

CURRICULUM VITAE & ADMINISTRATIVE RESUME

Laura Corley Lavine

*Gray Text indicates Administrative Role/Service/Experience

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

Education & Positions:

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 Roles & Responsibilities:

2015 Interim Director, ADVANCE at WSU, Washington State University, 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.

2018- Chair, Washington State University, Department of Entomology

The WSU Department of Entomology has 21 faculty members, 30 staff, and 30 graduate students located 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 market value.

Donor & Industry Partnership & Stewardship

- Led design and implementation of a Honey Bee fundraising project that resulted in over \$4 million in gifts to WSU, a new Honey Bee Research, Education & Extension Facility in Othello, WA, and a well-attended and highly publicized grand opening on March 6, 2020
- Recruited new faculty in the tenure-track (4) and in the career-track (7)
- Increased stewardship reporting, cultivated existing donors and developed new prospects, and held an Entomology tailgate to celebrate our donors with our department
- 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
- Hired a consultant to contribute to department innovation, entrepreneurship, and commercialization efforts (with department support) especially for the WSU Decision Aid System and the WSU Honey Bee program

Faculty, Staff, and Student Development

- Created a Chair's Advisory Committee composed of the department administrative assistant, faculty member Chair of the Curriculum Committee, faculty member Chair of the Operations committee, one staff member, one postdoctoral fellow, and one graduate student nominated by their respective groups. Implemented a monthly Chair's Advisory Committee meeting to facilitate shared decision making
- Reorganized teaching program to incorporate new career track faculty as we developed a plan to transition our courses to more fair and equitable allocations and to include novel revenue generation within the Enrollment Based Budgeting framework
- Reorganized the undergraduate and graduate teaching curriculum to be more accessible
- [Created a Diversity, Equity and Inclusion standing committee in the Department of Entomology in 2019 and provided a budget from endowment sources](#)
- Visit faculty, staff, and graduate students at the four Research and Extension Centers at least twice per year and attended commodity commission research reviews where Entomology faculty were presenting proposals and cultivated relationships with commissioners and staff
- Conduct faculty and staff annual reviews and shifted multiple faculty to new roles to better match their professional abilities and accomplishments
- Led design and implementation of a career-track faculty policy in the department that allowed career-track faculty full participation and voting rights in the department and starting salaries commensurate with tenure-track faculty

- Coordinate with HRS for the management of all employee positions, including resolution of employee and institutional concerns
- Direct and respond to Entomology Graduate student concerns over low stipends and other policy related concerns, initiatives include increasing stipend levels, removing the GRE requirement for admission, revising scholarship RFPs and fund disbursement in 2019
- Facilitated and obtained unanimous support for significant increases in the MS and PhD base stipends and for ending the GRE requirement for graduate student applicants to our department in 2020
- Redirect graduate student research assistantships into teaching assistantships as needed to support teaching needs and to increase teaching opportunities for graduate students
- Guide and support with department endowment funds disciplinary, teaching, and equity professional development opportunities for all department members
- *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

- Implemented a safety check and invited EH&S and CAHNRS safety committee members to participate for all Pullman faculty programs every three years
- Obtained unanimous support from the department for the renovation of the Entomology department office suite, conference room, and classroom from 2020-21 with department funds

Leadership Roles & Responsibilities:

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 21st century.

Federal, State, & Regional Grants Administration

- 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
- 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
- Allocation and decisions for McIntire-Stennis capacity projects (\$450K), Animal Health and Disease Research capacity program (\$23K), and Hatch Multi-State programs & allocations (\$10M)
- 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
- 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)

Internal & External Management & Leadership

- Supervised CAHNRS Research Infrastructure including the Plant Growth Facility (PGF) manager and advisory committee; managed the PGF service center business plan
- Designed, revised, and edited the research goal of the CAHNRS strategic plan (2017-2022)
- Led a CAHNRS wide space review with special emphasis in WSU Pullman
- Co-lead on strategic planning for CAHNRS Farms Operations and Research & Extension Centers statewide, totally over 10,000 acres of farms
- Participated in decision making for hiring and start-up supports for faculty with research appointments
- Supervision of the CAHNRS Large Grants Development Team comprised of 0.75 FTE Budget Specialist, 1.0 FTE Grant Development Specialist + other duties as assigned
- 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

Innovation, Commercialization, & Entrepreneurship Administration

- Chair of the Washington State University Conflict of Interest Committee from 2016-2019, a Presidential Committee
- Coordinated and led several 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
- Led redesign of the communication strategy from the CAHNRS Office of Research in partnership with the CAHNRS development team and marketing and communications team
- 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

Administrative Service:

