

CURRICULUM VITAE -- Zong-Ming (Max) Cheng, Professor

Department of Plant Sciences, University of Tennessee, Knoxville, TN 37996-4500

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ONE-PAGE SUMMARY

1. Career Goal:

Be a department head of Horticulture/Plant Sciences in a leading landgrant university

2. Research Interest:

Genomics, molecular biology, biotechnology/breeding on bioenergy crops (poplar, agave, soybean) and fruit crops (grape, apple, strawberry), and synthetic biology using kalanchoe as a model plant.

3. Career academic achievement:

- Published 105 refereed research articles (4 submitted) in diverse plant science, horticulture, genetics/genomics related journals, such as Plant Physiol, Plant J., Nature Protocol, NAR, 7 book chapters and one book review, 5 extension publications, with over 300 international coauthors.
- Awarded over 4 million dollars grants and contract from NSF, DOE-BESC, USDA-NRI, Consortium for Plant Biotech Res-EPA/DOE, biotech companies, commodities, nurseries, etc.
- Held three plant variety patents and trademarks and one biotech patent.
- Taught 10 different graduate/undergraduate courses in horticulture, breeding/biotechnology.
- Served as major professor of 15 Ph.D, 17 MS, 25 postdoc/visiting scientists.
- Launched Horticulture Research, a professional journal published by Nature Publishing Group, guest-edited 3 issues of journals, and served/serving as Associate Editors for five journals.
- Convened and co-convened 7 international professional conferences, 1 ASHS colloquium, and four workshops/symposia at ASHS. Initiated 2 Working Groups at ASHS.
- Gave 40+ invited presentations in conferences, seminars in departments and institutions.

3. Awards:

- Elected Fellow of American Society for Horticultural Sciences, 2012.
- Forest Resources Educator Award, North Dakota Forest Service, September, 2000
- Candidate for International Division Vice President, ASHS, 2013.

4. Leadership and management skills

- Cellular & Molecular Biology Ph.D Program Director (30 faculty from 8 colleges, 20 graduate students) –1998-2001, North Dakota State University, Fargo, ND. Responsible for all activities.
- University Senate (3 yrs): Liaison of UTIA and Academic Affair to revise the Faculty Handbook.
- Extensively involved in three Departmental strategic plannings, and ASHS National Task Force.
- Served on many departmental, college, UTIA level committees and many ASHS committees.
- Member of North Dakota and Tennessee Governors' trips to China, cultural advisors
- Representative of UTIA to Consortium for Plant Biotechnology, heavily involved in public relations with federal legislators and their chiefs of staff. Work extensively with industry groups.
- Review panels for USDA-ARS programs, DOE's Bioenergy program, and USDA-NRI program.
- Multi-program, large personnel management skills: simultaneously manage three large groups: 18 staff/graduate students in my lab in China, 8 people in my UT lab, and 24 Associate Editors and two staff members in Hort. Res. and many authors in numerous issues like ethics, personnel conflicts, complains, seeking advices and international collaborations, etc..

- Serve as board members/vice presidents of local non-profit organizations—work with local government in race, equal justice, minority, and community development issues.
- Special skills in launching new initiatives from scratch (established family business, launched a new high-profile professional journal—Horticulture Research, one of the key major initiators for UT-Chinese SCS-funded five-year 100 Ph.D program, now on the UT/China BS/MS program.

1. Education

Ph.D. 1991. Horticulture/Plant Genetics & Cell Biology. Cornell University, Ithaca, NY

M.S. 1988. Pomology/Plant Genetics. Cornell University, Ithaca, NY

B.S. 1982. Pomology. Nanjing Agricultural University, Nanjing, China

2. PROFESSIONAL EXPERIENCE

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|--------------------|---|
| 9/2009-present | Professor: 9-month appointment at UT, and 3-month appointment at Nanjing Agricultural University, Nanjing China |
| 7/2009-Present | Professor, Dept. of Plant Sciences, UT, Knoxville, TN
(90% Research, 10% Teaching) –from 12-month appointment became 9-month appointment |
| 9/2001-6/2009 | Associate Professor, Dept. of Plant Sciences, University of Tennessee (UT), Knoxville, TN |
| 10/1998 -- 8/2001 | <u>Director, Cellular and Molecular Biology Ph.D Program, North Dakota State University, Fargo, ND</u> |
| 7/1997 – 8/2001: | Associate Professor, Dept. Plant Sciences, NDSU, Fargo, ND |
| 11/1990 -- 6/1997: | Assistant Professor, Dept. of Plant Sciences, NDSU, Fargo, ND |
| 6/1985 -- 11/1990: | Graduate Fellowship (Chinese Government)
Graduate Research Assistant (Cornell University), Dept. of Horticultural Sciences, Cornell University, Ithaca, NY |

3. RESEARCH INTERESTS

- ❖ Plant synthetic biology: to engineer the high water use efficiency system from crassulacean acid metabolism plants into horticultural crops
- ❖ Poplar, apple, grape and strawberry genomics, functional genomics and biotechnology
- ❖ Woody horticultural plant breeding and biotechnology
- ❖ Invasive plant biology and biotechnological neutralization of invasive plants

4. PATENTS

- 1) **Cheng, Z.-M.**, A. A. Boe, J. P. Schnur, D. E. Herman. A cultivar of Asian white birch (*Betula platyphylla*) was released in 1996 and named Fargo® (PP10963). The cultivar was also trade marked as Dakota Pinnacle™
- 2) Herman, D. E. L. J. Chaput, **Z. M. Cheng**, W.-H. Dai. A cultivar of Asian white birch (*Betula platyphylla*) was released in 2003 and named “Varen” ® (Patent pending)
- 3) Herman, D. E. L. J. Chaput, **Z. M. Cheng**, W.-H. Dai, V. A. Moganson. A cultivar of Asian white birch (*Betula platyphylla*) was released in 2004 and named “VerDale” ® (Patent pending). The cultivar was also trade marked as “Prairie Vision”™

- 4) **Zong-Ming (Max) Cheng** and Xia Ye. 2009. A broad environmental stress-inducible promoter and its application in crops. Patent issued. **A major biotech company has been licensed to test the technology.**

5. AWARDS, PROFESSIONAL RECOGNITIONS, AND HONORS

Awards:

- 1) Elected Fellow of American Society for Horticultural Sciences, 2012.
- 2) Forest Resources Educator Award, North Dakota Forest Service and Centennial Tree Program, September, 2000
- 3) Candidate for International Division Vice President, ASHS, 2013.

