Curriculum vitae of Jianqiang Wu

CONTACT INFORMATION

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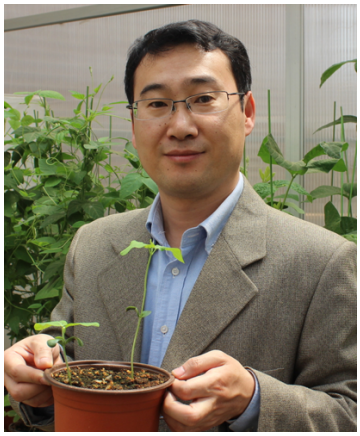

RESEARCH INTEREST

Defense mechanisms of maize against insects

Plant-parasitic plant interactions

EDUCATION

09.2001-11.2007	**Ph.D. Plant Molecular Biology and Genetics** Thesis: molecular study of the trypsin proteinase inhibitor defense mechanism and early herbivory-induced signaling in *Nicotiana* **Awarded the Otto Hahn Medal for excellent Ph.D. work in the Max Planck Society, 2008**	Department of Molecular Ecology, Max Planck Institute for Chemical Ecology, Jena, Germany; Supervisor: Prof. Ian T. Baldwin
09.1995 - 07.1998	**M.S. Analytical Chemistry (Chromatography and Mass Spectrometry)** Thesis: application of cyclodextrin-derivative stationary phases in separation of aromatic positional isomers in gas chromatography	Department of Analytical Chemistry, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China; Supervisor: Prof. Daoqian Zhu
09.1991-07.1995	**B.S. Chemical Engineering**	Department of Chemical Engineering, Dalian University of Technology, Dalian, China

ACADEMIC APPOINTMENTS

04.2012 – present: **Full Professor,** Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, China

01.2007 – 04.2012: **Group Leader**, Department of Molecular Ecology, Max Planck Institute for Chemical Ecology, Jena, Germany

10.1998 – 08.2001: **Research Associate**, Modern Analysis Center, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China

ADMINISTRATIVE APPOINTMENTS

1. 07. 2021-present, Deputy Director, Kunming Institute of Botany, Chinese Academy of Sciences
2. 06.2020.06-present: Department Chair, Department of Economic Plants and Biotechnology, Kunming Institute of Botany, Chinese Academy of Sciences
3. 01.2014.10-2020.05: Deputy Department Chair, Department of Economic Plants and Biotechnology, Kunming Institute of Botany, Chinese Academy of Sciences

PUBLICATIONS (*corresponding authors; # co-first authors)

2024

1. Setotaw, Y.B.[#], Li, J.[#], Qi, J., Ma, C., Zhang, M., Huang C., Wang, L., **Wu, J.*** (2024) Salicylic acid positively regulates maize defenses against lepidopteran insects. **Plant Diversity** (in press)
2. Wang, L., Ma, C., Wang, S., Yang F., Sun, Y., Tang, J., Luo, J., **Wu, J.*** (2024) Ethylene and jasmonate signaling converge on gibberellin catabolism during thigmomorphogenesis in Arabidopsis. **Plant Physiology** 194:758-773.

   https://pubmed.ncbi.nlm.nih.gov/37847103/

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   https://academic.oup.com/plphys/advance-article/doi/10.1093/plphys/kiad588/7334396
3. Zhang, J., Li, S., Li, W., Feng, Z., Zhang, S., Zheng, X., Xu, Y., Shen, G., Zhao, M., Cao, G., Wu, X.*, **Wu, J.*** (2023) Large-scale interplant exchange of macromolecules between soybean and dodder under nutrient stresses. **Plant Diversity** 46:116-125.

   https://pubmed.ncbi.nlm.nih.gov/38343599/

2023

4. **Wu, J.*** (2023) Plant biology: Young maize leaves 'smell' a volatile danger signal. **Current Biology** 33: R914-R916.

   https://pubmed.ncbi.nlm.nih.gov/37699351/
5. Shen, G., Zhang, J., Lei, Y., Xu, Y., **Wu, J.*** (2023) Between-Plant Signaling. **Annual Review of Plant Biology** 74:367-386.

   https://www.ncbi.nlm.nih.gov/pubmed/36626804

6. Ma, C., Li, R., Sun, Y., Zhang, M., Li, S., Xu, Y., Song, J., Li, J., Qi, J., Wang, L.*, **Wu, J.*** (2022) ZmMYC2s play important roles in maize responses to simulated herbivory and jasmonate. **Journal of Integrative Plant Biology** 65:1041-1058.

   https://www.ncbi.nlm.nih.gov/pubmed/36349965

2022

7. Xue, N., Zhan, C., Song, J., Li, Y., Zhang J., Qi, J., **Wu, J.*** (2022) The glutamate receptor-like 3.3 and 3.6 mediate systemic resistance to insect herbivores in Arabidopsis. **Journal of Experimental Botany** 73:7611-7627.

