# Jessica L. Shoup Rupp

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## Education

Ph.D., Plant Pathology, Kansas State University, 2015.
Graduate Certification in Applied Statistics, Kansas State University, 2014.
B.S., Chemistry, Pittsburg State University, 2009.
B.S., Biology, Pittsburg State University, 2009.

## Professional Experience

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|---|---|
| 2018-Present | Assistant Professor, Dept. of Plant Pathology, Kansas State University |
| 2015-2018 | Assistant Professor and Extension Plant Pathology Specialist, Montana State University |

## Publications

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**Explanation of contributions by J Rupp to multiple author publications:**

1. Principal investigator
2. Primary author/corresponding author
3. Secondary investigator
4. Secondary author
5. Collaborative investigator
6. Supervised primary author

Graduate students and students from the Rupp Lab are delineated by **

## Patents

1. Fellers, J. P., Trick, H. N., Cruz, L., and **Rupp, J. L. S.** (2020) Plant germplasm resistant to RNA viruses, U.S. Patent Publication number: 20200216856, Granted 04/28/2020 **(4).**
2. Fellers, J. P., Trick, H. N., Cruz, L., and **Rupp, J. L. S.** (2018) Plant germplasm resistant to RNA viruses, U.S. Patent US9909139B2 Granted 03/06/2018. **(4).**

## Journal Articles

1. Ranabhat, N.B**., Bruce, M.A., Fellers, J.P., and **Rupp, J.L.S**., (2022) A reproducible methodology for absolute viral quantification and viability determination in mechanical inoculations of wheat streak mosaic virus. Tropical Plant Pathology. **47**, 553–561. doi:10.1007/s40858-022-00507-y. **KAES: 21-067-J. (1,2,6)**

2. Kumssa, T., **Rupp, J.L.S**., Fellers, M.C., Fellers, J.P., and Zhang, G., (2019). An isolate of *Wheat streak mosaic virus* from foxtail overcomes *Wsm2* resistance in wheat. Plant Pathology. 68: 783-789. doi:10.1111/ppa.12989. **KAES: 17-026-J. (4).**
3. Fellers, J.P., Webb, C., Fellers, M.C., **Rupp, J.L.S.,** and De Wolf, E., (2019) Wheat virus identification in infected tissue using nanopore sequencing technology. Plant Disease. 103: 2199-2203. doi.org/10.1094/PDIS-09-18-1700-RE. **KAES 19-059-J. (4). *Top 10 most downloaded paper of 2019, Plant Disease.**
3. **Rupp, J. L. S**., Cruz, L. F., Trick, H. N., and Fellers, J. P., (2019) RNAi mediated silencing of endogenous wheat genes *eIF(iso)4E-2* and *eIF4G* induce resistance to multiple RNA viruses in transgenic wheat. Crop Science, 59:1-10. doi: 10.2135/cropsci2018.08.0518. **KAES 18-134-J. (2).**
4. **Rupp, J. L. S**., Cruz, L. F., Trick, H. N., and Fellers, J. P., (2016) RNAi Mediated, stable resistance to *Triticum mosaic virus* in Wheat. Crop Science*,* 56(4), 1602-1610. **KAES: 16-061-J. (2).**
5. Segovia, V., Bruce, M., **Rupp, J. L. S**., Huang, L., Bakkeren, G., Trick, H. N., and Fellers, J. P. (2016) Two small secreted proteins from *Puccinia triticina* induce reduction of β - glucoronidase transient expression in wheat isolines containing Lr9, Lr24, and Lr26. Canadian Journal of Plant Pathology*,* 38(1), 91-102. **KAES: 15-052-J. (3).**
6. **Rupp, J. L. S**., Simon, Z. G., Gillett-Walker, B., and Fellers, J. P., (2014). Resistance to *Wheat streak mosaic virus* identified in synthetic wheat lines, Euphytica, 198(2), 223-229. **KAES: 13-017-J. (2).**
7. Cruz, L*. **Rupp, J. L. S.** *, Trick, H. N., and Fellers, J. P., (2014). Stable resistance to *Wheat streak mosaic virus* in wheat mediated by RNAi, In Vitro Cellular & Developmental Biology – Plant, Vol. 50, Issue 6, pg. 665-672**. KAES: 13-071-J. (*2).**

**<u>Technical Reports and Extension Publications</u>**

1. Zhang, G., Martin, T.J.; Fritz, A.K., Li, Y., Seabourn, B.W., Chen, R.Y., Bai, G., Bowden, R., Chen, M., **Rupp, J.L.S**., Jin, Y., Chen, X., Kolmer, J., Marshall, D., (2022) Registration of 'KS Hamilton' Hard Red Winter Wheat, Journal of Plant Registrations, manuscript ID is JPR-2021-04-0040-CRC.R1. **(3,4)**
2. Mangel, D.,** Davis, M.A., Bruce, M.A., Andersen Onofre, K., and **Rupp, J.L.,** (2022a) Evaluation of foliar fungicides for the control of tan spot in winter wheat, 2021. Plant Disease Management Report (PDMR), 16:CF077 (1,2,6).
3. Mangel, D.,** Davis, M., Bruce, M., Fritz, A., and **Rupp, J.L.,** (2022b) Reaction of Kansas Interstate Nursery winter wheat accessions to Fusarium head blight, 2020. Plant Disease Management Report (PDMR), 16:CF076 **(1, 2, 6).**
4. Mangel, D.,** Davis, M.A., Bruce, M.A., **Rupp, J.L.,** Carver, B., Ibrahim, A., and Rudd, J., (2022c) Reaction of Oklahoma and Texas winter wheat accessions to Fusarium head blight, 2020. Plant Disease Management Report (PDMR), 16:CF075 **(1,2,6).**
5. Ranabhat, N.,** Bruce, M., Davis, M., Fritz, A.K., Zhang, G., and **Rupp, J.L.,** (2021a) Reaction of selected Kansas winter wheat cultivars to Barley yellow dwarf, 2020. Plant Disease Management Report (PDMR), 15:CF094. **(1, 2, 6).**

6. Ranabhat, N.,** Bruce, M., Fritz, A.K., Guttieri, M., and **Rupp, J.L.,** (2021b) Reaction of selected Kansas winter wheat cultivars to Wheat streak mosaic, 2020. Plant Disease Management Report (PDMR), 15:CF093. **(1, 2, 6).**
7. Mangel, D.,** Davis, M., Bruce, M., DeWolf, E., and **Rupp, J.L.,** (2021a) Evaluation of foliar fungicides for control of tan spot of winter wheat, 2020. Plant Disease Management Report (PDMR), 15:CF092 **(1, 2, 6).**
8. Mangel, D., **Bruce, M., Davis, M., and **Rupp, J.L.,** (2020b) Reaction of Kansas and Nebraska winter wheat accessions to tan spot, 2020. Plant Disease Management Report (PDMR), 15:CF091**. (1, 2, 6).**
9. Ranabhat, N.,** Bruce, M., Davis, M., and **Rupp, J.L.,** (2020a) Reaction of selected Kansas winter wheat cultivars to Barley yellow dwarf, 2019. Plant Disease Management Report (PDMR), 14:CF088. **(1, 2, 6).**
10. Mangel, D., **Bruce, M., Davis, M., and **Rupp, J.L.,** (2020a) Evaluation of foliar fungicides for control of tan spot of spring wheat, 2019. Plant Disease Management Report (PDMR), 14:CF089 **(1, 2, 6).**
11. Mangel, D.**, Bruce, M., Davis, M., and **Rupp, J.L.,** (2020b) Reaction of Kansas Intrastate Nursery winter wheat accessions to Fusarium head blight, 2019. Plant Disease Management Report (PDMR). 14:CF090. **(1, 2, 6).**
12. Ranabhat, N.,** Bruce, M.A., Fritz, A.K., Wegulo, S., Baezinger, P.S., and **Rupp, J.L.,** (2020b) Reaction of Kansas and Nebraska winter wheat to Fusarium head blight (FHB), 2019. Plant Disease Management Report (PDMR). 14:CF091. **(1,2,6).**
13. **Rupp, J.L.S.,** Bruce, M., and Paulitz, T., (2019) Rhizoctonia seed, seedling and root rot of lentil PP1913-3. Lentil Disease Diagnostic Series PP1913, NDSU Extension Publications. **KAES: 19-177-T. (1, 2).**
14. Bruce, M., Crutcher, F., and **Rupp, J.L.,** (2018) Pulse Crop Fungal Disease Management, Crop and Soils Magazine, vol. 51, No. 3, pg. 4-39. **(1, 2, 6).**
15. Bruce, M. A., Kephart, K., and **Rupp, J. L.,** (2017) Strategies for Control of Rhizoctonia Crown and Root Rot in Sugarbeet in Montana. Sugarbeet Research and Extension Reports, 2016, 183-185. **(1, 2, 6).**
16. **Rupp, J. L.,** Kephart, K., and Jacobsen, B., (2017) Strategies for Control of Rhizoctonia Crown and Root Rot in Sugarbeet in Montana 2015. Sugarbeet Research and Extension Reports, 2016, 180-182. **(1, 2).**
17. **Rupp, J. L**., and Jacobsen, B. (2017) Important Foliar and Viral Diseases in Sugarbeet (pp. 12). Bozeman, MT: MontGuide. https://store.msuextension.org/Products/Important-Foliar-and-Viral-Diseases-in-Sugarbeet__MT201710AG.aspx **(1, 2).**
18. Dyer, A., Johnston, J., Tharp, C., **Rupp, J**., Lane, T., and Fulbright, J., (2017) Small Grain Seed Treatment Guide (pp.11). Bozeman, MT: MontGuide. https://store.msuextension.org/Products/Small-Grain-Seed-Treatment-Guide__MT199608AG.aspx **(3, 4).**
19. **Rupp, J. L**., and Jacobsen, B. (2017) Bacterial and Fungal Diseases of Potato and their Management (pp. 9). Bozeman, MT: MontGuide. https://store.msuextension.org/Products/Bacteria-and-Fungal-Diseases-of-Potato-and-Their-Management__EB0225.aspx **(1, 2).**