National Service

- Search committee, USDA ARS Arid Land Agricultural Research Center, Research Leader 2021
- *Entomological Society of America Committee on Diversity & Inclusion 2019-current*
- Foundation for Food and Agriculture Research Fellows Program Leadership Team 2017-
 - 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/>
- Administrative Advisor for Hatch Multi-State Project W4185 Biological Control in Pest Management Systems of Plants, 2017-2019
- Administrative Advisor for Hatch Multi-State Committee WERA1017 Coordination of Integrated Pest Management Research and Extension/Educational Programs for the Western States and Pacific Basin Territories, 2017-2020
- Administrative Advisor for Hatch Multi-State Committee WERA1021 Spotted Wing Drosophila Biology, Ecology and Management USDA Multistate Research Coordinating Committee, 2015-2021
- Administrative Advisor for Hatch Multi-State Project W4147 Managing Plant Microbe Interactions in Soil to Promote Sustainable Agriculture, 2015-2019

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 College of Agricultural, Human and Natural Resource Sciences Budget Reduction & Reinvestment Task Force, 2021-current
- *WSU Provost's Committee for Inclusive Excellence 2021-2022*
- WSU Sahlin Faculty Excellence in Innovation & Entrepreneurship Award Committee 2022-2023
- WSU University Pre- and Post-Award Committee, Co-Chair 2020-current
- WSU University Press Editorial Board 2021-2024
- WSU Center for Sustaining Agriculture and Natural Resources Advisory Committee 2018-current
- *WSU Asian American & Pacific Islander Faculty/Staff Association Faculty Co-Chair, 2020-current*
- *WSU Chi Delta Sigma Asian American Pacific Islander sorority Faculty Advisor, 2017-2023*
- *ADVANCE at WSU Steering Committee Member 2015-current*
- WSU College of Agricultural, Human and Natural Resource Sciences Chairs and Directors Group, inaugural Chair 2019-2020
 - Coordinated chairs & directors to facilitate solutions to shared problems

- Provided professional development and workshops on budget management, personnel, pre- and post-award grants concerns, fundraising, donor relationships
- Search Committee member for WSU CAHNRS Senior Director of Development 2020
- WSU Sahlin Faculty Excellence in Leadership Award Committee 2020-2021
- Washington State Senate Task Force on Honey Bee Health, 2019-2020
- *WSU Multicultural Student Centers Working Group 2018*
- *WSU/UI Women's Leadership Conference Planning Committee 2018*
- WSU Centers, Institutes & Labs Task Force, Office of Research, 2017
- WSU Cannabis Task Force 2016-2018
- WSU Sahlin Faculty Excellence in Research Award Committee 2015-18, Chair 2017
- WSU CAHNRS Faculty Excellence Awards Committee 2016-19
- *WSU Paid Parental Leave Task Force Co-Chair 2016-17*
- WSU Academic Showcase Committee 2015-2019
- CAHNRS Building Committee for Plant Sciences Building REC5, 2016-2019
- WSU Conflict of Interest Committee, Chair 2016-2019
- WSU Office of Research Advisory Council 2015-2019
- *WSU Multicultural Student Services Team Mentoring Program Mentor 2015-18*
- WSU Office of Research Implementation Effectiveness Council 2015-2018
- Search Committee Chair for WSU CAHNRS Office of Research Grant Writer Specialist 2015
- Search Committee member for WSU CAHNRS Office of Research Business Development Specialist Position 2015
- Search Committee member for WSU CAHNRS Communications specialist position 2015
- *Search Committee Chair for Administrative Assistant for ADVANCE at WSU 2015*
- Executive Review Group, "120-Day Study on the WSU Research Enterprise" 2014
- College of Agricultural, Human, and Natural Resource Sciences Emerging Research Issues Committee & Chair, 2014-2018
- College of Agricultural, Human, and Natural Resource Sciences Tenure & Promotion Committee 2014
- Faculty Senator, Entomology & School of Food Science 2014-2015
- *President of the Association for Faculty Women, 2015-2016*
 - Led and coordinated strategic planning for the organization whose mission is to promote successful and satisfying careers for women by creating opportunities for members to connect to environments that are welcoming, supportive, and empowering.
- Faculty Status Committee 2014-2015
- Auvil Undergraduate Research Scholarship Reviewer, Fall 2010-2013
- CAHNRS Undergraduate Scholarship Reviewer, Spring 2011-2014
- University Hearing Committee Panel, 2012-2015
- School of Biological Sciences Animal EvoDevo Hiring Committee, 2009-2010
- Co-Chair, Research & Arts Committee, 2010-2012, 2013-2014
 - Led the New Faculty Seed grant panel on behalf of the VP of Research
 - Reviewed all Centers, Institutes, and Laboratories on behalf of the Faculty Senate

- Research & Arts Committee, 2009-2014
- *Transforming Leadership Training (TiLT) working group, 2008-2010*
- *Liaison to the Provost's Office for the Association of Faculty Women, 2008-2011*
- *Executive officer in the WSU Association of Faculty Women, 2007-2011, 2014-*
- *Future Cougars of Color Program, Scholarship Interviewer, April 4, 2008, 2020*

