

# PING HE

## PROFESSOR

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### EDUCATION/TRAINING

2008	Postdoc	Molecular Biology, Harvard Medical School, USA
2003	Ph.D.	Plant Pathology, Kansas State University, USA
1998	M.S.	Genetics, Chinese Academy of Sciences, China
1993	B.S.	Plant Genetics & Breeding, China Agricultural University, China

### POSITIONS & EMPLOYMENT

2009 – Present	Assistant (2009-2013)/Associate (2013-2017) /Professor (2017-)
	Department of Biochemistry and Biophysics Institute for Plant Genomics and Biotechnology Faculty of Molecular & Environmental Plant Sciences Texas A&M University, College Station, TX

### OTHER POSITIONS AND PROFESSIONAL MEMBERSHIPS

2016 – Present	Senior Editor, Molecular Plant-Microbe Interactions
2016	Editor, Plant Pattern Recognition Receptor Methods and Protocols Methods in Molecular Biology
2012 – 2017	Editorial Board, Molecular Plant Pathology

### HONORS & AWARDS

- Vice chancellor's Award in Excellence for Research, Texas A&M University, 2018
- National Science Foundation Career Award, 2013
- American Society of Plant Biologists Early Career Award, 2008

### SELECTED PUBLICATIONS

- Hou, S., Jamieson, P., and He, P. (2018) The cloak, dagger, and shield: proteases in plant-pathogen interactions. *Biochemical Journal* 475: 2491-2509.
- Jamieson, P.A., Shan, L., and He, P. (2018) Plant cell surface molecular cypher: receptor-like proteins and their roles in immunity and development. *Plant Science* 274: 242-251.
- Shan, L., and He, P. (2018) Pipped at the post: piperolic acid derivative identified as SAR regulator. *Cell* 173:286-287.
- Mang H., Feng, B., Hu, Z., Boisson-Dernier, A., Franck, C.M., Meng, X., Xu, G., Wang, T., Shan, L., and He, P. (2017) Differential regulation of two-tiered plant immunity and sexual reproduction by ANXUR receptor-like kinases. *The Plant Cell*. 29: 3140–3156.
- Li, F., Li, M., Wang, P., Cox, K. L., Duan, L., Dever, J.K., Shan, L. Li, Z., and He, P. (2017) Regulation of cotton drought responses by a MAP kinase cascade-mediated phosphorylation of GhWRKY59. *New Phytologist* 215: 1462-1475.
- Feng, B., Liu, C., Shan, L. and He, P. (2016) ADP-ribosylation takes control in plant-bacterium interactions *PLoS Pathog.* 12: e1005941.
- Feng, B., Ma, S., Chen, S., Zhu, N., Zhang, S., Yu, B., Yu, Y., Le, B., Chen, X., Dinesh-Kumar, S.P., Shan, L., and He, P. (2016) PARylation of the forkhead-associated domain protein DAWDLE regulates plant immunity. *EMBO Reports* 17:1799-1813.
- Li, B., Meng, X., Shan, L., and He, P. (2016) Transcriptional regulation of plant pattern-triggered immunity. *Cell Host & Microbe* 19:641-650.
- de Oliveira, M.V.V., Xu, G., Li, B., de Souza Vespoli, L., Meng, X., Chen, X., Yu, X., de Souza, S.A., Intorne, A.C., de A. Manhães, A.M.E., Musinsky, A.L., Koiwa, H., de Souza Filho, G.A., Shan, L., and He, P. (2016). Specific control of Arabidopsis BAK1/SERK4-regulated cell death by protein glycosylation. *Nature Plants* 2:15218.
- Feng, B., Liu, C., Oliveira, M.V.V., Intorne, A.C., Li, B., Babilonia, K., Filho, G.A.S., Shan, L., and He, P. (2015) Protein poly(ADP-ribosylation) regulates *Arabidopsis* immune gene expression and defense responses. *PLoS Genetics* 11(1): e1004936. doi:10.1371/journal.pgen.1004936.