20. Burrows, M., Fuller, K. B., and **Rupp, J. L**. (2017) Fungicide Use in Field Crops: Classification, Risks, Use, and Economics (pp. 8). Bozeman, MT: MontGuide. https://store.msuextension.org/Products/Fungicide-Use-in-Field-Crops-Classification-Risks-Use-and-Economics__MT201705AG.aspx **(3, 4).**
21. **Rupp, J. L**., and Zidack, N. (2016) Late Blight in Garden Potatoes (pp. 2). Bozeman, MT: Montana State University Extension. https://store.msuextension.org/Products/Late-Blight-in-Garden-Potatoes__MT201615AG.aspx **(1, 2).**
22. **Rupp, J. L**., Jacobsen, B., and Zidack, N., 2018 Potato Virus and Aphid Management Guide http://msuextension.org/pspp/toolspotato.html
23. **Rupp, J. L.,** and Jacobsen, B. 2018 Potato Disease Management Guide http://msuextension.org/pspp/documents/2018PotatoGuideV1.pdf **(1, 2).**
24. **Rupp, J. L**., Jacobsen, B., and Zidack, N., 2017 Potato Virus and Aphid Management Guide http://msuextension.org/pspp/documents/VirusManagementGuide2017v2 BJJJR3.pdf. Archived. **(1, 2).**
25. **Rupp, J. L.,** and Jacobsen, B. 2017 Potato Disease Management Guide http://msuextension.org/pspp/documents/2017PotatoGuide.pdf. Archived. **(1, 2).**
26. **Rupp, J. L.,** and Jacobsen, B., 2016 Potato Disease Management Guide. http://msuextension.org/pspp/documents/2016PotatoDiseaseManagementGuideMarch21.pdf Archived. **(1, 2).**
27. **Rupp, J. L**., and Zidack, N. 2016 Late Blight Quick Reference Guide http://msuextension.org/pspp/toolspotato.html **(1, 2).**
28. **Rupp, J. L**., What's the deal with GMO's?, factsheet **(1, 2).**

## Book Chapters

1. Bruce, M., and **Rupp, J.L.** (2022) Viral diseases of hemp. Invited book chapter. Compendium of Cannabis Diseases. APS Press. https://doi.org/10.1094/9780890546284**. KAES:20-066-B. (1,2,6).**
2. Bruce M.A., and **Rupp J.L.S** (2019) *Agrobacterium*-Mediated Transformation of *Solanum tuberosum* L., Potato. In: Kumar S., Barone P., Smith M. (eds) Transgenic Plants. Methods in Molecular Biology, vol 1864. Humana Press, New York, NY**. KAES: 19-133-B (1,2,6).**
3. Jacobsen, B.J., Bergman, J., Draper, M., and **Rupp, J.L.S**, Diseases of Safflower (Carthamus tinctorius L.) Chapter 15, Safflower. APS Press. **KAES: 21-064-B (4).**

## Manuscripts in Preparation

1. Bian, R., Liu, N., Xu, Y., Su, Z., Chai, L., Bernardo, A., St. Amand, P., Fritz, A., Zhang, G., Rupp, J.L., Akhunov, E., Jordan, K., and Bai, G., Quantitative trait loci for rolled leaf trait in a wheat EMS mutant from Jagger, TAAG-D-22-00551, Theoretical and Applied Genetics. Submitted August 17, 2022.
2. Yuzhou Xu[a], Yaoguang Li[a,b], Ruolin Bian[a], Allan K. Fritz[a], Guorong Zhang[a], Yanhong Dong[c], Lanfei Zhao[a], Yunfeng Xu[a,d], Nida Ghori[a,e], Amy Bernardo[f], Paul St. Amand[f], Jessica L. Shoup Rupp[g], Myron Bruce[g], Wei Wang[g], Eduard Akhunov[g], Brett Carver[h] and Guihua Bai[f,a*] Genetic architecture of quantitative trait loci (QTL) for FHB resistance and agronomic traits in a hard winter wheat population.

3. Mangel, D., Bruce, M., Bowden, R., and Rupp, J.L., First report of ToxA in Bipolaris sorokiniana in Kansas, and report of ToxA haplotype diversity in Kansas pathogens, Targeted submission: Plant Disease, Mar 2023 submission
4. Ranabhat, N., Fellers, J., Bruce, M., and Rupp, J.L., Genetic and evolutionary characterization of brome mosaic virus isolates and their association with other wheat viruses, Targeted submission: Frontiers in Plant Science, Abstract accepted for Dec 2022, Feb submission.

**Germplasm Releases**
2022 KS Providence
2022 KS Big Bow
2022 KS Territory
2022 KS Hamilton
2021 KS Ahearn
2020 KS Hatchett

**Presentations (presenter in bold)**

1. **Rupp, J.,** (2023). Fusarium Head Blight Management. Midwest Crops Meeting, St. Joseph, MO, January 17, 2023. **(1,2).**
2. **Rupp, J.,** (2023). Wheat Disease Recommendations for 2023. Midwest Crops Meeting, St. Joeseph, MO, January 17, 2023. **(1,2).**
3. **Dahal, A., **** Bruce, M., Turner, K., and Rupp, J. (2022). Fungal Species Associated with Kernza. US Wheat and Barley Scab Initiative Dec 6-9, 2022, Tampa, Fl. **(1,2,6).**
4. **Tibadki, L.,**** Bai, G., Rupp, J., and Jordan, K., Haplotype-Informed Prediction of Fusarium head blight resistance in USA wheat breeding programs, US Wheat and Barley Scab Initiarive, Dec 6-9, 2022, Tampa, FL**, (1,2,6).**
5. **Dahal, A.,**** Bruce, M., Turner, K., Rupp J., (2022). Molecular and Morphological Characterization of Fusarium species in Kernza. Plant Health 2022, The American Phytopathological Society,August 6-10, 2022, Pittsburgh, PA. **(1,2,6).**
6. **Davis, D.,**,** Dahal, A., Bruce, M., Davis, M.A., and Rupp, J.L., (2022) Analysis of isolates of Fusarium head blight collected from Kansas, Summer Undergraduate Research Showcase, July 28, 2022, Manhattan, KS. **(1,2,6).**
7. **Dahal, A.,**** Bruce, M., Turner, K., Rupp J., (2022). Molecular and Morphological Characterization of Fusarium spp. found in Kernza. Kernza Conference Lightning Talk, Kernza Meeting, Salina, KS 2022. **(1,2,6).**
8. **Dahal, A.,**** Bruce, M., Turner, K., Rupp J., (2022). Molecular and Morphological Characterization of Fusarium spp. found in Kernza. Student Poster Presentation, Kernza Meeting 2022, Salina, KS **(1,2,6).**
9. **Rupp, J.,** (2022). Applied Wheat Pathology at Kansas State University, Farm Bureau Annual Wheat Advisory Meeting, February 24, 2022. **(1,2).**
10. **Ranabhat, N**.,** Fellers, J., Bruce, M., and Rupp, J.L., (2021). First detection of Brome mosaic virus associated with other wheat viruses in Kansas wheat using Nanopore sequencing, Research and the state 2021, annual Capitol Graduate Research Summit (CGRS) selection, Kansas State University, Manhattan KS, October 27, 2021. **(1,2,6).**