   https://www.ncbi.nlm.nih.gov/pubmed/36214841

8. Xu, Y., Zhang, J., Ma, C., Lei, Y., Shen, G., Jin, J. J., Eaton, D. A., **Wu, J.*** (2022) Comparative genomics of orobanchaceous species with different parasitic lifestyles reveals the origin and stepwise evolution of plant parasitism. **Molecular Plant** 15:1384-1399.

   https://www.ncbi.nlm.nih.gov/pubmed/35854658

9. Song, J.#, Bian, J.#, Xue, N., Yu, X, **Wu, J.*** (2022) Inter-species mRNA transfer among green peach aphids, dodder parasites, and cucumber host plants. **Plant Diversity** 44:1-10.

   https://pubmed.ncbi.nlm.nih.gov/35281124

2021

10. Xu, Y.#, Lei, Y.#, Su, Z., Zhao, M., Zhang, J., Shen, G., Wang, L., Li, J., Qi, J., **Wu, J.*** (2021) A chromosome-scale *Gastrodia elata* genome and large-scale comparative genomic analysis indicate convergent evolution by gene loss in mycoheterotrophic and parasitic plants. **Plant Journal** 108:1609-1623.

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11. Lei, Y., Xu, Y., Zhang, J., Song, J., **Wu, J.*** (2021) Herbivory-induced systemic signals are likely evolutionarily conserved in euphyllophytes. **Journal of Experimental Botany** 72: 7274-7284.

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12. Malook, S.U., Xu, Y., Qi, J, Li, J., Wang, L., **Wu, J.*** (2021) *Mythimna separata* herbivory primes maize resistance in systemic leaves. **Journal of Experimental Botany** 72:3792-3805.

    https://pubmed.ncbi.nlm.nih.gov/33647931/

13. Zhang, J., Xu, Y., Xie, J., Zhuang, H., Liu, H., Shen, G.*, **Wu, J.*** (2021) The parasite *Cuscuta campestris* enables transfer of bidirectional systemic nitrogen signals between host plants. **Plant Physiology** 185:1395–1410.

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14. Zhang, C., Li, J., Li, S., Ma, C., Liu, H., Wang, L., Qi, J.*, **Wu, J.*** (2021) ZmMPK6 and ethylene signaling negatively regulate the accumulation of anti-insect metabolites DIMBOA and DIMBOA-Glc in maize inbred line A188. **New Phytologist** 229:2273-2287.

    https://pubmed.ncbi.nlm.nih.gov/32996127

2020

15. Shen, G.[#], Liu, N.[#], Zhang, J., Xu, Y., Baldwin, I.T., **Wu, J.*** (2020) *Cuscuta australis* (dodder) parasite eavesdrops on the host plants'FT signals to flower. **Proceedings of National Academy of Sciences of the USA** 117: 23125-23130
    https://www.ncbi.nlm.nih.gov/pubmed/32868415

16. Li, S., Zhang, J., Liu, H., Liu, N., Shen, G., Zhuang, H., **Wu, J.*** (2020) Dodder-transmitted mobile signals prime host plants for enhanced salt tolerance. **Journal of Experimental Botany** 71:1171-1184
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17. Zhang, C., Lei, Y., Lu, C., Wang, L.*, **Wu, J.*** (2020) MYC2, MYC3, and MYC4 function additively in wounding-induced jasmonic acid biosynthesis and catabolism. **Journal of Integrative Plant Biology** 62:1159-1175
https://www.ncbi.nlm.nih.gov/pubmed/31876387
18. Liu, N., Shen, G., Xu Y., Liu, H., Zhang, J., Li, S., Li, J., Zhang, C., Qi, J., Wang, L., **Wu, J.*** (2020) Extensive inter-plant protein transfer between *Cuscuta* parasites and their host plants. **Molecular Plant** 13:573-585
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2019

