吴建强简历

联系方式

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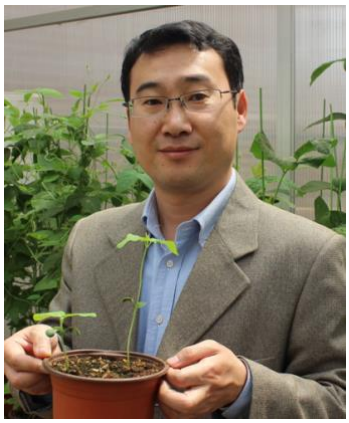

研究方向

重要农作物（玉米、番茄等）的抗虫分子机理研究

植物与寄生植物的相互作用

学习经历

2001.09-2007.11	**植物分子生物学与遗传学，博士** 论文: molecular study of the trypsin proteinase inhibitor defense mechanism and early herbivory-induced signaling in *Nicotiana*	分子生态学研究室, 德国马普化学生态学研究所; 导师：Ian T. Baldwin 教授 (美国科学院院士)
1995.09–1998.07	**分析化学，硕士** 论文：application of cyclodextrin-derivative stationary phases in separation of aromatic positional isomers in gas chromatography	中国科学院大连化学物理研究所；导师：朱道乾教授
1991.09-1995.07	**化学工程学（无机化工），学士**	大连理工大学化工学院

工作经历

2012.04–至今: 中国科学院昆明植物研究所，研究员，课题组长，博导，青年千人

2007.01–2012.04: 课题负责人（Group Leader）, 分子生态学研究室, 德国马普化学生态学研究所

1998.10–2001.08: 中国科学院大连化学物理研究所，分析化学研究室，研究实习员

发表文章 (* 通信作者; # 共同第一作者)

综述与评述文章

1. **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.

   https://www.ncbi.nlm.nih.gov/pubmed/29462721

2. 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

3. 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

4. Heinrich, M., Baldwin, I.T., **Wu, J.*** (2012) Protein kinases in plant growth and defense. Protein kinases in plant growth and defense. **Journal of Endocytobiosis and Cell Research, 22,** 48-51.

5. Hettenhausen, C., Baldwin, I.T., **Wu, J.*** (2012) MAPK signaling regulates multiple stress responses in plants. **Journal of Endocytobiosis and Cell Research,** 22, 52-6.

6. Meldau, S., Baldwin, I.T., **Wu, J.*** (2011) For security and stability: SGT1 in plant defense and development. **Plant Signaling & Behavior 6, 1**479-82.

   http://www.ncbi.nlm.nih.gov/pubmed/21897126

7. Yang D.H., Hettenhausen C., Baldwin, I.T., **Wu, J.*** (2011) The multifaceted function of BAK1/SERK3: plant immunity to pathogens and responses to insect herbivores. **Plant Signaling & Behavior 6, 1**322-4.

   http://www.ncbi.nlm.nih.gov/pubmed/21852758

8. **Wu, J.***, Baldwin, I.T.* (2010) New insights into plant responses to the attack from insect herbivores. **Annual Review of Genetics 44,** 1-24.

   http://www.ncbi.nlm.nih.gov/pubmed/20649414

9. **Wu, J.**, Baldwin, I.T.***** (2009) Herbivory-induced signaling in plants: perception and action. **Plant Cell & Environment 32,** 1161-74.

   http://www.ncbi.nlm.nih.gov/pubmed/19183291

研究论文

第一作者论文

1. **Wu, J.**, Hettenhausen, C., Schuman, M.C., and Baldwin, I.T.***** (2008) A comparison of two *Nicotiana attenuata* accessions reveals large differences in *Manduca sexta*-induced signaling events. **Plant Physiology 146**, 927-39.

   http://www.ncbi.nlm.nih.gov/pubmed/18218965

2. **Wu, J.**, Hettenhausen, C., Meldau, S., and Baldwin, I.T.***** (2007). Herbivory rapidly activates MAPK signaling in attacked and unattacked leaf regions but not between leaves of *Nicotiana attenuata*. **Plant Cell 19,** 1096-1122.

   http://www.ncbi.nlm.nih.gov/pubmed/17400894

3. **Wu, J.**, Kang, J.H., Hettenhausen, C., and Baldwin, I.T.***** (2007). Nonsense-mediated mRNA decay (NMD) silences the accumulation of aberrant trypsin proteinase inhibitor mRNA in *Nicotiana attenuata*. **Plant Journal 51,** 693-706.

