

# LAURA LAVINE, PhD

## *Administrative Resume*

Washington State University  
Department of Entomology  
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Pullman, WA 99164-6382

### SUMMARY

Higher Education Administrator, Department Chair, Research Leader, and Professor. Entrepreneurial and creative, my leadership is characterized by extraordinary energy and integrity. My values center around equity and diversity of thought, competence, and connection. I strive to combine critical and evidence-based approaches while placing high value on relationships, vision, curiosity, and openness.

**Administrative Expertise:** Strategic planning, creating effective stakeholder partnerships, faculty support, team and coalition building, public speaking, writing, policy analysis and development, budget management, program planning and evaluation, coaching, performance appraisals, and mentoring.

### KEY QUALIFICATIONS

**Academic Leadership & Strategic Execution:** Vision developed over years of experience within Washington state, across the nation, and internationally, based on facilitating research and scholarly activities, education, and cooperative extension. Integral strategist in engaging state government, USDA scientists, stakeholders, growers, and donors to ensure an impactful Entomology program.

**Program Development and Leadership:** Created highly effective and innovative research capacity funding collaborative groups to leverage expertise among faculty to solve agricultural science's urgent problems. Extensive and ongoing leadership training including adaptive and values-based leadership.

**Effective Communications:** Value relationships and building connections to communicate and align goals which requires strong oral and written communication skills. Executive level emotional intelligence combined with adept ability to build and support teams comprised of people from all walks of life and all political spectra. Energetic and engaged advocate for all people, especially those served by the land-grant university and cooperative extension.

**Budget Development and Management:** Experienced and effective. Currently responsible for WSU Entomology department operations overseeing a budget of up to \$10M that includes gifts, grants, sponsored projects, service center and state funding sources.

**Team Building:** Establish and support a culture of respect among all team members. Dedicated to building diverse teams who actively contribute to decision making at all levels. Experienced leading a program of approximately 25 faculty and their staff in Entomology and over 150 research faculty in the college.

**Dealing with Change:** Over my almost ten years of administrative experience in the college, I have led through numerous turnovers in executive leadership, implementation of financial and human resource systems University wide, severe budget reductions and staff turnover. Experienced working and leading with state and federal agencies in my role as department chair and as a research administrator for the college. Resiliency and resourcefulness developed from my early life as a first-generation college student and throughout my career in academia.

## EDUCATION & PROFESSIONAL DEVELOPMENT

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\*Gray Text indicates Administrative Role/Service/Experience

\**Blue Italicized Text indicates Diversity, Equity, & Inclusion Work*

Administrative positions held at Washington State University, the state's land-grant research university (Carnegie VHRA) with more than 31,000 undergraduate and graduate students on six campuses. The College of Agricultural, Human, and Natural Resource Sciences is the home of 16 units, 4 research and extension centers, and 40 county and tribal extension offices across the state. The College is research intensive with an annual operating budget of \$80 million and annual average research expenditures of more than \$65 million over a five-year period focused on basic research in basic plant and animal sciences, natural resource sciences, over 300+ specialty crops, agricultural industries, and the communities they impact. This represents about 30% of all research expenditures at WSU. Academic excellence is a hallmark of the College with over 3,000 undergraduate and graduate students. WSU CAHNRS engages people, organizations, and communities to advance knowledge, economic well-being, and quality of life by fostering inquiry, learning, and the application of research.

2016 Full Professor, Washington State University, Department of Entomology

2008 Associate Professor, Washington State University, Department of Entomology

2001 Assistant Professor, Washington State University, Department of Entomology

1999 Postdoctoral Fellow, University of Wisconsin, Madison

1999 PhD Awarded, Department of Entomology, University of Kentucky

1995 M.S. Department of Biological Sciences, Clemson University

1992 B.S. Biology (Chemistry minor), Lander University (Greenwood, SC)

### Leadership Training & Facilitation

**2022**        *NSF ADVANCE grant "Values-based Academic Leadership Training for Women in STEM" co-author of an online leadership training program for women in STEM.*

**2022**        *HERS Leadership Institute: a leadership development program for women in higher education, Intensive HLI, June 7-16, 2021 Denver, CO*

**2015-2016**    LEAD21: Leadership for the 21<sup>st</sup> Century.

**2014**        Washington State University, Provost Leadership Academy

**2014**        Washington State University, Center for Transformational Leadership and Learning "Tidal Leadership Immersion workshop" May 18-20, 2014, Pullman, WA.