Disciplinary Service

- *Member, Entomological Society of America Diversity & Inclusion Committee, 2019-current*
- Member at Large, Pacific Branch of the Entomological Society of America, 2018-2020
- Science Communication Chair for the Pacific Branch of the Entomological Society of America Annual Meeting 2018, 2019
- Program co-chair for the Pacific Branch of the Entomological Society of America 2015-2016; 2016-2017
- Chair and Co-Chair of the Pacific Branch of the Entomological Society of America Student Competition 2012-2014

Washington State University, Department of Entomology Service

- *Initiated the new Diversity & Inclusion Committee, a standing committee in 2020*
- Strategic Planning Initiatives 2017-current
- Graduate Program Assessment Committee, Chair 2014
- Seminar/Colloquium Committee 2013-2014, 2016-2017, 2022
- Insect Plant Interactions Hiring Committee 2011-2013
- Graduate Curriculum Committee, 2009-2012, 2014
- Graduate Program Coordinator 2007-2010, 2014
- Graduate Admissions Committee 2007-2013
- Arthropod Vector Biologist Hiring Committee, 2006-2007
- *Recruiter for WSU CAHNRS at Wapato High School "WSU Day", Dec. 2006*
- WSU/UI Joint Seminar Series co-organizer, 2006 & 2008
- WSU M.T. James Entomological Museum Tour Guide 2005-2013
- Graduate Student Coordinator 2004-2005
- Strategic Planning Committee 2003
- Scholarship Committee 2002-2005
- E.P. Catts Memorial Lecture organizer & host, 2004, 2011 (Haynes), 2014 (Nijhout), 2017 (Brown)

Honors & Awards

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| 2023 | <i>WSU College of Agricultural, Human, and Natural Resource Sciences Faculty Administrator Award</i> |
| 2022 | <i>HERS Leadership Institute: a leadership development program for women in higher education, Intensive HLI, June 7-16, 2021 Denver, CO</i> |
| 2021 | <i>Member of Alpha Alpha Alpha, First Generation Honors Society, Washington State University</i> |
| 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
- 2015-2016 LEAD21: Leadership for the 21st 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.
- 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*. Scientific Reports.
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. 2022. The draft genome sequence of Japanese rhinoceros beetle *Trypoxylus dichotomus*. Scientific Reports.
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 Moural, 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 polyphonic 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
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Funded Grants

- 2019-2023** *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 50th 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.
- 18th 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.

Service to Research & Scholarship:

USDA Grant Panelist – March 2021

NSF Grant Panelist – February 2023 ADVANCE; March 2013 Animal Physiology (International Collaborations in Organismal Biology between US and Israeli Investigators); October 2012 Behavioral Systems Cluster(Integrative Organismal Systems); April 2012 Behavioral Systems Cluster (IOS); October 2011 Organism-Environment Interactions Cluster (IOS); April 2010 Evolutionary Processes Cluster (IOS); March 2021 Integrative Physiological Processes (IOS)

Grant Reviewer for: WSU BIOAG grants program; NSF PIRE (Partnership for International Research & Education) program, BARD- The U.S.-Israel Binational Agricultural Research & Development Fund, University of Missouri Research Board, New Zealand Marsden Fund, Netherlands Organisation for Scientific Research, Portugese Foundation for Science & Technology, National Science Foundation, Israel National Science Foundation, U.S. Department of Agriculture Competitive Grants Program

Reviewing Editor for *Journal of Evolutionary Biology*, 2008-2012, *Frontiers in Experimental Endocrinology* 2014-2019; **Reviewer for:** *the ADVANCE journal; Insect Molecular Biology and Biochemistry; Insects; BMC Biology; Acta Biomaterialia, PLoS Genetics; Current Opinion in Insect Science, Biological Invasions, Proceedings of the Royal Society of London B, American Journal of Potato Research, Behavioral Ecology and Sociobiology, PLoS Genetics, The American Naturalist, Journal of Experimental Biology, Evolution, EMBO Reports, Canadian Journal of Zoology, PLoS One, Journal of Experimental Zoology Part A: Ecological Genetics & Physiology, Evolution; Journal of Morphology, Journal of Insect Science, Biological Journal of the Linnean Society, Apidologie, Journal of Insect Physiology, European Journal of Entomology, Developmental Biology, Cell and Tissue Research, Journal of Insect Behavior, Journal of Experimental Zoology Part B: Molecular &*

01/07/2023

*Developmental Evolution, Seminars in Cell & Developmental Biology, Gene, Journal of Economic Entomology, Journal of Physiology Education; **Invited Associate Editor for:** Journal of Experimental Zoology*