Amy K. Webster, Ph.D.

PROFESSIONAL APPOINTMENTS

Florida State University — August 2024 – present
Assistant Professor (tenure-track) — Tallahassee, FL
Department of Biological Science

University of Oregon — June 2021 – August 2024
NIH F32 Kirschstein NRSA Postdoctoral Fellow (2023 – 2024) — Eugene, OR
Postdoctoral Scholar (2021 – 2023)
Institute of Ecology and Evolution

EDUCATION

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

University of Georgia — August 2011 – May 2015
BS, Genetics and Mathematics — Athens, GA
Summa cum laude with highest honors
Goldwater Scholar

PUBLICATIONS (*equal contribution)

1. **Webster AK,** Willis JH, Johnson E, Sarkies P, Phillips PC. 2025. Gene expression variation across genetically identical individuals predicts reproductive traits. *eLife.*
2. **Webster AK** and Phillips PC. 2025. Epigenetics and individuality: from concepts to causality across timescales. *Nature Reviews Genetics.*
3. **Webster AK** and Phillips PC. 2024. Heritable epigenetic variation facilitates long-term maintenance of epigenetic and genetic variation. *G3: Genes | Genomes | Genetics*. 14(2). jkad287.
4. Jordan JM, **Webster AK**, Chen J, Chitrakar R, Baugh LR. 2023. Early-life starvation alters lipid metabolism in adults to cause developmental pathology in *Caenorhabditis elegans. Genetics.* iyac172.
5. **Webster AK**, Chitrakar R, Taylor SM, Baugh LR. 2022. Alternative somatic and germline gene-regulatory strategies during starvation-induced developmental arrest. *Cell Reports.* 41: 111473.
6. **Webster AK**, Chitrakar R, Powell M, Chen J, Fisher K, Tanny R, Stevens L, Evans K, Wei A, Antoshechkin I, Andersen EC, Baugh LR. 2022. Using population selection and sequencing to characterize natural variation of starvation resistance in *C. elegans*. *eLife.* 11:e80204.
7. Fry AL, **Webster AK**, Burnett J, 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.
8. 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.
9. 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).
10. **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.
11. 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.

12. 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).
13. **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.
14. 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.
15. 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.
16. **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

2025	First-Year Assistant Professor Award, Florida State University
2023 – 2024	National Institutes of Health Ruth L. Kirschstein NRSA F32 Fellowship
2020	Chancellor's Award for Research Excellence (CARE), Duke University
2015 – 2020	National Science Foundation Graduate Research Fellowship Program
2019	DeLill Nasser Award for Professional Development in Genetics, Genetics Society of America
2018	Marcy Speer Best Scientific Paper Award, Duke University
2015 – 2017	National Institutes of Health T32 Fellowship, Duke Program in Genetics and Genomics
2015	Outstanding Undergraduate Thesis Award, University of Georgia Genetics Department
2015	Cynthia Kenyon Outstanding Undergraduate Award, University of Georgia Genetics Department
2014	Goldwater Scholarship

SELECTED PRESENTATIONS

Invited External Seminars: 2025 (1), 2024 (5), 2023 (4), 2022 (1)
Selected Talks at International Conferences:

The Allied Genetics Conference (2024)
The International *C. elegans* Meeting (2023, 2021, 2019)
Population, Evolutionary, and Quantitative Genetics Meeting (2022)
Ecology, Evolution and Genomics of *C. elegans* and Other Nematodes Conference (2020)
Mechanisms and Evolution of Intergenerational Change Conference (2019)

RESEARCH SUPERVISION

At Florida State University:
Doctoral Committee Member (4 students, excluding advisees)
Doctoral Advisor (3 students)
Doctoral Rotation Mentor (4 students)
Bachelor Thesis Committee Member (2 students)
Bachelor Student Research Mentor (8 students)

At Duke University:
Bachelor Student Research Mentor (4 students)

SELECTED TEACHING

Fall 2025, Spring 2026: Instructor of Record for Bioinformatics, Florida State University
Fall 2022: Instructor of Record for Data Analysis and Visualization, University of Oregon

SELECTED SERVICE

Peer reviewer for *Nature Comm.*, *Genetics*, *G3*, *Trends in Genetics*, *STAR Protocols*, *Ecology and Evolution*