## CURRENT POSITION AND WSU LEADERSHIP SUMMARY

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2018- present

Chair, Washington State University, Department of Entomology

The WSU Department of Entomology has 21 faculty members, 30 staff, and 28 graduate students located state-wide at WSU Pullman, the four research and extension centers, and WSU Tri-Cities. We have adjunct faculty at the USDA ARS Yakima Agricultural Research Laboratory and the Washington State Department of Agriculture. The department provides instruction through the University Core Curriculum and required courses for the Integrated Plant Sciences, Organic and Sustainable Agriculture, and Agriculture Food Security majors. Research expenditures average \$4 M annually over a five-year period. Two impactful and award-winning extension programs - the WSU Decision Aid System and WSU Pesticide Resource Education Program- are managed by the Entomology department. The Entomology department annual operating budget is \$10 million per year. The department also manages 18 endowments totaling \$6.5 million at current market value.

### *Donor & Industry Partnership & Stewardship*

- **Innovative Vision and Strategic Implementation.** Invested in an external consultant for programmatic vision for department innovation, entrepreneurship, and commercialization efforts especially for the WSU Decision Aid System, the WSU Pesticide Resource and Education Program, and the WSU Bee program. Led efforts to increase research, extension & education efforts in pollinator health which resulted in over \$7 million in gifts to WSU, a new Honey Bee Research, Education & Extension facility and increased capacity for stakeholder driven research.
- **Programmatic Leadership.** Led a three -year, multi-department re-organization of the Pesticide Resource and Education Program by combining three existing units into one and coordinated with CAHNRS leadership as well as WSDA staff.

### *Faculty, Staff, and Student Development*

- **Commitment to shared decision-making.** Created a Chair's Advisory Committee for shared decision making. It is composed of the department administrative assistant, two faculty, one staff member, one postdoctoral fellow, and one graduate student nominated by their respective groups.
- **Strategic and financial management of teaching resources.** Reorganized teaching program to reach a wider audience and to include novel revenue generation. Reorganized the undergraduate and graduate teaching curriculum to be more accessible
- **Strategic deployment of limited resources through morale building and faculty support including policy development and enforcement.** Increased overall capacity in research, extension and teaching in the dept through design and implementation of a career-track faculty which has resulted in a 25% increase in total FTE but the impact is far more wide in terms of total key performance indicators such as grant expenditures, peer-reviewed publication generation, and dissemination of research to stakeholders.
- **Focus on Access and Equity for all.** Created a Diversity, Equity and Inclusion standing committee in the Department of Entomology in 2019 and provided a budget from endowment sources, *Coordinated implicit bias training and workshops from the Title IX coordinator to support management of incidents of bias, harassment & discrimination for the entire department*

### *Operations & Facilities*

- **Focus on programmatic impact and function.** Primary lead in a fundraising campaign, business plan, and current management of the WSU Honey Bee and Pollinator Facility in Othello, WA purchased solely with donor funds in 2019 and operated with donor funds to date. Strategic use of department funds for renovations for Entomology department educational and research facilities.

## PAST WSU LEADERSHIP SUMMARY

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### *2015-2018 Associate Director, Washington State University, College of Agricultural, Human, and Natural Resources Sciences Office of Research and Agricultural Research Center*

The CAHNRS Office of Research and Agricultural Research Center is WSU's State Experiment Station. CAHNRS is a leading driver of research at WSU, contributing between 30-40% of all extramural funding at the university. CAHNRS research contributes to a sustainable future through the powerful combination of both discovery and translational research designed to address the grand challenges of the 21<sup>st</sup> century.

#### *Federal, State, & Regional Grants Administration*

- **Effective Communication.** Collaborated with the Associate Director of Extension on Capacity fund projects and reporting year-round including the Plan of Work and Annual Report of Accomplishments for over 500 faculty FTE and 700 staff and graduate students. Supervision of Program Coordinator for all USDA NIFA capacity and competitive funding reporting. Coordination with USDA NIFA National Program Leaders, WSU Extension, WSU CAHNRS Business and Finance staff. Liaison to the Vice President of Research and the Office of Research. Liaison to the Washington State Commission on Pesticide Registration; flagged inappropriate fiscal management and discriminatory behavior which led to state and federal agency investigation and actions to end the inappropriate behavior. Liaison, as needed, the Washington Grain Commission, Northwest Potato Consortium, Washington Tree Fruit Research Commission, Washington Blueberry Commission, Washington Red Raspberry Commission.
- **Team Building and faculty success.** Design, implementation, assessment of reorganization of 180 individual Hatch capacity funded projects(\$10M) into 20 collaborative, multidisciplinary projects with new leaders, new policies, and reporting requirements that cross departments.
- **Programmatic financial management.** Allocation and decisions for McIntire-Stennis capacity projects (\$450K), Animal Health and Disease Research capacity program (\$23K), and Hatch Multi-State programs & allocations (\$10M). Led internal panels for CAHNRS Office of Research Internal Grants Programs including: ERI & ERI/CVM (\$300K per year); O.A. Vogel Endowment for wheat microbiology (\$150K per year); ARC Endowments (approximately \$50K per year); Appendix A Bioenergy Legislative proviso (\$500K per year).