   http://www.ncbi.nlm.nih.gov/pubmed/17587303

4. **Wu, J.**, Hettenhausen, C., Baldwin, I.T.***** (2006). Evolution of proteinase inhibitor defenses in North American allopolyploid species of *Nicotiana*. **Planta 224,** 750-760.

   http://www.ncbi.nlm.nih.gov/pubmed/16534618

通讯作者论文

2019

1. Li, S., Zhang, J., Liu, H., Liu, N., Shen, G., Zhuang, H., **Wu, J.*** (2019) Dodder-transmitted mobile signals prime host plants for enhanced salt tolerance. **Journal of Experimental Botany** (in press)

2. 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

   https://www.ncbi.nlm.nih.gov/pubmed/30967023

2018

3. 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.

   https://www.sciencedirect.com/science/article/pii/S2468265918300696

4. 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.

   https://www.ncbi.nlm.nih.gov/pubmed/29992948

5. 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

6. 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

7. 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

8. 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

9. 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

10. 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.

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11. 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.

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2016

12. 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.

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13. 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

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14. 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

15. 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

2015

16. 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.

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2014

17. 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

18. 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

19. 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.

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20. 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

21. 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.

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22. 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

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2012

23. 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

    http://www.ncbi.nlm.nih.gov/pubmed/22715110

24. 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

25. 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.

    http://www.ncbi.nlm.nih.gov/pubmed/22353561

26. 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.

    http://www.springerlink.com/content/ph4hq3w1318k5503/

2011

27. 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

28. 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.

    http://www.ncbi.nlm.nih.gov/pubmed/21622839

29. Wünsche, H., Baldwin, I.T., **Wu, J.*** (2011) Silencing *NOA1* elevates herbivory-induced JA accumulation and compromises most of carbon-based defense metabolites in *Nicotiana attenuata*. **Journal of Integrative Plant Biology 53**, 619-31.
http://www.ncbi.nlm.nih.gov/pubmed/21457460
30. Yang, D.H., Hettenhausen, C., Baldwin, I.T., **Wu, J.*** (2011) BAK1 regulates the accumulation of jasmonic acid and the levels of trypsin proteinase inhibitors in *Nicotiana attenuata*'s responses to herbivory. **Journal of Experimental Botany 62**, 641-52.
http://www.ncbi.nlm.nih.gov/pubmed/20937731
31. Meldau, S., Baldwin, I.T., **Wu, J.*** (2011) SGT1 regulates wounding- and herbivory-induced jasmonic acid accumulation and *Nicotiana attenuata*'s resistance to the specialist lepidopteran herbivore *Manduca sexta.* **New Phytologist 189**, 1143-56.
http://www.ncbi.nlm.nih.gov/pubmed/21118264

其它论文

1. Sun, T., Xu, Y., Zhang, D., Zhuang, H., **Wu, J.**, Sun, G. (2016) An acyltransferase gene that putatively functions in anthocyanin modification was horizontally transferred from Fabaceae into the genus *Cuscuta*. **Plant Diversity 38**, 149-155.
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
3. Zhang, N., Han Z., Sun, G., Hoffman, A., Wilson, I.W., Yang, Y., Gao, Q., **Wu, J**., Xie, D., Dai, J., Qiu, D. (2014) Molecular cloning and characterization of a cytochrome P450 taxoid 9alpha-hydroxylase in *Ginkgo biloba* cells. **Biochemical and Biophysical Research Communications 443**, 938-43.
http://www.ncbi.nlm.nih.gov/pubmed/24380857
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

6. Yu, S., Cao, L., Zhou, C.M., Zhang, T.Q., Lian, H., Sun, Y., **Wu, J.**, Wang, G., Wang, J.W., (2013) Sugar is an endogenous cue for juvenile-to-adult phase transition in plants. **eLife 2,** e00269.

