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| **研究方向** | 玉米抗虫分子机理研究 |

**简历：**

齐金峰，农学博士，中国科学院昆明植物研究所副研究员，硕士研究生导师。研究领域主要为玉米抗虫分子机理解析、微生物介导的植物抗虫反应等。相关研究获得国家自然科学基金青年项目及面上项目、中国科学院青年创新促进会及西部之光项目、云南省人社厅“云岭青年人才”计划、云南省科技厅基础研究面上项目及重点项目、云南省优秀青年科学基金、中国博士后科学基金面上项目和特别资助项目等支持。

**教育背景**

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| 时间 | 学历及获奖情况 | 学校及专业 |
| **2007.9**  **-2012.6** | **农学 博士**  **论文：**水稻抗虫相关基因*OsPLDa4/5* 和*OsJMT1* 的功能解析  **获奖：**优秀研究生一等奖荣誉、博士引领计划一等津贴，浙江大学及浙江省优秀毕业生等 | 浙江大学  农业昆虫与生物防治专业  导师：娄永根 教授 |
| **2003.9**  **-2007.6** | **农学 学士**  **获奖：**企业奖学金以及连续五次一等专业奖学金和学习单项奖学金，并获得校长奖学金等 | 山东农业大学  植物保护（师范）专业 |

**工作经历**

2018.01-至今：中国科学院昆明植物研究所， 资源植物与生物技术重点实验室 副研究员；

2017.01-2018.01：中国科学院昆明植物研究所，助理研究员；

2012.06-2016.12：中国科学院昆明植物研究所，博士后。

**会议报告**

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| 时间，地点 | 会议 | 报告 |
| 2010.10.11  上海 | 第八届全国化学生态学学术研讨会 | *OsHI-PLD* participate in direct and indirect herbivore-induced defense responses in rice |
| 2011.10.13  北京 | 第六届亚太化学生态会议 | Isolation and Characterization of a rice jasmonic acid carboxyl methyltransferase gene |
| 2016.07.25  武汉 | 第十一届全国化学生态学学术研讨会 | 多组学揭示玉米特异识别粘虫口水诱导的防御反应 |
| 2018.06.23  福州 | 第十二届全国化学生态学学术研讨会 | Ultraviolet-B enhances the resistance of multiple plant species to lepidopteran insect herbivory through the jasmonic acid pathway |
| 2019.10.10  杭州 | The 10th Conference of Asia-Pacific Association of Chemical Ecologists | The oriental armyworm (*Mythimna*  *separata*) feeding induces systemic  defence responses within and between  maize leaves |
| 2019.11.30  昆明 | 第十八届中国生态学大会 | 玉米抵御粘虫取食的时空响应分析 |
| 2021.11.26  广州 | 2021年青年昆虫学者高峰论坛 | 乙烯信号途径调控玉米诱导抗虫反应 |

**发表文章：**

Wang H., Li HW., Onoda, Xu YJ., Ma LF., Zhao F., and **Qi JF****\*** (2025). Leaf biomechanical traits predict litter decomposability. DOI: 10.1111/1365-2745.70019. Journal of Ecology. 通讯作者

Wang YJ., Chen L., Li ZW., Qiu MW\*., **Qi JF**\* and Peng XR\* (2025). Discovery and anti-insect activity of novel terpenoids from *Zea mays* corn silk against *Spodoptera frugiperda*. **Industrial Crops and Products**. **（共同通讯）**

**Qi JF**, Xiao FJ, Liu XX, Li J, Wang HC Li S, Yu H W, Xu YX, Wang, H. The fall armyworm converts maize endophytes into its own probiotics to detoxify benzoxazinoids and promote caterpillar growth. *Microbiome* 2024;12(1).

