  
 Alex McFarland (advisor, Erica Hartman) (chair) 2018 - 2021  
 Matt Robey (advisor, Neil Kelleher) 2016 - 2020  
 Rachel Bakker (advisor, Rich Carthew) 2015 - 2020  
 Joseph Muldoon (advisors, Neda Bagheri and Josh Leonard) (chair) 2015 - 2020  
 Aaron Sue (advisor, Thomas O'Halloran) 2014 - 2022  
 Ritika Giri (advisor, Richard Carthew) 2013 - 2020  
 Sumach Aldakeel (advisor, Cindy Voisine - Northeastern Illinois Univ.) 2016 - 2017  
 Adam Hockenberry (advisors, Luis Amaral and Michael Jewett) 2015 - 2017  
 Sarah Stainbrook (advisor, Keith Tyo) 2015 - 2019  
 Timothy Toby (advisor, Neil Kelleher) 2015 - 2018  
 Rose Njoroge (advisor, Sarki Abdulkadir – DGP, Feinberg School of Medicine), 2014 - 2018  
 Keila Torre-Santiago (advisor, Sadie Wignall) 2014 - 2017  
 Arianne Rodriguez (advisor, Yun Wang) 2014 (Transferred to DGP)  
 Lilien Voong (advisor, Alec Wang) 2013 - 2017

#### **DEPARTMENT, COLLEGE, AND UNIVERSITY SERVICE**

##### **Johns Hopkins University Department of Biology Service:**

2024            Holiday Party organizing committee  
                  Dr. Kavi Rangan Faculty Mentorship Committee  
                  Faculty chalk talks, organizer  
 2023            Faculty search committee, chair  
                  Faculty chalk talks, organizer

##### **Johns Hopkins University Krieger School of Arts and Sciences Service:**

2024            KSAS Dissertation Prize Committee  
                  CMDB Graduate Program Admissions Committee  
                  CMDB Graduate Retreat Organizer  
 2023            CMDB Graduate Program Admissions Committee

**Johns Hopkins University Service:**

2024 Woodrow Wilson Fellowship Review Committee  
*Ad hoc* Pew Scholars Review Committee

**Northwestern University Department of Molecular Biosciences Service:**

2022 Faculty search committee, chair  
 2021 Faculty search committee  
 2019 Faculty search committee  
 2017 Strategic Planning committee  
 2016 Faculty search committee  
 Strategic Planning committee  
 2015 Faculty search committee  
 2014 Program Review committee

**Northwestern University Weinberg College of Arts and Sciences Service:**

2022 WCAS Single-cell Genomics committee  
 WCAS Teaching Award committee  
 2019 Program in Biological Sciences curriculum committee  
 2016 Faculty search committee for the Neurobiology Department  
 2014 NUIN Post-doc Association, *Interviews and Start-up packages*

**Northwestern University Service:**

2022 Undergraduate Research Grant review committee  
 Steering committee for NUSeq Facility in Northwestern Medicine  
*Ad hoc* Limited submissions grant review panel

2021 Undergraduate Research Grant review committee  
 NSF-Simons Center for Quantitative Biology Pilot grant review panel  
 Limited Submissions Grant review committee  
 IBiS Graduate Admissions committee, chair  
 Steering committee for NUSeq Facility in Northwestern Medicine  
 IBiS Graduate Student Advisor  
*Ad hoc* reviewer for Data Science Initiative grants and fellowships

2020 Limited submissions grant review panel  
 IBiS Graduate Admissions committee, chair  
 Steering committee for NUSeq Facility in Northwestern Medicine  
 IBiS Graduate Student Advisor

2019 Limited submissions grant review panel  
 NSF-Simons Center for Quantitative Biology Pilot grant review panel  
 IBiS Graduate Admissions committee, chair  
 Steering committee for NUSeq Facility in Northwestern Medicine  
 Masters Program in Quantitative and Systems Biology, Curriculum committee  
 IBiS curriculum committee

2018 IBiS Graduate Admissions committee  
 Steering committee for NUSeq Facility in Northwestern Medicine  
 Masters Program in Quantitative and Systems Biology, Curriculum committee  
 Poster judge, Northwestern Undergraduate Research Symposium  
*Ad hoc* reviewer for Chemistry of Life Processes undergraduate grants and fellowships  
*Ad hoc* reviewer for Data Science Initiative grants and fellowships  
 NSF-Simons Center for Quantitative Biology Pilot grant review panel

2017 Discussion organizer, Northwestern Computational Research Day  
 Steering committee for NUSeq Facility in Northwestern Medicine

2017	<i>Ad hoc</i> reviewer for Chemistry of Life Processes undergraduate grants and fellowships <i>Ad hoc</i> reviewer for Data Science Initiative grants and fellowships
2016	IBiS Computational Bootcamp for incoming graduate students Lurie Cancer Center American Cancer Society IRG review panel Steering committee for NUSeq Facility in Northwestern Medicine <i>Ad hoc</i> reviewer for Chemistry of Life Processes undergraduate grants and fellowships <i>Ad hoc</i> reviewer for Data Science Initiative grants and fellowships
2015	IBiS Graduate Admissions committee IBiS Retreat committee, Co-chair IBiS Computational Bootcamp for incoming graduate students
2014	Creation of IBiS Computational Bootcamp for incoming graduate students IBiS Retreat committee, Co-chair Poster judge, Northwestern Undergraduate Research Symposium IBiS Graduate Admissions committee
2013	Poster judge, Northwestern Undergraduate Research Symposium

## COMMUNITY WORK

2024 -	International Research Olympiad Advisory Board
2023	Hosted 45 8th grade students from North Shore Country Day School for a day of science
2022	Mentored Jonathan Xiao from Lake Forest Academy
2022	Mentored Richelle Lee from Adlai E. Stevenson High School
2022	Mentored Anwyn Zhao from New Trier High School
2021	Mentored Ally Bardas from New Trier High School on anthelmintic sensitivity <i>Recipient of Regeneron Top 300 Science Talent Search</i>
2020	STEM presenter at ConnectCon presented by Wizards.exe
2020 -	Assistant Scoutmaster, Troop 2
2020 - 2023	Scouting Merit Badge Counselor: Chemistry, Citizenship in Society, Digital Technology, Environmental Science, Insect Study, Mammal Study, Medicine, Programming, Reptile and Amphibian Study, Swimming
2015 - 2019	Hosted 80 5th grade students from Lincolnwood Elementary School for a day of science
2016 - 2017	Mentored Lillian Tushman from Oak Park and River Forest High School on glucose responses <i>Recipient of 3rd place All-Illinois Science Research Competition</i>
2016 - 2019	Assistant Den Leader, Cub Scout Pack 922
2016 - 2017	American Youth Soccer Organization (AYSO) U8 Head Coach, <i>The Storm</i>
2015 - 2016	American Youth Soccer Organization (AYSO) U8 Head Coach, <i>Golden Ninjas</i>
2015 - 2016	Mentored Matteo di Bernardo from Evanston Township High School on anthelmintic sensitivity, <i>Recipient Columbia University Scientific Scholars Fellowship, Recipient Fulbright Fellowship</i>
2014 - 2018	Lecturer on <i>C. elegans</i> genetics to the Latin School of Chicago advanced biology class
2014	Co-organized (with Jacob Cruger) nematode collections with the Punahou School, Hawaii
2009	Organized nematode collections with Vassalboro Community School, Maine