Erik C. Andersen

Assistant Professor
Northwestern University
Department of Molecular Biosciences

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www.elegansvariation.org

Major Professional Interests:

Understanding the genetic basis of complex traits and genome evolution using high-throughput phenotyping, molecular genetics, and computational tools

Education:

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

Pre-doctoral Awards, Honors, and Fellowships:

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

Post-doctoral Recognitions:

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

Faculty Recognitions:

2017 - Associate Editor for *BMC Genomics*
2015 - Editorial Board Member of *Trends in Genetics*
2015 - 2019 American Cancer Society Research Scholar
2015 - 2017 March of Dimes Basil O'Connor Research Scholar
2014 - 2018 Pew Scholar in the Biomedical Sciences

Employment:

2014 - Member of Northwestern Institute on Complex Systems (NICO)
2013 - Assistant Professor of Molecular Biosciences, Northwestern University
Full Member of the Robert H. Lurie Comprehensive Cancer Center
Member of the Chemistry of Life Processes Institute (CLP)
Preceptor for the Interdisciplinary Biological Sciences Graduate Program (IBiS)
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:

Ongoing:

2017 - 2021 National Institutes of Health (R01 DK115690) - NIDDK
Large scale nutrigenetics and genomics in a tractable metazoan model
Multi-investigator Grant with AJ Marian Walhout (UMass Medical School) and Frank Schroeder (Cornell)
Total direct costs $2,000,000, Andersen direct costs $800,000

2017 - 2019 National Institutes of Heath (R21 AG053638) - NIA
High-throughput multi-modal analysis of natural variation in C. elegans healthspan
Multi-investigator Grant with Chris Fang-Yen (Univ. of Pennsylvania)
Total direct costs $275,000, Andersen direct costs $137,500

2016 - 2018 National Institutes of Heath (R21 AI121836) - NIAID
Discovery and validation of avermectin resistance loci in free-living and parasitic nematodes
PI - Andersen with subcontract to Dr. Michael Kimber (Iowa State University)
Total direct costs $275,000, Andersen direct costs $200,000

2015 - 2019 American Cancer Society Research Scholar Grant
Elucidating the genetic causes of variation in chemotherapy-based toxicity
Total direct costs $787,658 (Andersen)

2014 - 2018 Pew Charitable Trusts, Scholars Program in the Biomedical Sciences
Elucidating the genetics of anthelmintic resistance in nematode-borne neglected tropical diseases
Total direct costs $255,000 (Andersen)

2014 - 2018 National Institutes of Health (R01 GM107227) - NIGMS
Direct determination of the distribution of fitness effects of spontaneous mutations
PI Dr. Charlie Baer (University of Florida) with subcontract to Andersen
Total direct costs $800,000, Andersen direct costs $360,000

Completed:

2016 - 2017 Amazon Web Services
Optimization of computational pipelines to support the C. elegans *Natural Diversity Resource*
Total direct costs $3,000 (Andersen)

2016-2017 IDP/Sherman Fairchild Research Innovation Challenge Award, Robert H. Lurie Comprehensive Cancer Center
Validating individual differences in cytotoxicity to improve personalized chemotherapy treatment regimens
Multi-investigator Grant with Dr. Paul Burridge (Northwestern University)
Total direct costs $75,000, Andersen direct costs $37,500

2015 - 2017 March of Dimes Basil O'Connor Starter Research Grant
Identification of hookworm anthelmintic resistance genes to ameliorate maternal and infant anemia
Total direct costs $150,000 (Andersen)

2016 Weinberg College Research Innovation Grant, Northwestern University
The Caenorhabditis elegans *Natural Diversity Resource - a powerful tool to facilitate biomedical discovery*
Total direct costs $40,000 (Andersen)

2014 - 2016 Chicago Biomedical Consortium, Catalyst Grant
Uncovering "missing heritability" in an experimentally tractable model organism
Multi-investigator Grant with Ilya Ruvinsky (University of Chicago)
Total direct costs $240,000, Andersen direct costs $120,000