Current Professional Journal Editorial Board:

- 1) Founder Editor-in-Chief: Horticulture Research (published by Nature Publishing Group), IF 3.6
- 2) Editorial Board: Critical Review in Plant Sciences. 5/2016-present
- 3) Associate Editor: Genome 5/2015—present
- 4) Consulting Editor: HortScience 5/2010-4/2013
- 5) Guest Editor for the Special Issue of Critical Review in Plant Sciences –Genomics and Functional Genomics of abiotic resistance in specialty crops, issue 2, 2014
- 6) Guest Editor (with Dr. S. Korban) for the special issue of PCTOC: J. of Plant Biotechnology (In vitro Ploidy manipulation in the Genomics Era). March issue, 2011.
- 7) Associate Editor: Journal Agricultural Biotechnology. 10/2009-current
- 8) Associate Editor, Plant Cell Tissue and Organ Culture, October, 2008-current
- 9) Guest Editor (with Dr. Gerald A. Tuskan as the co-guest editor) for the Special Issue of Critical Review in Plant Sciences –Poplar Genomics and Functional Genomics, issue 5, 2009

National and International Panels, Committees, Professional Conference/Symposium Conveners, Organizers, and Section Moderators:

- 1) USDA-ARS Program Review Panel member, 2017
- 2) DOE Biological Science Office panel for Biological Design. April 24-25, 2017
- 3) Convener, Rosaceae Genomics Conference 9. June 2018.
- 4) Elected to US Rosaceae Executive Committee, 2017-2019
- 5) Co-convener, The fourth International Horticulture Research Conference, East Malling, July 16-19, 2017.
- 6) Co-convener, The third International Horticulture Research Conference, Nanjing, October 16-19, 2016.
- 7) The International Scientific Program Committee member of 12th International Grapevine Breeding and Genetics Conference, France, 2018.
- 8) The International Scientific Program Committee member of the X Symposium on Grapevine Physiology and Biotechnology in June 17-22. 2016 Verona, Italy
- 9) The International Scientific Program Committee member of Rosaceae Genomics 8. d'Angers, France. June 23-26, 2016.

- 10) The Second International *Horticulture Research* Conference, October 29-November 2, 2015, University of California at Davis, CA, Co-convener.
- 11) The First International *Horticulture Research* Conference, October 14-18, Nanjing, China, Convener.
- 12) The 11th International Grapevine Breeding and Genetics Conference, Beijing, China, July 28-August 2, 2014. Co-Convener.
- 13) The Third Fruit Molecular Biology and the Second Fruit Omics and Biotechnology Conferences, October 12-15, Nanjing China. Convener.
- 14) The Co-convener, the 11th International Conference of Grape Breeding and Genetics, Beijing, China, August, 2014
- 15) The Panel Member, Chinese National Science Foundation: Forestry and Ecology Division, 2012
- 16) Member of the International Scientific Committee of the Macrowine, Bordeaux, France, 2012.
- 17) Member of the International 12x Grapevine Annotation Project, 2012-current
- 18) Executive member of the International Grape Genome Program, 8/2010-current
- 19) Biotechnology Workshop co-organizer. ASHS 2009 annual meeting
- 20) Panel member. The USDA National Research Initiative Competitive Program 56.0A: Plant Biology (A): Gene Function and Regulation, April 7-11, 2008.
- 21) ASHS annual meeting Colloquium organizer, 2008
- 22) Panel member. The USDA Agricultural Research Service in reviewing project plans for a panel on Ornamentals in ARS's National Program 301 (Plant Genetic Resources), December 12-13, 2007
- 23) Biotechnology Workshop co-organizer. ASHS 2007 annual meeting
- 24) Section Chairperson: International Horticultural Congress: Symposium 10 – Plant Biotechnology. August 13-19, 2006, Seoul, South Korea
- 25) Biotechnology Workshop co-organizer. ASHS 2005 annual meeting
- 26) Biotechnology Workshop Organizer. ASHS 2004 annual meeting
- 27) Invited Panel Reviewer by the Consortium for Plant Biotechnology Research and Department of Energy to review DOE's Energy from Biomass Program, 2/1997.

Invited Presentations in Professional Conferences and Seminars:

- 1) Cheng, Zong-Ming (Max) Publishing in top Scientific Journals. Nanjing Forestry University, June 8, 2017
- 2) Cheng, Zong-Ming (Max). First International Apple Symposium. Yangling, China October 10-16, 2016.
- 3) Cheng, Zong-Ming (Max). Grape Stress Sub-genomics. China-Israel Symposium on Applied Genomics and Molecular Biology. March 15, 2016. Nanjing, China.
- 4) Cheng, Zong-Ming (Max). Gene Duplication and Post-duplication Divergence in Functions. Jiangsu Academy of Agri. Sciences, Nanjing, China 12/24/2015
- 5) Cheng, Zong-Ming (Max). Gene Duplication and Post-duplication Divergence in Functions. Huazhong Ag. University, Wuhan, China 12/25/2015
- 6) Cheng, Zong-Ming (Max). Gene Duplication and Post-duplication Divergence in Functions. Wuhan Botanical Garden, Wuhan, China 12/24/2015

- 7) Cheng, Zong-Ming (Max). Origin and evolution of NBS-LLR RPW8-domain containing genes in Rosaceae. The forth Fruit Crop Molecular Biology conference, Northwestern A/F University, Spetember 18-20, 2015.
- 8) Cheng, Zong-Ming (Max). How to integrate traditional fruit science and modern systems biology? Jiangsu Academy of Ag. Sci. October, 2015
- 9) Cheng, Zong-Ming (Max). How to integrate traditional fruit science and modern systems biology? Anhui Academy of Agri. Sciences, Hefei, Anhui Province, China. September 16, 2015.
- 10) Cheng, Zong-Ming (Max). How to integrate traditional fruit science and modern systems biology? Jilin Academy of Ag. Sci. July 2015
- 11) Cheng, Zong-Ming (Max) Annotation and Expressional Analyses of Gene Families of Grapevine in Responses to Abiotic stresses. Yangzhou University. July 3, 2015.
- 12) Cheng, Zong-Ming (Max) Annotation and Expressional Analyses of Gene Families of Grapevine in Responses to Abiotic stresses. Shenyang Agricultural University. August 14, 2014.
- 13) Cheng, Zong-Ming (Max). The bZIP transcription factor gene family in grapevine (*Vitis vinifera*): genome-wide analysis, expressions, and functional characterization. The 11th International Grapevine Breeding and Genetics Conference. July 28-August 2, 2014. Beijing, China.
- 14) Cheng, Zong-Ming (Max). The comparative transcriptomic analysis of ten species in five subfamilies of Orchidaceae. The 34th New Phytologist Symposium on CAM Biology. July 15-18, 2014. Lake Tahoe, CA, USA
- 15) Cheng, Zong-Ming (Max) Genome wide identification, expression and functional analysis of grapevine bZIP transcription factor gene family. Nanjing Forestry University, October 20, 2013.
- 16) Impact of release of apple genome on apple production and research. The Second International Symposium on Apple Production and Research, September 9-12, 2010.
- 17) The Second China-US Workshop on Biotechnology of Bioenergy Plants, 9/18-21, 2010.
- 18) Wuhan Botanical Garden, Hubei, China, Genomics and biotechnology of poplar, a leading dedicated woody bioenergy crop. January, 5, 2010
- 19) Huazhong Agricultural University, Wuhan, Hubei, China: Grapevine Genomics, Post-genomics, and Biotechnology. January 4, 2010
- 20) Nanjing Forestry University, Nanjing, China, Poplar Functional Genomics and Biotechnology for bioenergy. December 31, 2009.
- 21) Institute of Fruit and Forestry, Beijing Academy of Agricultural Sciences, Beijing, China. Fruit Crop Research Marches into the Era of Post-genomics and Systems Biology – the Case of Grapevine. December 22, 2009
- 22) College of Horticulture, Henan Agricultural University, Grapevine Research Enters into the Era of Post-genomics and Systems Biology. December 2, 2009
- 23) Northwestern University of Agriculture and Forestry, Yanglin, Shan Xi, China. Grapevine Research Enters into the Era of Post-genomics and Systems Biology. November 20, 2009
- 24) University, Guiyang, China, Genomics and biotechnology of poplar, a leading dedicated woody bioenergy crop. November 18, 2009.

