

CURRICULUM VITAE

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Education:

1995: Ph. D. Plant Pathology, University of California, Berkeley, CA
1992: M.S. Plant Pathology, University of California, Berkeley, CA
1990: B.S. Agricultural Biochemistry, Iowa State University, Ames, IA

Professional Experience:

2018 – Co-Director, Crop Bioengineering Center, Iowa State University, Ames, IA
2015 – ISU Plant Sciences Institute Faculty Scholar
2013 – 2019 Director, Center for Plant Responses to Environmental Stresses, Iowa State University, Ames, IA
2012 – Professor, Department of Plant Pathology & Microbiology, Iowa State University, Ames, IA
2007 – 2012 Associate Professor, Department of Plant Pathology, Iowa State University, Ames, IA
2000 – 2007 Assistant Professor, Department of Plant Pathology, Iowa State University, Ames, IA
1999 – 2000 Staff Scientist, Torrey Mesa Research Institute, Inc., San Diego, CA
1996 – 1999 Postdoctoral fellow, Institute of Biological Chemistry, Washington State University and Department of Biology, Texas A&M University. Advisor: Dr. James C. Carrington
1995 – 1996 Postdoctoral research, USDA-ARS & Department of Plant Biology, University of California, Berkeley, CA. Advisor: Dr. Barbara Baker
1990 – 1995 Graduate Student, Department of Plant Pathology, University of California, Berkeley, CA. Advisor: Dr. Barbara Baker

Honors and Awards:

Fellow, American Phytopathological Society (2022)
ISU Regents Award for Faculty Excellence (2021)
ISU Rossmann Manatt Faculty Development Award (2019)
Fellow, American Association for the Advancement of Science (2016)
ISU College of Agriculture and Life Sciences Special Research Award (2015)
ISU Exemplary Faculty Mentor (2015)
ISU College of Agriculture and Life Sciences Mid-Career Outstanding Achievement in Research (2009)
NIH National Research Service Award Postdoctoral Fellowship (1996-1999)
USDA Plant Gene Expression Center - outstanding research paper (1994)
William Carrol-Smith Fellowship (1990)

Affiliations:

American Society of Plant Biologists; American Phytopathological Society; International Society for Molecular Plant-Microbe Interactions; American Association for the Advancement of Science

Editorial boards:

Editor, *PhytoFrontiers* (2020 – present)

Steering Editorial Board, Journal of Plant Pathology (2020 - present)
Senior Editor, Molecular Plant Microbe Interactions (2015 – 2018)
Review Editor, Frontiers in Plant Science (2014 – present)
Editorial Board, Virology (2013 – 2016)
Senior Editor, Molecular Plant Pathology (2009 – 2014)
Associate Editor, Molecular Plant Microbe Interactions (2005 – 2007, 2011 – 2015)
Editorial Board Member, Molecular Plant Pathology (2006 – 2008)

Peer-Reviewed Journal Articles (94; * indicates corresponding author):