- Li, F., Cheng, C., Cui, F., Oliveira, M.V.V., Yu, X., Meng, X., Intorne, A.C., Babilonia, K., Li, M., Chen, X., Ma, X., Xiao, S., Zeng, Y., Fei, Z., Metz, R., Johnson, C.D., Koiwa, H., Sun, W., Li, Z., Filho, G.A.S., Shan, L., and **He, P.** (2014) Modulation of RNA polymerase II phosphorylation downstream of pathogen perception orchestrates plant immunity. **Cell Host & Microbe** 16:748-758.
- Gao, X., Chen, X., Lin, W., Lu, D., Niu, Y., Li, L., Cheng, C., McCormack, M., Sheen, J., Shan, L., and **He, P.** (2013) Bifurcation of *Arabidopsis* NLR Immune Signaling via Ca<sup>2+</sup>-Sensor Protein Kinases. **PLoS Pathog** 9, e1003127.
- Cheng, C., Gao, X., Feng, B., Sheen, J., Shan, L., and **He, P.** (2013) Plant immune response to pathogens differs with changing temperatures. **Nat Commun.** 4:2530. doi: 10.1038/ncomms3530
- Gao, X., Wheeler, T., Li, Z., Kenerley, C., **He, P.**, and Shan, L. (2011) Silencing GhNDR1 and GhMKK2 compromised cotton resistance to *Verticillium wilt*. **The Plant Journal.** 66:293-305.
- Lu, D., Lin, W., Gao, X., Wu, S., Cheng, C., Avila, J., Heese, A., Devarenne, T., **He, P.\***, and Shan, L.\* (2011) Direct ubiquitination of pattern recognition receptor FLS2 attenuates plant innate immunity. **Science.** 332:1439-1442. (\*Co-corresponding authors).
- Lu, D., Wu, S., Gao, X., Zhang, Y., Shan, L. and **He, P.** (2010) A receptor-like cytoplasmic kinase BIK1 associates with flagellin receptor complex to initiate plant innate immunity. **Proc Natl Acad Sci U S A.** 107:496-501.
- Boudsocq, M., Willmann M. R., McCormack, M., Lee, H., Shan L., **He P.**, Bush, J., Cheng, S., and Sheen J., (2010) Differential innate immune signalling via Ca<sup>2+</sup> sensor protein kinases. **Nature.** 464: 418-422.
- Shan, L., **He, P.**, Li, J., Heese, A., Peck, S. C., Nurnberger, T., Martin, G. B., and Sheen, J. (2008). Bacterial effectors target the common signaling partner BAK1 to disrupt multiple MAMP receptor-signaling complexes and impede plant immunity. **Cell Host Microbe** 4:17-27.
- Sheen, J., and **He, P.** (2007) Nuclear actions in innate immune signaling. **Cell** 128:821-823.
- **He, P.**, Shan, L., Lin, N.-C., Martin, G., Kemmerling, B., Nurnberger, T., and Sheen, J. (2006). Specific bacterial suppressors of MAMP signaling upstream of MAPKKK in *Arabidopsis* innate immunity. **Cell** 125:563-575.
- **He, P.**, Chintamanani, S., Chen, Z., Zhu, L., Kunkel, B. N., Alfano, J. R., Tang, X., and Zhou, J.-M. (2004). Activation of a COI1-dependent pathway in *Arabidopsis* by *Pseudomonas syringae* type III effectors and coronatine. **The Plant Journal** 37:589-602.
- **He, P.**, Friebe, B. R., Gill, B. S., and Zhou, J.-M. (2003). Allopolyploidy alters gene expression in the highly stable hexaploid wheat. **Plant Molecular Biology** 52:401-414.
- **He, P.**, Li, J., Zheng, X., Shen, L., Lu, C., Chen, Y., and Zhu, L. (2001). Comparison of molecular linkage maps and agronomic trait loci between DH and RIL populations derived from the same rice cross. **Crop Science** 41: 1240-1246.
- **He, P.**, Li, S., Qian, Q., Ma, Y., Li, J., Wang, W., Chen, Y., and Zhu L. (1999). Genetic analysis of rice grain quality. **Theor. Appl. Genet.** 98: 502-508.
- **He, P.**, Shen, L., Lu, C., Chen Y., and Zhu L. (1998). Analysis of quantitative trait loci which contribute to anther culturability in rice (*Oryza sativa* L.). **Molecular Breeding** 4: 165-172.