11. **Dahal, A.,**** Bruce, M., Turner, K., Treffer, L., Rupp J., (2021). Kernza, A local grain with a big future. Research and the State Poster Presentation, Kansas State University, Manhattan, KS October 20, 2021. **(1,2,6).**
12. **Mangel, D.**,** Elmore, E., Reinhart, K., Rupp, J., Bowden, B. (2021). Wheat Bacterial Leaf Blight Susceptibility is Tightly Linked to *Sr2*. 2021 Hard Winter Wheat Rust Symposium. **(1,3,6).**
13. **Mangel, D.**, **Bruce, M., De Wolf, E., Rupp, J. (2021). Race structure of necrotrophic effectors in the Kansas *Pyrenophora tritici-repentis* population. Plant Health 2021, The American Phytopathological Society. **(1,2,6).**
14. **Mangel, D.**,** Elmore, E., Reinhart, K., Rupp, J., Bowden, B. (2021). Elucidating the role of *Sr2* in bacterial leaf blight development through QTL analysis. 2021 APS North Central Division Meeting, The American Phytopathological Society. **(1,3,6).**
15. **Ranabhat, N.,**** Bruce, M., Fellers, J., and Rupp J., (2021) Viral quantification and viability determination in mechanical inoculation of Wheat streak mosaic virus, Plant Health 2021, research on-demand presentation, America Phytopathological Society Meeting, August 2-6, 2021, **(1,2,6).**
16. **Ranabhat, N**.,** Fellers, J., Bruce, M., and Rupp J., (2021) Characterization of Kansas wheat virus populations using nanopore sequencing. North Central America Phytopathological Society, Division Meeting, June 15-16, 2021, **(1,2,6).**
17. **Ranabhat, N.,**** Bruce, M., Fellers, J., and Rupp J. 2021. Wheat streak mosaic virus prevalence in Kansas winter wheat fields. Kansas Academy of science, 153rd Annual Meeting, April 10, 2021, **(1,2,6).**
18. **Ranabhat, N. B.**,** Bruce, M., Fellers, J., and Rupp J. L. (2021), A method of accurate viral quantification and viability determination in mechanical inoculation of Wheat streak mosaic virus. K-State GRAD Forum, March 31, 2021, **(1,2,6).**
19. **Ranabhat, N. B**.,** 2021. How does tracking a plant virus help to control it? Kansas State University Three Minute Thesis Competition, Manhattan KS, Feb. 19, 2021, **(1,2,6).**
20. **Mangel, D.**,** Bruce, M., Davis, M., Rupp, J. (2020). Fungicide Efficacy for Control of Fusarium head blight under field nursery conditions. 2020 National Fusarium Head Blight Forum. **(1,2,6).**
21. **Mangel, D.**,** Bruce, M., De Wolf, E., Bowden, R., Rupp, J. (2020). *ToxA* presence and haplotype diversity in the Kansas *Bipolaris sorokiniana* population. Plant Health 2020, The American Phytopathological Society. **(1,2,6).**
22. **D. Mangel**** (2020). The Evolving Relationship between Kansas Wheat and Fungal Necrotrophic Pathogens, Departmental Seminar, K-State Department of Plant Pathology, 2020. **(1,2,6).**
23. **Mangel, D**., Bruce, M., De Wolf, E., Bowden, R., and Rupp. J.L. (2020) *ToxA* presence and haplotype diversity in the Kansas *Bipolaris sorokiniana* population. American Phytopathological Society Meeting, Plant Health 2020, e-poster, Aug 10-14, 2020. **(1,2,6).**
24. **Ranabhat, N. B.,**** Bruce, M., Fellers, J., and Rupp J. L., (2020) Prevalence of *Wheat streak mosaic virus* in Kansas winter wheat. American Phytopathological Society Meeting, Plant health 2020, eposter. August 10-14. **(1,2,6).**
25. **Ranabhat N**. **B**** (2020). Investigating the dynamics of host-virus interaction between *Wheat streak mosaic virus* and winter wheat. Plant Pathology Departmental seminar, 29th April 2020, **(1,2,6).**

26. **Ranabhat N. B.** 2020. Exercise leadership through peer coaching methods. Plant Pathology Departmental professional development and communication seminar, 28th October 2020, **(1,2,6).**
27. **Mangel, D**.,** Bruce, M., Davis, M., and Rupp. J.L. (2020) Impact of Environmental Conditions on fungicide ability to control Fusarium head blight under field nursery conditions, Poster, 2019 National Fusarium Head Blight Forum, December 8-10, 2019, Milwaukee, WI**. (1,2,6).**
28. **Smith, N.**,** Mangel, D., Beyer, N., Ranabhat, N., Davis, M., Bruce, M., and Rupp, J.L., (2019) Exploring root rot pathogens in wheat-pea rotations in Kansas, REEU Poster session, July 25, 2019, Kansas State University, Manhattan, KS. **(1,2,6).**
29. **Rupp, J.L.,** (2019) In Vitro Biotechnology, Plant Contributed Paper Session, convener, June 9, 2019, Society of In Vitro Biology, Tampa, Fl. **(n/a)**
30. **Navia-Urrutia, M.,** Rupp, J.L.S., Fellers, J.P, and Trick, H.N., (2019), Wheat genome editing via CRISPR/Cas9 to incorporate virus resistance, Poster 096-P1, American Phytopathological Society Meeting, Aug 3-7, 2019, Cleveland, OH. **(4.)**
31. **Navia-Urrutia, M.,** Rupp, J.L.S., Fellers, J.P, and Trick, H.N., (2019), Wheat genome editing via CRISPR/Cas9 to incorporate virus resistance, P-2023, Plant Interactive Poster Session, Society of In Vitro Bioloy, June 8-12, 2019, Tampa, FL. **(4.)**
32. **Navia-Urrutia, M.,** Rupp, J.L.S., Fellers, J.P, and Trick, H.N., (2018) Use of biotechnological tools to incorporate broad virus resistance into wheat, Poster 70-P, International Congress of Plant Pathology, July 29-August 3, 2018, Boston, MA. **(4.)**
33. **Smith, V.,** Bruce, M., Kephart, K., and Rupp, J.L.S., (2018) Comparison of Fungicides for the Control of *Rhizoctonia solani* in sugarbeets, Poster P-55, Joint Meeting of the American Phytopathological Society, Pacific Division and Conference on Soilborne Plant Pathogens, June 25-27, 2018, Portland, OR. **(1,2,6).**
34. **Navia-Urrutia, M.,** Rupp, J.L.S., Fellers, J.P, and Trick, H.N., (2018) Implementing biotechnological approaches to enhance virus resistance in wheat, Poster P-2024, June 2-6, 2018, Society of In Vitro Biology, St. Louis, MO. **(4.)**
35. **Rupp, J.,** (2018) Drones in Ag: The Wild West, Great Plains Diagnostic Webinar Series, January 17, 2018. **(1,2,).**
36. **Rupp, J.,** (2018) Drones in Agriculture: Detecting *Potato virus Y* in the field, November 15, 2017, Montana Potato Improvement Association, Missoula, MT. **(1, 2).**
37. **Rupp, J.,** (2018) Row Crop Pathology in Montana, Montana Agricultural Experiment Station (MAES) Review, Departmental seminar series, November 9, 2017, Montana State University, Bozeman, MT. **(1,2).**
38. Bruce, M., Mangel, D., and **Rupp, J. L.**, (2017) AG MAPSS: Autonomous Guidance Modular Aerial Plant Survey System, Crop-Loss Assessment Poster P-135, American Phytopathological Society, August 5-9, 2017, San Antonio, TX. **(1, 2, 6).**
39. **Harchenko, W**.,** Bruce, M. A., and Rupp, J. L., (2017) RNAi Knockdown of Potato Genes Crucial for *Potato Virus Y* Replication, Interactive Poster Presentation P-2002, June 10-14, 2017, Society of In Vitro Biology, Raleigh, NC. **(1, 2, 6).**
40. **Wintermantel, W.,** Webb, K., and Rupp, J. L. S (2017) Advantages of using 'omics' technologies and bioinformatics for analyzing the impact of pathogens on sugarbeet, Poster, February 27, 2017, American Society of Sugarbeet Technologist, Greenville, SC. **(4).**