- 25) The 15th Grape Conference. Dunhuang, China. Grapevine Research Marches into the Era of Post-genomics and Systems Biology. August 28-31. 2009
- 26) Fruit Crop Molecular Biology and Molecular Biology, Nanjing Agricultural University, Fruit Crop Research Marches into the Era of Post-genomics and Systems Biology – the Case of Grapevine. May 24-25. 2009
- 27) University of Minnesota, Biology program, St. Paul campus, Genomics and biotechnology for Poplar, a woody bioenergy crop. December 16.
- 28) Society of Horticultural Sciences Annual Meeting: Biotechnology Working Group workshop, July 16-19.
- 29) Conference for Nanotechnology in the Forest Products Industry, June 13.
- 30) International Horticultural Society, Seoul, South Korea. 2006
- 31) Beijing Forestry University, China. Woody Plant Biotechnology Program at University of Tennessee, June, 2005
- 32) Department of Horticulture, Clemson University. Genetic Engineering for Rooting Enhancement with hardwood Cuttings.
- 33) American Society of Horticultural Sciences. Transgenic Approach for adventitious rooting enhancement. American Society for Horticultural Sciences annual meeting: July 19, 2004. Austin, TX.
- 34) Ministry of Agriculture, Plant Inspection and Quarantine Service Workshop. Molecular Detection and Diagnosis of *Verticillium albo-atrum*. Inter- Mongolia, China, June 19, 2004.
- 35) Department of Botany, University of Tennessee. The X-disease Phytoplasma: Its Detection, Interaction with the Host, and Molecular Characterization.
- 36) Department of Plant Sciences and Landscape Systems, University of Tennessee.
- 37) Department of Plant Sciences, University of Connecticut. Woody Plant Breeding and Biotechnology at NDSU. December 8, 2000.
- 38) North Dakota State Urban Forestry Association, February 10-11, 2000 Bismarck, ND.
- 39) Minnesota Landscape Association. January 4-6, 2000, Minneapolis, MN.
- 40) The Second Symposium of Chinese Young Horticulturists. Nanjing, China. June 19, 1998. Title: Woody Plant Breeding, genetics & biotechnology in the USA.
- 41) Biotechnology Center, Ciba Geigy Co. Triangle Park, NC. 7/12/1996 Title: Partial purification of broad-spectrum antimicrobial proteins from *Bacillus subtilis* strain TG26.

6. PUBLICATIONS

Special Issues of Journals Edited:

- 1) Zong-Ming (Max) Cheng 2014. Stress Biology of Specialty Crops. Critical Review in Plant Sciences Issue 2/3.
- 2) Zong-Ming (Max) Cheng, Schuyler S. Korban. 2011. In vitro ploidy manipulation in the genomics era. Special Issue of PCTOC: J. of Plant Biotechnology. 104
- 3) Cheng, Z.-M. and G. A. Tuskan, guest-editors. 2009. Poplar Community Mega-genomics. Special Issues, Critical Reviews in Plant Sciences. Vol 28, issue 5.

Refereed Articles (Submitted, in review):

113. Yan Zhong, Xiaohui Zhang, Zong-Ming Cheng. 2018. Lineage-specific duplications of NBS-LRR genes occurring before divergence of six *Fragaria* species. BMC Genomics. (in revision).
112. Fei Chen, Liangshen Zhang, Zong-Ming (Max) Cheng. 2016. A novel calcium signaling pathway specific to Metakinetoplastina protists illuminates a drug target for human African trypanosomiasis. Revised version submitted to BMC Genomics.
111. Xiling Wang, Xinlu Chen, and Zong-Ming (Max) Cheng. *Agrobacterium*-mediated Genetic Transformation of *Kalanchoe laxiflora*, a Model Species for Functional Genomics Study on Crassulacean Acid Metabolism Plants. HortScience.
110. Yuanchun Ma, Jiaoyang Wang, Yan Zhong, Zong-Ming (Max) Cheng Isolation and expression analysis of *SOS3* gene family in grapevine (*Vitis vinifera*) in response to salt and PEG stress.
109. Kaikai Zhu, Xiaolong Wang, Jun Tang, Jinyi Liu, Qunkang Cheng and Zong-Ming (Max) Cheng The grapevine kinome: annotation, classification and expression patterns in developmental process and in response to stresses. Horticulture Research

Refereed Articles (Published, in press, and accepted: 108):**2018 (2)**

108. Xiaoxuan Hu, Kaihui Huang, Sanhong Wang, Zong-Ming Cheng, Yan Zhong Differential expression of 12 NBS-encoding genes in two apple cultivars in response to *Alternaria alternata* f. sp. mali infection. Can. J Plant Sci. Accepted.
107. Yan Zhong, Cong Guo, Jinjin Chu, Hui Liu, Zong-Ming Cheng Microevolution of the VQ gene family in six *Fragaria* species. Genome. In press.

2017. (12)

106. Hui Liu, Yan Zhong, Xiao-Long Wang, Zong-Ming Cheng 2016 Genome-wide and evolution analysis of the *bZIP* transcription factor gene family in six *Fragaria* species (*F.x ananassa*, *F.iinumae*, *F.nipponica*, *F.nubicola*, *F.orientalis* and *Fragaria vesca*). Plant Systematics and Evolution. 303(9):1225–1237.
104. Chao Dong, Yuanchun Ma, Michael Wisniewski, Zong-Ming Cheng. 2017. Meta-analysis of the effect of overexpression of C-repeat/dehydration-responsive element binding family genes on drought tolerance. Environmental and Experimental Botany. <https://doi.org/10.1016/j.envexpbot.2017.07.014>. <http://www.sciencedirect.com/science/article/pii/S0098847217301685>
103. Yuanchun Ma, Qunkang Cheng, Zong-Ming Cheng, Hui Li, Yonghong Chang, Jing Lin 2017. Identification of important physiological traits and moderators that are associated with improved salt tolerance in CBL and CIPK overexpressors through a meta-analysis. Frontier in Plant Sciences. doi: 10.3389/fpls.2017.00856
102. Yue Xi, Jinyi Liu, Chao Dong, Zong-Ming (Max) Cheng. 2017. The CBL and CIPK gene family in grapevine (*Vitis vinifera*): genome-wide analysis and expression profiles in response to various abiotic stresses. Frontier in Plant Sciences. doi: 10.3389/fpls.2017.00978
101. Chen, Fei, Liangsheng Zhang, Zong-Ming (Max) Cheng. 2017. The calmodulin fused kinase novel gene family is the major system in plants converting Ca²⁺ signals to protein phosphorylation responses. Scientific Reports. 7:4127.

