Amy K Webster, PhD
awebst10@uoregon.edu
amykwebster.github.io

PROFESSIONAL APPOINTMENTS

University of Oregon — June 2021 – present
Postdoctoral Scholar — Eugene, OR
Research Advisor: Patrick Phillips

EDUCATION

Duke University — August 2015 – May 2021
PhD, Genetics and Genomics — Durham, NC
Research Advisor: Ryan Baugh
NSF Graduate Research Fellow

University of Georgia — August 2011 – May 2015
BS, Genetics — Athens, GA
BS, Mathematics
Research Advisors: Kelly Dawe, Daniel Promislow
Cumulative GPA: 3.97/4.00, *summa cum laude* with highest honors
Goldwater Scholar

PUBLICATIONS (*equal contribution)

1. (*Preprint)* **Webster AK**, Chitrakar R, Powell M, Chen J, Fisher K, Tanny R, Stevens L, Evans K, Antoshechkin I, Andersen EC, Baugh LR. 2021. Natural variation in the *irld* gene family affects insulin/IGF signaling and starvation resistance. *bioRxiv.* DOI: https://doi.org/10.1101/2021.06.07.447366.
2. (*Preprint*) **Webster AK**, Chitrakar R, Baugh LR. 2021. Alternative somatic and germline gene-regulatory strategies during starvation-induced developmental arrest. *bioRxiv.* DOI: https://doi.org/10.1101/2021.04.30.441514
3. Fry AL, **Webster AK**, Julia Burnett, Chitrakar R, Baugh LR, Hubbard EJA. 2021. DAF-18/PTEN inhibits germline zygotic gene activation during primordial germ cell quiescence. *PLoS Genetics*. 17(7): e1009650.
4. Lee D, Zdraljevic S, Stevens L, Wang Y, Tanny RE, Crombie TA, Cook DE, **Webster AK**, Chitrakar R, Baugh LR, Sterken M, Braendle C, Félix MA, Rockman M, Andersen EC. 2021. Balancing selection maintains hyper-divergent haplotypes in *Caenorhabditis elegans*. *Nature Ecology & Evolution*. 1-14.
5. Hibshman JD*, **Webster AK***, Baugh LR. 2021. Liquid-culture protocols for synchronous starvation, growth, dauer formation, and dietary restriction of *Caenorhabditis elegans. STAR Protocols.* 2(1).
6. **Webster AK**, Hung A, Moore BT, Guzman R, Jordan JM, Kaplan REW, Hibshman JD, Tanny RE, Cook DE, Andersen EC, Baugh LR. 2019. Population selection and sequencing of *C. elegans* wild isolates identifies a region on chromosome III affecting starvation resistance. *G3: Genes | Genomes | Genetics*. 9(10). 3477-3488.
7. Jordan JM, Hibshman JD, **Webster AK**, Kaplan REW, Leinroth A, Guzman R, Maxwell CS, Chitrakar R, Bowman EA, Fry AL, Hubbard EJA, Baugh LR. 2019. Insulin/IGF Signaling and Vitellogenin Provisioning Mediate Intergenerational Adaptation to Nutrient Stress. *Current Biology*. 29. 2380-2388.
8. Kaplan REW, **Webster AK**, Chitrakar R, Dent JA, Baugh LR. 2018. Food perception without ingestion leads to metabolic changes and irreversible developmental arrest in *C. elegans*. *BMC Biology*. 16(112).
9. **Webster AK**, Jordan JM, Hibshman JD, Chitrakar R, Baugh LR. 2018. Transgenerational Effects of Extended Dauer Diapause on Starvation Survival and Gene Expression Plasticity in *Caenorhabditis elegans*. *Genetics*. 210(1), 263-274.