41. **Bruce, M. A.,** Kephart, K., and Rupp, J. L., (2017) Sugarbeet Reporting Session, Strategies for Seasonal Control of Rhizoctonia Crown and Root Rot in Sugarbeet, January 10, 2017, Sugarbeet Research and Education Board, Fargo, ND. **(1, 2, 6).**
42. **Harchenko, W**.,** Bruce, M. A., and Rupp, J. L., (2016) Construction of Plasmid Vectors, Departmental Student Seminar, November 14, 2016, Montana State University, Bozeman, MT. **(1, 2, 6).**
43. **Rupp, J. L.,** (2016) Montana Seed Potato Seminar, Slicing Spuds, Montana Potato Improvement Association, Missoula, MT. November 3, 2016. **(1,2)**
44. **Rupp, J. L.,** (2016) US Dry Pea and Lentil Meeting, Effects of Fungal Pathogens on stored Chickpea, US Dry Pea and Lentil, Teleconference. February 24, 2016. **(1, 2).**
45. **Rupp, J. L.,** (2016) Western Sugar Cooperative 2016 Annual Meeting, Sugar beet Improvement through precision genome editing, Western Sugar Cooperative, Loveland, CO (conducted via internet from MT). January 27, 2016. **(1, 2).**
46. **Rupp, J. L.,** (2016) Sugarbeet Reporting Session, Strategies for season long control of Rhizoctonia Root and Crown Rot in Montana, Sugarbeet Research and Education Board, Fargo, ND. January 12, 2016. **(1, 2).**
47. **Harchenko, W.,**** Zidack, N., and Rupp, J.L., (2016) Montana Seed Potato Certification Program, Plant Poster P-2049, June 11-15, 2016, World Congress on In Vitro Biology, San Diego, CA. **(1,2,6).**
48. Rupp, J. L., **Kephart, K**., and Jacobsen, B., (2016) Strategies for Control of Rhizoctonia Crown and Root Rot in Sugar Beet in Montana, June 28, 2016, 2016 SARC Biennial Field Day, MSU/College of Ag/Dept. of Research Centers/Southern Ag Res Center, Huntley, MT**. (1,2).**
49. **Rupp, J. L.,** (2016) Plant and Animal Genome Conferences, "RNAi mediated silencing of endogenous wheat genes *eIF4(iso)E-2* and *eIF4G* induces resistance to Potyviruses *Wheat streak mosaic virus* and *Tritium mosaic virus*," Scherago International, San Diego, CA. January 10, 2016. **(2).**
50. Rupp, J. L., **Kephart, K.**, Maxwell, K., and Jacobsen, B., (2016) Western Sugar Joint Research Committee Project Review, Strategies for Control of Rhizoctonia Crown and Root Rot in Sugar Beet in Montana, January 25, 2016, Western Sugar Cooperative, Loveland, Colorado. **(1, 2).**
51. **Rupp, J. L.,** (2015) RNAi Mediated Silencing of Endogenous Wheat Genes *eIF(iso)4E-2* and *eIF4G* Induces Resistance to Potyviruses *Wheat streak mosaic virus* and *Triticum mosaic virus*, Student Oral Competition, North Central APS, June 11, 2015, East Lansing, MI, *Second place*. **(2).**
52. **Rupp, J. L.**, (2015) RNAi Mediated Silencing of Endogenous Wheat Genes eIF(iso)4E-2 and eIF4G Induces Resistance to Potyviruses *Wheat streak mosaic virus* and *Triticum mosaic virus*, Applications of Biotechnology in Crop Improvement, Society of In Vitro Biology, June 2, 2015 Tucson, AZ. **(2).**
53. **Rupp, J. L.**, (2015) Applications of Biotechnology in Crop Improvement, convener, June 2, 2015, Society of In Vitro Biology, Tucson, AZ. **(2).**
54. **Rupp, J. L.,** (2015) RNAi Mediated *Triticum mosaic virus* resistance in transgenic wheat, Interactive Poster Presentation, June 2, 2015, Society of In Vitro Biology, Tucson, AZ. **(2).**

55. **Rupp, J. L.,** (2015) Two Approaches for virus resistance in wheat, April 23, 2015, Department of Plant Sciences and Plant Pathology, Montana State University, Bozeman, MT. **(2).**
56. **Rupp, J. L.**, (2014) Method for producing plant germplasm resistant to RNA viruses, Kansas State University Distinguished Professors Meeting, September 16, 2014, Kansas State University, Manhattan, KS. **(2).**
57. **Rupp, J. L.,** (2014) RNAi Mediated Silencing of Endogenous Wheat Genes *eIF4(iso)E-2* and *eIF4G* Induces Resistance to Potyviruses *Wheat streak mosaic virus* and *Triticum mosaic virus*, Student Oral Competition, Society of In Vitro Biology, June 2, 2014 Savannah, GA. Third place in Student Oral Competition. **(2).**
58. **Rupp, J. L.,** (2014) Pathogens in the Grape Industry: a lot to "wine" about, April 26, 2014, Department of Plant Pathology, Kansas State University, Manhattan, KS. **(2).**
59. **Rupp, J. L.,** (2013) Method for producing plant germplasm resistant to RNA viruses, Kansas State University Research Foundation Board Meeting, December 5, 2013, Kansas State University Research Foundation, Manhattan, KS. **(2).**
60. **Rupp, J. L.**, (2013) RNAi Mediated Virus Resistance in Transgenic Wheat, Guest lecturer, Plant Virology, December 2, 2013, Department of Plant Pathology, Kansas State University, Manhattan, KS. **(2).**
61. **Rupp, J. L.**, Cruz, L., Fellers, J. P., and Trick, H. N., (2013) RNAi Mediated Viral Resistance in Transgenic Wheat: Stability over five generations, Research and the State, October 28, 2013, Kansas State University, Manhattan, KS. **(2).**
62. **Rupp, J. L.**, Cruz, L., Fellers, J. P., and Trick, H. N., (2012) RNAi Mediated Viral Resistance in Transgenic Wheat: Stability over five generations, P-2031, June 3-6, 2012, World Congress on In Vitro Biology, Bellevue, Washington. **(2).**
63. **Rupp, J. L.**, (2012) RNAi Mediated Virus Resistance in Transgenic Wheat: Stability over five generations, Interactive Poster Presentation, June 7, 2012, Society of In Vitro Biology, Bellevue, Washington.**_(2).**
64. **Rupp, J. L.**, (2012) RNAi-Mediated Virus Resistance in Transgenic Wheat, Ph.D. Proposal Seminar, Department of Plant Pathology, April 11, 2012, Kansas State University, Manhattan, Kansas. **(2).**
65. **Rupp, J. L.**, (2012) RNAi-Mediated Viral Resistance in Transgenic Wheat, Student Poster Presentation, Department of Plant Pathology, Kansas State University, Manhattan Kansas. **(2).**
66. **Rupp, J. L.**, Cruz, L., Fellers, J. P., and Trick, H. N., (2011) RNAi Mediated Virus Resistance in Transgenic Wheat, Student Oral Competition, Society of In Vitro Biology, June 5, 2011 Raleigh, North Carolina. Third place in Student Oral Competition. **(2).**
67. **Rupp, J. L.**, Cruz, L., Fellers, J. P., and Trick, H. N., (2011) RNAi mediated viral resistance in transgenic wheat, 2011 In Vitro Biology Meeting, June 4-8, 2011, Raleigh, North Carolina. **(2).**
68. **Rupp, J. L.**, (2011) How to write and submit a scientific paper, Student Networking Symposium, convener, Society of In Vitro Biology, June 4, 2011, Raleigh, North Carolina. **(2).**
69. **Rupp, J. L.,** (2011) Career pathways for the In Vitro Biologist, Student Networking Luncheon, convener, The Society of In Vitro Biology, June 6, 2011, Raleigh, North Carolina. **(2).**

