

Erik C. Andersen

Professor Northwestern University

Department of Molecular Biosciences

2205 Tech Drive

Evanston, IL 60208-3500

Office: 847-467-4382 Lab: 847-467-4264 Fax: 847-491-4461

erik.andersen@northwestern.edu

www.andersenlab.org www.elegansvariation.org



0000-0003-0229-9651



DATE UPDATED: May 18, 2023

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	Editorial Board Member of <i>Gene</i>
2019 - 2022	Human Frontiers Science Program Award Recipient
2018 - 2023	National Science Foundation CAREER Award Recipient
2017 - 2020	Editor Board Member of <i>BMC Genomics</i>
2015 - 2019	American Cancer Society Research Scholar
2015 - 2017	March of Dimes Basil O'Connor Research Scholar
2015 -	Editorial Board Member of <i>Trends in Genetics</i>
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

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

2022 - 2025 National Science Foundation, Capacity: Biological Collections (2224885)
Total: \$1,353,068 (\$845,667 direct, \$507,401 indirect)
Enhancement of the Caenorhabditis Natural Diversity Resource
co-PI: Andersen, co-PI: Tanny
2022 - 2025 National Science Foundation, Research Experiences for Undergraduates (2150134)
No funding to REU leadership
REU Site: Quantitative Biology REU (QBREU) at Northwestern University
Lead PI: Braun (Northwestern), co-PI: Andersen
2022 - 2024 National Institutes of Health (R21 OD030067) - Office of the Director

2022 - 2024 National Institutes of Health (R21 OD030067) - Office of the Director Total: \$150,147 (\$105,782 direct, \$44,365 indirect)

Genetic and genomic tools for C. briggsae research

Lead PI: Chamberlin (OSU), co-PI: Andersen

2020 - 2025 National Institutes of Health (R01 Al153088) - NIAID
Total: \$1,799,626 (\$1,142,050 direct, \$657,576 indirect)
Discovery of novel benzimidazole resistance mechanisms
Lead PI: Andersen, co-PIs: Fraser (UCSF), Gilleard (U Calgary), Kaplan (U Georgia)

2019 - 2024 Human Frontiers Science Program Research Grant (RGP0001/2019)
Total: \$351,000 (\$319,091 direct, \$31,909 indirect)
The repeatability of the genetic mechanisms underlying behavioral evolution
Lead PI: Andersen, co-PIs: Brown (Imperial, MRC), Hodgins (Monash)

2018 - 2024 National Institutes of Health (R01 ES029930) - NIEHS

Total: \$1,906,121 (\$1,287,165 direct, \$618,956 indirect)

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)

Total: \$530,812 (\$365,678 direct, \$165,134 indirect)

Discovery of the molecular mechanisms underlying microevolution of phenotypic plasticity in a

developmental trait

PI: Andersen

PAST

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

Lead PIs: Carthew and Kath, co-PIs Andersen, Mangan, and Wang

2022 - 2023 Les Turner ALS Center Pilot Grant

Creation of C. elegans ALS models incorporating natural variation

PI: Andersen

2019 - 2022 National Science Foundation, Collections in Support of Bio. Res. - Living Collections (1930382)

Enhancement of the Caenorhabditis Natural Diversity Resource

co-PI: Andersen, co-PI: Tanny

2018 - 2022 National Institutes of Health (U2C OD026506) - NIEHS

Genetics and quantum chemistry as tools for unknown metabolite identification

Lead PI: Edison (UGA), co-PIs Andersen, Fernandez (Georgia Tech), McIntyre (U of Florida), Merz (Michigan State), Schroeder (Cornell)

2018 - 2022 National Institutes of Health (R01 GM127433) - NIGMS

100k spontaneous mutations: the foundation for an evolutionary systems biology of C. elegans

Pls: Baer (Univ. of Florida) and Katju (Texas A+M) with sub to Andersen

2017 - 2021 National Institutes of Health (R01 DK115690) - NIDDK

Large scale nutrigenetics and genomics in a tractable metazoan model Multi-investigator Grant: Andersen, Walhout (UMass Medical School),

Schroeder (Cornell)

2021 Weinberg College of Arts and Sciences Baker Faculty Research Program Award

Genome-wide association studies of drug and toxin responses

PI: Andersen

2020 NUSeq Pilot Project Program (sponsored by Illumina)

Genome sequencing of Heterakis gallinarum

PI: Andersen

2015 - 2020 American Cancer Society Research Scholar Grant (127313-RSG-15-135-01-DDC)

