

**CURRICULUM VITAE**

**Name:** Lindsey C. Perkin  
**Title:** Research Molecular Biologist  
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**A. Education/Training**

INSTITUTION AND LOCATION	DEGREE	YEAR (s)	FIELD OF STUDY
Kansas State University	Ph.D.	2012	Biology
Texas Christian University	M.S.	2007	Biology
Texas Christian University	B.S.	2005	Biology

**B. Positions and Employment**

- November 2019 to present: Research Molecular Biologist, United States Department of Agriculture, Agricultural Research Service, Insect Control and Cotton Disease Research Unit, College Station, TX.
- May 2019 to November 2019: ORISE Fellow, United States Department of Agriculture, Agricultural Research Service, Insect Control and Cotton Disease Research Unit, College Station, TX.
- May 2018 – May 2019: Molecular Biologist (postdoc), United States Department of Agriculture, Agricultural Research Service, Insect Control and Cotton Disease Research Unit, College Station, TX.
- April 2013 to May 2018: Molecular Biologist (postdoc), United States Department of Agriculture, Agricultural Research Service, Stored Product Insect and Engineering Unit, Manhattan, KS.
- June 2012 to April 2013: Postdoctoral Research Associate, Emory University, Department of Biology, Atlanta, GA.

**C. Awards and Honors**

- 2024, USDA, ARS SciNet Fellow
- 2021, Headquarters funded ARS Postdoctoral Research Associate Program Class of 2021
- 2020, 2018, 2017, 2016, 2015, 2014, USDA-ARS Outstanding Annual Performance Award

**D. Professional Experience**

Dr. Lindsey Perkin has 10 years of experience as a Research Molecular Biologist with the United States Department of Agriculture, Agriculture Research Service (USDA-ARS). Her contributions on topics in genomics, transcriptomics, and gene disruption technologies include 30 peer-reviewed papers, as many invited presentations, and organization of many symposiums at international meetings. Examples of Dr. Perkin's work include sequencing and assembling reference quality genomes, analyzing differentially expressed genes via RNA-seq, functionally

annotating genes via RNA interference, and amplicon sequencing and analysis to determine communities. Based on Dr. Perkin's expertise she was awarded and supervises two postdoctoral students (ARS Headquarters postdoctoral fellow program and USDA-ARS ORISE SciNet fellow program).

#### **E. Grants Received**

- Perkin, L. C. 2023. USDA-ARS SciNet Fellow Program (\$142,000)
- Perkin, L. C. (*PI*) and Suh, C. P.-C. (*Co-PI*), 2023-2024. Analysis of plant DNA in the stink bug gut to determine host plant utilization. Cotton Inc. (\$48,000).
- Perkin, L. C. (*PI*) and Suh, C. P.-C. (*Co-PI*), 2021-2022. Boll weevil transcriptome assembly and identification of genes differentially expressed during pheromone production and following malathion exposure. Cotton Inc. (\$48,000)
- Perkin, L. C. (*PI*) and Suh, C. P.-C. (*Co-PI*), 2022. Y4 SNP-based diagnostic tools for the rapid identification of the boll weevil (*Anthonomus grandis grandis*) and related weevil species. USDA-APHIS (\$25,000)
- Perkin, L. C. (*PI*), 2021. Headquarters funded ARS Postdoctoral Research Associate Program Class of 2021, USDA-ARS (\$140,000)
- Suh, C. P.-C. (*PI*) and Perkin, L. C. (*Co-PI*), 2019-2021. Y1-Y3 SNP-based diagnostic tools for rapid identification of the boll weevil (*Anthonomus grandis grandis*) and other *Anthonomus* species. USDA-APHIS (\$233,500)
- Suh, C. P.-C. (*PI*) and Perkin, L. C. (*Co-PI*), 2019-2020. DNA quantity and integrity of trap-captured boll weevils. Cotton Inc. (\$41,000)
- Suh, C. P.-C. (*PI*) and Perkin, L. C. (*Co-PI*), 2018-2019. Detection and biologically based management of row crop pests concurrent with boll weevil eradication. ARS Innovation Fund (\$25,000)

#### **LIST OF PUBLICATIONS (last four years)**

Calvin, W., Gore, J., Jeremy, G., Perkin, L.C., and Kerns, D.L. Potential for grain sorghum as a trap and nursery crop for *Helicoverpa zea* and its natural enemies and dissemination of HearNPV into cotton. (*In Review Agronomy*).

Cohen, Z. P., **Perkin, L. C.**, Raszick, T.J., Sim, S.B, Geib, S.M., Childers, A.K., Sword, G.A., and Suh, C.P.-C. Pangenomics links boll weevil expansion with cotton cultivation. (*In Review Mol. Ecol. Res.*)

Cohen, Z. P., **Perkin, L. C.**, Wagner, T. A., Yu, J., Arick, M. A., Grover, C. E., Bell, A. A., Liu, J., Udall, J. A., and Suh, C. P.-C. Nematode-resistance loci in Upland cotton genomes are associated with structural differences, G3 Genes|Genomes|Genetics, jkae140. 2024.