70. **Rupp, J. L.**, Cruz, L., Fellers, J. P., and Trick, H. N., (2010) RNAi Mediated Viral Resistance in Transgenic Wheat, 12th IAPB World Congress/2010 In Vitro Biology Joint Meetings, June 6-10, St. Louis, MO. **(2).**
71. **Rupp, J. L.,** (2009) Transformation of *Methanobrevibacter smithii*, Undergraduate Senior Honors Research Presentation, Chemistry Colloquium, Pittsburg State University, Pittsburg, Kansas. **(2).**
72. **Rupp, J. L.**, (2009) Plant Transformation Technologies, Biology Senior Exit Presentation, Department of Biology Seminar, December 4, 2009, Pittsburg State University, Pittsburg, Kansas. **(2).**
73. **Rupp, J. L.,** Nelson, C.A., Zegar, I., and McAfee, J., (2009) NMR spectroscopy of an H-RALY-like protein, Undergraduate research presentation, American Chemical Society Meeting, November 12, 2009, Pittsburg, Kansas. **(2).**
74. **Rupp, J. L.,** Nelson, C.A., Zegar, I., and McAfee, J., (2009) An H-RALY-like protein, Undergraduate Research Poster Presentation, Pittsburg State University, March 16, 2009, Pittsburg, Kansas. **(2).**

**Summary of Extension Presentations**

During my time at MSU, I developed and delivered 85 presentations reaching over 5,000 program participants (as of July 23, 2018). These programs were organized by county agents, certified crop advisors, commodity groups and myself. These events focus on providing hands-on training for agricultural professionals and producers throughout the state. A full list of extension presentations is available upon request.

**Teaching**

1. Lecturer, PLPTH 765, Integrated Disease Management, 7 enrolled participants, 2 credit course, Kansas State University, Oct 17-Dec 16, 2022.
2. Lecturer, PLPTH 765, Integrated Disease Management, 7 enrolled participants, 2 credit course, Kansas State University, Oct 19-Dec 9, 2021.
3. Lecturer, PLPTH 765, Integrated Disease Management, 8 enrolled participants, 2 credit course, Kansas State University, Oct 13-Dec 3, 2020.
4. Lecturer, PLPTH 765, Integrated Disease Management, 12 enrolled participants, 2 credit course, Kansas State University, Oct 15-Dec 12, 2019.
5. Guest Lecture, Crop Diseases, PLPTH 585, New technologies for Plant Disease Management 20 participants, Kansas State University, 2019.
6. Guest Teaching, REEU Summer Program, 8 participants, Practical Field Preparation and Disease Scouting, Kansas State University, 2019. Partners: Lucky Mehra and Erick DeWolf.
7. Guest Teaching, REEU Summer Program, 8 participants, Data Analysis, Kansas State University, 2019. Partner: Lucky Mehra
8. Guest Lecture, Biotechnology Class, BIOB 105CS, What's hot, what's not: Advances in Genome Editing, 100 participants, Montana State University, October 10, 2016, Nov. 8, 2017.
9. Guest Lecture, Advanced Plant Pathology PSPP 524, Virology (5 lectures), Integrated Pest Management (2 lectures), 8 participants, Montana State University, Fall 2015, Fall 2017.

10. Guest Lecture, Plant Virology PLPTH 835, Potyviruses in Wheat, 18 participants, Kansas State University, 2013.

**Supervision of post-doctoral research associates**

Dr. Myron Bruce, Feb 2016-2018 (promotion to Assistant Research Professor-Montana State University, Feb 2018)

**Mentorship of Graduate Students**

| **Current Graduate Student (Dates of Mentorship)** | **Role** | **Institution** | **Program/Degree** | **Expected Graduation Date** |
|---|---|---|---|---|
| Lawrence Tidakbi (2022-present | Committee Chair, PI | Kansas State | Ph.D. in Plant Pathology | May 2026 |
| Anusha Dahal (2020-present) | Committee Chair, PI | Kansas State | M.S. in Plant Pathology | May 2024 |
| Nathan Smith | Committee Member | Kansas State | M.S. in Plant Pathology | May 2024 |

| **Past Graduate Student (Dates of Mentorship)** | **Role** | **Institution** | **Program/Degree** | **Position directly after Graduation** |
|---|---|---|---|---|
| Dr. Nar Ranabhat Ph.D. (2018-2022) | Committee Chair, PI | Kansas State | Ph.D. in Plant Pathology, Defended 3/2022 | Post Doctoral Fellow, Dr. James Stack, K-State |
| Dr. Dylan Mangel, Ph.D. (2018-2022) | Committee Chair, PI | Kansas State | Ph.D. in Plant Pathology Defended 3/2022 | Assistant Professor and Extension Specialist, University of Nebraska-Lincoln |
| Dr. Umara Rana, Ph.D. (2018-2020) | Committee Member | Kansas State | Ph.D. in Agronomy Defended 12/2020 | Assistant Professor, University of |

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|---|---|---|---|---|
| | | | | Faisalabad, Pakistan |
| Dr. Uta Stuhr McKelvey, Ph.D. (2016-2020) | Committee Member | Montana State | Ph.D. in Plant Sciences Defended 8/2020 | Research Assistant Professor, Montana State |
| Carmen Murphy (2017-2022) | Committee Member | Montana State | Ph.D. in Plant Sciences Defended Aug 2022 | Post-Doctoral Fellow, Montana State |
| Corrine Melvin (2019) | Committee Member | Kansas State | M.S. in Plant Pathology | Transferred |
| Whitney Harchenko (2016-2018) | Committee Chair, PI | Montana State | Ph.D. in Plant Sciences | Did not graduate |
| Brian Ross (2016-2018) | Committee Member | Montana State | Ph.D. in Plant Sciences | May 2022, switched emphasis |

**Mentorship of Undergraduate Students**

| Student (Dates of Mentorship) | Institution | Major | Project |
|---|---|---|---|
| Danielle Davis (2022) | University of Missouri-Colombia, REEU Student | Plant Sciences | Analyzing isolates of Fusarium head blight from across Kansas |
| Angel DeTrinidad (2021) | California State University, Chico, REEU Student (shared with Andersen Onofre) 2021 | Plant and Soil Sciences | Identification of key weather variables responsible for first detection of stripe rust in Kansas wheat |
| Nick Beyer (2018-2022) | Kansas State | Biochemistry | The effects of rotation on root rots of wheat in KS |
| Nathan Smith (2019) | Fort Hays State University, REEU student 2019 | Biology | Investigation of wheat-pea rotations on root diseases in Northern KS |
| Danah Ashour (2017-2018) | Montana State | B.S. in Microbiology, Graduated 2018, | Investigation of pea root diseases in Montana in |

| | | | |
|---|---|---|---|
| | | *Accepted to Johns Hopkins* | rotation with winter wheat |