1. Elmore, M. G., Groves, C. L., Hajimorad, M. R., Stewart, T. P., Gaskill, M. A., Wise, K. A., Sikora, E., Kleczewski, N. K., Smith, D. L., Mueller, D. S., **Whitham, S. A.*** (2022) Detection and discovery of plant viruses in soybean by metagenomic sequencing. *Virology J. Accepted*.
2. Bredow, M., Natukunda, M. I., Beernink, B. M., Sartor-Chicowski, A., Salas-Fernandez, M. G., **Whitham, S. A.*** (2022) Characterization of a foxtail mosaic virus vector for gene silencing and analysis of innate immune responses in *Sorghum bicolor*. *Mol. Plant Pathol. Accepted*.
3. Beernink, B. M., Lappe, R. L., Bredow, M., **Whitham, S. A.*** (2022) Impacts of RNA mobility signals on virus induced somatic and heritable gene editing. *Front. Genome Ed.* 4:925088. doi: [10.3389/fgeed.2022.925088](https://doi.org/10.3389/fgeed.2022.925088)
4. Chung, S. H., Zhang, S., Song, H., **Whitham, S. A.**, Jander, G.* (2022) Maize resistance to insect herbivory is enhanced by silencing expression of genes for jasmonate-isoleucine degradation using sugarcane mosaic virus. *Plant Direct*. doi: [10.1002/pld3.407](https://doi.org/10.1002/pld3.407).
5. Bueno, T. V., Fontes, P. P., Abe, V. Y., Satiko, A. U., Senra, R. L., Oliveira, L. S., dos Santos, A. B., Capote Ferreira, E. G., Darben, L. M., de Oliveira, A. B., Abdelnoor, R. V., **Whitham, S. A.**, Fietto, L. G., Marcelino-Guimarães, F. C.* (2022) A *Phakopsora pachyrhizi* effector suppresses PAMP-triggered immunity and interacts with a soybean glucan endo-1,3- β -glucosidase to promote virulence. *Mol. Plant Microbe Interact. Accepted*.
6. Yu, H., Ruan, H., Xia, X., Sartor Chicowski, A., **Whitham, S. A.**, Li, Z., Wang, G., Liu, W.* (2022) Maize FERONIA-like receptor genes are involved in the response of multiple disease resistance in maize. *Mol. Plant Pathol. Accepted*.
7. Xu, R.*, Gao, M., Li, M., **Whitham, S.A.**, Zhang, S., Xu, Y. (2022) Identification of MdGRF genes and the necessary role of MdGRF02 in apple root growth regulation. *Scientia Horticulturae* 295:110866. doi: [10.1016/j.scienta.2021.110866](https://doi.org/10.1016/j.scienta.2021.110866)
8. McCaghey, M., Shao, D., Kurcezewski, J., Lindstrom, A., Ranjan, A., **Whitham, S. A.**, Conley, S. P., Williams, B., Smith, D. L., Kabbage, M.* (2021) Host-induced gene silencing of a *Sclerotinia sclerotiorum* oxaloacetate acetylhydrolase using bean pod mottle virus as a vehicle reduces disease on soybean. *Front. Plant Sci.* 12:677631. doi: [10.3389/fpls.2021.677631](https://doi.org/10.3389/fpls.2021.677631)
9. Gerber, M., Pillay, N.*, Holan, K., **Whitham, S. A.**, Berger, D. K. (2021) Automated Hyper-Parameter Tuning of a Mask R-CNN for Quantifying Common Rust Severity in Maize, 2021 International Joint Conference on Neural Networks (IJCNN), pp. 1-7. doi: [10.1109/IJCNN52387.2021.9534417](https://doi.org/10.1109/IJCNN52387.2021.9534417).
10. Pillay N.*, Gerber M., Holan K., **Whitham S. A.**, Berger D. K. (2021) Quantifying the Severity of Common Rust in Maize Using Mask R-CNN. In: Rutkowski L., Scherer R., Korytkowski M., Pedrycz W., Tadeusiewicz R., Zurada J.M. (eds) Artificial Intelligence and Soft Computing. ICAISC 2021. Lecture Notes in Computer Science, vol 12854. Springer, Cham. doi: [10.1007/978-3-030-87986-0_18](https://doi.org/10.1007/978-3-030-87986-0_18)
11. O'Conner, S., Zheng, W., Qi, M., Kandel, Y., Fuller, R., **Whitham, S. A.**, Li, L.*. (2021) GmNF-YC4-2 Increases Protein, Exhibits Broad Disease Resistance and Expedites Maturity. *Int. J. Mol. Sci.* 22: 3586; <https://doi.org/10.3390/ijms22073586>
12. Chung, S. H., Bigham, M., Lappe, R., Chan, B., Nagalakshmi, U., **Whitham, S. A.**, Dinesh-Kumar, S., Jander, G.* (2021) A sugarcane mosaic virus vector for rapid in planta screening of proteins that inhibit the growth of insect herbivores. *Plant Biotechnol. J.* doi: [10.1111/pbi.13585](https://doi.org/10.1111/pbi.13585)

