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Education:

Ph.D. 1992, Plant Genetics and Breeding, University of the Philippines at Los Banos and International Rice Research Institute (IRRI), Philippines.

M.Sc. 1985, Plant Genetics and Breeding, Fujian Agricultural University, Fuzhou, China.

B.Sc. 1982, Plant Genetics, Hunan Agricultural University, Changsha, China

Research/Professional Experience:

Professor, 7/2008-present, Department of Plant Pathology, Ohio State University, Columbus

Associate Professor, Department of Plant Pathology, Ohio State University, Columbus, Ohio. 5/2004-7/2008.

Adjunct Professor, Hunan Agricultural University, Hunan, China, 3/2004-present.

Adjunct Professor, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, 1996-present

Assistant Professor, Department of Plant Pathology, Ohio State University, Columbus, Ohio. 10/1999-7/2004.

Senior Scientist and Principal Investigator, Institute of Molecular Agrobiology, The National University of Singapore, 8/1996-9/99.

Postdoctoral Research Associate, University of California at Davis, 8/1993-8/96

Postdoctoral Research Associate, Texas A&M University, 6/1992-8/1993.

Awards, Honors and Services

- Editorial Board of Plant Science, March, 2007
- Editorial Board of Journal of Plant Biology, July 2007.
- Research Award of Merit from Gamma Sigma Delta, the Honor Society of Agriculture, OSU, 4/2007
- Member, Editorial Board of Plant Science, 2/2007-present
- The Syngenta Award of the American Phytopathology Society, 8/2006
- Panel member, USDA-NRI Functional Genomics, 10/2005
- OARDC Distinguished Junior Faculty Research Award, 5/2005
- Panel member: OARDC Research Committee, 9/2004-present
- Panel member: USDA-NRI Genetic Mechanism, 3/2004
- Outstanding Overseas Young Scientist Award, Natural Science Foundation of China (6/2001)
- DuPont Young Professor Award (8/2000)

Society Memberships:

American Association for the Advancement of Science (AAAS), American Society for Plant Biologists (ASPB), American Phytopathological Society (APS)

Funding Agency: NSF-Plant Genome Research, USDA-NRI, DOE, Ohio Agricultural Research and Development Center (OARDC), USAID-IRRI.

Research Interests: Plant Disease Resistance and Plant Functional Genomics

Publication list in the last five years:

1. Li-Rong Zeng, Chan Ho Park, R.C. Venu, Julian Gough and Guo-Liang Wang. 2008.Classification, expression pattern, and E3 ligase activity assay of rice U-Box-containing proteins. **Molecular Plant**, in press.

2. Vega-SÃ¡nchez ME, Zeng L, Chen S, Leung H, Wang GL. 2008. SPIN1, a K Homology Domain Protein Negatively Regulated and Ubiquitinated by the E3 Ubiquitin Ligase SPL11, Is Involved in Flowering Time Control in Rice. **The Plant Cell,** 1456-1469.
3. Wu C, Bordeos A, Madamba MR, Baraoidan M, Ramos M, Wang GL, Leach JE, Leung H. 2008. Rice lesion mimic mutants with enhanced resistance to diseases. **Mol Genet Genomics**. 279(6):605-19.
4. Shujie Dong, Lane P. Tredway, H. David Shew, **Guo-Liang Wang**, Elumalai Sivamani, Rongda Qu. 2007. Resistance of transgenic tall fescue to two major fungal diseases. Plant Science, 173:501-509.
5. Rose Palumbo, Wai-Foong Hong, Jinguo Hu, Richard Craig, James Locke, Charles Krause, David Tay and **Guo-Liang Wang**. 2007. Target Region Amplification Polymorphism (TRAP) as a Tool for Detecting Genetic Variation in the Genus Pelargonium. **HortScience** 42:1118-1123.
6. Venu RC, Jia Y, Gowda M, Jia MH, Jantasuriyarat C, Stahlberg E, Li H, Rhineheart A, Boddhireddy P, Singh P, Rutger N, Kudrna D, Wing R, Nelson JC, **Guo-Liang Wang.** 2007. RL-SAGE and microarray analysis of the rice transcriptome after *Rhizoctonia solani* infection. **Mol Genet Genomics.** 278: 421-431.
7. Miguel E. Vega-Sánchez, Malali Gowda and **Guo-Liang Wang**. 2007. Tag-based approaches for deep transcriptome analysis in plants. **Plant Sciences**, 173:371-380.
8. Malali Gowda, Huameng Li, **Guo-Liang Wang.** 2007. Robust analysis of 5'-transcript ends (5'-RATE): a high-throughput protocol for characterization of sequence diversity of transcription start sites. **Nature Protocols.** 2(7):1622-32.
9. Malali Gowda, R-C. Venu, Huameng Li, Chatchawan Jantasuriyarat, Songbiao Chen, Maria Bellizzi, Vishal Pampanwar, HyeRan Kim, Ralph A. Dean, Eric Stahlberg, Rod Wing, Cari Soderlund, **Guo-Liang Wang**. 2007. *Magnaporthe grisea* Infection Triggers RNA Variation and Antisense Transcript Expression in Rice, **Plant Physiology,** 144(1):524-33.
10. Kan Nobuta, Venu Reddyvari-Channarayappa, Cheng Lu, André Belo, Kalyan Vemaraju, Pam Green, **Guo-liang Wang**, and Blake C. Meyers. 2007. An Expression Atlas of Rice mRNA and Small RNA", **Nature Biotechnology**, 25:473-477.
11. Gowda M, RC Venu, Mohan B Raghupathy, Kan Nobuta, Huameng Li, Eric Stahlberg, Rod Wing, Sean Coughlan, Christian D Haudenschild, Ralph Dean, Baek Hie Nahm, Blake C Meyers and **GL Wang**. 2006. Deep and comparative analysis of the mycelium and appressorium transcriptomes of Magnaporthe grisea using MPSS, RL-SAGE, and oligoarray methods. **BMC Genomics**, 8;7:310.
12. Liangying Dai, Xionglun Liu, Yinghui Xiao, **GL Wang**. 2007 Recent advances in cloning and characterization of disease resistance genes in rice. **Journal of Integrative Plant Biology.** 49 (1): 112-119.
13. Gowda M, Reddyvarichannarayappa Venu, Jia Y, Stahlberg E, Pampanwar V, Soderlund C, **GL Wang** (2007). Use of RL-SAGE Analysis to Identify Novel Fungal and Plant Genes Involved in Host-Pathogen Interactions. **Methods Mol Biol.** 2006;354:131-44.
14. Malali Gowda and **GL Wang** (2007) Robust-LongSAGE (RL-SAGE): an improved LongSAGE method for high-throughput transcriptome analysis. In: Kåre Lehmann Nielsen (ed) **Methods Mol Biol.**. Humana Press. In press.
15. Zhou B, M. Dolan, H. Sakai, and **G.-L. Wang**. 2007. The Genomic Dynamics and Evolutionary Mechanism of the Pi2/9 Locus in Rice. Mol. **Plant-Microbe Interact., MPMI** 20:63-71.