#### *Innovation, Commercialization, & Entrepreneurship*

- **Compliance and communication.** Chair of the Washington State University Conflict of Interest Committee from 2016-2019, a Presidential Committee. Liaison to the University Industry Consortium a members only national group whose goal is to facilitate public-private partnerships for gains in research and economic development of innovative and transformative technologies for agriculture and natural resource sciences, supply chain and related industries.
- **Team- and coalition- building.** Led focus groups and advisory board composed of stakeholders such as state and federal agency scientists, industry, growers, commercial retail operations, agricultural chemical companies, and business such as Microsoft, Google, and others particularly in the areas of precision agriculture, digital agriculture, and crop decision support tools.

### ***2015 Interim Director, ADVANCE at WSU, Provost's Office***

The vision of ADVANCE at WSU is to develop an inclusive research institution whose faculty are supported by a system that promotes career-long excellence for all. I led the transition of the ADVANCE at WSU program from grant funded to institutional funding while maintaining programming and adding all under-represented minority faculty to the eligibility criteria. I remain on the steering committee and I serve as coPI and project manager on a \$1.2M NSF ADVANCE Regional Partnership grant to support the success of mid-career faculty women in STEM.

### **Select & Highlighted Administrative Service:**

#### **National Service**

- President-elect, Pacific Branch of the Entomological Society of America, 2024
- Search committee, USDA ARS Arid Land Agricultural Research Center, Research Leader 2021
- ***Chair, Entomological Society of America Committee on Diversity, Equity & Inclusion 2023-current (member since 2019)***
- Foundation for Food and Agriculture Research Fellows Program Leadership Team 2017-2023; Review guidelines, evaluate Fellow applications for the stipend and professional development categories
- Experiment Station Committee On Organization & Policy (A unit of the Association of Public & Land Grant Universities), Science and Technology Committee, Chair 2017-2019
  - Led the revision of the ESCOP Science roadmap <http://escop.info/roadmaptext/>

#### **Washington State University Service**

- WSU Strategic Plan Implementation Goal Team member for Employee Development, Wellness, and Belonging goal 2023-current
- WSU College of Agricultural, Human and Natural Resource Sciences Budget Advisory Committee, inaugural Chair 2023-2025
- WSU College of Agricultural, Human and Natural Resource Sciences Business Services Task Force, Chair 2021-2022; Coordinate faculty, staff, and CAHNRS leadership to facilitate solutions to business services problems and future goals for the College; Facilitate the identification and analysis of business services problems in both staff support and business processes in the College; Propose and implement recommendations for solutions to business services problems that includes fiscal services and grant services
- ***WSU Provost's Committee for Inclusive Excellence 2021-2022***
- WSU University Press Editorial Board 2021-2024
- ***WSU Asian American & Pacific Islander Faculty/Staff Association Faculty Co-Chair, 2020-current***
- WSU College of Agricultural, Human and Natural Resource Sciences Chairs and Directors Group, inaugural Chair 2019-2020
- ***WSU Multicultural Student Services Team Mentoring Program Mentor 2015-18***
- Faculty Senator, Entomology & School of Food Science 2014-2015
- ***President of the Association for Faculty Women, 2015-2016***
- Co-Chair, Research & Arts Committee, 2010-2012, 2013-2014

## **Honors & Awards**

- 2023** *Entomological Society of America Diversity & Inclusion, Distinguished Achievement Award in the Promotion of Diversity and Inclusion in the Field of Entomology*
- 2023** *WSU College of Agricultural, Human, and Natural Resource Sciences Faculty Administrator Award*
- 2023** *WSU Martin Luther King, Jr. Distinguished Service Award for Faculty in Inclusive and Equitable Practices*
- 2021** *Member of Alpha Alpha Alpha, First Generation Honors Society, Washington State University*
- 2020** Physiology, Biochemistry, & Toxicology Award from the Pacific Branch of the Entomological Society of America
- 2016** Washington State University, College of Agricultural, Human, and Natural Resource Sciences R. M. Wade Excellence in Teaching Award
- 2016** *Washington State University, Samuel H. Smith Leadership Award*
- 2013** NSF POGIL Facilitators Workshop (3-day training), January 12-14, Hampton Inn, Myrtle Beach, South Carolina
- 2011** *NSF Native Case Studies Training Workshop, March 26, Washington State University (Lavine and Carris: hosts)*
- 2008** Washington State University Office of Undergraduate Education “Undergraduate Research Excellence Award: Student/Faculty-mentor team”, April 8, 2008
- 2004** Washington State University Graduate & Professional Student Association Outstanding Advisor Award 2004