100. Xiao-Long Wang, Xinlu Chen, Tianbao Yang Zong-Ming Cheng. Genomic identification of bZIP family genes involved in drought and heat stresses in strawberry (*Fragaria vesca*). *International J. Genomics*. 3981031. doi: [10.1155/2017/3981031](https://doi.org/10.1155/2017/3981031)
99. Dong, Chao, Xue Li, Yue Xi, and Zong-Ming (Max) Cheng. 2017. Micropropagation of *Pyracantha coccinea*. *HortScience*. 52:271-273.
98. Jun Tang, Jing Lin, Xiaogang Li, Qingsong Yang, Zong-Ming (Max) Cheng and Youhong Chang. 2017. Genome-wide characterization and expression profiling of calmodulin genes in pear (*Pyrus bretschneideri*). *BioMed Research International*. <https://doi.org/10.1155/2017/7904162>
97. Yuanchun Ma, Robert Auge, Zong-Ming (Max) Cheng. 2017. Can overexpression of cation/proton antiporter 1 family genes increase salt tolerance? A meta-analysis. *Plant Biotechnology Journal*. 15: 162-173 doi: 10.1111/pbi.12599.
- 2016. (9)**
96. Yan Zhong and Zong-Ming (Max) Cheng. 2016. A unique RPW8-containing class of genes that originated in early land plant and evolved through domain fission, fusion and tandemly species-specific duplication. *Sci. Rep.* 2016;6:32923. doi:10.1038/srep32923..
95. Jun Tang, Jing Lin, Hui Li, Qingsong Yang, Xiaogang Li, Zong-Ming Cheng and Youhong Chang. 2016. Characterization of CIPK Family in Asian Pear (*Pyrus bretschneideri* Rehd) and Co-expression Analysis Related to Salt and Osmotic Stress Responses. *Frontiers in Plant Science*. 2016 7:1361. doi:10.3389/fpls.2016.01361.
94. Kaihui Huang, Yan Zhong, Yingjun Li, Dan Zheng, Zong-Ming Cheng. 2016 Genome wide identification and expression analysis of apple ASR gene family in response to *Alternaria alternata* f. sp. mali. *Genome*. 59(10): 866-878, 10.1139/gen-2016-0043.
93. Yingjun Li, Kaihui Huang, Yan Zhong, Zong-Ming Cheng. 2016. Genome analysis of NBS-encoding genes in kiwifruit genome (*Actinidia chinensis*). *Journal of Genetics*. *Journal of Genetics* 95(4):997-1001.
92. Jinyi Liu, Nana Chen, Zong-Ming (Max) Cheng, Jinsong Xiong. 2016. Genome-wide identification, annotation and expression profile analysis of *SnRK2* gene family in grapevine. *Australian J. Grape Wine Res.* 22 (3): 478–488.
91. Kaikai Zhu, Fei Chen, Jinyi Liu, Xinlu Chen, Tarek Hewezi, Zong-Ming (Max) Cheng. 2016. Evolution of an intron-poor cluster of the CIPK gene family and expression in response to drought stress in soybean (*Glycine max*). *Scientific Reports*. 6:28225. DOI: 10.1038/srep28225.
90. Xiling Wang, Zong-Ming (Max) Cheng Fengxiang Xu. 2016. Breeding triploid plants: a review. *Czech J. Genetics and Plant Breeding*. 52: 41-54.
89. Zhang, L.S., Fei Chen, Guo-Qiang Zhang, Yong-Qiang Zhang, Shance Niu, Jin-Song Xiong, Zhenguo Lin, Zong-Ming (Max) Cheng, Zhong-Jian Liu. 2016. Origin and mechanism of crassulacean acid metabolism in orchids as implied by comparative transcriptomics and genomics of the carbon fixation pathway. *Plant Journal*. 86 (2): 175–185. DOI: 10.1111/tpj.13159.
88. Olaf Czarnecki, Anthony C. Bryan, Sara S. Jawdy, Xiaohan Yang, Zong-Ming Cheng, Jin-Gui Chen and Gerald A. Tuskan. 2016 Simultaneous knock-down of six non-family genes using a

single synthetic RNAi fragment in *Arabidopsis thaliana*. *Plant methods* 12:16 DOI: 10.1186/s13007-016-0116-8

2015.(8)

87. Wang, Xiao-Long, Yan Zhong, Zong-Ming Cheng, Jin-Song Xiong. 2015. Genome-wide comparative analysis of bZIP genes in three Rosaceous species. *International Journal of Genomics*.
86. Yan Zhong, Yingjun Li, Kaihui Huang, Zong-Ming Cheng. 2015. Species-specific duplications of NBS-encoding genes in Chinese chestnut (*Castanea mollissima*). *Scientific Rep.* 5:16638 DOI: 10.1038/srep16638.
85. Ling Guan, A. Murphy, W.A. Peer, L.J. Gan, y. Li, Z.-M. (Max) Cheng. 2015. Physiological and Molecular Regulation of Adventitious Root Formation. *Critical Reviews in Plant Sciences*. 34:506-521.
84. Yuanchun Ma, Jiaoyang Wang, Yan Zhong, Fang Geng, Grant R Cramer & Zong-Ming (Max) Cheng. 2015. Subfunctionalization of cation/proton antiporter 1 genes in grapevine in response to salt stress in different organs. *Horticulture Research* 2, doi:10.1038/hortres.2015.31
83. Wang Min, Alessandro Vannozzi, Gang Wang, Yan Zhong, Erika Cavallini, Massimiliano Corso, Zong-Ming (Max) Cheng. 2014. A comprehensive survey of the grapevine VQ domain-containing gene family and its transcriptional correlation with WRKY TFs. *Frontiers in Plant Sciences*. <http://dx.doi.org/10.3389/fpls.2015.00417>
82. Ma, Yuanchun, Jiaoyang Wang, Yan Zhong, Grant Cramer, and Zong-Ming (Max) Cheng. 2015. Genome-wide analysis of the CPA super family genes in grapevine (*Vitis vinifera* L.). *Plant Omics Journal*. 8(4):300-311.
81. Zhong, Yan, Huan Yin, Daniel J Sargent, Mickael Malnoy and Zong-Ming (Max) Cheng. 2015. Unique evolutionary pattern of NBS-LRR genes among five Rosaceae species. *BMC Genomics* 16:77 doi:10.1186/s12864-015-1291-0
80. Liu, Jinyi, Nana Chen, Joshua N. Grant, Zong-Ming (Max) Cheng, C. Neal Stewart Jr, and Tarek Hewezi. 2015. Soybean kinome: functional classification and gene expression patterns. *J. Exp. Bot.* doi:10.1093/jxb/eru537.

2014.(12)

79. Wang, Gang, Arianna Lovato, Annalisa Polverari, Min Wang, Ying-Hai Liang, Yuan-Chun Ma, Zong-Ming Cheng. 2014. Genome-wide identification and analysis of mitogen activated protein kinase kinase gene family in grapevine (*Vitis vinifera*). *BMC Plant Biology*. 14(1):219. DOI: 10.1186/s12870-014-0219-1.
78. Wang, Xiaolong, Yan Zhong¹, Zong-Ming (Max) Cheng. 2014. Evolution and expression analysis of the CCCH zinc finger gene family in *Vitis vinifera*. *Plant Genome* doi:10.3835/plantgenome2014.05.0019