16. Soderlund C, Haller K, Pampanwar V, Ebbole D, Farman M, Orbach MJ, **Wang G-L**, Wing R, Xu JR, Brown D, Mitchell T, Dean R. 2007. MGOS: A resource for studying Magnaporthe grisea and Oryza sativa interactions. **Mol Plant Microbe Interact.** 19(10):1055-61.
17. Jo Y.-K., **G.-L. Wang,** and M. J. Boehm. 2007. Expression Analysis of Rice Defense-Related Genes in Turfgrass in Response to Magnaporthe grisea, Phytopathology, **Phytopathology** 97:170-178.
18. Yan H, H Ito, K Nobuta, S Ouyang, W Jin, S Tian, C Lu, RC Venu, **GL Wang**, PJ Green, RA Wing, CR Buell, BC Meyers, and J Jiang. (2006). Genomic and genetic characterization of rice Cen3 reveals extensive transcription and evolutionary implications of a complex centromere. **Plant Cell** 18(9):2123-33
19. Gowda M, H Li, J Alessi, F Chen, R Pratt, **GL Wang** (2006). Robust Analysis of 5'-Transcript Ends (5'-RATE): A novel technique for transcriptome analysis and genome annotation. **Nucleic acids research.** 34(19):e126.
20. Zhou B, Q Qu, G Liu, M Dolan, H Sakai, G Lu, M Bellizzi, **GL Wang** (2006). The eight amino acid differences within three leucine-rich repeats between Pi2 and Piz-t resistance proteins determine the resistance specificity to *Magnaporthe grisea,* **Mol. Plant-Microbe Interact.**19(11):1216-28.
21. Chen S, Lizhen Tao and **GL.Wang**. 2006. Protoplast-based transient assay system for gene expression and protein-protein interaction study in rice. **Molecular Plant Pathology,** 7(5):417-427 (front cover of the issue).
22. Zeng LR. Vega-Sánchez, M., Zhu T. and **GL.Wang**. (2006) Ubiquitination-mediated protein degradation and modification: an emerging theme in plant-microbe interactions. **Cell Research**, 16: 413-426.
23. Ryu HS, Muho Han, Sang-Kyu Lee, Jung-Il Cho, Nayeon Ryoo, Sunggi Heu, Youn-Hyung Lee, Seong Hee Bhoo, Tae-Ryong Hahn, **GL Wang**, Jong-Seong Jeon. (2006). A comprehensive expression analysis of *WRKY* gene superfamily in rice plants during defense response. **Plant Cell Reporter,** 25(8):836-47.
24. Qu SH, Liu GF, Zhou B, Bellizzi M, Zeng LR, Dai LY, Han H and **Wang GL**. 2006. The Broad-Spectrum Blast Resistance Gene Pi9 Encodes an NBS-LRR Protein and is a Member of a Multigene Family in Rice. **Genetics** 172: 1901-1914.
25. Wu JL, Wu C, Lei C, Baraoidan M, Bordeos A, Madamba MR, Ramos-Pamplona M, Mauleon R, Portugal A, Ulat VJ, Bruskiewich R, **Wang GL,** Leach J, Khush G, Leung H. (2005) Chemical- and Irradiation-induced Mutants of Indica Rice IR64 for Forward and Reverse Genetics**. Plant Mol Biol.** 2005 59(1):85-97.
26. Wang, ZL, L.Dai, Z. Jiang, W. Peng, L. Zhang, **GL. Wang**, D. Xie. (2005) GmCOI1, a soybean F-box protein gene, shows ability to mediate jasmonate-regulated plant defense and fertility in Arabidopsis. **Molecular Plant-Microbe Interactions,** 18:1285-1295.
27. Gu K, Yang B, Tian D, Wu L, Wang D, Sreekala C, Yang F, Chu Z, **Wang GL**, White F, Yin Z. (2005) Type III effector-induced R gene expression triggers disease resistance in rice. **Nature***,* 435:1122-1125.
28. Jantasuriyarat C, Gowda M, Haller K, Hatfield J, Lu G, Stahlberg S, Zhou B, Li H, Kim HR, Yu YS, Dean RA, Wing RA, Soderlund C and **GL Wang** (2005). Large-scale identification of ESTs involved in rice and rice blast (*Magnaporthe grisea*) interaction. **Plant Physiology**, 138: 105-15
29. Yi G, Lee SK, Hong YK, Cho YC, Nam MH, Kim SC, Han SS, **Wang GL**, Hahn TR, Ronald PC, Jeon JS. (2004) Use of Pi5(t) markers in marker-assisted selection to screen for cultivars with resistance to Magnaporthe grisea. **Theor Appl Genet.** 109(5):978-85.