## **Publications (74)**

1. Jesse N Weber, Wataru Kojima, Romain Boisseau, Teruyuki Niimi, Shinichi Morita, Shuji Shigenobu, Hiroki Gotoh, Kunio Araya, Chung-Ping Lin, Camille Thomas-Bulle, Cerisse E Allen, Wenfei Tong, Laura Corley Lavine, Brook O Swanson, Douglas J Emlen. 2023. Evolution of horn length and lifting strength in the Japanese rhinoceros beetle *Trypoxylus dichotomus*. *Current Biology* 33: 4285-4297.
2. S Morita, TF Shibata, T Nishiyama, Y Kobayashi, K Yamaguchi, K Toga, T Ohde, H Gotoh, T Kojima, J Weber, M Salvemini, T Bino, M Mase, M Nakata, T Mori, S Mori, R Cornette, K Sakura, L Lavine, D Emlen, T Niimi, S Shigenobu. 2023. The draft genome sequence of Japanese rhinoceros beetle *Trypoxylus dichotomus*. *Scientific Reports* 13:8735
3. H Gotoh, H Adachi, K Matsuda, LC Lavine. 2021. Epithelial folding determines the final shape of beetle horns. *Current Opinion in Genetics & Development* 69, 122-128
4. AW Adesanya, MD Lavine, TW Mournal, LC Lavine, F Zhu, DB Walsh. 2021. Mechanisms and management of acaricide resistance for *Tetranychus urticae* in agroecosystems. *Journal of Pest Science*, 1-25
5. X Lin, H Gao, Y Xu, Y Zhang, Y Li, MD Lavine, LC Lavine. 2020. Cell cycle progression determines wing morph in the polyphenic insect *Nilaparvata lugens*. *Iscience* 23(4), 101040.
6. AW Adesanya, T Waters, MD Lavine, DB Walsh, LC Lavine, F Zhu. 2020. Multiple insecticide resistance in onion thrips populations from Western USA. *Pesticide Biochemistry and Physiology* 165, 104553.

7. AW Adesanya, A Cardenas, MD Lavine, DB Walsh, LC Lavine, F Zhu. 2020. RNA interference of NADPH-Cytochrome P450 reductase increases susceptibilities to multiple acaricides in *Tetranychus urticae*. *Pesticide Biochemistry and Physiology* 165: 104550.
8. AW Adesanya, MJ Beauchamp, MD Lavine, LC Lavine, F Zhu, DB Walsh. 2019. Physiological resistance alters behavioral response of *Tetranychus urticae* to acaricides. *Scientific Reports* 9 (1), 1-12
9. B Buchalski, E Gutierrez, D Emlen, L Lavine, B Swanson. 2019. Variation in an Extreme Weapon: Horn Performance Differences across Rhinoceros Beetle (*Trypoxylus dichotomus*) Populations. *Insects* 10 (10), 346
10. Meixiang Wu, Adekunle W Adesanya, Mariany A Morales, Douglas B Walsh, Laura C Lavine, Mark D Lavine, Fang Zhu. 2019. Multiple acaricide resistance and underlying mechanisms in *Tetranychus urticae* on hops. *Journal of Pest Science* 92 (2), 543-555
11. MD Lavine, AM Hayes, RS Zinna, H Gotoh, DJ Emlen, LC Lavine. 2019. Uncoupling horn growth from body size in the Asian rhinoceros beetle. *INTEGRATIVE AND COMPARATIVE BIOLOGY* 59, E356-E356
12. AW Adesanya, A Cardenas, MD Lavine, DB Walsh, LC Lavine, F Zhu. 2019. RNA interference of NADPH-Cytochrome P450 reductase increases susceptibilities to multiple acaricides in *Tetranychus urticae*. *bioRxiv*, 780536