- Chosen as a September 2018 Highlight in *Genetics*
- Selected for the Marcy Speer Best Scientific Paper Award

10. Hibshman JD, Doan AE, Moore BT, Kaplan REW, Hung A, **Webster AK**, Bhatt DP, Chitrakar R, Hirschey MD, Baugh LR. 2017. *daf-16*/FoxO promotes gluconeogenesis and trehalose synthesis during starvation to support survival. *eLife*. 6.
11. Burton NO, Furuta T, **Webster AK**, Kaplan RE, Baugh LR, Arur S, Horvitz HR. 2017. Insulin-like signaling to the maternal germline controls progeny response to osmotic stress. *Nature Cell Biology*. 19(3), 252-257.
12. **Webster AK**, Cieszewski R, Promislow DEL. 2014. The Role of Age-Structure in the Optimal Germination Fraction of Seeds. *Mathematical And Computational Forestry & Natural-Resource Sciences (MCFNS)*, 6(1), 26-35 (10).

SELECTED AWARDS, FELLOWSHIPS, AND GRANTS

2021	Jo Rae Wright Fellowship for Outstanding Women in Science
2020	Duke Chancellor's Award for Research Excellence (CARE)
2020	Duke Biology Department, Grant-In-Aid
2015 – 2020	NSF Graduate Research Fellowship Program
2019	Genetics Society of America DeLill Nasser Award for Professional Development in Genetics
2019	Summer Institute in Statistical Genetics Scholarship
2018	Marcy Speer Best Scientific Paper Award
2017, 2019	Duke Graduate School Conference Travel Award
2015	Outstanding Undergraduate Thesis Award – One genetics major chosen
2015	Cynthia Kenyon Outstanding Undergraduate Award – One genetics major chosen
2015	Joy P. Williams Science Award – One of two honors students
2014	DAAD RISE Program, Max Planck Institute for Molecular Cell Biology and Genetics
2014	Goldwater Scholarship
2013	Hollingsworth Award, University of Georgia Math Department
2012	SURE Program, Emory University
2011 – 2015	Zell Miller Scholarship
2011 – 2015	Charter Scholarship, University of Georgia

PROFESSIONAL DEVELOPMENT AND ADDITIONAL TRAINING

2019 Summer Institute in Statistical Genetics, University of Washington
- Completed modules: 1) Statistical Genetics and 2) Association Mapping: GWAS and Sequencing Data
- Awarded competitive DeLill Nasser Award to attend

2018 – 2019 *GENETICS* Peer Review Training Program
- Selective program for early career scientists
- Completed formal peer review training curriculum and review manuscripts submitted to *GENETICS*

2018 – 2019 Preparing Future Faculty Program
- Selective program for graduate students pursuing academic positions
- Guest lecturer for GN703: Quantitative and Population Genetics, NC State University

PRESENTATIONS

Talks

2021	23rd International *C. elegans* Conference: “Natural genetic variation in *irld* genes modifies insulin signaling to influence starvation resistance”
2021	Duke Genetics Recruitment: “Uncovering natural genetic variation in starvation resistance using population sequencing in *C. elegans*”
2020	Duke Genetics Student Seminar: “Uncovering natural genetic variation affecting starvation resistance using locus-specific population sequencing in *C. elegans”*
2020	Ecology, Evolution and Genomics of *C. elegans* and Other Nematodes Conference: “Uncovering natural genetic variation affecting starvation resistance using locus-specific population sequencing in *C. elegans”*
2020	Duke Genetics Recruitment: “Uncovering natural genetic variation in starvation resistance using population sequencing in *C. elegans”*
2019	Duke Genetics Student Retreat: “Population selection and sequencing of *C. elegans* wild isolates identifies genomic regions affecting starvation resistance”
2019	Mechanisms and Evolution of Intergenerational Change Conference, Wellcome Genome Campus, Hinxton, UK: “Transgenerational effects of extended dauer diapause on starvation survival and gene expression plasticity in *C. elegans”*
2019	22nd International *C. elegans* Conference, University of California, Los Angeles: “Population selection and sequencing of *C. elegans* wild isolates identifies a region on chromosome III affecting starvation resistance”
2019	Duke Genetics Recruitment: “Transgenerational effects of early-life starvation on fitness and gene expression in *C. elegans”*
2018	Duke Population Biology Seminar: “Uncovering natural genetic variation in starvation resistance using population sequencing in *C. elegans*”
2018	Duke Development, Cell, and Molecular Biology Seminar: “Uncovering natural genetic variation in starvation resistance using population sequencing in *C. elegans*”
2018	Duke Genetics Student Retreat: “Transgenerational effects of extended dauer diapause on starvation survival and gene expression plasticity in *C. elegans*”
2018	Duke Genetics Recruitment: “Extended dauer diapause in *C. elegans* confers transgenerational starvation resistance”
2017	Duke Epigenetics and Epigenomics Program Seminar: “Proximal and transgenerational effects of long-term dauer diapause in *C. elegans*”
2017	Duke Development, Cell and Molecular Biology Department Seminar: “Transgenerational effects of long-term dauer arrest in *C. elegans*”
2017	Duke Genetics Student Retreat: “Regulation of gene expression during starvation in *C. elegans*”
2017	Duke Genetics Student Seminar: “Transgenerational effects of dauer arrest in *C. elegans*”
2015	CURO Symposium, University of Georgia: “Molecular and Genetic Analysis of the Ab10 Meiotic Drive Haplotype in Maize and Teosinte”
2014	CURO Symposium, University of Georgia: "Breaking Mendel's Laws: The Role of Abnormal Chromosome 10 in Meiotic Drive”