13. Beernink, B. M., Holan, K. L., Lappe, R. R., **Whitham, S. A.*** (2021) Direct Agroinoculation of Maize Seedlings by Injection with Recombinant Foxtail Mosaic Virus and Sugarcane Mosaic Virus Infectious Clones. *J. Vis. Exp.* 168:e62277. [doi: 10.3791/62277](https://doi.org/10.3791/62277)
14. Zheng, N., Li, T., Dittman, J. D., Su, J., Li, R., Gassmann, W., Peng, D., **Whitham, S. A.***, Liu, S.*, Yang, B.* (2020) CRISPR/Cas9-based gene editing using egg cell-specific promoters in Arabidopsis and soybean. *Front. Plant Sci.* 11:800. [doi: 10.3389/fpls.2020.00800](https://doi.org/10.3389/fpls.2020.00800)
15. Elmore, M. G.*, Banerjee, S., Pedley, K. F., Ruck, A., **Whitham, S. A.** (2020) *De novo* transcriptome of *Phakopsora pachyrhizi* uncovers putative effector repertoire during infection. *Physiol. Mol. Plant Pathol.* 110:101464. [doi: 10.1016/j.pmp.2020.101464](https://doi.org/10.1016/j.pmp.2020.101464)
16. Mei, Y., Beernink, B. M., Ellison, E. E., Konečná, E., Neelakandan, A. K., Voytas, D. F., **Whitham, S. A.*** (2019) Protein expression and gene editing in monocots using foxtail mosaic virus vectors. *Plant Direct.* 3:e00181. [doi: 10.1002/pld3.181](https://doi.org/10.1002/pld3.181)
17. Bao, Y., Zarecor, S., Shah, D., Tuel, T., Campbell, D. A., Chapman, A. V. E., Imberti, D., Kiekhäfer, D., Imberti, H., Lübberstedt, T., Yin, Y., Nettleton, D., Lawrence-Dill, C. J., **Whitham, S. A.**, Tang, L., Howell, S. H.* (2019) Assessing plant performance in the envirotron. *Plant Methods.* 15:117. [doi: 10.1186/s13007-019-0504-y](https://doi.org/10.1186/s13007-019-0504-y)
18. Qi, M., Yu, M., Grayczyk, J. P., Darben, L. M., Rieker, M. E. G., Seitz, J., Voegelé, R. T., **Whitham, S. A.**, Link, T. I.* (2019) Candidate effectors from *Uromyces appendiculatus*, the causal agent of rust on common bean, can be discriminated based on suppression of immune responses. *Front. Plant Sci.* 10:1182. [doi: 10.3389/fpls.2019.01182](https://doi.org/10.3389/fpls.2019.01182)
19. Mei, Y., Liu, G., Zhang, C., Hill, J. H., **Whitham, S. A.*** (2019) A sugarcane mosaic virus vector for gene expression in maize. *Plant Direct.* 3:e00158. [doi: 10.1002/pld3.158](https://doi.org/10.1002/pld3.158)