2016 Data Scientist Initiative, Northwestern University
A novel statistical model to predict the removal of mobile genetic elements
Multi-investigator Grant with Jiping Wang (Northwestern University)
Total direct costs $20,000 (Andersen)

2013 - 2014 American Cancer Society, Institutional Research Grant [93-037-18]
Elucidating the genetic causes of variation in chemotherapy-based toxicity
Total direct costs $30,000 (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 with Thomas O'Halloran (Northwestern University)
Total direct costs $28,000 (Andersen)

Publications from Northwestern University:

undergraduate co-authors in italics, corresponding authors underlined

h-index=16, i10-index=21, link to Google Scholar page (here)

Zdraljevic S and **Andersen EC** (2017)
Natural diversity facilitates the discovery of conserved chemotherapeutic response mechanisms.
Current Opinions in Genetics and Development Accepted August 11
Citations: NA, Journal Impact Factor (2016): 5.825

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 Jul 12; 13(7):e1006891
Citations: 0, Journal Impact Factor (2016): 6.100

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 Aug 17; 8(1):273
Citations: 0, Journal Impact Factor (2016): 12.124

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 May 9 (accepted)
Citations: 0, Journal Impact Factor (2016): 13.649

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 Apr 20; 169(3)431-441
Citations: 4, Journal Impact Factor (2016): 28.710

Cook DE and **Andersen EC** (2017)
VCF-kit: Assorted utilities for the variant call format.
Bioinformatics May 15; 33(10):1581-1582
Citations: 0, Journal Impact Factor (2016): 7.307

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 Dec 2; 11(12):e0167613
Citations: 1, Journal Impact Factor (2016): 2.806

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 Nov 18; [10.1534/g3.116.035162]
Citations: 2, Journal Impact Factor (2016): 3.198

Cook DE, Zdraljevic S, *Roberts JP*, **Andersen EC** (2016)
CeNDR, the *Caenorhabditis elegans* Natural Diversity Resource.
Nucleic Acids Research Oct 3; [10.1093/nar/gkw893]
Citations: 13, Journal Impact Factor (2016): 10.162

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 *C. elegans* telomere length.
Genetics Sept; 204(1):371-83
Citations: 16, Journal Impact Factor (2016): 5.963

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 July 28; 12(7):e1006219
Citations: 6, Journal Impact Factor (2016): 6.100

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 Sep; 283(17):3204-21 **Commissioned review**
Citations: 6, Journal Impact Factor (2016): 4.237

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 Aug; 203(4):1859-1870
Citations: 4, Journal Impact Factor (2016): 5.963

Sterken MG, Snoek LB, Kammenga JE, **Andersen EC**. (2015)
The laboratory domestication of *C. elegans.*
Trends in Genetics Mar; 31(5) 224-231
Citations: 35, Journal Impact Factor (2016): 11.45

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 May 19; 200(3) 975-989
Citations: 33, Journal Impact Factor (2016): 5.963

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 Mar 13; 5(5) 911-920
Citations: 23, Journal Impact Factor (2016): 3.198

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 Mar 16; 25(6) 732-740
Citations: 23, Journal Impact Factor (2016): 8.851

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 Feb 13; 11(2)e1004583
Citations: 14, Journal Impact Factor (2016): 7.000

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 Feb; 69(2) 508-519 *equal contribution
Citations: 4, Journal Impact Factor (2016): 4.612

Shimko TC, **Andersen EC**. (2014)
COPASutils: an R package for reading, processing, and visualizing data from COPAS large-particle flow cytometers.
PLoS One Oct 20; 9(10):e111090
Citations: 10, Journal Impact Factor (2016): 2.806

Andersen EC, Bloom JS, Gerke JP, Kruglyak L. (2014)
The neuropeptide receptor *npr-1* is a major determinant of *Caenorhabditis elegans* growth and physiology.
PLoS Genetics Feb; 10(2):e1004156
Citations: 48, Journal Impact Factor (2016): 6.100

