

Curriculum Vitae

Jiangqi WEN, Ph.D.

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Core Facility Manager
Molecular and Biological Materials
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EDUCATION

Ph.D, Lanzhou University, Plant Physiology, 1994. Advisor: Prof. HouGuo Liang
M.S. Lanzhou University, Plant Physiology, 1989. Advisor: Prof. HouGuo Liang
B. S. Lanzhou University, Lanzhou, China. Plant Physiology, 1986.

AREAS OF EXPERTISE

PLANT PHYSIOLOGY

MOLECULAR BIOLOGY AND GENETICS

PROTEIN BIOCHEMISTRY

RESEARCH EXPERIENCES and EMPLOYMENT

Facility Manager

**Core Facility of Molecular and Biological Materials
The Samuel Roberts Noble Foundation (2005-present)**

Research Associate

University of Missouri, Columbia, Missouri (2000 - 2005)
Advisor: Dr. John C. Walker

Research interests: Receptor-like protein kinases and signal transduction, molecular genetics and plant development with special interests in plant flower and fruit development.

Accomplishments:

- receptor like protein kinases and brassinosteroid signal transduction, including identification of BAK1, the co-receptor of brassinosteroid in Arabidopsis (Li J, **Wen J.** et al, 2002, *Cell*, **110**: 213-222) and
- characterization of the beta-subunit of plant heterotrimeric G-protein (Lease KA, **Wen J.** et al, 2001, *Plant Cell*, **13**: 2631-2641).
- Characterization of DVL, a novel plant polypeptide family involved in plant development (**Wen J.** et al, 2004, *Plant Journal*, **37**: 668-677)

Postdoc Fellow of STA (Science and Technology Agency, Japan)

National Agricultural Research Center for Hokkaido Region (formerly Hokkaido National Agricultural Experiment Station), Japan (1998 -2000)

Advisor: Dr. Ryozo Imai

Research interest: Molecular basis of cold stress and signal transduction in rice plant

Accomplishments:

- Cold stress and signal transduction in rice.
- First cloned a MAP kinase kinase gene (*OsMEK1*) and three MAP kinase genes (*OsMAP1-3*) and demonstrated that they are involved in the low temperature stress of rice plant (**Wen J.** et al, 2002, *Plant Physiology*, **129**: 1880-1891).

Visiting Scientist

Department of Plant Sciences, University of Cambridge, United Kingdom (1996 -1997)

Advisor: Dr. John C. Gray

Research interests: protein-protein interaction and photosynthetic electron transport

Accomplishments:

- Protein-protein interaction and photosynthetic electron transport.
- Purification of recombinant plastocyanin and cytochrome f from E. coli (no tags, native proteins).
- Revealed the requirements of some specific amino acid residues in the interaction between plastocyanin and cytochrome f and its electron transfer (Gong X, **Wen J** et al, 2000, *European Journal of Biochemistry*, **267**: 1732-1742; **267**: 3461-3468).

Lecturer and Associate Professor

Department of Biology, Lanzhou University, Lanzhou, China (1991-1998)

- Plant cyanide-resistant respiration and cyanide metabolism
- Plant photosynthetic adaptation to water stress and salt stress

PUBLICATIONS

Peer-Reviewed Journals

1. Wang H, Chen J, **Wen J**, Tadege M, Li G, Liu Y, Mysore KS, Ratet P, Chen R. Control of compound leaf development by FLO/LFY ortholog Single Leaflet1 (SGL1) in *Medicago truncatula*. **Plant Physiol.** 2008 Feb 22
2. Tadege M, **Wen J**, He J, Tu H, Kwak Y, Eschstruth A, Cayrel A, Endre G, Zhao PX, Chabaud M, Ratet P, Mysore KS. Large-scale insertional mutagenesis using the Tnt1 retrotransposon in the model legume *Medicago truncatula*. **Plant J.** 2008 Mar 5
3. **Wen J.**, Lease K.A., Walker J.C. 2004. DVL, a novel class of small polypeptides: Overexpression alters *Arabidopsis* development. **Plant Journal**, **37**: 668-677.
4. **Wen J.**, Oono K., Imai R. 2002. Two novel mitogen-activated protein signaling components, OsMEK1 and OsMAP1, are involved in a moderate low-temperature signaling pathway in rice. **Plant Physiology**, **129**: 1880-1891.
5. Li J., **Wen J.**, Lease K.A., Doke J.T., Tax F.E., Walker J.C. 2002. BAK1, an *Arabidopsis* LRR receptor-like protein kinase, interacts with BRI1 and modulates brassinosteroid signaling. **Cell**, **110**: 213-222.
6. Lease K.A., **Wen J.**, Li J., Doke J.T., Liscum E., Walker J.C. 2001. A mutant *Arabidopsis* heterotrimeric G-protein β subunit affects leaf, flower, and fruit development. **Plant Cell**, **13**: 2631-2641.
7. Gong X.S., **Wen J.Q.**, Gray J.C. 2000. The role of amino-acid residues in the hydrophobic patch surrounding the haem group of cytochrome f in the interaction with plastocyanin. **European J. Biochemistry**, **267**: 1732-1742.
8. Gong X.S., **Wen J.Q.**, Fisher N.E., Young S., Howe C.J., Bendal D.S., Gray J.C. 2000. The role of individual lysine residues in the basic patch on turnip cytochrome f for electrostatic interaction with plastocyanin in vitro. **European J. Biochemistry**, **267**: 3461-3468.
9. **Wen J.Q.**, Huang F., Liang W.S. and Liang H.G. 1997. Increase of HCN evolution and activity of beta-cyanoalanine synthase in ageing slices of potato tubers. **Plant Sci.**, **125**: 147-151.