Jin G, **Qi J**, Zu H, Liu S, Gershenzon J, Lou Y, Baldwin IT, Li R (2023) Jasmonate-mediated gibberellin catabolism constrains growth during herbivore attack in rice. **Plant Cell**. doi:10.1093/plcell/koad191

Li C, Dong L, Durairaj J, Guan JC, Yoshimura M, Quinodoz P, Horber R, Gaus K, Li J, Setotaw YB, **Qi J**, De Groote H, Wang Y, Thiombiano B, Flokova K, Walmsley A, Charnikhova TV, Chojnacka A, Correia de Lemos S, Ding Y, Skibbe D, Hermann K, Screpanti C, De Mesmaeker A, Schmelz EA, Menkir A, Medema M, Van Dijk ADJ, Wu J, Koch KE, Bouwmeester HJ (2023) Maize resistance to witchweed through changes in strigolactone biosynthesis. **Science** 379 (6627):94-99. doi:10.1126/science.abq4775

Wang H(#), **Qi JF**(#), Qin R, Ding K, Graham DW, Zhu YG (2023) Intensified livestock farming increases antibiotic resistance genotypes and phenotypes in animal feces. **Commun Earth Environ** 4 (1). doi:10.1038/s43247-023-00790-w **（共同一作）**

Wang HC(#), **Qi JF**(#), Xiao DR, Wang Y, Shi WY, Wang H (2023) Bacterial community diversity and underlying assembly patterns along vertical soil profiles in wetland and meadow habitats on the Zoige Plateau, China. **Soil Biology and Biochemistry** 184:109076. doi:10.1016/j.soilbio.2023.109076**（共同一作）**

Ma CR., Li R., Sun Y., Zhang M., Li, S. Xu, Y. Song, J. Li, J., **Qi JF.**, Wang L., Wu, JQ\*. (2023) ZmMYC2s play important roles in maize responses to simulated herbivory and jasmonate. **Journal of Integrative Plant Biology** 65 (4):1041-1058

Guo JF., Liu S, Jing DP, He KL, Zhang YJ, Li MS, **Qi JF**\*and Wang ZY\* (2023). Genotypic variation in field-grown maize eliminates trade-offs between resistance, tolerance and growth in response to high pressure from the Asian corn borer.**Plant Cell & Environment**. doi.org/10.1111/pce.14458 （**共同通讯作者**）

Zhang CP., Li J., Li S., Ma CR., Liu H., Wang L., **Qi JF**., \* and Wu JQ.\* (2021). "ZmMPK6 and ethylene signalling negatively regulate the accumulation of anti-insect metabolites DIMBOA and DIMBOA-Glc in maize inbred line A188." **New Phytologist** 229(4): 2273-2287.（**共同通讯作者**）

Malook SU, Xu YX, **Qi JF**, Li J, Wang L, Wu JQ (2021) *Mythimna separata* herbivory primes maize resistance in systemic leaves. J Exp Bot 72: 3792-3805

Malook SU, Liu XF, Ma CY, **Qi JF**, Liu WD, Zhou SQ (2021) Transcriptomic Responses of Fall Armyworms (*Spodoptera frugiperda*) Feeding on a Resistant Maize Inbred Line Xi502 with High Benzoxazinoid Content. Agronomy-Basel 11

刘树楠，申国境，李京，张翠萍，Saif-UL-Mallook，吴建强，王蕾，宋伟，王燚，赵久然\*，唐国文\*，**齐金峰**\*（2019）先玉335、郑单958 和京科968 抗虫能力的比较研究，玉米科学，27(6)：52～57

Malook, S.(#)., **Qi, JF**. (#), 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** 374:1767 **(Co-first author)**

**Qi, JF.**, Malook, S., Shen, G., Gao, L., Zhang, C., Li, J., Zhang, J., Wang, L., **Wu, JQ.\*** (2018) Current understanding of maize and rice defense against insect herbivores. **Plant Diversity** 40: 189-195. (Review)

Guo, JF., **Qi, JF.**, He, KL., Wu, JQ., Bai, SX., Zhang, TQ., Zhao, JR., et al. (2019). The Asian corn borer *Ostrinia furnacalis* feeding increases the direct and indirect defense of mid-whorl stage commercial maize in the field. **Plant Biotechnology Journal**. 17：88–102

**Qi, JF.**, Zhang, M., Lu, CK., Hettenhausen, C., Tan, Q., Cao, G.Y., et al. (2018). Ultraviolet-B enhances the resistance of multiple plant species to lepidopteran insect herbivory through the jasmonic acid pathway. **Scientific Reports**. 8.

