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## **EDUCATION**

2003 – 2009 Postdoc, Developmental Biology, Duke University, Durham, NC.  
Advisor: Dr. Philip N. Benfey  
2003 PhD, Plant Physiology, the Pennsylvania State University, State College, PA.  
Advisor: Dr. Nina V. Fedoroff  
1990 MS, Botany, Department of Biology, Peking University, Beijing.  
Advisor: Dr. Zhengli Li  
1987 BS, Botany, Department of Biology, Peking University, Beijing

## **AWARDS AND HONORS**

2011 Registration award for the 22th International Conference on Arabidopsis Research  
2007 1st prize for postdoctoral talks, Southeast SDB meeting, Chapel Hill, NC  
2003 The Alumni Association Dissertation Award, Penn State University  
2002 Keystone scholarship for the conference “Epigenetics in Development and Disease,” Taos, NM  
2000 Nina Fedoroff Teaching Assistant Award, Penn State University  
1997-9 Life Sciences Consortium predoctoral fellowship, Penn State University  
1995 3rd prize for Advancement in Science & Technology, Beijing Municipal government, Beijing  
1994 1st prize for academic achievement, Beijing Academy of Agriculture & Forestry, Beijing  
1993 2nd prize for Advancement in Science & Technology, Beijing Municipal government, Beijing  
1990 Guanghua Award for graduate studies, Peking University  
1987 Award for academic excellence in undergraduate studies, Peking University

## **RESEARCH EXPERIENCE**

2003-2009 Postdoctoral Fellow with Dr. Philip N. Benfey at Duke University  
1997-2003 PhD studies with Dr. Nina V. Fedoroff at Penn State University  
1990-1997 Research assistant, Beijing Vegetable Research Center, Beijing Academy of Agriculture & Forestry, Beijing  
1993-1994 Visiting fellow, Department of Food Science, Cornell University

## **PUBLICATIONS**

1. **Cui, H.**, Kong, D., and Hao, Y. *SPINDLY* acts downstream of *ERECTA* in redox-mediated cortex proliferation in the root of *Arabidopsis thaliana*. *In revision*.
2. **Cui H** (2012) Killing two birds with one stone - transcriptional regulators coordinate development and stress responses in plants. *Plant Signaling & Behavior* (*in press*).