20. Chang, H. X., Tan, R., Hartman, G. L., Wen, Z., Sang, H., Domier, L. L., **Whitham, S. A.**, Wang, D., Chilvers, M. I.* (2019) Characterization of soybean STAY-GREEN genes in susceptibility to foliar chlorosis of sudden death syndrome. *Plant Physiol.* 180:711-717. [doi: 10.1104/pp.19.00046](https://doi.org/10.1104/pp.19.00046)
21. Helm, M., Qi, M., Sarkar, S., Yu, H., **Whitham, S. A.**, Innes, R. W.* (2019). Engineering a decoy substrate in soybean to enable recognition of the *Soybean mosaic virus* NIa protease. *Mol. Plant Microbe Interact.* 32:760-769. [doi: 10.1094/MPMI-12-18-0324-R](https://doi.org/10.1094/MPMI-12-18-0324-R)
22. Pedley, K. F.*, Pandey, A. K., Ruck, A., Lincoln, L. M., **Whitham, S. A.**, Graham, M. A.* (2019) *Rpp1* encodes a ULP1-NBS-LRR protein that controls immunity to *Phakopsora pachyrhizi* in soybean. *Mol. Plant Microbe Interact.* 32:120-133. [doi: 10.1094/MPMI-07-18-0198-FI](https://doi.org/10.1094/MPMI-07-18-0198-FI)
23. Qi, M., Zheng, W., Zhao, X., Hohenstein, J., Kandel, Y., O'Conner, S., Wang, Y., Du, C., Nettleton, D., Macintosh, G., Tylka, G., Wurtele, E., **Whitham, S. A.**, Li, L.* (2019) QQS orphan gene and its interactor NF-YC4 reduce susceptibility to pathogens and pests. *Plant Biotechnol. J.* 17:252-263. [doi: 10.1111/pbi.12961](https://doi.org/10.1111/pbi.12961)
24. Xu, H.-Y., Zhang, C., Li, Z.-C., Wang, Z.-R., Jiang, X.-X., Shi, Y.-F., Fang, Y., Braun, E., Mei, Y., Qiu, W.-L., Li, S., Wang, B., Xu, J., Navarre, D., Ren, D., Cheng, N., Nakata, P. A., Graham, M. A., **Whitham, S. A.**, Liu, J.-Z.* (2018) GmMEKK1 is a key regulator of cell death and defense responses in soybean. *Plant Physiol.* 178:907-922. [doi: 10.1104/pp.18.00903](https://doi.org/10.1104/pp.18.00903)
25. Irizarry, M. D., Elmore, M. G., Batzer, J. C., **Whitham, S. A.**, Mueller, D. S.* (2018). Alternative hosts for *Soybean vein necrosis virus* and feeding preferences of its vector soybean thrips. *Plant Health Progress.* 19:176-181. [doi: 10.1094/PHP-11-17-0071-RS](https://doi.org/10.1094/PHP-11-17-0071-RS)
26. Hajimorad, M. R.*, Domier, L. L., Tolin, S. A., **Whitham, S. A.**, Saghai Maroof, M. A. (2018) *Soybean mosaic virus*: A successful potyvirus with a wide distribution but restricted natural host range. *Mol. Plant Pathol.* 19:1563-1579. [doi: 10.1111/mpp.12644](https://doi.org/10.1111/mpp.12644)