77. Ying-Hai Liang, Bin Cai, Fei Chen, Gang Wang, Min Wang, Yan Zhong & Zong-Ming (Max) Cheng **2014**. Construction and validation of a gene co-expression network in grapevine (*Vitis vinifera*. L.). *Horticulture Research* 1, doi:10.1038/hortres.2014.40
76. Chen, Y. X., F. Chen, H. Hu, L. Yang, L. Yue, R. N. Trigiano, and Z. Cheng. **2014**. Micropropagation of *Agave americana*. *HortScience*, 49(3):1–8. 2014.
75. Min Wang, A. Vannozzi, G. Wang, Ying-Hai Liang, G. B. Tornielli, Zenoni, Erika Cavallini, Mario Pezzotti and Z.-M. (Max) Cheng. **2014**. Genome and transcriptome analysis of the grapevine (*Vitis vinifera* L.) WRKY gene family. *Horticulture Research*. 1, 16; doi:10.1038/hortres.2014.16
74. Jinyi Liu, Nana Chen, Fei Chen, Bin Cai, Silvia Dal Santo, Giovanni Battista Tornielli, Mario Pezzotti, and Zong-Ming (Max) Cheng **2014**. Genome-wide analysis and expression profile of the bZIP transcription factor gene family in rapevine (*Vitis vinifera*). *BMC Genomics* 2014, 15:281
73. Cheng, Z. 2014. Stress Biology of Specialty Crops. *Crit Rev Plant Sci*. 3:90–91
72. Feng, G., Y. Li, and Z. Cheng. **2014**. Plant Molecular and Genomic Responses to Stresses in Projected Future CO2 Environment. *Crit Rev Plant Sci*. 33:2-3, 238-249, DOI: 10.1080/07352689.2014.870421
71. Gang Wang, Arianna Lovato, Ying-Hai Liang, Min Wang, Giovanni Battista Tornielli, Annalisa Polverari, Mario Pezzotti, Zong-Ming (Max) Cheng. **2014**. Genome-wide manual annotation, verification by isolation and expression analyses of MAPK gene family in grapevine (*Vitis vinifera*). *Australian J. Grape Wine Res.* 20, 255–262.
70. Yin, Hengfu, Chun Ju Chen, Jun Yang, David J. Weston, Jin-Gui Chen, Wellington Muchero, Ning Ye, Timothy J. Tschaplinski, Stan D. Wulfschleger, (Max) Zong-Ming Cheng, Gerald A. Tuskan, Xiaohan Yang. **2014**. Functional genomics of drought tolerance in bioenergy crops. *Crit Rev Plant Sci*. In press.
69. Lin, Wu-Ling, B. Cai, and Z. Cheng. **2014**. Identification and characterization of lineage-specific genes in *Populus trichocarpa*. *Plant Cell, Tissue, and Organ Culture*. 116:217–225.
68. Cheng, Z.M. **2014**. Inaugural editorial. *Horticulture Research* 1, 5. doi:10.1038/hortres.2014.5. **2013.(4)**.
67. Chen F, Fasoli M, Tornielli GB, Dal Santo S, Pezzotti M, et al. **2013**. The Evolutionary History and Diverse Physiological Roles of the Grapevine Calcium-Dependent Protein Kinase Gene Family. *PLoS ONE* 8(12): e80818. doi:10.1371/journal.pone.0080818
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6. Schnurr, J. P., Z.-M. Cheng, and A. A. Boe. 1996. Effect of plant growth regulators on sturdiness of Jack pine seedlings. *J. Environ. Hort.* 14:228-230.
5. Cheng, Z.-M. and N.-Q. Shi. 1995. Micropropagation of mature Siberian elm in two steps. *Plant Cell Tissue Organ Culture* 41:197-199.
4. Park, Y. D., D. H. Ronis, A. A. Boe, and Z.-M. Cheng. 1995. Plant regeneration from leaf tissues of four North Dakota genotypes of potato (*Solanum tuberosum* L.). *American Potato J.* 72:329-338.
3. Cheng, Z.-M., X.-L. Xu, 1992. Current status of grape tissue culture. *Fruit Science.* 9(2): 50-55.
2. Cheng, Z.-M. and B. I. Reisch. 1989. Shoot regeneration from petioles and leaves of *Vitis x labrascana* 'Catawba'. *Plant Cell Reports.* 8:403-406.
1. Xu, X.-L., H.Y. Xu, B.-C. Sheng, Z.-M. Cheng, and W. H. Dai. 1985. Observation of *Malus* pollens under scanning electron microscope. *J. Nanjing Agri. Uni.* 2:124-129.

Book Chapters:

- 1) Xiong AS, QH, Yao RH Peng and **Z.-M. Cheng**. 2010. Directed *in vitro* evolution of reporter genes based on semi-rational design and high throughput screening. In Braman, J. ed. *In Vitro Mutagenesis Protocols*. Third Ed. Final version submitted. The Humana Press.
- 2) **Cheng, Z.-M.**, Y. Li, and Z. Zhang, 2008. Plant Growth Regulators Used in Propagation. In C. Beyl and R. N. Trigiano (eds). *Plant Propagation: Concepts and Laboratory Exercises*. CRC Press. pp 143-150.
- 3) Osburn, L., **Z.-M. Cheng**, and R. N. Trigiano 2008. Adventitious rooting of woody and herbaceous plants. In C. Beyl and R. N. Trigiano (eds). *Plant Propagation: Concepts and Laboratory Exercises*. CRC Press. pp. 201-212.
- 4) Li Y., **Z. Cheng**, W. Smith, D. Ellis, Y. Chen, L. Lu, R. McAvoy, Y. Pei, W. Deng, C. Thammina, X. Zheng, H. Duan, K. Luo and D. Zhao (2006): Invasive ornamental plants: problems, challenges, and biotech approaches to neutralize their invasiveness. In: *Floriculture, Ornamental and Plant Biotechnology (1st Edition)* Ed. by J.A. Teixeira da Silva, Vol III. Global Science Books, Japan. 399-406.
- 5) Trigiano, R.N., K.R. Malueg, K.A. Pickens, **Z.-M. Cheng** and E.T. Graham. 2004 Histological Techniques. P. 39-48. In: Trigiano, R.N. and D.J. Gray (eds.). *Plant Development and Biotechnology*. CRC Press, LLC., Boca Raon. 359 pp.
- 6) **Cheng, Z.-M.** 1994. Genetic Engineering. In: R. M. Fu (ed.) *Fruit and Melon Biotechnology*, pp. 331-389. Agriculture Press. Beijing, China.
- 7) Shi N.-Q. and **Z.-M. Cheng**. 1994. PCR technology and application. In: R. M. Fu (ed.) *Fruit*

and Melon Biotechnology. pp. 390-402. Agriculture Press. Beijing, China.

Book Reviews:

1. **Cheng, Z.-M.** 1999. Tree Biotechnology-towards New Millennium. HortScience 34:943.

In-house Publications:

News Release, UTIA Video News Web Page December 2003. <http://www.agriculture.utk.edu/news/VideoReleases>

Extension Publications:

- 1) **Cheng, Z.-M.**, J. A. Walla, and Y. H. Guo. 1995. Research to develop X-disease resistant chokecherry. Windbreak Demonstrator (NDSU Extension Publication) 5(1&2):8-9.
- 2) Walla, J. A. and **Z.-M. Cheng**. 1994. Research to develop disease resistant ponderosa pine. Windbreak Demonstrator (NDSU Extension Publication) 4(1):6.
- 3) Capps, T., D. H. Herman, and **Z.-M. Cheng**. 1994. Update on search for DED resistant American elm in southeastern ND. Windbreak Demonstrator (NDSU Extension Publication) 4(4):6.
- 4) **Cheng, Z.-M.** and V. Quam. 1993. Survey on Dutch elm disease resistant American elm in southeastern North Dakota. Windbreak Demonstrator (NDSU Extension Publication) 3(5):6.
- 5) **Cheng, Z.-M.** 1993. Helping trees to combat 2,4-D. Windbreak Demonstrator 3(4):7 (NDSU Extension Publication)

Abstracts and presentation in professional meetings

A total of 65, not listed.

Presentations at Industry Meetings:

Osburn, L. and (Max) Z.-M. Cheng. 2006. Micropropagation of two *Lonicera* species for genetic engineering for sterility.

1. Z.-M. (Max) Cheng. 2004. Techniques to Control Invasiveness in Ornamental Plants. An invited presentation to TNLA annual meeting, July, 2004.