19. Qin. Y., Zhang, J., Hettenhausen, C., Liu, H., Li, S., Shen, G., Cao, G., **Wu, J.*** (2019) The host jasmonic acid pathway regulates the transcriptomic changes of dodder and host plant under the scenario of caterpillar feeding on dodder. **BMC Plant Biology** 19:540.
https://www.ncbi.nlm.nih.gov/pubmed/31801469
20. Gao, L., Shen, G., Zhang, L., Qi, J., Zhang, C., Ma, C., Li, J., Wang, L., Malook, S.U., **Wu, J.*** (2019) An efficient system composed of maize protoplast transfection and HPLC-MS for studying the biosynthesis and regulation of maize benzoxazinoids. **Plant Methods** 15:144.
https://www.ncbi.nlm.nih.gov/pubmed/31798670
21. Malook, S.[#], Qi, J.[#], Hettenhausen, C.[#], Xu, Y., Zhang, C., Zhang, J., Lu, C., Li, J., Wang, L., **Wu, J.*** (2019) The oriental armyworm (*Mythimna separata*) feeding induces systemic defense responses within and between maize leaves. **Philosophical Transactions of the Royal Society B** 374: 20180307
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22. **Wu, J.*** (2018) miRNAs as a secret weapon in the battlefield of haustoria, the interface between parasites and host plants. **Molecular Plant 11,** 354–356.
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23. Qi, J., Malook, S., Shen, G., Gao, L., Zhang, C., Li, J., Zhang, J., Wang, L., **Wu, J.*** (2018) Current understanding of maize and rice defense against insect herbivores. **Plant Diversity** 40: 189-195.
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24. Sun, G.[#], Xu, Y.[#], Liu, H.[#], Sun, T., Zhang, J., Hettenhausen, C., Shen, G., Qi, J., Qin, Y., Li, J., Wang, L., Chang, W., Guo, Z., Baldwin, I.T., **Wu, J.*** (2018) Large-scale gene losses underlie the genome evolution of parasitic plant *Cuscuta australis*. **Nature Communications** 9:2683.
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25. Zhuang, H., Li, J., Song, J., Hettenhausen, C., Schuman, M., Sun, G., Zhang, C., Li, J., Song, D., **Wu, J.*** (2018) Aphid (*Myzus persicae*) feeding on the parasitic plant dodder (*Cuscuta australis*) activates defense responses in both the parasite and soybean host. **New Phytologist** 218: 1586-1596. https://www.ncbi.nlm.nih.gov/pubmed/29575001
26. Lei, Y., Xu, Y., Hettenhausen, C., Lu, C., Shen, G., Zhang, C., Li, J., Song, J., Lin, H.*, **Wu, J.*** (2018). Comparative analysis of alfalfa (*Medicago sativa* L.) leaf transcriptomes reveals genotype-specific salt tolerance mechanisms. **BMC Plant Biology** 18:35 https://www.ncbi.nlm.nih.gov/pubmed/29448940
27. Lu, C., Qi, J., Hettenhausen, C., Lei, Y., Zhang, J., Zhang, M., Zhang C., Song J., Li, J., Cao, G., Malook, S.U., **Wu, J.*** (2018) Elevated CO_2 differentially affects tobacco and rice defense against lepidopteran larvae via the jasmonic acid signaling pathway. **Journal of Integrative Plant Biology** 60: 412-431 https://www.ncbi.nlm.nih.gov/pubmed/29319235
28. Qi, J., Zhang, M., Lu, C., Hettenhausen, C., Tan, Q., Cao, G., Zhu, X., Wu, G., **Wu, J.*** (2018) Ultraviolet-B enhances the resistance of multiple plant species to lepidopteran insect herbivory through the jasmonic acid pathway. **Scientific Reports** 8:277 https://www.ncbi.nlm.nih.gov/pubmed/29321619

2017

29. Song, J., Liu, H., Zhuang, H., Zhao, C., Xu, Y., Wu, S., Qi, J., Li, J., Hettenhausen, C.*, **Wu, J.*** (2017) Transcriptomics and alternative splicing analyses reveal large differences between maize lines B73 and Mo17 in response to aphid *Rhopalosiphum padi* Infestation. **Frontiers in Plant Science** 8:1738. https://www.ncbi.nlm.nih.gov/pubmed/29067035
30. Hettenhausen, C.[#], Li, J.[#], Zhuang, H., Sun, H., Xu, Y., Qi, J., Zhang, J., Lei, Y., Qin, Y., Sun, G., Wang, L., Baldwin, I.T., **Wu, J.*** (2017) The stem parasitic plant *Cuscuta australis* (dodder) transfers herbivory-induced signals among plants. **Proceedings of National Academy of Sciences of the USA** 114: E6703-E6709. https://www.ncbi.nlm.nih.gov/pubmed/28739895

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31. Lei, Y., Liu, Q., Hettenhausen, C., Cao, G., Tan, Q., Zhao, W., Lin, H.*, **Wu, J.*** (2017) Salt-tolerant and -sensitive alfalfa (*Medicago sativa*) cultivars have large variations in defense responses to the lepidopteran insect *Spodoptera litura* under normal and salt stress condition. **PLoS One** 12: e0181589. https://www.ncbi.nlm.nih.gov/pubmed/28719628

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32. Sun, T., Renner, S., Xu, Y., Qin, Y., **Wu, J.***, Sun, G.* (2016) Two *hAT* transposon genes were transferred from Brassicaceae to broomrapes and are actively expressed in some recipients. **Scientific Reports** 6:30192. https://www.ncbi.nlm.nih.gov/pubmed/27452947
33. Luo, J., Wei, K., Wang, S., Zhao, W., Ma, C., Hettenhausen, C., Wu, J., Cao, G., Sun, G., Baldwin, I. T., **Wu, J.***, Wang, L*. (2016) COI1-regulated hydroxylation of jasmonoyl-L-isoleucine impairs *Nicotiana attenuata*'s resistance to the generalist herbivore *Spodoptera litura*. **Journal of Agricultural and Food Chemistry** 64, 2822-2831 http://www.ncbi.nlm.nih.gov/pubmed/26985773