Raszick, T.J., **Perkin, L.C.**, Godoy, A., Shirley, X.A., Wright, K., Martin, P., Suh, C.P.-C., Ruiz-Arce, R. and Sword, G.A. A new qPCR assay for the rapid diagnosis of *Anthonomus grandis* subspecies. Insects. 14(11): 845. 2024. <https://doi.org/10.3390/insects14110845>.

Raszick, T.J., **Perkin, L.C.**, Shirley, X.A., Ruiz-Arce, R., Kramer, Z.A., Suh, C.P.-C. and Sword, G.A. Source tracing of *Anthonomus grandis* captured in areas of the USA where the

species had previously been eradicated. *J. Pest Sci.* 2024. <https://doi.org/10.1007/s10340-023-01656-y>.

**Perkin, L.C.**, Cohen, Z.P., Carlson, J.W., and Suh, C.P.-C. The transcriptomic response of the boll weevil, *Anthonomus grandis grandis* Boheman (Coleoptera: Curculionidae), after exposure to the organophosphate insecticide, malathion. *Insects*. 14(2): 197. 2023.

**Perkin, L.C.**, Hamons, K., Suh, C.P.-C., and Sword, G.A. Amplicon sequencing of plant material links cotton fleahopper to host plants. *J. Cotton Sci.* 27(1):1-9. 2023.

Cohen, Z.P., **Perkin, L.C.**, Sim, S.B, Stahlke, A.R., Geib, S.M., Childers, A.K., Smith, T.P.L., and Suh, C. Insight into weevil biology from a reference quality genome of the boll weevil, *Anthonomus grandis grandis* Boheman (Coleoptera: Curculionidae). *G3: Genes Genomes Genet.* jkac309. 2022.

Oppert, B., Muszewska, A., Steczkiewicz, K., Šatović-Vukšić, E., Plohl, M., Fabrick, J., Vinokurov, K., Koloniuk, I., Johnston, S., Smith, T., Guedes, R., Terra, W., Ferreira, C., Dias, R., Chaply, K., Elpidna, E., Tereshchenkova, V., Mitchell, R., Jenson, A., McKay, R., Shan, T., Cao, A., Miao, Z., Xiong, C., Jiang, H., Morrison III, W., Willian, K., Sergey, S., Schlipalius, D., Lorenzen, M., Bansal, R., Wang, Y-H., **Perkin, L.**, Poelchau, M., Friesen, K., Olmstead, M., Scully, E., and Campbell, J. The genome of *Rhyzopertha dominica*: Adaptation for success. *Genes* 13(3): 446. 2022. <https://doi.org/10.3390/genes13030446>.

**Perkin, L.C.**, Perez, J.L., and Suh, C.P.-C. The identification of boll weevil, *Anthonomus grandis grandis* (Coleoptera: Curculionidae), genes involved in pheromone production and pheromone biosynthesis. *Insects* 12(10): 893. 2021. <https://doi.org/10.3390/insects12100893>.

**Perkin, L.C.**, Bell, A., Hinze, L.L., Suh, C.P.-C., Arick, M.A., Peterson, D.G., and Udall, J.A. Genome assembly of two nematode-resistant cotton genotypes (*Gossypium hirsutum* L.). *G3* 11(11): jkab276. 2021. <https://doi.org/10.1093/g3journal/jkab276>.

**Perkin, L.C.**, Smith, T.P.L, and Oppert., B. Variants in the mitochondrial genome sequence of *Rhyzopertha dominica* (Fabricius) (Coleoptera: Bostrycidae). *Insects*. 12(5): 387. 2021. <https://doi.org/10.3390/insects12050387>.

**Perkin, L.C.**, Oppert, B., Duke, S., and Suh, C.P.-C. Assessment of DNA integrity from trap-captured boll weevil (Coleoptera: Curculionidae) for use in new PCR-based diagnostic tool. *Journal of Economic Entomology*. 114(3): 1321-1328. 2021. <https://doi.org/10.1093/jee/toab073>.

Raszick, T.J., Dickens, C.M., **Perkin, L.C.**, Tessnow, A.E., Suh, C.P.-C., Ruiz-Arce, R., Boratynski, T.N., Falco, M.R., Johnston, J.S., and Sword, G.A. Population genomics and phylogeography of the boll weevil, *Anthonomus grandis* Boheman, (Coleoptera: Cuculionidae), in the United States, northern Mexico, and Argentina. *Evolutionary Applications*. 14(7): 1778-1793. 2021. <https://doi.org/10.1111/eva.13238>.

Hamons, K., Raszick, T.J., **Perkin, L.C.**, Sword, G., and Suh, C.P.-C. Cotton fleahopper biology and ecology relevant to the development of insect resistant management strategies. *Southwestern Entomologist*. 46(1): 1-16. 2021. <https://doi.org/10.3958/059.046.0101>.

Oppert, B., **Perkin, L.C.**, Lorenzen, M., and Dossey, A.T. Transcriptome analysis of life stages of the house cricket, *Acheta domesticus*, to improve insect crop production. *Scientific Reports*. 10: 3471. 2020.