   http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3610343/

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

论著章节

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.**

口头报告

1. **The 10th Conference of Asia-Pacific Association of Chemical Ecologist**, Hangzhou, China, October 9-13, 2019
2. **World Congres on Parasitic Plants - WCPP2019**, Amsterdam, the Netherlands, June 30-July 5, 2019
3. **第十二届全国化学生态学学术会议**，福建福州市，2018 年 6 月 22-25 日
4. **第九届西北地区植物科学与资源利用研讨会**，云南大理，2017 年 8 月 25-27 日
5. **The 5th International Conference on Biotic Plant Interactions**, Aug. 17-21, 2017
6. **第十三届全国杂草科学大会**，贵阳，2017 年 8 月 7 日-10 日
7. **17th Plant Genomics Conference in China**, Fuzhou, China, Aug. 19-21, 2016
8. **11th National Congress of Chemical Ecology**, Wuhan, China, July 22-24, 2016
9. **National Congress of Plant Biology**, Changchun, China, Oct. 9-12, 2015
10. **International Symposium on "From Ecosystems to Modern Agriculture"**, Lanzhou, China, June 26－27, 2015
11. **13th Congress on Parasitic Plants**, Kunming, China, 5-10 July 2015
12. **3rd International Conference on Plant Metabolism**, Xiamen, China, July 2-5, 2014
13. **10th Solanaceae Conference (SOL 2013)**, Beijing, China, Oct. 13-17, 2013
14. The important roles of MAPKs in plant defense against herbivores. **Invited talk, Institute of Zoology, Chinese Academy of Sciences**, Beijing, China, Jun 4, 2013
15. Herbivory-induced signaling in plants – MAPKs go ahead. **Invited talk, Institute of Botany, Chinese Academy of Sciences**, Beijing, China, Nov. 12, 2012
16. 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
17. MPK4 in stress signaling. **Invited talk, Huazhong Agricultural University**, Wuhan, China, Jul. 18, 2012

18. Functions of MAPK signaling in plant resistance to herbivores. **Invited lecture, Chinese Academy of Forestry**, Beijing, China, Dec. 27, 2011
19. 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
20. Herbivory-Induced Signaling in Plants: Perception and Action. **Invited lecture, Anhui Agricultural University**, Feb 21, 2011
21. 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
22. NaCDPK1 mediates heat resistance in *Nicotiana attenuata*. **Max Planck Institute for Chemical Ecology,** Jena, Germany, Sept. 25-26, 2008
23. MAP kinases regulate *Nicotiana attenuata's* defense responses to herbivory. Department of Life Sciences, **Nanjing University,** Nanjing, China, June 6, 2008
24. 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
25. MAP kinases regulate defense responses to herbivory in *Nicotiana attenuata*; **Max Planck Institute for Chemical Ecology,** Jena, Germany, Sept. 2007
26. 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
27. 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

教学工作

1. "植物分子生物学"，中科院昆明植物研究所，2013.06
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

杂志编委与学术任职

中国植物生理与植物分子生物学学会常务理事，兼青年工作委员会委员（第十二届；2019.7-2024.7）

云南省植物学会第十二届理事会青年工作委员会主任委员（2015.2-2020.2）

第八届化学生态学专业委员会委员（2017-至今）

Journal of Integrative Plant Biology 编委 (2011-至今)

Frontiers in Ecology and Evolution 编委 (2014-至今)

Plant Diversity 编委（2015-至今）

获奖情况

2008.06, Otto Hahn 奖章, 德国马普学会

2018 年获国务院政府特殊津贴

基金与项目

1. 2020.01-2023.12，国家国家自然科学基金委，面上项目（编号：31970274），“菟丝子介导的磷胁迫系统性信号在寄主植物间长距离运输研究”
2. 2018.01-2020.12，中国科学院对外合作重点项目（编号：151853KYSB20170025），“寄生植物菟丝子在不同寄主间转导氮胁迫系统性信号的研究”

3. 2016.01-2019.12，国家基金委-云南省联合基金（编号：U1502263），“玉米丝裂原活化蛋白激酶（MAPK）信号系统抗虫功能及分子机理研究”
4. 2015.01-2018.12，国家自然科学基金委，面上项目（编号：31470369），“大气 CO_2 浓度升高对野生烟草抗虫能力的影响及分子机理研究”（已结题）
5. 2014.07-2019.06, 中国科学院先导专项“作物病虫害的导向性防控--生物间信息流与行为操控”课题，“农作物抗虫信号流传递与调控网络研究”（编号：XDB11050200）
6. 2013.10-2018.09, 马普伙伴小组国际合作项目，“Host-parasitic plant interactions”（已结题）
7. 2012.12-2015.11, 云南省高端人才计划（编号：2012HA016），“重要经济作物抗虫分子机理研究”（已结题）
8. 2012.12-2015.11，云南省海外高层次人才计划（已结题）
9. 2012.01-2014.12, 中共中央组织部，青年千人计划（已结题）
10. 2011.12, 欧盟玛丽居里奖学金 (获 96.1 分) (合作者: Detlef Weigel 教授, 德国马普发育生物学研究所，Lynne E. Maquat 教授, 美国罗切斯特大学，均为美国科学院院士)