Publications from before Northwestern University:
undergraduate co-authors in italics, corresponding authors underlined

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 13(1), 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 talks:

Departmental seminars and invited conference presentations:

2018 New York Univ. Center for Genomics and Sys. Bio. Parasite Workshop in Abu Dhabi, UAE (scheduled)
2017 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
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
2015 Program in Systems Biology, University of Massachusetts Medical School, Worcester, MA
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
2013 Quantitative genetics workshop, 19th International *C. elegans* meeting, UCLA, Los Angeles, CA
2012 Molecular Bioscience Department, Northwestern University, Evanston, IL
Program in Systems Biology, University of Massachusetts Medical School, Worcester, MA
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

Contributed presentations: (*selected for oral presentation)
2017 *Molecular Helminthology: An Integrated Approach, Cape Cod, MA
2015 *Midwest Neglected Infectious Disease meeting, U. of Notre Dame, Notre Dame, IN
*Bridging the divide, 20th International *C. elegans* meeting, UCLA, Los Angeles, CA
2013 *19th International *C. elegans* meeting, UCLA, Los Angeles, CA
Society for Molecular Biology of Evolution, Chicago, IL
2012 *Evolutionary biology of *Caenorhabditis* and other nematodes meeting, CSHL, NY
2011 *18th International *C. elegans* meeting, UCLA, Los Angeles, CA
18th International *C. elegans* meeting (poster), UCLA, Los Angeles, CA
2010 *Evolutionary biology of *Caenorhabditis* and other nematodes meeting, Hinxton, UK
Evolutionary biology of *Caenorhabditis* and other nematodes meeting (poster), Hinxton, UK
Cold Spring Harbor Labs Automated Imaging and High-throughput Phenotyping, CSHL, NY
2009 *17th International *C. elegans* meeting, UCLA, Los Angeles, CA
2009 Gordon Research Conference on Quantitative Genetics and Genomics, Galveston, TX
2007 Department of Biology Annual Retreat, MIT, ** poster prize winner
2006 *C. elegans* Evolution and Development meeting, Univ. of Wisconsin, Madison, WI
2005 *15th International *C. elegans* meeting, UCLA, Los Angeles, CA
Chromatin Structure and Function meeting, Nassau, Bahamas
2004 East Coast *C. elegans* meeting, Yale, New Haven, CT
2003 *14th International *C. elegans* meeting, UCLA, Los Angeles, CA
2002 East Coast *C. elegans* meeting, University of New Hampshire, Durham, NH

Peer review and related activities:

Editorial board:
Trends in Genetics

Associate editor:
BMC Genomics (Multicellular invertebrate genomics)

Guest editor:
PLoS Genetics

Reviewing activity: Academic Journals
American Naturalist, *Biological Journal of the Linnean Society*, *BMC Evolutionary Biology*, *BMC Genetics*, *BMC Genomics*, *Cell*, *Development*, *EMBO*, *Environmental Microbiology*, *Genes and Development*, *G3*, *Genetics*, *Genome Research*, *Journal of Visualized Experiments*, *Heredity*, *Nature*, *Nature Scientific Reports*, *Nature Genetics*, *PLoS Genetics*, *PLoS ONE*, *PNAS*, *Science*, *Scientific Reports*, *Trends in Genetics*, *Trends in Molecular Medicine*

Reviewing activity: Grants and fellowships
2014 *Ad hoc* reviewer for Human Frontiers Science Program
2014 *Ad hoc* reviewer for National Science Foundation
2017 *Ad hoc* reviewer for Bill and Melinda Gates Foundation

Professional affiliations and service:

Membership in Professional Societies:
Genetics Society of America, member
Society of Molecular Biology and Evolution, member

Professional service:

2018 Organizing committee for Parasitic Nematodes meeting, NYU Abu Dhabi
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:**

2016 - Creator and director 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. Since 2016, over 900 strains have been distributed to the community and over 1500 mappings have been facilitated.