**Grants Awarded**

1. **Rupp, J.L**., and Bruce, M., Development of Scab Resistant Wheat Cultivars for Kansas—Evaluating Advanced Kansas Breeding Lines for their reaction to fungicides, U.S. Wheat and Barley Scab Initiative, 05/22-05/26, $*279, 816.00.*
2. Toomajian, C., Schmale, D., **Rupp, J.L.,** Andersen Onofre, K., Leslie, J., Bruce, M., USDA NIFA, 12/1/21-11/20/24, Genetic mapping of traits related to Fusarium head blight in wheat using a diverse set of Fusarium graminearum isolates, *$749, 192.0*
3. Andersen Onofre, K., DeWolf, E., **Rupp, J.L.,** Bruce, M., Liu, S., Lollato, R., Bowden, R., USDA NIFA 2/1/2022-1/31/2022 An emerging threat to US wheat exports: a rapid, integrated response through advanced diagnostics and regional management of Tilletia spp., *$999,397.00*
4. Jordan, K., Bai,. G., and **Rupp, J.,** Haplotype-informed Prediction of Fusarium Head Blight Resistance in U.S. Wheat Breeding Programs (NACA), U.S. Wheat and Barley Scab Initiative, USDA-ARS, 08/21-07/23, $80,585.00
5. **Rupp, J.L.,** Fritz, A., Bruce, M., Friebe, B., Zhang, G., Andersen Onofre, K., (2021) Disease Phenotyping: Determining the reaction of wheat lines to Important Diseases, Kansas Wheat Commission, KWC/KSU 2022-11, (7/1/21-6/30/22, *$41,204.00.* Rupp Lab allocation: *$41,204.00.*
6. **Rupp, J.L.S**., Bruce, M., and Turner, K., (2021) Improving disease resistance in the perennial grain Kernza to protect the value of the grain and the environment, North Central Research and Education Grant, SARE, 11/1/20-10/31/2023, *$167,433.00.* Rupp Lab allocation: *$106,847*.
7. **Rupp, J.L**., and Bruce, M., (2020) Development of Scab Resistant Wheat Cultivars for Kansas, U.S. Wheat and Barley Scab Initiative, USDA-ARS, 59-0206-0-154, 5/15/20-5/14/23 *$135,570*.00 Rupp Lab allocation: *$135,570.00*.
8. Akhunov, E., Fritz, A., Lollato, R., **Rupp, J.L,** and Poland, J., (2020) Crop Breeding Innovation Hub: Winter Wheat Breeding Innovation Hub at Kansas State University, USDA NIFA, 2020-68013-30905 6/1/20-5/31/2024, *$1,000,000.00*. Rupp Lab allocation: *$0.00.*
9. **Rupp, J.L**., and Bruce, M., (2020) Development of Scab Resistant Wheat Cultivars for Kansas—Evaluating Advanced Kansas Breeding Lines for their reaction to fungicides, U.S. Wheat and Barley Scab Initiative, $*17,000*. Rupp Lab allocation: *$17,000.00*
10. **Rupp, J.L.** and Bruce, M., (2020) Disease Phenotyping: Determining the reaction of wheat lines to Important Diseases, Kansas Wheat Commission, *$40,470.00.* Rupp Lab allocation: *$40,470.00.*
11. **Rupp, J.L.** and Bruce, M., (2019) Disease Phenotyping: Determining the reaction of wheat lines to Important Diseases, Kansas Wheat Commission, *$33,390.00.* Rupp Lab allocation: *$33,390.00.*
12. **Rupp, J.L.** and Bruce, M**.,** (2019) Increasing the capacity of mist irrigation systems for inoculated nurseries in Hard Winter Wheat region. U.S. Wheat and Barley Scab Initiative, *$11,000.* Rupp Lab allocation: *$11,000*.

13. **Rupp**., J.L., Bruce, M., DeWolf, E., Fritz, A., Zhang, G., Andersen Onofre, K., (2019) Capacity Grant: Determining the Reaction of Wheat Lines to Diseases, USDA- Research Education and Economics – National Institute of Food and Agriculture, 10/1/2019-9/30/24, $0.00. Rupp Lab allocation: $0.00.
14. **Rupp, J.L.** and Bruce, M., (2018) Disease Phenotyping: Determining the reaction of wheat lines to Important Diseases, Kansas Wheat Commission, *$32,000.00.* Rupp Lab allocation: *$32,000.00.*
15. DeWolf, E., **Rupp, J.L.,** Fritz, A., and Lollato, R., (2018) Prediction Models and Improved Pre-Harvest Estimates of Deoxyvalenol, U.S. Wheat and Barley Scab Initiative, Rupp Lab allocation: *$38,220.00.*
16. **Rupp, J.L.,** (2018) Bowden NACA: Wheat Rust Resistance Research, USDA-ARS, *$39,500.00.* Rupp Lab allocation: *$39,500.00.*
17. **Rupp, J.L.,** Bruce, M., Smith, V., and Kephart, K., (2018) Western Sugar Variety Trials for Rhizoctonia Crown and Root Rot: Evaluation using multispectral imaging, *$7,500.00*. *Remained in Montana.*
18. **Rupp, J. L.,** Bruce, M., and Dyer, A., (2018) Detecting the undetectable, *Pea seed-borne mosaic virus* in Montana, USDA Specialty Crop Block Grant, 2018-2020, *$106,662*. *Remained in Montana.*
19. **Rupp, J. L.,** Bruce, M., (2018) Beet Sugar Development Foundation, Precision Genome Editing in Sugarbeet using CRISPR/Cas9, *$8,500.00.*
20. **Rupp, J. L.,** Bruce, M., (2018) *Potato virus Y* phenotyping studies and continued precision genome editing in potato, Montana Department of Agriculture, *$32,628.00*
21. Sherman, J. (Principal), **Rupp, J. L.** (Co-Principal) (2018), Field High-throughput phenotyping for sustainable malt production, Sponsored by New Belgium Brewing Company (NEWBEL). *$7500.00*
22. **Rupp, J. L.,** (2017) Western SARE Mini-grant, Advanced Diagnostics Workshop, *$1,500.00.*
23. **Rupp, J. L.,** Bruce, M., (2017) COA/MAES Research Innovation Grant, AG-MAPSS, *$4,738.50*.
24. **Rupp, J. L.,** Bruce, M., Kephart, K., (2017) Western Sugar, Strategies for the control of Rhizoctonia Crown and Root Rot in Montana, *$15,000*.
25. **Rupp, J. L.,** Bruce, M., (2017) Beet Sugar Development Foundation, Precision Genome Editing in Sugarbeet using CRISPR/Cas9 *$9,500.00.*
26. **Rupp, J. L.** and Bruce, M., (2017) Western Sugar, Precision Genome Editing in Sugarbeet using CRISPR/Cas9, *$8,500.00*.
27. **Rupp, J. L.** and Kephart, K., (2016) Western Sugar, New Strategies for Seasonal Control of Rhizoctonia Crown and Root Rot in Sugarbeet, *$6,750.00*.
28. **Rupp, J. L.,** (2016) Montana Department of Ag (MDA), Potato Improvement through Precision Genome Editing Year 2, *$13,540.88*.
29. **Rupp, J. L.,** (2016) US Dry Pea and Lentil, The effect of fungal pathogens on germination of stored chickpea (garbanzo bean), *$9,665.00*.
30. **Rupp, J. L.,** (2016) USDA Specialty Crop Block Grant, (Farm Bill), Early Detection of Economically Important Specialty Crop Pathogens by Multispectral Imaging, *$57,470.00*.

31. **Rupp, J. L.,** (2015) Montana Department of Ag (MDA), Potato Improvement through Precision Genome Editing, *$49,572.00*.

## Grants Pending

1. Nelson, K., Sharda, V., Sampson, G., **Rupp, J.,** and Anderson Onofre, K., Wheat streak mosaic' dynamics at the intersection of environmental conditions and agricultural management, NSF Ecology and Evolution of Infectious Diseases, National Science Foundation, *$1,806,270.00*.