Lu, CK., **Qi, JF.**, Hettenhausen, C., Lei, Y., Zhang, J., Zhang, M., et al. (2018). Elevated CO2 differentially affects tobacco and rice defense against lepidopteran larvae via the jasmonic acid signaling pathway. **Journal of Integrative Plant Biology**. 60 (5):412-431

Sun, G., Xu, Y., Liu, H., Sun, T., Zhang, J., Hettenhausen, C., Shen, G., **Qi, JF** Qin, Y., Li, J., Wang, L., Chang, W., Guo, Z., Baldwin, I.T., and Wu, J. (2018). Large-scale gene losses underlie the genome evolution of parasitic plant *Cuscuta australis*. **Nat Commun** 9: 2683.

Hettenhausen, C., Li, J., Zhuang, H., Sun, H., Xu, Y., **Qi, JF**, et al. (2017) Stem parasitic plant Cuscuta australis (dodder) transfers herbivory-induced signals among plants. **Proc Natl Acad Sci U S A**. 114: E6703-E6709.

Wang H.(#)，**Qi JF.**(#), Xiao DR., Wang ZB., Tian K., (2017) A re-evaluation of dilution for eliminating PCR inhibition in soil DNA samples, **Soil Biology and Biochemistry**， 106: 109~118. **(Co-first author)**

**Qi JF**.(#), Sun GL. (#), Wang L. (#), Zhao CX.(#), Hettenhausen C., Schuman M.C., . . . Wu JQ. (2016) Oral secretions from *Mythimna separata* insects specifically induce defence responses in maize as revealed by high-dimensional biological data. **Plant Cell & Environment** 39:8 1749-1766

**Qi JF**.(#), Li JC. (#), Han X.(#)., Li R., Wu J., Yu H., . . . Lou YG. (2016) Jasmonic acid carboxyl methyltransferase regulates development and herbivory-induced defense response in rice. **Journal of Integrative Plant Biology** 58: 564-576.

Hettenhausen C.，Sun, GL.，He, YB.，Zhuang, HF.，Sun, T.，**Qi, JF.**，Wu, JQ. (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, 18973.

Zhang DL(#), **Qi JF**(#)., Yue J.P., Huang J.L., Sun T., Li S.P., . . . Sun G.L. (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. **(Co-first author)**

**Qi JF.**, Zhou GX, Yang LJ, Erb M, Lu YH, Sun XL, Cheng JA, Lou YG (2011) The chloroplast-localized phospholipases d alpha 4 and alpha 5 regulate herbivore-induced direct and indirect defenses in rice. **Plant Physiology** 157: 1987-1999

Tong X.H(#), **Qi JF.**, (#)**,** Zhu XD, Zeng LJ, Wang BH, Li Q, Zhou GX, Mao BZ, Lou YG, He ZH (2012) The rice hydroperoxide lyase OsHPL3 functions in defense responses by modulating the oxylipin pathway. **Plant Journal** 71: 763-775 (Co-first author)

Zhou GX, **Qi JF**., Ren N, Cheng JA, Erb M, Mao BZ, Lou YG (2009) Silencing OsHI-LOX makes rice more susceptible to chewing herbivores, but enhances resistance to a phloem feeder. **Plant Journal** 60**:** 638-648

Zhang T, Luan JB, **Qi JF**., Huang CJ, Li M, Zhou XP, Liu SS (2012) Begomovirus-whitefly mutualism is achieved through repression of plant defences by a virus pathogenicity factor. **Molecular Ecology** 21: 1294-1304

Xin ZJ, Yu ZN, Erb M, Turlings TCJ, Wang BH, **Qi JF**., Liu SN, Lou YG (2012) The broad-leaf herbicide 2,4-dichlorophenoxyacetic acid turns rice into a living trap for a major insect pest and a parasitic wasp. **New Phytologist** 194: 498–510