13. J Shinji, H Gotoh, H Miyanishi, MD Lavine, LC Lavine. 2019. The activin signaling transcription factor Smox is an essential regulator of appendage size during regeneration after autotomy in the crayfish. *Evolution & development* 21 (1), 44-55
14. Hayes, A.M., Lavine, M.D., Gotoh, H., Lin, X., L.C. Lavine. 2019. Mechanisms regulating phenotypic plasticity in wing polyphenic insects. *Advances in Insect Physiology*, pp 43-72.
15. **Gartstein, M.A. Benjamin, C.P., Lavine, L.C., Craft, R.M., Wharton, A.S. 2018. External mentor program: a pathway to career advancement for women in STEM. *The ADVANCE Journal*. 10.5399/osu/ADVJRN.1.1.1**
16. R Zinna, D Emlen, **LC Lavine**, A Johns, H Gotoh, T Niimi, I Dworkin. 2018. Sexual dimorphism and heightened conditional expression in a sexually selected weapon in the Asian rhinoceros beetle. *Molecular Ecology* 27:5049-5072; DOI: 10.1111/mec.14907
17. J Shinji, H Gotoh, H Miyanishi, MD Lavine, **LC Lavine**. 2018. The activin signaling transcription factor Smox is an essential regulator of appendage size during regeneration after autotomy in the crayfish. *Evolution & development* DOI: 10.1111/ede.12277
18. AW Adesanya, E Franco, DB Walsh, M Lavine, **L Lavine**, F Zhu. 2018. Phenotypic and Genotypic Plasticity of Acaricide Resistance in Populations of *Tetranychus urticae*(Acari: Tetranychidae) on Peppermint and Silage Corn in the Pacific Northwest. *Journal of Economic Entomology*, Volume 111, Issue 6, 14 December 2018, Pages 2831–2843, <https://doi.org/10.1093/jee/toy303>
19. T Ohde, S Morita, S Shigenobu, J Morita, T Mizutani, H Gotoh, RA Zinna, M Nakata, Ylto, K Wada, Y Kitano, K Yuzaki, K Toga, M Mase, K Kadota, J Rushe, **LC Lavine**, DJ Emlen, T Niimi 2018. Rhinoceros beetle horn development reveals deep parallels with dung beetles. *PLoS Genetics* 14: e1007651
20. X Lin, Y Xu, J Jiang, M Lavine, **LC Lavine**. 2018. Host quality induces phenotypic plasticity in a wing polyphenic insect. *Proceedings of the National Academy of Sciences* 115 (29): 7563-7568.
21. J Hust, MD Lavine, AM Worthington, R Zinna, H Gotoh, T Niimi, **L Lavine**. 2018. The Fat-Dachsous signaling pathway regulates growth of horns in *Trypoxylus dichotomus* but does not affect horn allometry. *Journal of Insect Physiology* 105: 85-94.
22. Lin X, **Lavine LC**. 2018. Endocrine regulation of a dispersal polymorphism in winged insects: a short review. *Current Opinion in Insect Science* 25:20-24.
23. Adesanya AW, MA Morales, DB Walsh, **LC Lavine**, MD Lavine, F Zhu. 2018. Mechanisms of resistance to three mite growth inhibitors of *Tetranychus urticae* in hops. *Bulletin of Entomological Research* 1-12 DOI: <https://doi.org/10.1017/S0007485317000414>