34. Qi, J.[#], Sun, G.[#], Wang, L.[#], Zhao, C.[#], Hettenhausen, C., Schuman, M.C., Baldwin, I.T., Li, J., Song, J., Liu, Z., Xu, G., Lu, X., **Wu, J.*** (2016) Oral secretions from *Mythimna separata* insects specifically induce defense responses in maize as revealed by high-dimensional biological data. **Plant Cell & Environment** 39, 1749-1766 http://www.ncbi.nlm.nih.gov/pubmed/26991784
35. Hettenhausen, C[#]., Sun, G.[#], He, Y., Zhuang, H., Sun, T., Qi, J., **Wu, J.*** (2016) Genome-wide identification of calcium-dependent protein kinases in soybean and analyses of their transcriptional responses to insect herbivory and drought stress. **Scientific Reports**, 6: 18973. http://www.ncbi.nlm.nih.gov/pubmed/26733237

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36. Hettenhausen, C., Schuman, M.C., **Wu, J.*** (2015) MAPK signaling – a key element in plant defense response to insects. **Insect Science 22,** 157-164**.** http://www.ncbi.nlm.nih.gov/pubmed/24753304
37. Li, J., Hettenhausen, C., Sun, G., Zhuang, H., Li, J. H.*, **Wu, J.*** (2015) The parasitic plant *Cuscuta australis* is highly insensitive to abscisic acid-induced suppression of hypocotyl elongation and seed germination. **PLoS One**, 10: e0135197. http://www.ncbi.nlm.nih.gov/pubmed/26258814

2014

38. Hettenhausen, C., Heinrich, M., Baldwin, I.T., **Wu, J.*** (2014) Fatty acid-amino acid conjugates are essential for systemic activation of salicylic acid-induced protein kinase and accumulation of jasmonic acid in *Nicotiana attenuata*. **BMC Plant Biology**, 14, 326. http://www.ncbi.nlm.nih.gov/pubmed/25430398
39. Zhang, D., Qi, J., Yue, J., Huang, J., Sun, T., Li, S., Wen, J., Hettenhausen, C., Wu, J., Wang, L., Zhuang, H., **Wu, J.*** and Sun, G.* (2014), Root parasitic plant *Orobanche aegyptiaca* and shoot parasitic plant *Cuscuta australis* obtained Brassicaceae-specific strictosidine synthase-like genes by horizontal gene transfer. **BMC Plant Biology 14**, 19. http://www.ncbi.nlm.nih.gov/pubmed/24411025

2013

40. Wang, L., **Wu, J.*** (2013) The essential role of jasmonic acid in plant-herbivore interactions - using the wild tobacco *Nicotiana attenuata* as a model. **Journal of Genetics and Genomics 40,** 597-606. http://www.ncbi.nlm.nih.gov/pubmed/24377866
41. Hettenhausen, C., Baldwin, I.T., **Wu, J.*** (2013) *Nicotiana attenuata* MPK4 suppresses a novel JA signaling-independent defense pathway against the specialist insect *Manduca sexta* but is not required for the resistance to the generalist *Spodoptera littoralis*. **New Phytologist 199**, 787-99. http://www.ncbi.nlm.nih.gov/pubmed/23672856
42. Yang, D.H., Baldwin, I.T., **Wu, J.*** (2013) Silencing brassinosteroid receptor *BRI1* impairs herbivory-elicited accumulation of jasmonic acid-isoleucine and diterpene glycosides, but not jasmonic acid and trypsin proteinase inhibitors in *Nicotiana attenuata*. **Journal of Integrative Plant Biology 55**, 514-526. http://www.ncbi.nlm.nih.gov/pubmed/23347255
43. Heinrich, M., Hettenhausen, C., Lange, T., Wünsche, H., Fang, J., Baldwin, I.T., **Wu, J.*** (2013) High levels of jasmonic acid antagonize the biosynthesis of gibberellins and inhibit the growth of *Nicotiana attenuata* stems. **Plant Journal 73,** 591-606. http://www.ncbi.nlm.nih.gov/pubmed/23190261
44. Hettenhausen, C., Yang, D.H., Baldwin, I.T., **Wu, J.*** (2013) Calcium-dependent protein kinases, CDPK4 and CDPK5, affect early steps of jasmonic acid biosynthesis in *Nicotiana attenuata*. **Plant Signaling & Behavior 8**, e22784 http://www.ncbi.nlm.nih.gov/pubmed/23221744

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45. Yang, D.H., Hettenhausen, C., Baldwin, I.T., **Wu, J**.* (2012) Silencing *Nicotiana attenuata* calcium-dependent protein kinases, CDPK4 and CDPK5, strongly upregulates

wound- and herbivory-induced jasmonic acid accumulations. **Plant Physiology 159,** 1591-607
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46. Hettenhausen, C., Baldwin, I.T., **Wu, J**.* (2012) Silencing *MPK4* in *Nicotiana attenuata* enhances photosynthesis and seed production but compromises abscisic acid-induced stomatal closure and guard cell-mediated resistance to *Pseudomonas syringae* pv. *tomato* DC3000. **Plant Physiology 158,** 759-76
http://www.ncbi.nlm.nih.gov/pubmed/22147519
47. Shi, C., Baldwin, I.T., **Wu, J**.* (2012) Arabidopsis nonsense-mediated mRNA decay factors, UPF1, UPF2, and UPF3, are involved in plant development and wounding- and pathogen-induced responses. **Journal of Integrative Plant Biology 54,** 99-114.
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48. Heinrich, M., Baldwin, I.T., **Wu, J.*** (2012) Three MAPK kinases, MEK1, SIPKK and NPK2, are not involved in activation of SIPK after wounding and herbivore feeding but important for accumulation of trypsin proteinase inhibitors. **Plant Molecular Biology Reporter 30**, 731-40.
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2011