27. Burkhaw, S. J., Stephens, N. M., Mei, Y., Duenas, M. E., Freppon, D. J., Ding, G., Smith, S. C., Lee, Y.-J., Nikolau, B. J., **Whitham, S. A.**, Smith, E. A.* (2018) Characterizing virus-induced gene silencing at the cellular level with *in situ* multimodal imaging. *Plant Methods*. 14:37. [doi: 10.1186/s13007-018-0306-7](https://doi.org/10.1186/s13007-018-0306-7)
28. Ranjan, A., Jayaraman, D., Grau, C., Hill, J. H., **Whitham, S. A.**, Ané, J.-M., Kabbage, M.* (2018) The pathogenic development of *Sclerotinia sclerotiorum* in soybean requires specific host NADPH oxidases. *Mol. Plant Pathol.* 19:700-713. [doi: 10.1111/mpp.12555](https://doi.org/10.1111/mpp.12555)
29. Qi, M., Grayczyk, J. P., Seitz, J. M., Lee, Y., Link, T. I., Choi, D., Pedley, K. F., Voegelé, R. T., Baum, T. J., **Whitham, S. A.*** (2018) Suppression or activation of immune responses by predicted secreted proteins of the soybean rust pathogen *Phakopsora pachyrhizi*. *Mol. Plant Microbe Interact.* 31:163-174. [doi: 10.1094/MPMI-07-17-0173-FI](https://doi.org/10.1094/MPMI-07-17-0173-FI)
30. Mei, Y., **Whitham, S. A.*** (2018) Virus-induced gene silencing in maize with a *Foxtail mosaic virus* vector. *Methods Mol. Biol.* 1676:129-139. [doi: 10.1007/978-1-4939-7315-6_7](https://doi.org/10.1007/978-1-4939-7315-6_7)
31. Liu, J. Z.* , Duan, J., Ni, M., Liu, Z., Qiu, W.-L., **Whitham, Steven A.**, Qian, W.-J. (2017) S-nitrosylation inhibits the kinase activity of tomato phosphoinositide-dependent kinase 1 (PDK1). *J. Biol. Chem.* 292:19743-19751. [doi: 10.1074/jbc.M117.803882](https://doi.org/10.1074/jbc.M117.803882)
32. Lu, H., Tang, L.* , **Whitham, S. A.**, Mei, Y. (2017) An automated platform for maize seedling morphological traits characterization. *Sensors*. 17:2082. [doi:10.3390/s17092082](https://doi.org/10.3390/s17092082)
33. Rajamaki, M.-L.* , Xi, D., Sikorskaite, S., Valkonen, J. P. T., **Whitham, S. A.** (2017) Differential requirement of the ribosomal protein S6 and ribosomal protein S6 kinase for plant-virus accumulation and interaction of S6 kinase with potyviral VPg. *Mol. Plant Microbe Interact.* 30:374-384. [doi: 10.1094/MPMI-06-16-0122-R](https://doi.org/10.1094/MPMI-06-16-0122-R)
34. Bak, A., Cheung, A., Yang, C., **Whitham, S. A.**, Casteel, C. L.* (2017) A viral protease relocates in the presence of the vector to promote vector performance. *Nat. Comm.* 8:14493. [doi: 10.1038/ncomms14493](https://doi.org/10.1038/ncomms14493)