Posters

2020	The Allied Genetics Conference (TAGC): “Gene expression analysis and temporal ablation of AMA-1/PolII show that transcriptional regulation supports survival deep into starvation”
2019	Mechanisms and Evolution of Intergenerational Change Conference, Wellcome Genome Campus, Hinxton, UK : “Transgenerational effects of extended dauer diapause on starvation survival and gene expression plasticity in *C. elegans”*
2019	22nd International *C. elegans* Conference, University of California, Los Angeles: “Transgenerational effects of extended dauer diapause on starvation survival and gene expression plasticity in *C. elegans*”
2018	Population, Evolutionary, and Quantitative Genetics Conference, University of Wisconsin-Madison: “Ancestral life history and natural genetic variation shape starvation survival in *C. elegans*”
2017	21st International *C. elegans* Conference, University of California, Los Angeles: “Transgenerational effects of long-term dauer arrest”
2016	Aging, Metabolism, Stress, Pathogenesis, and Small RNAs in *C. elegans* Conference, University of Wisconsin-Madison: “Understanding persistent effects of L1 arrest, dauer arrest, and dietary restriction in the context of a fluctuating environment”
2014	Plant Center Retreat, University of Georgia: "Abnormal Chromosome 10 Exhibits Meiotic Drive in *Zea mays parviglumis*”
2014	CURO Symposium, University of Georgia: "Breaking Mendel's Laws: The Role of Abnormal Chromosome 10 in Meiotic Drive"
2012	Summer Undergraduate Research Experience Symposium, Emory University: "Characterization of *sig-1*-mediated Transgene Desilencing in *C. elegans*"

ACADEMIC SERVICE, OUTREACH, AND MENTORING

2019 – present	*Ad hoc* reviewer for *Genetics* and *STAR Protocols*
2017, 2019 – 2020	Mentor four undergraduates in lab
2015 – 2019	Volunteer with Duke Outreach in Genetics and Genomics • SciTech Expo NC Museum of Natural Science (2018) • Duke Alumni Weekend (2016, 2018) • Creekside Elementary Science Night (2018) • NC Elementary Science Olympiad (2017) • “Lean In” Women in Science NC School of Science and Math (2017) • DNA Day 5K (2016, 2017) • Little River Elementary Science Night (2016) • Campout Carnival at Duke (2015, 2016) • Museum of Life and Science (2016)
2018 – 2020	Duke Genetics Distinguished Lecture Series Committee Member
2017, 2019	Duke Genetics Retreat Committee Member
2015 – 2016	Duke Genetics Recruitment Committee Member
2011 – 2015	MathCOUNTS Outreach, Member (2011-2012), Head Coach (2012-2014), Executive Board (2014-2015)
2012 – 2015	Journal of Young Investigators, Associate Editor (2012-2013), Biology Research Editor (2013-2015)