News Release, UTIA Video News Web Page

<http://www.agriculture.utk.edu/news/VideoReleases>, December 2003.

Knox News Sentinel Interview in biofuel. January 29, 2007.

8. RESEARCH GRANTS AND CONTRACTS AWARDED

At Uni. TN (2001-present), funded: \$2,890,159, expected incoming funds: \$377,360
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Year	P.I.(s)	Title	Funding Agency	Duration	\$ Amount
2017	Cheng, Z.M	Characterization soybean Kinome for drought tolerance	TNSPB	2017-1-1—12-31	\$30000
2016	Cheng, Z.M	Transformation of Poplars for plant-microbe interaction	Department of Energy, Oak Ridge National Lab	5/2016-4/2019 Funds transfer annually	\$175500 (2016 funding: \$58,500)
2016	Cheng, Z.M.	Characterization soybean Kinome for drought tolerance	Tennessee soybean Promotion Board	1/2016-1/2016	\$42,625
2015	Cheng Z.-M	Global characterization of genes affecting strawberry fruit phenolics biosynthesis and postharvest quality	USDA-ARS-Beltsville, MD	5/1/2015-4/30/2020 Funds transfer annually	\$325,450 (2015-2017 funding in place)
2014	Cheng Z.-M. and Tarek Hewezi	Characterization soybean Kinome for drought tolerance	Tennessee soybean Promotion Board	12/2015-1/2014	\$62,000
2012	Cheng Z.-M.	Transformation of soybean with a broad-spectrum stress tolerance gene	Tennessee soybean Promotion Board	1/2012-12/2012	\$43,000
2011	Cheng Z.-M.	Demonstration of broad-stress-inducible promoter PpXTH22, and a broad-stress tolerance gene PtXTH22 in major agronomic crop, soybean	University of Tennessee Research Foundation	1/2-011-12/2011	\$15000

2010	Cheng, Z.-M.	Establishment of biotechnology tools for Agaves, high-cellulose, low water-requiring potential bioenergy feedstock plants	University of Tennessee, Institute of Agriculture	1/2011-12/31/2011	\$18000
2010	Cheng Z.-M.	Transformation of soybean with a broad-spectrum stress tolerance gene	Tennessee soybean Promotion Board	1/2010-12/2011	\$80,458
2009	Cheng Z.-M.	Enhance biomass production in low fertility soil by engineering Dof gene	DOE/CPBR	1/2009-12/2010	78,600
2009	Cheng Z.-M.	Validation of Poplar XTHX, a broad-stress response gene for universal crop application	UT Res. Foundation	2/09-10/09	\$15000
2008	Chen, F. Cheng, Z.-M.	Investigating the roles of methyltransferases in lignin biosynthesis in poplar.	DOE Bioenergy Science Center	11/2007-10/2009	\$50,000
2007	Cheng Z.M. Chen, F.	Accelerated Domestication for Maximizing the Biomass Production and Characterization of Cell-wall Genes in Poplar for Bioenergy.	DOE/ Bioenergy Science Center	10/2007-9/2012	\$398,456
2007	Cheng Z.M.	Down-regulating the DHS Gene and Translation Initiation Factor eIF-5A to Increase Poplar Biomass.	Phenotype Screening	10//2006-9/2008	\$4000
2006	Cheng Z.M, F. Chen, X. Yang	Down-regulating the DHS Gene and Translation Initiation Factor eIF-5A to Increase Poplar Biomass.	DOE/CPBR/	10//2006-9/2008	\$70,000
2005	Cheng, Z.-M.	Construction of a poplar BIBAC library and transformation of Arabidopsis with a large fragment of the poplar genome for poplar functional genomics research.	UT Professional Development Awards.	5/2005-4/2006	\$5000
2005	Cheng, Z.-M.	Genome-enabled discovery of carbon sequestration genes in poplar – genetic transformation of Nisqually-1.	DOE-ORNL	5/2005-4/2006	\$50000

2004	Cheng, Z.- M. B. Mullin, C. N. Stewart	Phytoremediation of Heavy Metal Contamination by Metallothioneins, a New Class of Plant Metal-Binding Proteins.	EPA- CPBR	12/2004 -12/2008	\$212,000
2004	Tuskan, G. E.Retzler, D. Rokhsar, Z.- M. Cheng,	VCA: The <i>Populus</i> Genome Curation.	National Science Foundation.	8//2004- 7/2007	\$1,385,382
2004	Cheng, Z.- M	Genome-enabled discovery of carbon sequestration genes in poplar – genetic transformation of Nisqually-1.	DOE-ORNL	5/2004 -4/2005.	\$5,0000
2004	Cheng, Z.- M, S. Rogers, P. Ayers	Exotic plant survey in the Obed wild and scenic river park.	National Park Service.	1/2004 - 9/2004	\$10,000
2003	Cheng, Z.- M	Genome-enabled discovery of carbon sequestration genes in poplar – genetic transformation of Nisqually-1.	DOE-ORNL	5/2003 -4/2004	\$53,000
2003	Cheng, Z.- M	Characterization of transgenic aspen for wood production/quality.	DOE/CPBR	2003 -2004	\$31,048
2002	Cheng, Z.- M	Characterization of transgenic aspen for wood production/quality.	DOE/CPBR	2002 -2003	\$20,000
2002	Cheng, Z.- M	Develop a High throughput Transformation System for <i>Populus trichocarpa</i> "Nisqually-1" to Participate in the Post-Genomic Research on <i>Populus</i> .	UTIA	2002 -2003	\$3000
2001	Y. Li & Z. M. Cheng	Characterization of transgenic aspen for wood production/quality.	DOE/CPBR	1/2001 - 12/2001	\$40,000
At North Dakota State University (1991-2001) funded: \$818,662					
2000	Z. M. Cheng	Micropropagation of oak.	J. F. Schmidt Nursery Found.	1/2001- 12/2001	\$2,500

2000	Cheng, Z. M.	Micropropagation of hardy woody plants.	Bailey Nurseries, Inc.	1/2000-12/2000	\$5,000
2000	Cheng, Z. M.	Evaluation and characterization of rooting capability of hybrid aspens transformed with rooting genes.	DOE/CPBR	1/2000 - 12/2000	\$61,000
2000	Cheng, Z. M.	Evaluation and characterization of rooting capability of hybrid aspens transformed with rooting genes.	Weyerhaeuser Company	1/2000 - 12/2000	\$5,000
2000	J. Walla & Z. M. Cheng	Development of X-disease resistant chokecherry.	USDA-PMC	1/2000 - 12/2000	\$5,000
1999	Cheng, Z. M. Y. H. Guo	Construction of an ordered, complete genomic library for the X-disease phytoplasma.	USDA-NRICGP	9/1999-8/2001	\$100,000
1998	Cheng, Z. M.	Evaluation and characterization of rooting capability of hybrid aspens transformed with rooting genes.	DOE/CPBR	1/1999 - 12/2000	\$61,000
1998	Cheng, Z. M.	Evaluation and characterization of rooting capability of hybrid aspens transformed with rooting genes.	Blandin Paper Co. Minnesota	1/1999 - 12/1999	\$5,000
1998	Cheng, Z.-M. & Y. Guo	A simple, rapid, universal PCR technique for commercial MLO diagnosis.	NSF/TRIC/ NDEPSCoR	5/1998 - 12/1998	\$3,932
1998	Cheng, Z.-M.	Construction of an ordered, complete genomic library for the X-disease phytoplasma.	NSF-IIP- NDEPSCoR	7/1998 - 6/2000	\$16,000
1998	J. Walla & Z.-M. Cheng	Development of X-disease resistant chokecherry germplasm.	USDA-FS- NAC	7/1998 - 6/1999	\$5,000
1998	J. Walla & Z.-M. Cheng	Development of X-disease resistant chokecherry germplasm.	ND R&D	7/1998 - 6/1999	\$4,500