Teaching and advising:

Undergraduate teaching:

2018 Biological Sciences 393: *Genetic Analysis* (winter, 40 students, expected)
2017 Biological Sciences 398: *Tutorial in Biology* (fall, Kimberly Collins)
Biological Sciences 399: *Tutorial in Biology* (fall, Grace Park)
Biological Sciences 399: *Tutorial in Biology* (fall, Selina Deiparine)
Biological Sciences 393: *Genetic Analysis* (spring, 27 students)
Biological Sciences 399: *Tutorial in Biology* (spring, Grace Park)
Biological Sciences 399: *Tutorial in Biology* (spring, Selina Deiparine)
Biological Sciences 399: *Tutorial in Biology* (spring, Samuel Hamilton)
Biological Sciences 399: *Tutorial in Biology* (winter, Grace Park)
Biological Sciences 399: *Tutorial in Biology* (winter, Selina Deiparine)
Biological Sciences 399: *Tutorial in Biology* (winter, Samuel Hamilton)
2016 Biological Sciences 393: *Genetic Analysis* (spring, 17 students)
Biological Sciences 398: *Tutorial in Biology* (fall, Sarah Bier)
Biological Sciences 398: *Tutorial in Biology* (fall, Mattlyn Cordova)
2016 Biological Sciences 398: *Tutorial in Biology* (fall, Selina Deiparine)
Biological Sciences 398: *Tutorial in Biology* (fall, Samuel Hamilton)
Biological Sciences 398: *Tutorial in Biology* (fall, Grace Park)
2015 *Guest Lecture:* University of Wisconsin-Madison Biology 675 - *Evolution seminar* (fall, 8 students)
Biological Sciences 393: *Genetic Analysis* (spring, 12 students) - **new course**
Biological Sciences 398: *Tutorial in Biology* (spring, Lautaro Cilenti)

2015 Biological Sciences 399: *Independent Research* (spring, Kreena Patel)
Biological Sciences 399: *Independent Research* (spring, Hillary Tsang)
Biological Sciences 399: *Independent Research* (winter, Kreena Patel)
Biological Sciences 399: *Independent Research* (winter, Hillary Tsang)
2014 Biological Sciences 398: *Tutorial in Biology* (fall, Mazeed Aro-Lambo)
Biological Sciences 398: *Tutorial in Biology* (fall, Kreena Patel)
Biological Sciences 398: *Tutorial in Biology* (fall, Hillary Tsang)

Graduate teaching:

2018 Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*
(summer, guest lecture, 25 students, expected)
Interdisciplinary Biological Sciences/Chemistry 416: *Practical Training in Chemical Biology Methods and Experimental Design*
(spring, 20 students, expected)
2017 Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*
(summer, guest lecture, 15 students)
Interdisciplinary Biological Sciences/Chemistry 416: *Practical Training in Chemical Biology Methods and Experimental Design*
(spring, 19 students)
Interdisciplinary Biological Sciences 421: *Rigor and Reproducibility*
(spring, guest lecture, 5 students)
2016 Interdisciplinary Biological Sciences: *Graduate Computational Biology Bootcamp*
(fall, 19 students) - www.GitHub.com/AndersenLab/IBiS-Bootcamp
2015 Interdisciplinary Biological Sciences 402: *Eukaryotic Molecular Biology*
(fall, guest lecture, 22 students)
Interdisciplinary Biological Sciences: *Graduate Computational Biology Bootcamp*
(fall, 22 students) - www.GitHub.com/AndersenLab/IBiS-Bootcamp
2014 Interdisciplinary Biological Sciences 423: *Ethics of peer review*
(spring, guest lecture, 41 students)
Interdisciplinary Biological Sciences 402: *Eukaryotic Molecular Biology*
(fall, guest lecture, 16 students)
Interdisciplinary Biological Sciences: *Graduate Computational Biology Bootcamp*
(fall, 16 students) - www.GitHub.com/AndersenLab/IBiS-Bootcamp - **new course**
Interdisciplinary Biological Sciences 423: *Ethics of peer review*
(spring, guest lecture, 42 students)
2013 Interdisciplinary Biological Sciences 402: *Eukaryotic Molecular Biology*
(fall, guest lecture, 24 students)