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http://www.ncbi.nlm.nih.gov/pubmed/21852758
51. Heinrich, M., Baldwin, I.T., **Wu, J.*** (2011) Two mitogen-activated protein kinase kinases, MKK1 and MEK2, are involved in wounding- and specialist lepidopteran herbivore *Manduca sexta*-induced responses in *Nicotiana attenuata.* **Journal of Experimental Botany 62**, 4355-65.
http://www.ncbi.nlm.nih.gov/pubmed/21610019
52. Wünsche, H., Baldwin, I.T., **Wu, J.*** (2011) *S*-Nitrosoglutathione reductase (GSNOR) mediates resistance of *Nicotiana attenuata* to the specialist insect herbivore *Manduca sexta.* **Journal of Experimental Botany 62**, 4605-16.
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Other papers

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2. Sun, H., Wang, L., Zhang, B., Ma, J., Hettenhausen, C., Cao, G., Sun, G., **Wu, J.**, Wu, J*. (2014) Scopoletin is a phytoalexin against *Alternaria alternata* in wild tobacco dependent on jasmonate signalling. **Journal of Experimental Botany 65**, 4305-15. http://www.ncbi.nlm.nih.gov/pubmed/24821958
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4. Sun, H., Hu, X., Ma, C., Hettenhausen, C., Wang, L., Sun, G., **Wu, J.**, Wu, J*. (2014) Requirement of ABA signalling-mediated stomatal closure for resistance of wild tobacco to *Alternaria alternate*. **Plant Pathology 63**, 1070-7. http://onlinelibrary.wiley.com/doi/10.1111/ppa.12181/abstract
5. Sun, G., Yang, Y., Xie, F., Wen, J.F., **Wu J.**, Wilson, I.W., Tang, Q., Liu, H., Qiu, D. (2013) Deep sequencing reveals transcriptome re-programming of *Taxus* × *media* cells to the elicitation with methyl jasmonate. **PLoS One 8**, e62865. http://www.plosone.org/article/info:doi/10.1371/journal.pone.0062865
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7. Deng, W.W., Zhang, M., **Wu J.**, Li, Y.Y., Wei, C.L.*, Jiang, C.J., Wan, X.C. (2013) Molecular cloning, functional analysis of three *cinnamyl alcohol dehydrogenase* (*CAD*) genes in the leaves of tea plant, *Camellia sinensis*. **Journal of Plant Physiology 170,** 272-282 http://www.ncbi.nlm.nih.gov/pubmed/23228629
8. Meldau, S., **Wu, J.**, Baldwin, I.T.* (2009) Silencing two herbivory-activated MAP kinases, SIPK and WIPK, does not increase *Nicotiana attenuata*'s susceptibility to herbivores in the glasshouse and in nature. **New Phytologist 181**, 161-73. http://www.ncbi.nlm.nih.gov/pubmed/19076722

9. Rayapuram, C., **Wu, J.**, Hase, C., and Baldwin, I.T.* (2008) PR-13/Thionin not PR-1 mediates bacterial resistance in *Nicotiana attenuata* in nature and neither influences herbivore resistance. **Molecular Plant-Microbe Interactions 21,** 988-1000. http://www.ncbi.nlm.nih.gov/pubmed/18533839

10. Horn, M., Patankar, A.G., Zavala, J.A., **Wu, J.**, Doleckova-Maresova, L., Vujtechova, M., Mares, M., Baldwin, I.T.* (2005). Differential elicitation of two processing proteases controls the processing pattern of the trypsin proteinase inhibitor precursor in *Nicotiana attenuata*. **Plant Physiology 139**, 375-388. http://www.ncbi.nlm.nih.gov/pubmed/16113221