## Grants Not Funded

1. Lin, X (KSU), Strano, M (MIT), Luo, J (U of R), Yu, J, (ISU) Nielsen-Gammon, J., (Texas A&M), Ghoshal, G., Andresen, Rice, C., Kirkham, M.B., University Distinguished Professor in plant water dynamics at KSU. Akhunov, E., Welch, S.,Wang, H., Crain, J., Yu, J., Bai, G., Fritz, A., Wang, L., Schumacher, R., Xie, Y, Skakun, S., Jia, X., Kenaian, A., **Rupp, J.,** Anderson Onofre, K., Lollato, R., Zhang, G., Xue, Q., Holman, J., Khosla, R., Soltani, A., Crossa, J., and Butenhoff, C., The Dorothy AI Institute: Climate-Smart Winter Wheat Production Systems, NSF AI for climate smart agriculture, National Science Foundation, LOI.
2. Toomajian, C., **Rupp, J.L.,** Andersen Onofre, K., Leslie, J., Bruce, M., USDA NIFA, 12/1/21-11/20/24, Genetic mapping of traits related to Fusarium head blight in wheat using a diverse set of Fusarium graminearum isolates, *$749, 192.0*
3. **Rupp, J.L.,** and Bruce, M., (2020) Exploring Conditional Resistance and Tolerance to *Wheat streak mosaic virus* in wheat, USDA Crop Pest and Beneficial Species, *$495,936.00*.
4. **Rupp, J.L.,** and Bruce, M., (2019) Detecting the "undetectable"—Identifying viral pathogens in symptomatic pea not detected by traditional methods, US Dry Pea and Lentil Council, $18,135.00
5. **Rupp, J.L.,** Dratz, E., Bruce, M., Sands, D., Pilgeram, A., Zinego, E., and Carr, C., (2018) MARSGREENS: *M*icrogreens *A*ssessment for a *R*apid, *S*afe, *G*reat-tasting, *R*esilient, and *E*fficient *E*xploration *N*utrition *S*ystem, TRISH-BRASH, Phase 2, Rupp Lab allocation *$400,000.*
6. **Rupp, J.L.,** and Bruce, M., (2018) Integrated Management Strategies for the Control of Wheat streak mosaic virus in Wheat, North Central SARE, letter of intent submitted October 16, 2018. *Not invited to proceed.*
7. **Rupp, J.L.,** et al., (2018) Intensify and diversify Great Plains wheat-based production systems for greater resilience and profitability for rural communities, USDA-AFRI SAS, letter of intent submitted July 7, 2018. *Not invited to proceed*.
8. Draper, M., et al., (2018) Building a Model for Agricultural and Community Survival in the Great Plains Region, USDA-AFRI SAS, letter of intent submitted July 7, 2018. *Not invited to proceed*.

## Contract Research

1. Albaugh (with Andersen Onofre), *$10,000.00*
2. FMC, *$4000.00*
3. Elemental Enzymes, *$500.00*

4. Testing phospite products for antifungal and disease suppression properties in wheat, Compass Minerals, *$14,040.00*
5. Sugarbeet Storage Experiments, 2015, Syngenta, *$4,500*
6. Sugarbeet Foliar Fungicide Trial, 2016, Nichino, *$4,500*
7. Sugarbeet Storage Experiments, 2016, Syngenta, *$8,000*
8. Sugarbeet Foliar Fungicide Trial, 2017, Syngenta, *$2,000*
9. Pinto Bean Foliar Fungicide Trial, 2017, Dow AgroSciences, *$13,000*
10. Sugarbeet Seed Treatment Trial, 2017, Valent, *$8,500.00*
11. Sugarbeet Storage Experiments, 2017, *Syngenta, $8000.00*
12. Elemental Enzymes Biocontrol Assays, Elemental Enzymes, *$11,000*
13. Sugarbeet Storage Experiments, 2018, *Syngenta, $8000.00*

## Awards

2021 Early Career Scientist, Society of In Vitro Biology, June 6, 2021.
2019 Service Award, Society of In Vitro Biology, June 8, 2019.

## Active participation in professional and learned societies:

| | |
|---|---|
| **2014-present** | The American Phytopathological Society |
| **2014-present** | North Central American Phytopathological Society |
| **2010-2020** | Society for In Vitro Biology (SIVB) |
| **2015-2018** | Pacific Division American Phytopathological Society |
| **2017-2018** | Potato Association of America |

## Service

### Department Service

- Rocky Ford Plant Pathology Experiment Station Coordinator, 2019-present.
- Wheat Variety Release Committee, Kansas State University, 2018-present
- Plant Pathology Student Club Faculty Advisor, March 2019-present.
- Plant Pathology Seminar Coordinator, Fall 2020.
- Plant Pathology Student Club Scholarship Review Committee, May 2019.
- Committee Member, Wheat and Forage Extension Pathologist Search, Jan-Aug 2019.
- Committee Member, Pulse Research Associate Position Search. April 2017.
- MAES Review Committee, Michelle Flenniken, October 2016.
- Committee Member, Pulse Crop Breeder Search. February-April 2016.

### University Service

- Graduate Representative, Dissertation Committee--Aaron Marsh-Ph.D. candidate, Physics, Montana State University, 2015-2018.

### Professional Service

- Society of In Vitro Biology Plant Section Chair, *elected* 2022.
- Hard Winter Wheat Coordinated Project Committee Chair, U.S. Wheat and Barley Scab Initiative, 2022-2024, *elected,* 2021.

- Grant Panelist, USDA NIFA 2021 Crop Protection and Pest Management (CPPM), Extension Implementation Program (EIP), Dr. Vijay Nandula, Program Director, Dr. Rubella Goswami, Panel Manager, May 3-7, 2021.
- 2021 USWBSI Planning Committee, Hard Winter Wheat Focus Group
- 2021 USWBSI Hard Winter Wheat Session Co-coodinator
- 2020-present, Pottawatomie County, KS Extension Advisory Board
- 2020-present, Pottawatomie County 4-H Foundation Council
- Hard Winter Wheat Coordinated Project Committee, U.S. Wheat and Barley Scab Initiative, 2020-2024, *elected*, 2019.
- APS Focus on Wheat Advisory Board, 2019-2021.
- Ad hoc grant review, University of Guelph/Ontario Ministry of Agriculture, Food, and Rural Affairs, Mary Ruth McDonald, Program Director, March 13, 2019.
- 10th International Integrated Pest Management Symposium Planning Committee: Early Career and Graduate Student Committee, Poster Committee, 2019-2021.
- Grant Panelist, USDA NIFA Crop Pests and Beneficial Species, Rubella Goswami, National Program Leader, Stephen Duke, Panel Director, December 11-14, 2018.
- Plant Biotechnology Section Board Secretary, Society of In Vitro Biology, Term 2018-2020, elected.
- Board of Directors, Vice-President, Mountain States Crop Education Association, 2018-2022, elected.
- Program Chair and Planning Committee, 2019 Montana/Wyoming Malt Barley and Sugarbeet Symposium, Billings, MT. Duties concluded Jan 7, 2019.
- Local Area Committee Co-Chair 2020, Potato Association of America, 2017-2019
- American Seed Trade (ASTA) Biotechnology Spokesperson, 2017-2019.
- Student Awards Committee, Society of In Vitro Biology 2018, 2019.
- Poster Judge, Society of In Vitro Biology, 2018, 2019.
- Editorial Board Member, In Vitro Cellular and Developmental Biology-Plant, Raleigh, NC, June 1, 2017- Present.
- Associate Editor*, In Vitro Cellular and Developmental Biology-Plant, Raleigh, NC, June 1, 2016 - Present. *Note: This position functions as a senior editor.*
- Associate Editor, Plant Health Progress, St. Paul, MN, August 15, 2015 – Present.
- Reviewer/Referee, Plant Disease, August 2017.
- Reviewer/Referee, Functional and Integrative Genomics. October 2016.
- Program Chair and Planning Committee Member, 2017 Montana/Wyoming Malt Barley and Sugarbeet Symposium, Billings, MT, January 2016-January 2017.
- Session Chair, Society of In Vitro Biology, Applications of Next Generation Sequencing, San Diego, CA. May 30, 2015 - June 15, 2016.
- Plant Program Committee, Society of In Vitro Biology, San Diego, CA. May 30, 2015 - June 15, 2016.
- Long-Range Planning Committee, Society of In Vitro Biology, San Diego, CA. May 30, 2015 - June 15, 2016.