35. De Carvalho, M. C. C. G., Nascimento, L. C., Darben, L. M., Polizel-Podanosqui, A. M., Lopes-Caitar, V. S., Rocha, C. S., Qi, M., Carazzolle, M. F., Kuwahara, M. K., Pereira, G. A. G., Abdelnoor, R. V., **Whitham, S. A.**, Marcelino-Guimarães, F. C.* (2017) Prediction of *P. pachyrhizi* secretome expressed *in planta* and potential effector families. *Mol. Plant Pathol.* 18:363-377. [doi: 10.1111/mpp.12405](https://doi.org/10.1111/mpp.12405)
36. Qi, M., Link, T. I., Müller, M., Hirschburger, D., Pudake, R. N., Pedley, K. F., Braun, E., Voegelé, R. T., Baum, T. J., **Whitham, S. A.*** (2016) A small cysteine-rich protein from the Asian soybean rust fungus, *Phakopsora pachyrhizi*, suppresses plant immunity. *PLoS Pathog.* 12:e1005827. [doi: 10.1371/journal.ppat.1005827](https://doi.org/10.1371/journal.ppat.1005827)
37. Martin, K. M., Singh, J., Hill, J. H., **Whitham, S. A.**, Cannon, S.* (2016) Dynamic transcriptome profiling of *Bean common mosaic virus* (BCMV) infection in common bean (*Phaseolus vulgaris* L.). *BMC Genomics* 17:613 [doi: 10.1186/s12864-016-2976-8](https://doi.org/10.1186/s12864-016-2976-8)
38. **Whitham, S. A.***, Qi, M., Innes, R. W., Ma, W., Lopes-Caitar, V., Hewezi, T. (2016) Molecular soybean-pathogen interactions. *Annu. Rev. Phytopathol.* 54:19.1-19.26 [doi: 10.1146/annurev-phyto-080615-100156](https://doi.org/10.1146/annurev-phyto-080615-100156)
39. Mei, Y., Zhang, C., Kernodle, B. M., Hill, J. H., **Whitham, S. A.*** (2016) A *Foxtail mosaic virus* vector for virus-induced gene silencing in maize. *Plant Physiol.* 171:760-772 [doi: 10.1104/pp.16.00172](https://doi.org/10.1104/pp.16.00172)
40. Irizarry, M. D.* , Groves, C. L., Elmore, M. G., Bradley, C. A., Dasgupta, R., German, T., Jardine, D. J., Saalau-Rojas, E., Smith, D. L., Tenuta, A. U., **Whitham, S. A.**, Mueller, D. S. (2016) Re-emergence of *Tobacco streak virus* infecting soybean in the United States and Canada. *Plant Health Progress* 17:92-94 [doi: 10.1094/PHP-BR-15-0052](https://doi.org/10.1094/PHP-BR-15-0052)
41. **Whitham, S. A.***, Lincoln, L. M., Chowda-Reddy, R. V., Dittman, J. D., O'Rourke, J. A., Graham, M. A.* (2016) Virus-induced gene silencing and transient gene expression in soybean using *Bean pod mottle virus* infectious clones. *Curr. Protoc. Plant Biol.* 1:263-283. [doi: 10.1002/cppb.20012](https://doi.org/10.1002/cppb.20012)