1998	J. Walla & Z. M. Cheng	Development of X-disease resistant chokecherry germplasm.	USDA-PMC	7/1998 - 6/1999	\$5,000
1997	Cheng, Z.-M.	Genetic improvement of aspen for wood/fiber production.	DOE/CPBR/ Kansas S. U.	7/1997 - 6/1998	\$11,500
1997	Cheng, Z.-M.	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	Novartis Biotech, Co.	7/1997 - 12/1998	\$5,000
1997	Cheng, Z. M.	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	Monsanto Company	7/1997 - 12/1998	\$2,500
1997	Cheng, Z. M., S. Meinhardt	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	DOE/ CPBR	7/1997 - 12/1998	\$65,000
1997	Cheng, Z.-M	Evaluation of rooting capability of hybrid aspens transformed with rooting genes.	NDSU/Res. Foundation	1/1998 - 12/1998	\$2,700
1996	Cheng, Z.-M.	Genetic improvement of aspen for wood/fiber production.	DOE/CPBR/ Kansas S. U.	7/1996 - 6/1997	\$8,500
1996	Cheng, Z.-M.	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	Northrup King Co.	7/1996 - 6/1997	\$10,000
1996	Cheng, Z.-M.	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	Monsanto Company	7/1996 - 6/1997	\$2,000
1996	Cheng, Z.-M.	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	Ciba Geigy Corporation	7/1996 - 6/1997	\$2,500
1996	Cheng, Z.-M. S. Meinhardt	Purification of a broad-spectrum antimicrobial protein and its gene isolation.	DOE/ CPBR	7/1996 - 6/1997	\$65,000

1996	Cheng, Z.-M.	To improve rooting capability of aspen hardwood cuttings through genetic engineering for biomass production.	Blandin Paper Co.	1/1996 - 12/1996	\$7,000
1996	Cheng, Z.-M.	Purification of a bacterial protein against wheat scab and other plant pathogens and its gene isolation.	N. D. Agri. Exp. Station	2/1996 - 6/1996	\$7,000
1995	Cheng, Z.-M.	Host/pathogen interaction and inheritance of XMLO resistance in chokecherry.	USDA-NRICGP	9/1995 - 8/1998	\$50,000
1995	Cheng, Z.-M.	Department of Energy Ph.D Traineeship.	DOE/ND EPSCoR	1/1996 - 12/1997	\$32,000
1995	Cheng, Z.-M.	To improve rooting capability of aspen hardwood cuttings through genetic engineering for biomass production.	DOE/CPBR	1/1996 - 12/1996	\$85,000
1995	Cheng, Z.-M.	Development of 2,4-D resistant Siberian elm to reduce the negative impact of 2,4-D drift.	USDA-FS	6/1996 - 10/1996	\$14,280
1994	Cheng, Z.-M.	To improve rooting capability of aspen hardwood cuttings through genetic engineering for biomass production.	DOE/CPBR	7/1994 - 12/1995	\$85,000
1994	Cheng, Z.-M.	Development of 2,4-D resistant Siberian elm to reduce the negative impact of 2,4-D drift.	USDA-Forest Service	6/1994 - 5/1995	\$16,000
1994	Cheng, Z.-M.	North Dakota Centennial windbreak project.	USDA-SCS	4/1994-3/1995	\$13,750
1993	Cheng, Z.-M.	Development of a micropropagation system of ponderosa pine (<i>Pinus ponderosa Laws</i>).	USDA-FS Lincoln Lab	9/1993 - 8/1995	\$7,500
1993	Cheng, Z.-M.	North Dakota Centennial windbreak project.	USDA-SCS	4/1993 - 3/1994	\$27,500

199 2	Cheng, Z.-M.	Development of a micropropagation system of ponderosa pine (<i>Pinus ponderosa</i> Laws.).	USDA-FS Lincoln Lab	9/1992 - 8/1994	\$15,000
199 1	Cheng, Z.-M.	Development of regeneration, in vitro selection, and transformation systems for American and Siberian elms.	NDSU- Grant-in-Aid	5/1991 - 5/1992	\$5,000

9. CREDIT COURSES TAUGHT (9/2001-Current at UT, 11/1990-8/2001 AT NDSU)

Term	Year	Course No.	Course Title	Credit No.	Enrollment	% Resp.
Spring	2017	PS330	Plant Propagation	3	26	33%
Spring	2016	PS330	Plant Propagation	3	30	33%
Spring	2015	PS330	Plant Propagation	3	28	33%
Spring	2014	PS330	Plant Propagation	3	30	33%
Spring	2013	PS330	Plant Propagation	3	31	33%
Fall	2012	PS505	Seminar and Poster Preparation	1	8	100
Fall	2011	PS505	Seminar and Poster Preparation	1	7	100
Fall	2007	OHLD 497	Individual Study	1	2	100
Spring	2006	PS605	Special Topics/Plant Breeding and Genetics: Plant Functional Genomics	2	9	100
Fall	2005	PS501	Horticultural Invasive Plant Species: Biology, Control & Biotechnological Prevention	1	7	100
Fall	2004	OHLD 330	Plant Propagation	3	21	100

Spring	2004	OHLD490	Senior Seminar	1	25	100
Fall	2003	PLSC	Individual Study	1	1	100
Spring	2003	OHLD490	Senior Seminar	1	25	100
Fall	2002	OHLD 330	Plant Propagation	3	23	100
Spring	2003	OHLD490	Senior Seminar	25	1	100
Fall	1991-2000	PLSC 484/684	Plant Tissue Culture and Micropropagation	2	8-14	100
Spring	2001	PLSC 360	Horticultural Food Crops	4	13	50
Spring	1992, 1994, 1996	PLSC759	Biotechnology Application to Plant Breeding		10 7 6	100
Spring	1994	PLSC 796	Special Topics B Forest Tree Breeding	1	4	100

10. GRADUATE STUDENTS/VISITING SCIENTISTS/POSTDOCS in US (AS MAJOR ADVISOR UNLESS INDICATED)

#	Name	Degree	Year of graduation	Current Position	Note
45	Rongbin Hu	Postdoc	1/2018-		
44	Kaikai Zhu	Visiting Scholar	12/2017-		
43	Chunxiao liu	Postdoc	10/2017-9/2018		
42	Xiaoli Hu	Ph.D	Expected: 9/2017-		
41	Ying Sun	Visiting Scholar	10-2017-9-2018	Associate Professor, Northwest Forestry University	
40	Xiulian Yang	Visiting Scholar	10-2017-9-2018	Associate Professor, Nanjing Forestry University	