Book Chapters

1. Hettenhausen C, Baldwin, I.T., **Wu J.** (2014) Virus-induced gene silencing in plant MAPK research. **Methods in Molecular Biology – Plant MAP Kinases: Methods and Protocols. Eds. G. Komis, J. Samaj, Humana Press Inc. 1171:79-89** http://www.ncbi.nlm.nih.gov/pubmed/24908121
2. Galis I., Schuman M.C., Gase K., Hettenhausen C., Hartl M., Dinh S.T., **Wu J.**, Bonaventure G., Baldwin I.T. (2013) The use of VIGS technology to study plant-herbivore interactions. **Methods in Molecular Biology - Virus-induced gene silencing: Methods and protocols. Eds. A. Becker, Humana Press Inc. 975:109-37** http://www.ncbi.nlm.nih.gov/pubmed/23386299
3. Tretyakov, A., Mrotzek, G., **Wu, J.**, Baldwin, I.T., Saluz, H.P.* (2006). Rapid heatblock thermocycling of small samples: a path to fast, low-cost plant genotyping. **Floriculture, Ornamental and Plant Biotechnology. Vol. 4. Global Science Books, Isleworth, 226 - 230.**
4. Hettenhausen C, Baldwin, I.T., **Wu J.** (2014) Virus-induced gene silencing in plant MAPK research. **Methods in Molecular Biology – Plant MAP Kinases: Methods and Protocols. Eds. G. Komis, J. Samaj, Humana Press Inc. 1171:79-89**

   http://www.ncbi.nlm.nih.gov/pubmed/24908121
5. Galis I., Schuman M.C., Gase K., Hettenhausen C., Hartl M., Dinh S.T., **Wu J.**, Bonaventure G., Baldwin I.T. (2013) The use of VIGS technology to study plant-herbivore interactions. **Methods in Molecular Biology - Virus-induced gene silencing: Methods and protocols. Eds. A. Becker, Humana Press Inc. 975:109-37**

   http://www.ncbi.nlm.nih.gov/pubmed/23386299

EDITORIAL SERVICES

- Co-editor of Journal of Integrative Plant Biology (2010-2023)
- Editor of Plant Diversity (2015-2020)
- Editor-in-Chief of Plant Diversity (2021-2025)
- Editor of Journal of Ecology and Environment (2023-2024)

TALKS

1. **Topic workshop of 43rd annual meeting of the molecular biology society of Japan**, Dec. 2, 2020
2. **The 10th Conference of Asia-Pacific Association of Chemical Ecologist**, Hangzhou, China, October 9-13, 2019
3. **World Congres on Parasitic Plants - WCPP2019**, Amsterdam, the Netherlands, June 30-July 5, 2019
4. **The 5th International Conference on Biotic Plant Interactions**, Aug. 17-21, 2017
5. **17th Plant Genomics Conference in China**, Fuzhou, China, Aug. 19-21, 2016

6. **11th National Congress of Chemical Ecology**, Wuhan, China, July 22-24, 2016
7. **National Congress of Plant Biology**, Changchun, China, Oct. 9-12, 2015
8. **International Symposium on "From Ecosystems to Modern Agriculture"**, Lanzhou, China, June 26—27, 2015
9. **13th Congress on Parasitic Plants**, Kunming, China, 5-10 July 2015
10. **3rd International Conference on Plant Metabolism**, Xiamen, China, July 2-5, 2014
11. **10th Solanaceae Conference (SOL 2013)**, Beijing, China, Oct. 13-17, 2013
12. The important roles of MAPKs in plant defense against herbivores. **Invited talk, Institute of Zoology, Chinese Academy of Sciences**, Beijing, China, Jun 4, 2013
13. Herbivory-induced signaling in plants – MAPKs go ahead. **Invited talk, Institute of Botany, Chinese Academy of Sciences**, Beijing, China, Nov. 12, 2012
14. Herbivory-induced signaling in plants – MAPKs go ahead. Invited talk, **Institute of Genetics and Developmental Biology, Chinese Academy of Sciences**, Beijing, China, Nov. 14, 2012
15. MPK4 in stress signaling. **Invited talk, Huazhong Agricultural University**, Wuhan, China, Jul. 18, 2012
16. Functions of MAPK signaling in plant resistance to herbivores. **Invited lecture, Chinese Academy of Forestry**, Beijing, China, Dec. 27, 2011
17. MPK4 in *Nicotiana attenuata*: a multifaceted MAPK involved in biotic and abiotic resistance. **2nd International Symposium on Integrative Plant Biology**, **Invited lecture,** Lanzhou, China, Aug. 26-28, 2011
18. Herbivory-Induced Signaling in Plants: Perception and Action. **Invited lecture, Anhui Agricultural University**, Feb 21, 2011
19. When an herbivore takes a bite, does the plant know? **Invited plenary lecture, International Conference on Plant Vascular Biology and Agriculture,** Chongqing, China, June 21-24, 2009
20. NaCDPK1 mediates heat resistance in *Nicotiana attenuata*. **Max Planck Institute for Chemical Ecology,** Jena, Germany, Sept. 25-26, 2008
21. MAP kinases regulate *Nicotiana attenuata's* defense responses to herbivory. Department of Life Sciences, **Nanjing University,** Nanjing, China, June 6, 2008
22. Genetic modifications of *Nicotiana attenuata* reveal functions of plant secondary metabolites in resistance to herbivory; **Invited plenary lecture, International Conference on Plant Secondary Metabolism,** Kunming, China, June 8-10, 2008
23. MAP kinases regulate defense responses to herbivory in *Nicotiana attenuata*; **Max Planck Institute for Chemical Ecology,** Jena, Germany, Sept. 2007
24. The evolution of proteinase inhibitor defense mechanisms during polyploidy speciation in *Nicotiana* native to North America, **Workshop DFG-SPP 1152 "Evolution of metabolic diversity",** Halle, Germany, Oct. 2004
25. The evolution of herbivory-specific expression of proteinase inhibitors during polyploidy speciation in *Nicotiana* native to North America; **Botanikertagung 2004/Deutsche Botanische Gesellschaft, Vereinigung für Angewandte Botanik, Braunschweig,** Germany, Sept. 2004