K-12 advising:

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:

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

Karol Bisaga (2017 - , Class of 2020), Biological Sciences Major
2017 NU Bioscientist Summer Grant recipient
Kimberly Collins (2016 - , Class of 2020), Biological Sciences Major
2017 NU Bioscientist Summer Grant recipient
Rohit Rastogi (2016 - , Class of 2019), Computer Science and Statistics Majors
Grace Park (2016 - , Class of 2019), Biological Sciences Major
2016 Posner Fellowship recipient
2017 Program in Biological Sciences Summer Grant recipient
Selina Deiparine (2016 - , Class of 2018), Biological Sciences Major
2016 Summer URG recipient, 2016 Academic URG recipient
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), Biological Sciences 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

Masters student advising:
Suma Aldakeel (advisor, Cindy Voisine - Northeastern Illinois Univ.) 2016 - 2017
Nick Timkovich (advisor, Luis Amaral) 2015
Kristen Larrichia (advisor, Nyree Zerega – Program in Plant Biology and Conservation), 2014 - 2015
Lucie Bastin-Heline (2014), Master's exchange student, Ecole Normale Superior, Paris, France

Graduate student and post-doctoral advising:

Graduate PhD candidates:
Kathryn Evans (2016 -), Ph.D. student, Interdisciplinary Biological Sciences Program
Funded by the Cell and Molecular Basis of Disease NIH Training grant (2017-2019)
Recipient of travel award from IBiS and the Northwestern Graduate School (2017)
Recipient of Biotechnology NIH Training grant cluster member, declined (2017)
Shannon Brady (2015 -), Ph.D. student, Interdisciplinary Biological Sciences Program
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 award from IBiS and the Northwestern Graduate School (2017)
Poster prize winner Northwestern Computational Research Day (2017)
Poster prize winner 21st International C. elegans meeting
Best TA award IBiS Graduate Program (2017)
Daniel Cook (2014 -), Ph.D. student, Driskill Graduate Program
Funded by a National Science Foundation Pre-doctoral Fellowship (2015-2018)
Recipient of travel award from IBiS and the Northwestern Graduate School (2016)
Northwestern Presidential Fellowship Finalist (2017)
Stefan Zdraljevic (2014 -), Ph.D. student, Interdisciplinary Biological Sciences Program
Funded by the Cell and Molecular Basis of Disease NIH Training grant (2015-2017)
Recipient of travel award from Northwestern Center for Genetic Medicine (2016, 2017)
Recipient of travel award from IBiS and the Northwestern Graduate School (2015, 2017)
Chemistry of Life Processes Drug Discovery Scholar (2017)

Post-doctoral researchers:
Timothy Crombie (2017 -), Ph.D. from University of Florida, advisor Dr. David Julian
Steffen Hahnel (2017 -), Ph.D. from Justus-Liebig University, advisor Dr. Christoph Grevelding
Recipient of DFG German Science Fellowship (2018-2020)
Daehan Lee (2017 -), Ph.D. from Seoul National University, advisor Dr. Junho Lee
Mostafa Zamanian (2014 - 2016), Ph.D. from Iowa State University, advisor Dr. Timothy Day
Current position: Assistant Professor of Pathobiological Sciences, University of Wisconsin - Madison
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)
Bryn Gaertner (2014), Ph.D. from University of Oregon, advisor Dr. Patrick Phillips

Additional rotation graduate students:
Nicholas Sepulveda (Spring, 2017), Michael Schamber (Winter, 2017), Evan Buechel (Spring, 2016), Nic Daffern (Spring, 2016), Bryan Eder (Winter, 2016), Kathryn Evans (Fall, 2015), Ryan Abdella (Winter, 2015), Erin Baker (Fall, 2014), Alex Karge (Spring, 2014), Saiorse McSharry (Winter, 2014), Amy Nilles (Fall, 2013), Ian Wolff (Summer, 2013)