42. Casteel, C. L.* , De Alwis, M., Bak, A., Dong, H., **Whitham, S. A.**, Jander, G. (2015) Disruption of ethylene signaling by *Turnip mosaic virus* mediates suppression of plant defense against the aphid vector, *Myzus persicae*. *Plant Physiol.* 169:209-218. doi: <http://dx.doi.org/10.1104/pp.15.00332>
43. Liu, J. Z., Graham, M. A., Pedley, K. F., **Whitham, S. A.*** (2015) Gaining insight into soybean defense responses using functional genomics approaches. *Brief. Funct. Genomics.* 14:283-290. doi: [10.1093/bfgp/elv009](http://dx.doi.org/10.1093/bfgp/elv009)
44. Moran Lauter, A. N., Peiffer, G. A., Yin, T., **Whitham, S. A.**, Cook, C., Shoemaker, R. C., Graham, M. A.* (2014) Identification of candidate genes involved in early iron deficiency chlorosis signaling in soybean (*Glycine max*) roots and leaves. *BMC Genomics.* 15:702. doi: [10.1186/1471-2164-15-702](http://dx.doi.org/10.1186/1471-2164-15-702)
45. Liu, J. Z., Braun, E., Qiu, W. L., Shi, Y. F., Marcelino-Guimarães, F. C., Navarre, D., Hill, J. H., **Whitham, S. A.*** (2014) Positive and negative roles for soybean MPK6 in regulating defense responses. *Mol. Plant Microbe Interact.* 27:824-834. doi: [10.1094/MPMI-11-13-0350-R](http://dx.doi.org/10.1094/MPMI-11-13-0350-R)
46. Casteel, C., Yang, C., Nanduri, A., De Jong, H., **Whitham, S. A.**, Jander, G.* (2014) The Nla-pro protein of *Turnip mosaic virus* improves growth and reproduction of the aphid vector, *Myzus persicae* (green peach aphid). *Plant J.* 77:653-663. doi: [10.1111/tpj.12417](http://dx.doi.org/10.1111/tpj.12417)
47. Link, T. I., Lang, P., Scheffler, B. E., Duke, M. V., Graham, M. A., Cooper, B., Tucker, M. L., van de Mortel, M., Voegelé, R. T., Mendgen, K., Baum, T. J., and **Whitham, S. A.*** (2014) The haustorial transcriptomes of *Uromyces appendiculatus* and *Phakopsora pachyrhizi* and their candidate effector families. *Mol. Plant Pathol.* 15:379-393. doi: [10.1111/mpp.12099](http://dx.doi.org/10.1111/mpp.12099)
48. Atwood, S., O'Rourke, J., Peiffer, G., Yin, T., Majumder, M., Zhang, C., Cianzio, S., Hill, J. H., Cook, D., **Whitham, S. A.**, Shoemaker, R. C., Graham, M. A.* (2014) Replication protein A subunit 3 and the iron efficiency response in soybean. *Plant Cell Environ.* 37:213-234. doi: [10.1111/pce.12147](http://dx.doi.org/10.1111/pce.12147)
49. Kandoth, P. K., Heinz, R., Yeckel, G., Nathan, G. W., Parijat, J. S., Hill, J., **Whitham, S. A.**, Baum, T. J., Mitchum, M. G.* (2013) A virus-induced gene silencing method to study soybean cyst nematode parasitism in *Glycine max*. *BMC Res. Notes.* 6:255. doi: [10.1186/1756-0500-6-255](http://dx.doi.org/10.1186/1756-0500-6-255)
50. Morales, A. M. A. P., O'Rourke, J. A., van de Mortel, M., Schneider, K. T., Bancroft, T. J., Borém, A., Nelson, R. T., Nettleton, D., Baum, T. J., Shoemaker, R. C., Fredrick, R. D., Abdelnoor, R. V., Pedley, K. F., **Whitham, S. A.**, and Graham, M. A.* (2013) Transcriptome analyses and virus-induced gene silencing identify genes in the *Rpp4*-mediated Asian soybean rust resistance pathway. *Funct. Plant Biol.* 40:1029-1047. doi: [10.1071/FP12296](http://dx.doi.org/10.1071/FP12296)
51. Pogorelko, G. V., Lionetti, V., Fursova, O., Sundaram, R. M., Qi, M., **Whitham, S. A.**, Bogdanove, A. J., Bellincampi, D., and Zabolina, O. A.* (2013) Alteration of cell wall polysaccharide acetylation increases plant resistance to fungal pathogens. *Plant Physiol.* 163:9-23. doi: [10.1104/pp.113.214460](http://dx.doi.org/10.1104/pp.113.214460)
52. Smith, D. L.* , Fritz, C., Watson, Q., Willis, D. K., German, T. L., , A., Mueller, D., Dittman, J. D., Saalau-Rojas, E., and **Whitham, S. A.** (2013) First report of soybean vein necrosis disease caused by *Soybean vein necrosis-associated virus* in Wisconsin and Iowa. *Plant Disease.* 97:693. doi: [10.1094/PDIS-11-12-1096-PDN](http://dx.doi.org/10.1094/PDIS-11-12-1096-PDN)
53. Liu, J. Z. and **Whitham, S. A.*** (2013) Overexpression of a soybean nuclear localized type III DnaJ domain-containing HSP40 reveals its roles in cell death and disease resistance. *Plant J.* 74:110-121. doi: [10.1111/tpj.12108](http://dx.doi.org/10.1111/tpj.12108)
54. Zhang, C.* , **Whitham, S. A.**, Hill, J. H. (2013) Virus-induced gene silencing in soybean and common bean. *Methods Mol. Biol.* 975:149-156. doi: [10.1007/978-1-62703-278-0_11](http://dx.doi.org/10.1007/978-1-62703-278-0_11)
55. Liu, S., Kandoth, P. K., Warren, S. D., Yeckel, G., Heinz, R., Alden, J., Yang, C., Jamai, A., El-Mellouki, T., Juvale, P. S., Hill, J. H., Baum, T. J., Cianzio, S., **Whitham, S. A.**, Korkin, D., Mitchum, M. G.* , Meksem, K.*

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