Elucidating the genetic causes of variation in chemotherapy-based toxicity

PI: Andersen

2017 - 2020 National Institutes of Heath (R21 AG053638) - NIA High-throughput multi-modal analysis of natural variation in C. elegans healthspan Multi-investigator Grant: Fang-Yen (Univ. of Pennsylvania) and Andersen 2016 - 2019 National Institutes of Heath (R21 Al121836) - NIAID Discovery and validation of avermectin resistance loci in free-living and parasitic nematodes PI: Andersen with subcontract Kimber (Iowa State University) 2014 - 2019 Pew Charitable Trusts, Scholars Program in the Biomedical Sciences Elucidating the genetics of anthelmintic resistance in nematode-borne neglected tropical diseases PI: Andersen National Institutes of Health (R01 GM107227) - NIGMS 2014 - 2019 Direct determination of the distribution of fitness effects of spontaneous mutations PI: Dr. Charlie Baer (University of Florida) with subcontract to Andersen 2018 Google, Inc. Google Cloud Platform Research credit award Optimization of computational pipelines to support the C. elegans Natural Diversity Resource PI: Andersen 2016 - 2017 **Amazon Web Services** Optimization of computational pipelines to support the C. elegans Natural Diversity Resource PI: Andersen IDP/Sherman Fairchild Research Innovation Challenge Award, Robert H. Lurie Comprehensive 2016-2017 Cancer Center Validating individual differences in cytotoxicity to improve personalized chemotherapy treatment regimens Multi-investigator Grant with Andersen and Burridge (Northwestern University) 2015 - 2017 March of Dimes Basil O'Connor Starter Research Grant Identification of hookworm anthelmintic resistance genes to ameliorate maternal and infant anemia PI: Andersen 2016 Weinberg College Research Innovation Grant, Northwestern University The Caenorhabditis elegans Natural Diversity Resource - a powerful tool to facilitate biomedical discovery PI: Andersen 2014 - 2016 Chicago Biomedical Consortium, Catalyst Grant Uncovering "missing heritability" in an experimentally tractable model organism Multi-investigator Grant with Andersen and Ruvinsky (University of Chicago) 2016 Data Scientist Initiative, Northwestern University A novel statistical model to predict the removal of mobile genetic elements Multi-investigator Grant with Andersen and Wang (Northwestern University) 2013 - 2014 American Cancer Society, Institutional Research Grant [93-037-18] Elucidating the genetic causes of variation in chemotherapy-based toxicity

PI: Andersen

2013 - 2014 Chemistry of Life Processes, Chairman's Innovation Award

Using perturbations of heavy metal homeostasis to treat nematode-borne neglected tropical diseases

Multi-investigator Grant: Andersen and O'Halloran (Northwestern University)

PUBLICATIONS

h-index=35, i10-index=62, link to Google Scholar page (here)

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

PREPRINTS:

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 *bioRxiv*. Posted May 18, 2023

DOI: https://doi.org/10.1101/2023.05.16.541014

85. Fouad AD, Churgin MA, Hayden J, Xu J, Park JI, Liu A, Teng C, Sun H, Parrado M, Bowlin P, La Torre MD, <u>Crombie TA</u>, 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:

84. <u>Lee D</u>, Fox BW, Palomino DCF, Panda O, Tenjo FJ, *Evans KS*, <u>Stevens L</u>, Koury E, Rodrigues PR, Kolodziej AR, Schroeder KF, and Andersen EC (2023)

Natural genetic variation in the pheromone production of *C. elegans*

Accepted at *The Proceedings of the National Academy of Sciences* on May 11, 2023 *bioRxiv*, Posted November 25, 2022

DOI: https://doi.org/10.1101/2022.11.23.517769

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 β-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, <u>Stevens L</u>, <u>Evans KS</u>, 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 $\it Caenorhab ditis elegans \, \beta$ -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, <u>Zhang G</u>, Giese GE, Walker M, Roberto NM, Na H, Reis-Rodriguez P, Curtis BJ, Kolodziej AR, <u>Crombie TA</u>, <u>Zdraljevic S</u>, 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, Chikuturudzi 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. <u>Stevens L</u>, *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. <u>Crombie TA</u>, 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, Zdralievic 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, <u>Crombie TA</u>, 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, <u>Widmayer S</u>, 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, <u>Stevens L</u>, *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*, <u>Lee D</u>, Ojemakinde A, Andersen EC, Vannberg FO, Lu H, and McGrath PT (2020)

A spontaneous complex structural variant in *rcan-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, Waschk 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. <u>Lee D</u>, *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*, <u>Zamanian M</u>, 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

<u>Publications from research prior to Northwestern University:</u>

Felix MA, Jovelin 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):

2023 Zoom about Parasites (ZaP worms), virtual seminar Latin American Worm Meeting, Valparaiso, Chile

2022 Univ. of California - Riverside, Institute for Integrative Genome Biology

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

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, Germay

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

2019 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-Universitat, Kiel, Germany

Berlin Seminar for Resistance Research, Freie Universitat 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

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 Northwestern:

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 - Genes

2015 - Trends in Genetics

Associate Editor:

2017 - 2019 BMC Genomics (Multicellular invertebrate genomics)

Guest Associate Editor:

PLoS Genetics, eLife, PLoS Pathogens

Reviewing activity: Grants and fellowships

2023 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 P01Al127338 (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 P01Al127338 (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

2019 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:

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:

2022

2023 Worm Board *ex officio* member Nematode Genomes

C. elegans Community Faculty Mentor, Genetics Society of America 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 Marta Muniz (Samson-Himmelstjerna lab, Freie Univ.