24. Meixiang Wu, Adekunle W Adesanya, Mariany A Morales, Douglas B Walsh, **Laura C Lavine**, Mark D Lavine, Fang Zhu. 2018. Multiple acaricide resistance and underlying mechanisms in *Tetranychus urticae* on hops. *Journal of Pest Science* <https://doi.org/10.1007/s10340-018-1050-5>
25. Gotoh, H, RA Zinna, Y Ishikawa, H Miiyakawa, A Ishikawa, Y Sugime, DJ Emlen, **LC Lavine**, T Miura. 2017. The function of appendage patterning genes in mandible development of sexually dimorphic stag beetle. *Developmental Biology* 422: 24-32. *Impact Factor* 3.155
26. *Impact Factor* 3.9
27. R Zinna, H Gotoh, CS Brent, A Dolezal, A Kraus, T Niimi, D Emlen, **LC Lavine**. 2016. Endocrine Control of Exaggerated Trait Growth in Rhinoceros Beetles. *Integrative and Comparative Biology* doi: 10.1093/icb/icw042 *Impact Factor* 3.52
28. Lin, Xinda, Yun, Yao, Wang, Bo, Lavine, M.D., and **L.C. Lavine**. 2016. FOXO links wing polyphenism and wound healing in the brown planthopper, *Nilaparvata lugens*. *Insect Biochemistry and Molecular Biology* 70: 24-31. *Impact Factor* 3.9
29. Hiroki Gotoh, Robert A Zinna, Ian Warren, Michael DeNieu, Teruyuki Niimi, Ian Dworkin, Douglas J Emlen, Toru Miura, **Laura C Lavine**. 2016. Identification and functional analysis of sex determination genes in the sexually dimorphic stag beetle *Cyclommatus metallifer*. *BMC Genomics* 17:250. *Impact Factor* 3.867
30. X Lin, Y Yao, B Wang, DJ Emlen, **LC Lavine**. 2016. Ecological Trade-offs between Migration and Reproduction Are Mediated by the Nutrition-Sensitive Insulin-Signaling Pathway. *International Journal of Biological Sciences* 12: 607. *Impact Factor* 3.0
31. F Zhu, **L Lavine**, S O'Neal, M Lavine, C Foss, D Walsh. 2016. Insecticide Resistance and Management Strategies in Urban Ecosystems. *Insects* 7: 2. *Impact Factor* 1.94
32. Mills, M.R., Nemri R.S., Carlson, E.A., Wilde, W., Gotoh, H., **Lavine, L.C.** and B.O. Swanson. 2016. Functional mechanics of beetle mandibles: honest signaling in a sexually selected system. *Journal of Experimental Zoology Part A: Ecological Genetics & Physiology* 325A: 3-12. *Impact Factor* 1.226
33. Piraneo, T.G., Bull, J., Morales, M.A., **Lavine, L.C.**, Walsh, D.B., and F. Zhu. 2015. Molecular mechanisms of *Tetranychus urticae* chemical adaptation in hop fields. *Scientific Reports* 5:17090; DOI: 10.1038/srep17090. *Impact Factor* 5.228
34. Gotoh, H., Hust, J.A., Miura, T., Niimi, T., Emlen, D.J., and **L.C. Lavine**. 2015 The Fat/Hippo signaling pathway links within-disc morphogen patterning to whole-animal signals during phenotypically plastic trait growth in insects. *Developmental Dynamics*. DOI: 10.1002/dvdy.24296
35. Liu, X., Hayashi, F., **Lavine, L.C.**, and D. Yang. 2015. Is diversification in male reproductive traits driven by evolutionary trade-offs between weapons and nuptial gifts? *Proceedings of the Royal Society of London B* 282: 20150247.
36. **Lavine, L.C.**, Gotoh, H., Brent, C., Dworkin, I., and D.J. Emlen. 2015. Exaggerated trait growth in insects. *Annual Review of Entomology* 60: 453-472.
37. Hull, J.J., Chaney K, Gieb S.M., Fabrick J.A., Brent C.S., Walsh, D.B., and **L.C. Lavine**. 2014. Transcriptome-based identification of ABC transporters in the western tarnished plant bug *Lygus hesperus*. *PLoS One* 9(11): e113046. doi:10.1371/journal.pone.0113046
38. *Invited Book Chapter*. Zhu, F., Cui, Y., Walsh, D. and **L.C. Lavine**. 2014. Application of RNAi toward insecticide resistance in *Short Views on Insect Biochemistry and Molecular Biology, Vol 2: 595-619*, editors B.K. Tyagi, C. Raman, Z.Gui, Scientific and Academic Publishing, USA.
39. Johns, A., Gotoh H., McCullough E.L., Emlen D.J., and **L.C. Lavine**. 2014. Heightened condition-dependent growth of sexually selected weapons in the rhinoceros beetle *Trypoxylus dichotomus* (Coleoptera: Scarabaeidae). *Integrative and Comparative Biology*: 54: E119-E119. doi: 10.1093./icb/icu041