30. Zeng L-R, Qu S, Bordeos A, Yang C, Baraoidan M, Yan H, Xie Q, Nahm BH, Leung H, and **Wang GL** (2004) *Spotted leafl11*, a Negative Regulator of Plant Cell Death and Defense, Encodes a U-Box/Armadillo Repeat Protein Endowed with E3 Ubiquitin Ligase Activity. **Plant Cell 16(10)**: 2795-2808
31. **Wang GL** , Wu C, Zeng L, He C, Baraoidan M, William CE, Ronald P, Leung H (2004) Isolation and characterization of rice mutants compromised in the Xa21-mediated resistance to *Xamthomonas oryzae* pv *oryzae* . **Theoretical and Applied Genetics,** 108:379-84.
32. Gowda M, Jantasuriyarat C, Dean R., **Wang GL** (2004) A robust-longSAGE method for large-scale gene discovery and transcriptome profiling. **Plant Physiology**, 134:890-7.
33. Lu G, Jantasuriyarat C, Zhou B, **Wang GL** (2004). Isolation and characterization of novel defense response genes involved in compatible and incompatible interactions between rice and *Magnaporthe grisea* . **Theoretical and Applied Genetics,** 108:525-34.
34. Gu K, Tian D, Yang F, Wu L, Chellamma S, Wang D, **Wang GL** , Yin Z (2003) . High-resolution genetic mapping of Xa27(t), a new bacterial blight resistance gene in rice, Oryza sativa L. **Theoretical and Applied Genetics,** 108(5):800-7.
35. Qu S, Coaker G, Francis D, Zhou B, **Wang GL** (2003) Development of a new transformation-competent artificial chromosome (TAC) vector and construction of tomato and rice TAC libraries. **Molecular Breeding,** *12:297-308* .
36. Jeon JS, Chen D, Yi GH, **Wang GL**, Ronald PC (2003) . Genetic and physical mapping of *Pi5(t)* , a locus associated with broad-spectrum resistance to rice blast. **Molecular Genetics and Genomics***,* 269(2):280-289 .
37. Zeng L, Yin Z, Chen J, Leung H, **Wang GL** (2002) Fine genetic mapping and physical delimitation of the lesion mimic gene Spl11 to a 160 kb DNA segment of the rice genome. **Molecular Genetics and Genomics** 268:253-261.
38. Liu G, Lu G, Zeng L, **Wang GL** (2002) The two broad-spectrum blast resistance genes, *Pi9(t)* and *Pi2(t)* , are physically linked on rice chromosome 6. **Molecular Genetics and Genomics** 267:472-480.
39. Zhai WX, Wang WM, Zhou YL, Li XB, Zheng XW, Zhang Q, **Wang GL** , Zhu LH. (2002) Breeding bacterial blight resistant hybrid rice with the cloned bacterial resistance gene *Xa21* . **Molecular Breeding** 8:285-293.