10. **Wen J.Q.**, Liang W.S. and Liang H.G. 1997. HCN evolution and changes of beta-cyanoalanine synthase in potato tubers. **Chinese Science Bulletin**, **42**: 1028-1030.
11. **Wen J.Q.**, Tan B.C. and Liang H.G. 1996. Changes in protein and amino acid levels during growth and senescence of *Nicotiana rustica* callus. **J. Plant Physiol.**, **148**: 707-710.
12. **Wen J.Q.**, Wang J. and Liang H.G. 1996. Relationship between heat production and operation of alternative pathway in aging potato tuber slices. **Chinese Science Bulletin**, **41**: 604-606.
13. **Wen J.Q.** and Liang H.G. 1995. Salicylic acid-induced increase of activity of the alternative pathway during ageing of potato tuber slices. **Acta Phytophysiol Sinica**, **21**: 273-280.
14. **Wen J.Q.** and Liang H.G. 1995. Effects of pre-treatment with KCN and NaN_3 on cyanide-resistant respiration in tobacco callus. **Acta Botanica Sinica**, **37**: 711-717.
15. **Wen J.Q.** and Liang H.G. 1994. Comparison of the effects of salicylic acid on the alternative pathway in slices of dormant and dormancy-breaking potato tubers. **Plant Sci.**, **102**: 127-131.
16. **Wen J.Q.** and Liang H.G. 1994. Induction of salicylic acid on the alternative pathway in ageing potato tuber slices. **Chinese Science Bulletin**, **39**: 1644-1647.
17. **Wen J.Q.** and Liang H.G. 1993. Studies on energy status and mitochondrial respiration during germination and senescence of mung bean cotyledons. **Physiol. Plant.**, **89**: 805-810.
18. **Wen J.Q.**, Tan B.C. and Liang H.G. 1992. Changes in metabolism of protein during senescence of mung bean cotyledons. **Acta Phytophysiol. Sinica**, **18**: 273-278.
19. **Wen J.Q.** and Liang H.G. 1991. Changes in metabolism of nucleic acids during senescence of mung bean cotyledons. **Acta Phytophysiol. Sinica**, **17**: 133-138.
20. Zhou G.K., **Wen J.Q.** and Liang H.G. 2000. The relationship between the membrane of plant mitochondria and the cyanide-resistant respiration under low temperature. **Chinese Bulletin of Life Sciences**, **12**: 7-10.
21. Zhou G.K., Li H.Y., **Wen J.Q.**, Kong Y.Z. and Liang H.G. 2000. The cyanide-resistant respiration in callus of *Nicotiana rustica* cv. Gansu Yellow Flower under low temperature. **Acta Botanica Sinica**, **42**: 679-683.
22. Zhou G.K., Kong Y.Z., Li H.Y., **Wen J.Q.** and Liang H.G. 2000. Relationship between active oxygen species and the cyanide-resistant respiration in tobacco callus under heat stress. **Acta Phytophysiological Sinica**, **26**: 241-246.
23. Zhou G.K., Kong Y.Z., Li H.Y., **Wen J.Q.** and Liang H.G. 2000. Dynamic changes of respiration pathway and active oxygen levels in subcultured tobacco callus. **Chinese Journal of Applied Ecology**, **11**: 885-888.
24. Zhou G.K., Li H.Y., Kong Y.Z., **Wen J.Q.** and Liang H.G. 2000. Dynamic changes in respiratory pathway during the growth and senescence of