Graduate thesis committee memberships:
Sumach Aldakeel (advisor, Cindy Voisine - Northeastern Illinois Univ.), 2016 - 2017
Adam Hockenberry (advisors, Luis Amaral and Michael Jewitt) 2015 - 2017
Rachel Bakker (advisor, Rich Carthew) 2015 -
Joseph Muldoon (advisors, Neda Bagheri and Josh Leonard) 2015 -
Sarah Stainbrook (advisor, Keith Tyo) 2015 -
Timothy Toby (advisor, Neil Kelleher) 2015 -
Rose Njoroge (advisor, Sarki Abdulkadir – DGP, Feinberg School of Medicine), 2014 -
Keila Torre-Santiago (advisor, Sadie Wignall) 2014 - 2017
Aaron Sue (advisor, Thomas O'Halloran), 2014 -
Arianne Rodriguez (advisor, Yun Wang), 2014 (Transferred to DGP)
Ritika Giri (advisor, Richard Carthew), 2013 -
Lilien Voong (advisor, Alec Wang), 2013 - 2017

Northwestern University service:

Departmental Service:

2017	Departmental Strategic Planning committee
2016	Faculty search committee for quantitative biology
	Departmental Strategic Planning committee
2015	Faculty search committee
2014	Departmental Program Review committee

Weinberg College of Arts and Sciences Service:

2016	Faculty search committee for the Neurobiology Department
2014	NUIN Post-doc Association, *Interviews and Start-up packages*

University-level Service:

2018	IBiS Graduate Admissions committee
	Masters Program in Quantitative and Systems Biology, Curriculum committee
2017	Discussion organizer, Northwestern Computational Research Day
	Steering committee for Genomics Facility in Northwestern Medicine
	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 Genomics Facility in Northwestern Medicine
	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
	Qualifying examination committee (Rachel Bakker, Carthew lab)
	Qualifying examination committee, Chair (Joseph Muldoon, Bagheri and Leonard labs)
	Qualifying examination committee (Sarah Stainbrook, Tyo lab)
	Qualifying examination committee (Timothy Toby, Kelleher lab)
2014	Creation of IBiS Computational Bootcamp for incoming graduate students
	IBiS Retreat committee, Co-chair
	Qualifying examination committee (Aaron Sue, Morimoto lab)
	Qualifying examination committee (Arianne Rodriguez, Wang lab)
	Qualifying examination committee (Rose Njoroge, Abdulkadir lab)
	Masters thesis examination committee (Kristen Larrichia, Zerega lab)
	Poster judge, Northwestern Undergraduate Research Symposium

2013	IBiS Graduate Admissions committee
	Qualifying examination committee (Lilien Voong, Wang lab)
	Qualifying examination committee (Ritika Giri, Carthew lab)
	Poster judge, Northwestern Undergraduate Research Symposium

Community work:

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 - 2017	Mentored Lillian Kameny from Alameda Community Learning Center on etoposide variation
2016 -	Assistant Den Leader, Pack 922
2016 - 2017	American Youth Soccer Organization (AYSO) U8 Head Coach, *The Storm*
2015 -	Hosted 80 5th grade students from Lincolnwood Elementary School for a day of science
2015 - 2016	Mentored Caitlin Westerfield from Evanston Township High School on pathway evolution
2015 - 2016	Mentored Ainsley Tran from Oak Park and River Forest High School on iron sensitivity
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 of Columbia University Scientific Scholars Fellowship
2014 -	Lecturer on *C. elegans* genetics to the Latin School of Chicago advanced biology class
2014	Mentored Lauren Mann from Oak Park and River Forest High School on iodine sensitivity
2014	Co-organized with Jacob Cruger nematode collections with the Punahou School, Hawaii
2013, 2014	Mentored Jacob Cruger from Latin School of Chicago
2009	Organized nematode collections with Vassalboro Community School, Maine