Berlin)

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)

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)

2020	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)
	Scientific Advisory Board Member for P01Al127338 (PI Dr. Michael Ferdig, Notre Dame Univ.)
2018	Organizing committee for <i>C. elegans</i> 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)
	Scientific Advisory Board Member for P01Al127338 (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?

C. elegans community service and open-science software:

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

Poster judge, 19th International C. elegans meeting - Evolution and Genomics section

TEACHING AND ADVISING

Undergraduate teaching:

2023	Biological Sciences 203: <i>Genetics and Evolution</i> (winter, 285 students) Biological Sciences 398: <i>Independent Research</i> (Fiona Shao)
	Biological Sciences 399: <i>Independent Research</i> (Andrea Phung, Cassia Yeo, Sharik Khan)
2022	New course: Biological Sciences 203: <i>Genetics and Evolution</i> (winter, 379 students)
	Biological Sciences 398: Independent Research (Andrea Phung)
2021	Biological Sciences 393: <i>Genetic Analysis</i> (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: <i>Independent Research</i> (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: <i>Genetic Analysis</i> (winter, 28 students)
	Biological Sciences 398: Tutorial in Biology (Karol Bisaga)

2018 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:

2022 Driskill Graduate Program 430: Genetic Analysis - Leveraging Big Data and Model Organisms

(spring, one guest lecture, estimated 15 students)

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 quest lecture, 17 students)

2018 Interdisciplinary Biological Sciences 421: Rigor and Reproducibility

(summer, one quest 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

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

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

2014 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:

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:

Fiona Shao (2022 - , Class of 2024), Biological Sciences Major

2023 Summer URG recipient

Gracie Paredas (2022 - , 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 - , Class of 2024), Biological Sciences Major

2022 Summer URG recipient, 2023 Summer URG recipient

Skyler Stone (2022 - , Class of 2025), Biological Sciences Major

2022 Posner Fellow, 2023 Summer URG recipient

Andrea Phung (2021 - , Class of 2025), Biological Sciences Major

2022 AYURG recipient, 2022 Summer URG recipient

Cassia Yeo (2021 - , 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 Chikuturudzi (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):

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

Funded by the NIH Biotechnology Training grant full member (2022-2023)

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)

(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 Biometrica (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:

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):

Amanda Shaver (2022 -), Ph.D. from Univ. of Georgia, advisor Dr. Arthur Edison

Vice Chair of the National Post-doctoral Council

José Luis Tellez Arreola (2022), Ph.D. from Universidad Autonomous 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 -), Ph.D. from Ecole Normale Superieure, Paris, advisor Dr. Marie-Anne Felix (La Fondation pour la Recherche Médicale, CNRS, Ecole Normale Superior - Paris)

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

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:

Corinne Croslyn (advisor, Shelby Blythe) 2022 -

Feihong Xu (advisor, Luis Amaral) (chair) 2021 -

Elias Guan (advisor, Chris Petersen) (chair) 2021 -

Reese Richardson (advisor, Luis Amaral) (chair) 2021 -

Idalis Ramirez (advisor, Rick Morimoto) 2021

Taojunfeng Su (advisor, Neil Kelleher) (chair) 2021 -

Emily Czajkowski (advisor, Sadie Wignall) 2020 -

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

Departmental Service:

Faculty search committee
Faculty search committee
Faculty search committee
Strategic Planning committee
Faculty search committee
Strategic Planning committee
Faculty search committee
Program Review committee

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

University-level Service:

0000	
2022	Undergraduate Research Grant review committee
2022	Undergraduate riesearch 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
	Ad hoc reviewer for Chemistry of Life Processes undergraduate grants and fellowships
	Ad hoc 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
	Ad hoc reviewer for Chemistry of Life Processes undergraduate grants and fellowships
	Ad hoc 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
2014	IBiS Graduate Admissions committee
2013	Poster judge, Northwestern Undergraduate Research Symposium

COMMUNITY WORK

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
	Recipient of Regeneron Top 300 Science Talent Search
2020	STEM presenter at ConnectCon presented by Wizards.exe
2020 -	Assistant Scoutmaster, Troop 2
2020 -	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
	Recipient of 3rd place All-Illinois Science Research Competition
2016 - 2019	Assistant Den Leader, Cub Scout Pack 922
2016 - 2017	American Youth Soccer Organization (AYSO) U8 Head Coach, The Storm
2015 - 2016	American Youth Soccer Organization (AYSO) U8 Head Coach, Golden Ninjas
2015 - 2016	Mentored Matteo di Bernardo from Evanston Township High School on anthelmintic sensitivity,
	Recipient Columbia University Scientific Scholars Fellowship, Recipient Fulbright Fellowship
2014 - 2018	Lecturer on C. elegans 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