- tobacco callus, gansu yellow flower. **Acta Bot. Boreal.-Occident. Sinica**, **20**: 754-758.
25. Liang W.S., Liang H.G., **Wen J.Q. (corresponding author)** 1998. Comparison of the measurement of the in vivo activity of the alternative pathway in aged potato tuber slices. **Journal of Plant Physiology**, **153**: 244-246.
 26. He J.X., **Wen J.Q.**, Chong K., Liang H.G. 1998. Changes in transcript levels of chloroplast psbA and psbD genes during water stress in wheat leaves. **Physiologia Plantarum**, **102**: 49-54.
 27. Liang W.S., **Wen J.Q.** and Liang H.G. 1997. Salicylic acid-stimulated ethylene production in aged potato tuber slices. **Phytochemistry**, **44**: 221-223.
 28. Liang W.S., **Wen J.Q.** and Liang H.G. 1997. Relationship between endogenous ethylene and the development and operation of the alternative pathway in aged potato tuber slices. **Acta Botanica Sinica**, **39**: 527-533.
 29. Wang, H. L., Hao, L. M., **Wen, J. Q.**, Liang, H. G. 1998. Differential expression of photosynthesis-related genes of reed ecotypes in response to drought and saline habitats. **Photosynthetica** **35** (1): 61-69.
 30. Hao, L. M., Wang, H. L., **Wen, J. Q.**, Liang, H. G. 1996. Effects of water stress on light-harvesting complex II (LHCII) and expression of a gene encoding LHCII in *Zea mays*. **Journal of Plant Physiology**, **149**: 30-34.
 31. Zhang L.X., Wang J., **Wen J.Q.** and Liang H.G. 1995. Purification and partial characterization of a protease associated with photosystem II particles. **Physiol. Plant.**, **95**: 591-595
 32. Tan B.C., **Wen J.Q.** and Liang H.G. 1993. Effects of epicotyl removal on the reversion of senescence and metabolism of nucleic acids and proteins in mung bean cotyledons. **Acta Phytophysiol. Sinica**, **19**: 285-292.
 33. Zhang L.P., **Wen J.Q.** and Liang H.G. 1993. Separation and changes of invertase isoenzymes during senescence of cotyledons of Bailan melon seedlings. **Acta Phytophysiol. Sinica**, **19**: 17-22.
 34. Tan B.C., **Wen J.Q.** and Liang H.G. 1993. Changes in protein metabolism during the callus formation from cotyledon segments of mung bean. **Acta Biol. Exp. Sinica**, **26**: 151-154.
 35. Li Q.B., **Wen J.Q.** and Liang H.G. 1992. A comparative study on the metabolism of nucleic acids during the subculture and differentiation of tobacco callus. **Acta Biol. Exp. Sinica**, **25**: 149-154.

Invited Talks

- June 20-24, 2003, Madison, Wisconsin. "The DVL Family of Small Polypeptides Regulate Arabidopsis Development", **14th International Conference on Arabidopsis Research**.

- August 3-7, 2002, Denver, Colorado. "DVL1, a member of a small polypeptide family regulates Arabidopsis development", **Plant Biology 2002 organized by the American Society of Plant Biologists.**
- June 12, 2000, Sapporo, Japan. **Annual Meeting of Hokkaido Agriculture and Horticulture Society.**
- March 28, 2000, Nagoya, Japan. **Annual Meeting of Japanese Society for Plant Physiologists.**

Journal Reviewer

- *Environmental and Experimental Botany*, 2004
- *Plant Physiology and Biochemistry*, 2004
- *Planta*, 2004
- *Plant Science*, 2004
- *FEBS Letters*, 2000
- *Journal of Plant Physiology and Molecular Biology* (formerly *Acta Phytophysiological Sinica*), 1997

Fellowships and Honors Awarded

- Life Science Week Poster Competition, First Place, University of Missouri, March, 2003.
- Excellent Papers Award, 2nd place, "**Wen J.Q.** and Liang H.G. 1993. Studies on energy status and mitochondrial respiration during germination and senescence of mung bean cotyledons. **Physiol. Plant., 89:** 805-810." By Chinese Society of Plant Physiologists, 1996
- Grand Award for Progression of Science and Technology, 2nd place to Liang HG, **Wen JQ** etc by Ministry of Education of China, 1996.
- Sino-British Friendship Fellowship, 1996-1997.
- STA Fellowship (Science and Technology Agency of Japan), 1998-2000.

Contact information of References:

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