40. Gotoh, H. and **L.C. Lavine**. 2014. Genetic control of color polymorphism of the stag beetle *Cyclommatus metallifer* Boisduval (Coleoptera: Lucanidae). *The Coleopterists Bulletin* 68 (2): 209-213.
41. Warren, I.A., Vera, C., Johns, A., Zinna, R., Marden, J., Emlen, D.J., Dworkin, I., and **L. Corley Lavine**. 2014. Insights into the development and evolution of exaggerated traits using de novo transcriptomes of two species of horned scarab beetles. *PLoS One* 9 (2): e88364. *Impact Factor* 3.73
42. Gotoh, H., Miyakawa, H., Ishikawa, A., Ishikawa, Y., Sugime, Y., Emlen, D.J., **Corley Lavine, L.**, and T. Miura. 2014. Developmental link between sex and nutrition: doublesex regulates sex-specific mandible growth via juvenile hormone signaling in stag beetles. *PLoS Genetics*. Jan 10 (1): e1004098. Doi: 10.1371/journal.pgen.1004098. Epub 2014 Jan 16. *Impact Factor* 8.517
43. Steffan, S.A., Lee J.C., Singleton M.E., Vilaire A., Walsh D.B., **Lavine L.S.**, Patten, K. 2013. Susceptibility of cranberries to *Drosophila suzukii* (Diptera: Drosophilidae). *J Econ Entomol.* 106 (6): 2424-2427. *Impact Factor* 1.6
44. Wu, M., Gotoh, H., Waters, T. Walsh, D., **L. Corley Lavine**. 2013. Identification of an alternative Knockdown Resistance (kdr)-like mutation, M918L, and a novel mutation, V1010A, in the *Thrips tabaci* voltage-gated sodium channel gene. *Pest Management Science* DOI 10.1002/ps.3638. *Impact Factor* 2.594
45. Warren IA, Gotoh H, Dworkin IM, Emlen DJ, **Lavine LC**. 2013. A general mechanism for conditional expression of exaggerated sexually-selected traits. *BioEssays* 35: 889-899. *Impact Factor* 5.423
46. Hattori, A. Miyakawa, H., Ishikawa, Y., Miyazaki, S., Okada, Y., Cornette, R., **Corley Lavine, L.**, Emlen, D.J., Koshikawa, S., and T. Miura. 2013. Soldier differentiation in the damp-wood termite is regulated by the insulin signaling pathway. *Journal of Experimental Zoology Part B Molecular & Developmental Evolution* 320B: 295-306. *Impact Factor* 2.123
47. **Corley Lavine, L.**, Hahn, LL, Garczynski, SF, Warren, IA, Dworkin, IM and DJ Emlen. 2013. Cloning and characterization of an insulin receptor gene from the horned scarab beetle *Onthophagus nigriventris* (Coleoptera: Scarabaeidae). *Archives of Insect Biochemistry & Physiology* 82: 43-57. DOI: 10.1002/arch.21072 *Impact Factor* 1.515
48. Vinchesi A, Cobos D, **Corley Lavine L**, Walsh D. 2012. Manipulation of soil temperatures to influence brood emergence in the alkali bee. *Apidologie* DOI: 10.1007/s13592-012-0180-7 *Impact Factor* 1.493
49. Emlen DJ, Warren I, Johns A, Dworkin I, **Corley Lavine L**. 2012. A mechanism of extreme growth and reliable signaling in sexually selected ornaments and weapons. *Science* 337: 860-864. DOI:10.1126/science.1224286. *Impact Factor* 31.027
50. Van Truong, T., Byun, D., **Corley Lavine, L.**, Emlen, D.J., Park, H.C., and M.J. Kim. 2012. Flight behavior of the rhinoceros beetle *Trypoxylus dichotomus* during electrical nerve stimulation. *Bioinspiration & Biomimetics* doi:10.1088/1748-3182/7/3/036021 *Impact Factor* 2.412
51. Zhou, C., Kandemir, I., Walsh, D.B., Zalom, F.G. and **L. Corley Lavine**. 2012. Identification of *Lygus hesperus* by DNA barcoding reveals significant gene flow among geographically distant and habitat diverse populations. *PLoS One* 7 (3): e34528. *Impact Factor* 3.73
52. Gotoh, H., Cornette, R., Koshikawa, S., Okada, Y., **Corley Lavine, L.**, Emlen, D.J., and T. Miura. 2011. Juvenile hormone regulates extreme mandible growth in the male stag beetle *Cyclommatus metallifer*. *PLoS ONE* 6(6): e21139. Doi: 10.1371/journal.pone.0021139. *Impact Factor* 3.73
53. Gaver-Wainwright, M.M., Zack, R.S., Foradori, M.J., and **L. Corley Lavine**. 2011. Misdiagnosis of spider bites: bacterial associates, mechanical pathogen transfer, and hemolytic potential of venom from the hobo spider, *Tegenaria agrestis* (Araneae: Agelenidae). *Journal of Medical Entomology* 48(2):382-388. *Impact Factor* 1.857