TEACHING

1. “Plant Molecular Biology”, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, June 2013
2. “Transfection of Arabidopsis Protoplasts”, Max Planck International Research School, basic lecture, Max Planck Institute for Chemical Ecology, Jena, Feb. 6-8, 2012
3. “Advanced Molecular Cloning and Application of Arabidopsis Protoplasts”, Max Planck International Research School, basic lecture, Max Planck Institute for Chemical Ecology, Jena, November 7-11, 2011
4. “Application of quantitative real-time PCR in ecological studies”, Ecology Workshop, Friedrich Schiller University, Jena, July 2010
5. “Basic Knowledge of Molecular Cloning”, Max Planck International Research School, basic lecture, Max Planck Institute for Chemical Ecology, Jena, June 2009
6. “Molecular Cloning of PCR Products”, Ecology Workshop, Friedrich Schiller University, Jena, July 2008

AWARDS RECEIVED

Jun. 2008, Otto Hahn medal, Max Planck Society.

GRANTS

1. Jan. 2021-Dec. 2023, Yunnan Innovation Team Project, Yunnan Provincial Science and Technology Department.
2. June 2020, General and Key Project of Applied Basic Research Program of Yunnan (2020-2022)
3. Jan. 2020, National Science Foundation of China (2020-2023)
4. Aug. 2017, Key International Collaborative Program, Chinese Academy of Sciences (2018-2020)
5. Jan. 2016, National Science Foundation of China-Yunnan Joint Grant (2016-2019)
6. Jan. 2015, National Science Foundation of China (2015-2018)
7. May 2014, the Strategic Priority Research Program of the Chinese Academy of Sciences (2014-2019)
8. Oct. 2013, “Max Planck Partner Group” grant, from the Max Planck Society (2013-2018).
9. Oct. 2012, “Top talents program of Yunnan Province” (No. 2012HA016), from Yunnan Global Talents Affairs Leading Group (2012-2015)
10. Jan. 2012, awarded the “Thousand Young Talent Program” from China (2012-2015)
11. Startup grant from the Kunming Institute of Botany, Chinese Academy of Sciences (2012-2015)
12. Dec. 2011, awarded Marie Curie International Outgoing Fellowship (scored 96.1/100) from the European Union (hosts: Prof. Detlef Weigel, Max Planck Institute for Developmental Biology, and Prof. Lynne E. Maquat, University of Rochester)

SUPERVISION

Postdocs and Visiting Scientists

1. Canrong Ma (Dec. 2022-present), Ph.D. from Kunming Institute of Botany, CAS
2. Mou Zhang (Jan. 2022-present), Ph.D. from Nanjing Agricultural University
3. Jingxiong Zhang (Dec. 2020-present), Ph.D. from Kunming Institute of Botany, CAS

4. Yuxing Xu (Jul. 2019-present), postdoc, Ph.D. from Kunming Institute of Botany, CAS
5. Juan Song (Dec. 2018-Apr. 2022), postdoc, Ph.D. from Kunming Institute of Botany, CAS
6. Yunting Lei (Jan. 2018-Dec. 2020), Ph.D. from Sichuan University
7. Sen Li (Dec. 2017-present), postdoc, Ph.D. from Zhejiang University
8. Hui Liu (Apr. 2016-June 2019), postdoc, Ph.D. from Kunming Institute of Zoology, CAS
9. Yan Qin (Jul. 2014-Dec. 2017), postdoc, Ph.D. from Kunming Institute of Zoology, CAS
10. Dale Zhang (Oct. 2014.10-Jan. 2015), visiting scientist, Professor at Henan University
11. Christian Hettenhausen (Apr. 2012-Apr. 2018), postdoc, Ph.D. from the Max Planck Institute for Chemical Ecology, Germany, funded by the "Fellowship for Young International Scientists" program from CAS.
12. Jinfeng Qi (Jun. 2012-Dec. 2016), postdoc, Ph.D. from Zhejiang University, China.
13. Maria Heinrich (Oct. 2012-Dec. 2012), visiting scientist, from the Max Planck Institute for Chemical Ecology, Germany.