3. **Cui H**, Y Hao, and D Kong (2012) SCARECROW has a SHORT-ROOT independent role in modulating the sugar response. *Plant Physiology* 158: 1769-1788.
4. Hao Y, and **H Cui** (2012) SHORT-ROOT regulates vascular patterning, but not apical meristematic activity, in the Arabidopsis root through cytokinin homeostasis. *Plant Signaling & Behavior* 7: 314-317.
5. **Cui H**, Hao Y, Kovtun M, Viktor S, Deng XW. Genome-wide direct target analysis reveals a role for SHORT-ROOT in vascular patterning through cytokinin signaling. *Plant Physiology* 157: 1221-1331 (Cover story; recommended by the Faculty1000).
6. Iyer-Pascuzzi, A. S., T. Jackson, **H. Cui**, J. J. Petricka, W. Busch, H. Tsukagoshi, and P. N. Benfey (2011) Cell identity regulators link development and stress responses in the Arabidopsis root. *Developmental Cell* 21: 770-782.
7. Sozzani R\*, **Cui H\***, Moreno-Risueno MA, Busch W, Van Norman JM, Vernoux T, Brady SM, Dewitte W, Murray JA and Benfey PN, 2010. Spatiotemporal regulation of cell-cycle genes by SHORT-ROOT links patterning and growth. *Nature* 466:128-132 (\*equal contribution).
8. **Cui H**, and Benfey PN, 2009. Cortex proliferation: simple phenotype, complex regulatory mechanisms. *Plant Signaling and Behavior*, 4:551-553.
9. **Cui H**, and Benfey PN, 2009. Interplay between SCARECROW, GA and LIKE HETEROCHROMATIN PROTEIN 1 in ground tissue patterning in the *Arabidopsis* root. *Plant Journal* 58:1016-1027.
10. **Cui H**, Levesque MP, Vernoux T, Wang JY, Blilou I, Scheres B, and Benfey PN, 2007. An evolutionarily conserved mechanism delimiting SHR movement defines a single layer of endodermis in plants. *Science* 316:421-425 (article highlighted in *Cell*, *Nature*, *Science*, *STKE*, *JCB* and *C&E* news; "Must Read" by the Faculty 1000)
11. Levesque MP, Vernoux T, Busch W, **Cui H**, Wang JY, Blilou I, Hassan H, Nakajima K, Matsumoto N, Lohmann JU, Scheres B, Benfey PN, 2006. Whole-genome analysis of the SHORT-ROOT developmental pathway in Arabidopsis. *PLoS Biology* 4:e143.
12. **Cui H** and Fedoroff NV, 2002. Inducible DNA demethylation mediated by the maize *Spm* transposon-encoded TnpA protein. *Plant Cell* 14:2883-2899.
13. **Cui H**, Liu J and Sun S M, 1999. Improved conditions for the purification of phosphoglucumutase (PGM) isoenzymes from Chinese cabbage and studies of their molecular properties. *Acta Agriculture Borealis-Sinica*, 14(1):134-140.
14. **Cui H**, Li L, Zheng X and Sun SM, 1998. Purification of the heat-tolerance related isozyme of phosphoglucumutase from Chinese cabbage. *Acta Agriculture Borealis-Sinica*, 13(4): 86-92.
15. **Cui H**, 1996. Investigation of the major browning inhibitory factors in honey. *Acta Agriculture Borealis-Sinica*, 11(4): 125-128.
16. Jin T, **Cui H** and Kawano S, 1995. Determination of sugar content in apples by Near Infrared Spectrophotometry. *Acta Agriculture Borealis-Sinica*, 10(2): 87-90.
17. Jin T, Liu L, **Cui H** and Wu X, 1994. Determination of the nutritive constituents in Chinese cabbage by Near Infrared Spectrophotometry (NIRs). *Acta Agriculture Borealis-Sinica*, 9 (suppl): 32-34.
18. Jin T and **Cui H**, 1994. A new method for the determination of nutrients in intact strawberry by Near Infrared Spectrophotometry. *Acta Agriculture Borealis-Sinica*, 9(2): 120-123.
19. **Cui H** and Zheng X, 1993. Application of HPLC to seed variety identification of Chinese cabbage. *Seed*, 6: 53-58.
20. **Cui H**, 1993. Optimization of HPLC conditions for the separation of water-soluble proteins in Chinese cabbage seeds. *Seed*, 4: 7-12.
21. Su W, Liang J and **Cui H**, 1991. Morphology and anatomy of a new algae species *Pelvetia siliquosa*. *Ocean and Lake*, 6: 85-88.

## **BOOK CHAPTER**

Hongchang Cui, 2011. The Epigenetic Basis of Cell-Fate Specification and Reprogramming. In "Epigenetics: A Reference Manual". Eds. Craig, J.M and Wong N.C. Caister Academic Press. Pp 183-194.

## **INVITED TALKS**

- 2012 The 10<sup>th</sup> International Conference on Plant Biology Frontiers: Development and Environment, Huangshan, China. "Getting to the root of root growth under abiotic stress."
- 2012 Plant Biology 2012, Austin, Texas. "Old dogs, new tricks—A systems approach uncovers important roles for SHORT-ROOT and SCARECROW in root morphogenesis and abiotic stress response."
- 2009 The North Carolina State University. "Finding the Hidden Jewels - A systems approach reveals new roles for SHORTROOT and SCARECROW in plant development and physiology."
- 2009 The Ohio State University. "Genetic and Epigenetic Mechanisms of Cell Fate Specification in the *Arabidopsis* Root."
- 2009 The 25<sup>th</sup> Symposium in Plant Biology - the Evolution of Plant Development. "Getting to the root of SHORT-ROOT and SCARECROW function." The University of California, Riverside
- 2008 The 19<sup>th</sup> International Conference on Arabidopsis Research, Montreal, Canada. "SHORTROOT and SCARECROW in Root Development and Land Plant Evolution: Old proteins, New Functions."
- 2007 Institute of Botany, Chinese Academy of Sciences, Beijing, China. "Radial patterning in the Arabidopsis root: a tale of two master regulators."
- 2007 Southeast regional Society of Developmental Biologists conference, Chapel Hill, NC. Title: "An evolutionarily conserved mechanism delimiting SHR movement defines a single layer of endodermis in plants."
- 2005 The 19<sup>th</sup> Annual Plant Molecular Biology Retreat, NC Biotechnology Center, Wrightsville, NC. Title: "Functional interdependency between SHR and SCR in radial patterning of the Arabidopsis root."