54. **Corley Lavine, L.** 2009. Towards a better understanding of life. TREE 25 (3): 135-136. *Impact Factor 15.389*
55. Holmes, D. and **Corley Lavine, L.** 2009. Roaches, apoptosis and the ovarian clock: use it or lose it. Heredity 103:192-193.
56. Emlen, D., **Corley Lavine, L.**, and Ewen-Campen, B. 2007 On the origin and evolutionary diversification of beetle 'horns'. Proceedings of the National Academy of Sciences USA 104: 8661-8668.
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### **Funded Grants**

- 2019-2024** *NSF ADVANCE, Values-based Academic Leadership Trajectories for women in STEM (VAuLTS), \$1,218,058. PI: Maria Gartstein, co-Is: Laura Lavine (Project Manager), Erika Offerdahl, John Schneider, Denise Yost, Paula Groves Price.*
- 2019-2021 Washington Grain Commission, Hessian Fly Management: An Emerging Research Issue in PNW Wheat, \$18,000 to PI L. Lavine. Co-I: Michael Pumphrey.
- 2015-2020 NSF Integrative Organismal Systems Collaborative Research: The evolution of extreme traits, \$520,000. NSF IOS 1456731 to PI L. Lavine. NSF IOS to Douglas Emlen (PI: \$750,000; Univ. of Montana).
- 2014-2017 USDA NIFA Specialty Crop Research Initiative. Reducing the Impact of Industry-Critical Insect and Disease Problems in Hops through Development of Preventive and Predictive Strategies. Walsh, Barbour, Lavine, Peters, et al. \$3.2 million.
- 2013-2014 WSU Proposal Development Stimulus Program, Analysis & detection of insecticide resistance in an economically important & widespread insect pest, Douglas Walsh (PI), Laura Lavine (coPI), Sally O'Neal (coPI), \$40,000.
- 2013-2014 WSU Proposal Development Stimulus Program, The evolution of extreme traits, Laura Lavine, PI, \$40,000.
- 2013-2014 WSU CAHNRS Investment in Future Success Program, The evolution of extreme traits, Laura Lavine PI, \$10,392.
- 2013-2014 WSU CAHNRS Emerging Research Issues Program, Identifying molecular markers for insecticide resistance in arthropod pests, Douglas Walsh (PI), Laura Lavine (coPI), Timothy Waters (coPI), and Sally O'Neal (coPI), \$25,175.
- 2013 Washington State Commission on Pesticide Registration, Identifying robust molecular markers for miticide resistance. Douglas Walsh, Laura Lavine (coPIs), \$27,425
- 2012-2016 USDA Pest Management Alternatives Program, Costs and benefits of managing spider mite resistance on western US perennial specialty crops, Douglas Walsh, Laura Corley Lavine, Frank Zalom (UC Davis) and Kelly Cobourn (Boise State) \$199,293.
- 2013-2014 Hop Research Council, Integrated pest management of arthropods on hops. Douglas Walsh (PI), Laura Lavine (coPI), and Sally O'Neal (coPI), \$96,989
- 2012-2013 Hop Research Council, Integrated pest management of arthropods on hops. Douglas Walsh (PI), Laura Lavine (coPI), and Sally O'Neal (coPI), \$99,934
- 2012 Washington State Commission on Pesticide Registration, Identifying mechanisms of resistance in Lygus and spider mites. Douglas Walsh, Laura Lavine (coPIs), \$24,380
- 2011-2012 Hop Research Council, Integrated pest management of arthropods on hops. Douglas Walsh (PI), Laura Lavine (coPI), and Sally O'Neal (coPI), \$104,081
- 2012 Washington State University NSF ADVANCE grant, External Mentor Award, \$5,352.
- 2011-2012 Norman Ehmann Grants for Urban Entomology Fund, Washington State University, Insecticide cross resistance in bed bugs. Laura Corley Lavine and Jeb Owen, coPIs. \$10,000.

- 2011-2012 Joseph H. Hill Memorial Foundation, Inc., Insecticide cross resistance in the western flower thrips: physiological mechanisms and IPM strategies. Laura Corley Lavine and Douglas Walsh, coPIs. \$10,000.
- 2009-2010** *WSU Agricultural Research Center, Investment in Future Success, Funds to support faculty training and implementation of problem-based learning methods, Laura Corley Lavine and Lori M. Carris coPIs, \$12,138.50*
- 2009-2010 Washington State Tree Fruit Research Commission. Identification of critical physiological targets in codling moth, Stephen Garczynski and Laura Corley Lavine coPIs, \$147,185
- 2009-2014 NSF Integrative Organismal Systems: Collaborative Research: Genetic mechanisms of conditional-expression and trait exaggeration in the weapons of sexual selection, \$298,369. NSF IOS 0919730 to coPI L.Lavine. NSF IOS 0919781 to Douglas Emlen (coPI: \$660,452; Univ. of Montana) and NSF IOS 090142 to coPI: Ian Dworkin (\$101,825; Michigan State University).

**Funded Grants** -\$370,000 in funded grants from NSF, Washington State Tree Fruit Research Commission, and internal WSU competitive grants from 2003-2009

**Invited Lectures – over 80 national & international invited lectures** –available upon request (highlights)

- Opponent & Invited Speaker, Uppsala University, March 2023
- Beijing Agricultural University, College of Grassland Science & Technology, Invited Speaker, November 8, 2020.
- Kansas State University, Department of Entomology, Invited Speaker, February 25, 2020.
- Washington State Academy of Sciences, Eleventh Annual Symposium, The Highs and Lows of Conducting Research on Cannabis in Washington State, Invited Speaker, 2018.
- Kansas State University, Division of Biology 50<sup>th</sup> Anniversary Celebration, Invited Speaker, March 11-16, 2018
- Japan Society for the Study of Evolution Annual Meeting, *Keynote Speaker*, Kyoto University, Kyoto Japan July 24-26, 2017.
- 18<sup>th</sup> International Congress of Evolutionary Endocrinology, Invited Speaker in EcoEvoDevo Symposium, June 2017, Lake Louise, Banff Canada
- North Dakota State University, *Student Choice Invited Speaker*, Dept of Biology March 2017
- “The Evolution of Mechanisms : a workshop on the integration of life-history evolution and physiology” Invited Keynote Speaker at the University of Debrecen, Hungary organized by Adam Lendvai, Zoltan Nemeth, Jacint Tokolyi, and Zoltan Barta in Debrecen, Hungary January 28-31, 2016.

**Not listed – reviewer for grants, journals, etc.**