

Curriculum Vitae of Rui Shi

Professional Preparation:

- Harbin Normal University, P.R. China, Bachelor of Biology, 1990
- Harbin Normal University, P.R. China, Master of Genetics, 1993
- Northeast Agriculture University, P.R. China, Doctor of Genetics and Breeding, 1999

Appointments:

- 2007-present: North Carolina State University, Research Associate
- 2002-07: North Carolina State University, Research Associate (PostDoc)
- 2002-02: Michigan Technology University: Research Associate (PostDoc),
- 2000-02: Institute of Genetics, Chinese Academy of Science, P.R. China: Research Associate (PostDoc)
- 1996-99: Harbin Normal University, Assistant Professor, Department of Biology
- 1993-96: Harbin Normal University, Research Associate, Department of Biology

Research interests:

Molecular Biology, Biotechnology, Functional Genomics, Biotechnology and Systems Biology of lignin biosynthesis, cellulose biosynthesis and cell wall formation in wood.

Publications:

Most Closely Related to the NSF Project:

- Rui Shi, Ying-Hsuan Sun, Quanzi Li, Steffen Heber, Ronald Sederoff, and Vincent L. Chiang (2009). Towards a systems approach for lignin biosynthesis in *Populus trichocarpa*: Transcript abundance and promoter sequence motifs of the monolignol biosynthetic genes. *Plant Cell Physiol.* 51(1): 1–20 doi:10.1093/pcp/pcp175
- Rui Shi and Vincent Chiang (2005). A facile means for quantifying microRNAs expression by real-time PCR. *Biotechniques*, 39: 519-522
- Shanfa Lu, Ying-Hsuan Sun, Rui Shi, Catherine Clark, Laigeng Li, and Vincent L. Chiang (2005). Novel and mechanical stress responsive microRNAs in *Populus trichocarpa* that are absent from Arabidopsis. *The Plant Cell*, 17: 2186-2203
- Shanfa Lu, Rui Shi, Cheng-Chung Tsao, Xiaoping Yi, Laigeng Li and Vincent L. Chiang.(2004) RNA silencing in plants by the expression of siRNA duplexes. *Nucleic Acids Research* 2004 32(21):e171

Other Recent Publications:

- Ruo-Nan Zhou, Rui Shi, Shu-Mei Jiang, Wei-Bo Yin, Huang-Huag Wang, Yu-Hong Chen, Jun Hu, Richard RC Wang, Xiang-Qi Zhang, and Zan-Min Hu (2008). Rapid EST isolation from chromosome 1R of rye. *BMC Plant Biol.* 8:28

- Fa-Yun Zhang , We-iBo Yin, Rui Shi, Ying-Kao Hu, Yue-Ming Yan, Yu-Hong Chen, Yi-Hua Zhou, Jun Hu, Richard R.-C. Wang, and Zan-Min Hu (2005). Construction and characterization of chromosome 1B specific DNA library of wheat. *Can. J. Plant Sci.* 85: 309-316.
- Shu-Mei Jiang, Long Zhang, Jun Hu, Rui Shi, Guang-He Zhou, Yu-Hong Chen, Wei-Bo Yin, Richard R.-C. Wang, and Zan-Min Hu (2004) Screening and analysis of differentially expressed genes from an alien addition line of wheat *Thinopyrum intermedium* induced by *barley yellow dwarf virus* infection. *Genome/Génome* 47(6): 1114-1121 (2004)
- Hu ZanMin, Wang Huai, Shi Rui, Dang BenYuan, Hu Jun, Yin Weibo, Chen YuHong, Jiang SuMei, Chen ZhengHua (2004). Microdissection and construction of region-specific DNA libraries of wheat chromosome 6B. *Acata Botanica Sinica*, 46(11):1357-1365

Presentation:

- Rui Shi and Vincent Chiang (2007). Investigating microRNAs by Poly(A) tailing based RT-PCR. Nucleic Acid-Based Technologies, Cambridge Healthtech Institute, Baltimore, Maryland.
- Rui Shi and Vincent Chiang (2006). Investigate microRNAs in tree based on modified RT-PCR. North Carolina Plant Molecular Biology Consortium. Wrightsville beach, North Carolina
- Rui Shi and Vincent Chiang (2005). Real-time PCR for microRNA. The Annual Meeting of the American Society of Plant Biologists, Seattle, Washington
- Rui Shi, Laigeng Li, Vincent Chiang (2005). Analysis of transcription factor genes in loblolly pine wood formation. Plant and Animal Genome XIII Conference, San Diego, California.

Patent:

- Chiang Vincent & Shi Rui: Identifying and quantifying small RNAs. *United States Patent and Trademark Office*. Publicatin No. US-2009-0220969-A1, Publication date 09/03/2009
- Hu zanmin, Shi Rui, Yang chenmin, Chen Zhenghua: Methods of lettuce's chloroplast transformation and lettuce chloroplast DNA fragment for construction of site directed vector for chloroplast transformation. *State intellectual property office of the People Republic of China*. Patent number: 1393562, Publication date: 2003.01.29

Funding:

- Ying-Hsuan Sun, Rui Shi, Ronald Sederoff and Vincent L. Chiang. Functional characterization of two xylem abundant peroxidase genes in *Populus trichocarpa*. Forest Biotechnology Industry Research Consortium (FORBIRC) 2009-10
- Vincent Chiang and Rui Shi. Tissue-Specific Transcriptome of Monolignol Biosynthesis Genes. FORBIRC 2007-08
- Rui Shi, Ting-Feng Yeh and Vincent Chiang. Investigating microRNAs involved in tension wood formation. FORBIRC 2007-08.
- Rui Shi, Ronald Sederoff and Vincent Chiang. Constructing Chromosome Specific cDNA/ESTs library for Loblolly Pine. FORBIRC 2006-07.
- Rui Shi, Shanfa Lu, and Vincent Chiang. Discovery of Conserved micorRNAs in Eucalyptus and Loblolly pine. FORBIRC 2005-06.