Ph.D. Theses

1. Shuhan Zhang (Sept. 2021-present), Kunming Institute of Botany, CAS
2. Junyu He (Sept. 2022-present), Kunming Institute of Botany, CAS
3. Deqing Rong (Sept. 2021-present), Kunming Institute of Botany, CAS
4. Lijian Zhang (Sept. 2021-present), Kunming Institute of Botany, CAS
5. Zerui Feng (Sept. 2020-present), Kunming Institute of Botany, CAS
6. Tianyin Zheng (Sept. 2019-present), Kunming Institute of Botany, CAS
7. Jianxiang Yang (Sept. 2019-present), Kunming Institute of Botany, CAS
8. Man Zhao (Sept. 2019-present), Kunming Institute of Botany, CAS
9. Xijie Zheng (Sept. 2017-present), Kunming Institute of Botany, CAS
10. Che Zhan (Sept. 2017-present), Kunming Institute of Botany, CAS
11. Yohannes Besufekad (Jan. 2019-present), Kunming Institute of Botany, CAS
12. Canrong Ma (Sept. 2018-Nov. 2022), Kunming Institute of Botany, CAS
13. Na Xue (Sept. 2018-Nov. 2022), Kunming Institute of Botany, CAS
14. Shalan Li (Sept. 2016-Nov. 2019), Kunming Institute of Botany, CAS
15. Nian Liu (Sept. 2015-June 2020), Kunming Institute of Botany, CAS
16. Saif Ul Malook (Oct. 2015- June 2019), Kunming Institute of Botany, CAS
17. Jingxiong Zhang (Sept. 2014-Dec. 2020), Kunming Institute of Botany, CAS
18. Yuxing Xu (Sept. 2014- June 2019), Kunming Institute of Botany, CAS
19. Cuiping Zhang (Sept. 2013-June 2020), Kunming Institute of Botany, CAS
20. Chengkai Lu (Sept. 2014-July 2018), Kunming Institute of Botany, CAS
21. Yunting Lei (Apr. 2014-Nov. 2017), The interaction among abscisic acid, jasmonic acid, and strigolactones for regulating plant salt-tolerance and herbivore-resistance. Sichuan University
22. Juan Song (Sept. 2013- July 2018), Kunming Institute of Botany, CAS
23. Huifu Zhuang (Sept. 2013-July 2018), Kunming Institute of Botany, CAS

24. Juan Li (Jan. 2013- Jan. 2016), Studies on the response of the parasitic plant *Cuscuta* to phytohormones and herbivory-induced inter-plant signaling mediated by *Cuscuta*. Huazhong Agricultural University
25. Dahai Yang (Apr. 2007-Mar. 2011), Functions of protein kinases, calcium-dependent protein kinases (CDPKs) and BRI1-associated kinase 1 (BAK1), in wild tobacco (*Nicotiana attenuata*) immunity to herbivore and pathogen. Max Planck Institute for Chemical Ecology.
26. Hendrik Wünsche (Jul. 2008-Jun. 2011), Involvement of two nitric oxide-associated genes, NOA1 and GSNOR, in *Nicotiana attenuata*'s resistance to the specialist insect herbivore *Manduca sexta*. Max Planck Institute for Chemical Ecology.
27. Christian Hettenhausen (Feb. 2007-Dec. 2011), Mitogen-activated protein kinase 4 (MPK4) functions in development and resistance to biotic and abiotic stresses in *Nicotiana attenuata*. Max Planck Institute for Chemical Ecology.
28. Stefan Meldau (Jan. 2007-Mar. 2012), Early herbivory-induced responses in plants. Max Planck Institute for Chemical Ecology.
29. Maria Heinrich (Jan. 2009-Jul. 2012), Functions of MAPKKs in plant resistance to herbivore in *Nicotiana attenuata*. Max Planck Institute for Chemical Ecology.

Master Theses

1. Wenxing Li (Sept. 2020-present), Kunming Institute of Botany, CAS
2. Zhongxiang Su (Sept. 2019-present), Kunming Institute of Botany, CAS
3. Jinge Bian (Sept. 2018-June 2021), Kunming Institute of Botany, CAS
4. Lei Gao (Sept. 2016-June 2019), Yunnan University
5. Jiaxin Wen (Sept. 2016- June 2019), Yunnan University
6. Menghua Mu (Sept. 2015-July 2018), Kunming Institute of Botany, CAS
7. Lingdan Zhang (Sept. 2013-July 2016), A study on the application of a PEG-mediated transient gene expression system in maize mesophyll protoplasts, Anhui Agricultural University.
8. Chuan Shi (May 2010-Jun. 2011), Die Bedeutung der nonsense-mediated mRNA decay Proteine UPF1, UPF2 und UPF3 im Hinblick auf die Pflanzenentwicklung und der abiotischen und biotischen Stressantwort.

Diploma Theses

1. Christian Hettenhausen (10.2004-07.2006), Characterization of a trypsin protease inhibitor-deficient ecotype of *Nicotiana attenuata* collected from Arizona.
2. Stefan Meldau (Jan. 2005–Dec. 2006), MAP kinase signaling mediates plant defense against herbivores.

Bachelor Theses

1. Yvonn Stampnik (11.2008-05.2009), BAK1 regulates herbivore feeding-induced jasmonic acid accumulation and secondary metabolite contents in *Nicotiana attenuata*