**Peer Review of Journal Manuscripts**

- 1 review, Plant Disease, Focus article (virology), 2017

- 8 reviews, Plant Disease
    - (2021) 1 review, (2020) 1 review, (2019) 1 review, (2017-2018) 5 reviews
- 22 reviews, In Vitro Cellular and Developmental Biology-Plant Editor Assignments
    - (2022) 1 review, (2021) 1 review (2020) 4 reviews, (2019) 8 reviews, (2018) 5 reviews (2015-2017) 8 reviews
- 6 reviews, In Vitro Cellular and Developmental Biology-Plant Reviewer Assignments
    - (2021) 1 review, (2019) 1 review, (2018), 1 review, (2016-2017) 4 reviews
- 13 reviews, Plant Health Progress, Associate Editor
    - (2022) 2 reviews, (2021) 1 review (2020) 2 review, (2019) 1 review, (2018) 1 review, 2016-2017) 9 reviews
- 1 review, Crop Protection, 2019
- 1 review, Crop Science, 2020
- 2 reviews, Field Crops Research
    - (2021) 1 review, (2020) 1 review
- 1 review, Functional and Integrative Genomics, 2016
- 1 review, Plant, Cell, Tissue, and Organ Culture, 2015
- 3 reviews, The American Journal of Sugarbeet Research, 2017-2019

**Pre-Professional Service**

- Long-Range Planning Committee, Society of In Vitro Biology, 2014
- Plant Program Committee, Society of In Vitro Biology, 2013
- Student Past Co-Chair, Society of In Vitro Biology, 2012
- Plant Program Committee, Society of In Vitro Biology, 2011
- Committee Member, K-State Plant Pathology Graduate Student Club, 2011
- Plant Program Committee, Society of In Vitro Biology
- Student Past-Chair, Society of In Vitro Biology, 2011
- Student Plant Section Chair, Society of In Vitro Biology 2010
- Plant Pathology Graduate Student Club, Kansas State University 2010-2015
- Chemistry Club and Biology Club, Pittsburg State University, 2007-2009
- Future Graduate Students in Science Club, Pittsburg State University, 2009
- GRE Study Group Leader and Instructor, Pittsburg State University, 2009

**Professional Development Activities**

1. Mental Health First Aid Training, Pottawatomie County Police Department, Facilitator, Officer Bruce Coleman, Sept 2, 2021.
2. Mental Health Awareness Training, Kansas State University, 2019
3. Fusarium Workshop, 2019.
4. New Faculty Institute, Kansas State University, 2018-2019
5. Meta-Analysis in Plant Pathology, American Phytopathological Society Annual Meeting Workshop, August 5, 2017.
6. PNW-COSMOS Indigenous Student Mentoring Program, November 2016-June 2017.
7. Field-based High Throughput Phenotyping Workshop, University of Arizona Maricopa Agricultural Center Maricopa, AZ, March 13-17, 2017.
8. Center for Faculty Excellence Program, Effective Presentations, Montana State

University, Bozeman, MT, February 2, 2017.
9. Center for Faculty Excellence Program, Broader Impacts for your Grant Proposal, Montana State University, Bozeman, MT, November 15, 2016.
10. Using R for Reproducible Science, American Phytopathological Society Annual Meeting Workshop, July 30, 2016.
11. Network Modeling using R, American Phytopathological Society Annual Meeting Workshop, July 30, 2016.
12. Center for Faculty Excellence Program, Research Mentoring, Montana State University, Bozeman, MT. May 17, 2016.
13. Center for Faculty Excellence Program, Mentor Mentee Luncheon, Montana State University, Bozeman, MT. May 4, 2016.
14. Tutorial, Activity Insight Training, December 14, 2015.
15. Center for Faculty Excellence Program, Persevering and Diversifying to reach your goals. November 10, 2015.
16. Center for Faculty Excellence Program, Principal Investigator Training, Montana State University, October 27, 2015.
17. Center for Faculty Excellence Program, ADVANCE-Grant Writing Boot camp, Montana State University, September 18, 2015-October 23, 2015
18. Tutorial, CMS Introductory Training, Montana State University, October 14, 2015
19. Center for Faculty Excellence Program, Veterans in the classroom, Montana State University, October 13, 2015
20. Center for Faculty Excellence Program, Project TRACS Seminar for Student Success, Montana State University, September 30, 2015
21. Center for Faculty Excellence Program, New Faculty Orientation, Montana State University, Bozeman, MT, August 20, 2015

**Print Media and Newspapers**

1. Enough of This Rot, Feature, Sugar Producer, August 7, 2018.
2. Seed treatments promote healthy stand establishment in small grains, The Prairie Star, April 12, 2018.
3. Plant pathologist preaches prevention for pulses, The Williston Herald, June 23, 2017
4. This spud's for you, Mountains and Minds, Spring 2017
5. 2017 looks like a challenge for farmers and ranchers, The Williston Herald, March 24, 2017
6. Prevention key to profiting with pulses, The Sidney Herald, March 7, 2017
7. Pulse Disease in Montana, The Williston Herald, March 4, 2017
8. Pulse Diseases and Sugarbeet Diseases, The Roundup, March 1, 2017
9. Sugar beet diseases of interest for 2016, The Roundup, February 24, 2016

**Radio**

1. Impact of flooding on Great Plains Wheat, Andrew Mort, Citigroup, London, UK, Series of 3 interviews, 5/21, 5/29, 6/14, 2019.
2. Root Rot in Pulse Crops, Ag PhD, August 28, 2018.

https://soundcloud.com/agphd/08-28-18-root-rot-in-pulse-crops

3. Biotechnology and Potatoes, Ag Inspirations podcast, November 16, 2017.
4. Sugar is not a GMO, Northern Ag Network, January 10, 2017
5. Sugarbeet Disease Challenges, Northern Ag Network, January 10, 2017
6. The Malt Barley and Sugarbeet Symposium, Northern Ag Network, January 10, 2017.
7. 2017 Malt Barley and Sugarbeet Symposium, Northern Ag Network, December 14, 2016
8. Root Rot Disease of Pulse Crops, Ag PhD., September 7, 2016. https://soundcloud.com/agphd/09-06-16-ag-phd-radio-show

**Television**

1. Growth through Agriculture #4709, panelist, Montana Ag Live! June 4, 2017.
2. Diseases of Potatoes and Sugarbeets in Montana #4507, Special Guest, Montana Ag Live! May 15, 2016.

**Social Media**

1. Manage the Twitter account @KSUWheatDoc, with over 70,000 impressions from Aug 2018-Aug 2019. During the prime wheat growing season there were over 41,000 impressions. This Twitter account features only wheat disease information and research updates from my lab, the Applied Wheat Pathology Lab.

**Pre-Professional Scholarships, Awards and Honors**

- The John S. Song Award, Society of In Vitro Biology**,** 2015, $600.00
- American Phytopathological Society Virology Student Travel Award, 2015, $500.00
- North Central American Phytopathological Society Student Travel Award, 2015, $250.00
- Kansas State University Graduate Student Travel Award, 2015, $500.00
- Tillman Family Agriculture Graduate Student Award, 2014, $6000.00
- University Distinguished Professors Graduate Student Award, 2014, $5000.00
- Sarachek Scientific Travel Award, 2014, $1000.00
- Society of In Vitro Biology Student Travel Award, 2014, $250.00
- Kansas State University Graduate Student Travel Award, 2014, $500.00
- Kansas State University Research Foundation Scholarship, 2013, $15,000.00 + $5000.00 tuition stipend
- Phillip R. White Award, 2013, Society of In Vitro Biology, $600.00
- Top 5% of Teaching Assistants at Kansas State University, 2012
- Tillman Family Agriculture Graduate Student Award, 20111, $2500.00
- Third Place—Student Oral Competition, Society of In Vitro Biology, 2011
- Tillman Family Agriculture Graduate Student Recruitment Award, 2010, $5000.00
- Society of In Vitro Biology Student Travel Grant, 2010, $500.0