指导学生

博士后和访问学者

1. 宋娟（2018.12-至今），博士后，毕业于中科院昆明植物研究所
2. 雷云霆（2018.1-至今），博士后，毕业于四川大学（中科院昆明植物研究所联合培养）
3. 李森（2017.12-至今），博士后，毕业于浙江大学
4. 刘晖（2016.04-至今），博士后，毕业于中科院昆明动物研究所
5. 秦燕 （2014.07-2017.12），博士后，毕业于中科院昆明动物研究所
6. 张大乐（2014.10-2015.1），河南大学教授，访问学者

7. Christian Hettenhausen (2012.04-2018.04), 博士后，毕业于德国马普化学生态学研究所，获中国科学院外籍青年科学家计划资助
8. 齐金峰 (2012.06-2016.12)，博士后，毕业于浙江大学
9. Maria Heinrich (2012.10-2012.12), 访问学者，来自于德国马普化学生态学研究所，博士

博士生

1. 展澈（2017.09-至今），中科院昆明植物研究所
2. Yohannes Besufekad（2019.01-至今），中科院昆明植物研究所
3. 马灿容（2018.09-至今），中科院昆明植物研究所
4. 薛娜（2018.09-至今），中科院昆明植物研究所
5. 李莎兰（2019.09-至今），中科院昆明植物研究所
6. Saif Ul Malook（2015.10-2019.06），中科院昆明植物研究所
7. 刘念（2015.09-至今），中科院昆明植物研究所
8. 张井雄（2014.09-至今），中科院昆明植物研究所
9. 许宇星（2014.09-2019.06），中科院昆明植物研究所
10. 张翠萍（2013.09-至今），中科院昆明植物研究所
11. 路承凯（2014.09-2018.07），中科院昆明植物研究所
12. 雷云霆（2014.04-2017.11），四川大学（联合培养）
13. 宋娟（2013.09-2018.07），中科院昆明植物研究所
14. 庄会富（2013.09-2018.07），中科院昆明植物研究所
15. 李娟（2013.01-2016.01），华中农业大学（联合培养）
16. Dahai Yang (2007.04-2011.03), 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.

17. Hendrik Wünsche (2008.07-2011.06), 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.
18. Christian Hettenhausen (2007.02-2011.12), 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。
19. Stefan Meldau (2007.01-2012.03), Early herbivory-induced responses in plants.
20. Maria Heinrich (2009.01-2012.07), Functions of MAPKKs in plant resistance to herbivore in *Nicotiana attenuata*. Max Planck Institute for Chemical Ecology.

硕士生

1. 温佳昕（2016.09-2019.06），云南大学与中科院昆明植物研究所，联合培养
2. 高磊（2016.09-2019.06），云南大学与中科院昆明植物研究所，联合培养
3. 穆梦花（2015.09-2018.07）, 中科院昆明植物研究所
4. 张龄丹（2013.09-2016.06），安徽农业大学与中科院昆明植物研究所，联合培养
5. Chuan Shi (2010.05-2011.06), Die Bedeutung der nonsense-mediated mRNA decay Proteine UPF1, UPF2 und UPF3 im Hinblick auf die Pflanzenentwicklung und der abiotischen und biotischen Stressantwort. 德国耶拿应用技术大学

Diploma 学生

1. Christian Hettenhausen (2004.10-2006.07), Characterization of a trypsin protease inhibitor-deficient ecotype of *Nicotiana attenuata* collected from Arizona. 德国耶拿大学
2. Stefan Meldau (2005.01–2006.12), MAP kinase signaling mediates plant defense against herbivores. 德国耶拿大学

本科生

1. Yvonn Stampnik (2008.11-2009.05), BAK1 regulates herbivore feeding-induced jasmonic acid accumulation and secondary metabolite contents in *Nicotiana attenuata.* 德国耶拿大学