39	Yanwei Chen	Visiting Scholar	7-2017-6-2018	Associate Professor Henan Normal University	
39	Jing Ma	Visiting Scholar	7-2017-6-2018	Associate Professor Southwest University	
38	Zhigang Dong	Visiting Scholar	8/2016-7/2017	Associate professor, Shanxi Academy of Ag. Sciences, Taigu, Shaxi, China	
37	Hui Liu	Visiting Scholar	9/2016-8/2017	Ph.D graduate student at NAU (1/2018)	
36	Jun Tang	Postdoc Fellow	9/2015-12/2016	Associate professor, Jiangsu Academy. Ag. Sci	
35	Yonghui Wu	Visiting Scientist	7/2016-6/2017		
34	Ximei Huo	Visiting Scholar	9/2015-4/2016		
33	Xiaolong Wang	Visiting Scholar	8/2015-6-2017		Paid by Scholar's home country
32	Li Zhen	Visiting Scholar	9/15/2014-9/214/2015	Associate Professor, Yunnan Agricultural University	Paid by Scholar's home country
31	Xiling Wang	Visiting Scholar	8/28/2014-8/27/2015	Associate Professor, Nanjing Agricultural University	Paid by Scholar's home country
30	Fei Chen	Visiting Ph.D student	9/15/2014-9/14/2016	Postdoc at Fujian Agricultural University	Paid by Scholar's home country
29	Yuanchun Ma	Visiting Ph.D student	8/31/2014-2/28/2015	Postdoc at Jiangsu Academy of Agricultural Sciences	Paid by Scholar's home country

28	Ying Chen	Visiting Scholar	3/2011-2/2012	Associate Professor, Nanjing Forestry University	Paid by Scholar's home country
27	Wanmei Jin	Visiting Scholar	3/2011-2/2012	Associate professor, Beijing Academy of Agriculture and Forestry	Paid by Scholar's home country
26	Ying Li	Visiting scholar	11/2010-10/2012		Paid by Scholar's home country
25	Junfeng Fan	Visiting Scientist	1/2010-1/2011	Professor, Northwestern University of Agriculture and Forestry	Paid by Scholar's home country
24	Xiaoqing Guo	Visiting Scientist	11/2009-4/2010	Associate Professor, Zhejiang Agri. And Forestry University	Paid by Scholar's home country
23	Wulin Lin	Postdoc	8/2009-		
22	Bin Cai	Visiting Scientist	4/2009-6/2010	Associate Professor, Nanjing Agricultural University	
21	Xia Ye	Postdoc	1/2007-7/2009	Associate professor, Henan Agricultural University, China	
20	Alina Campbell	MS	8/2008-		Co-major advisor
19	Xiaohang Yang	Postdoc	5/2005-9/2006	Staff Scientist, ORNL-Environmental Science Division, DOE	
18	Byung Guk, Kang	Ph.D	12/2009	Postdoc, University of Missouri	
17	Kimberley A. Pickens	Ph.D	2004	Assistant Professor, Macon State University	
16	Joo Young Kim	MS	2006	Research Associate, University of Florida	
15	Sara Jawdy	MS	2006	Research Associate, DOE ORNL	Co-major advisor

14	Jianhua Wei	Postdoc	2/004-12/2004	Director, Biotechnology Center, Research Scientist, Beijing Academy Agri. Sci	
13	Yuxi Wang	Visiting scientist	9/2003-12/2003	Deputy Director, Plant Quarantine and Inspection Service, Chinese Dept. of Agriculture, Beijing	
12	John Ke	Postdoc	3-6/2002	Senior Scientist, Sengenta, NC 27735	
11	Michael J. Bosela	Ph.D	2001	Assistant Professor, Indiana Purdue Univ. at Fort Wayne	
10	Wenhao Dai	Ph.D	2000	Assistant Professor, North Dakota State University	
9	Weisong Guo	Ph.D	1999	Senior Researcher Ohio Supercomputer Center, OSU	
8	Yiqiang Liu	MS	1998	Research Specialist, Canada	
7	Yonghong Guo	Postdoc	1997-2000	USDA-ARS-Beltsville, MD	
6	Yonghong Guo	Ph.D	1997	See above	
5	Xiaodong Song	Visiting Scientist	1997	Research Scientist, China	
4	Zhen Zhang	Visiting Scientist	1994-1996	Department Head, Nanjing Agri. Uni. China	
3	Jeffrey P. Schnurr	MS	1995	Assistant superintendent, TPC, MN	
2	Cheng Guo Wang	Ph.D	1995	Quality Assurance Audit Specialist, Northview Biosciences, IL.	

1	Richard Gilmore	MS	1993	Retired	
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Graduate Students at Nanjing Agri. University, China (19, only listed graduated ones)

#	Name	Degree	Graduation year	Current position
1	Xiaolong Wang	Ph.D	2017.9	
2	Yue Xi	MS	2017.6	Ph.D student, Italy
3	Cong Guo	MS	2017.6	
4	Chengdong Luo	MS	2017.6	
5	Xiaohan Chen	MS	2017.6	
6	Fengfeng Zhang	MS	2017.6	
7	Hui Liu	MS	2016	Visiting Scientist, UT
8	Yingjun Li	MS	2016	Technical Consultant
9	Kaihui Huang	MS	2016	Technical Consultant
10	Dan Zheng	MS	2016	Technical Manager
11	Fei Chen	Ph.D	2016	Postdoc, Fujian Ag. Uni
12	Yuanchun Ma	Ph.D	2015	Postdoc, JAAS
13	Ling Guan	Ph.D	2015	Staff scientist, JAAS
14	Jiaoyang Wang	MS	2015	Manager
15	Min Wang	Ph.D	2014	Staff scientist,
16	Gang Wang	Ph.D	2014	Staff scientist
17	Jinyi Liu	Ph.D	2014	Postdoc
18	Xue Li	MS	2014	Higher School Teacher
19	Zhenying Luo	MS	2014	Assistant scientist
20	Huan Yin	MS	2014	Assistant manager,
21	Ying Li	Ph.D	2013	At maternal leave
22	Yinghai Liang	Ph.D	2013	Associate Director, Institute of Pomology, JAAS

23	Nana Chen	MS	2013	Assistant Scientist, NJAU
24	Guanqiao Feng	MS	2013	Graduate student, UF
25	Tao Cai	MS	2013	Program manager

11. PROFESSIONAL MEMBERSHIPS

1. International Horticultural Society. 2011-15
2. The American Society for Horticultural Sciences (ASHS), 1989-present
3. The American Association for the Advancement of Sciences (AAAS), 1995-1999, 2005-2010
4. American Society of Plant Biologists, 2002- 2008
5. International Mycoplasma Society, 1997-2001
6. American Phytopathology Society, 1996, 1998
7. International Society of Plant Molecular Biology, 1991-1997
8. The Great Plains Agroforestry Association, 1993-1997

12. SERVICE TO THE UNIVERSITY, THE PUBLIC, AND THE PROFESSION

Service to University (only those at UT are listed, some are limited to the past 3 years)

University Level:

- 1) University of Tennessee's representative to the CPBR, 2001-present
- 2) University of Tennessee Faculty Senate (elected), 7/2006-9/2010:
Appeals Committee (Dealing faculty appeals for tenure and promotion)
Faculty Affairs (representing UT Institute of Agriculture)

University of Tennessee Institute of Agriculture:

- 1) Strategic Planning Committee, 2017.5—2017.12
- 2) Governor Chair Search Committee, 2007-present
- 3) Committee Member of the National Agricultural Biotechnology Council to organize the 2005 meeting in Nashville, TN
- 4) Member of four-member committee for Biotechnology Building Teaching Facility Committee, 2001-2003
- 5) Tennessee Agricultural Experiment Station Representative for the Capital Campaign Kickoff

Department Level:

- 1) Department Advisory Committee 2010-2011, 2013
- 2) Facility and Equipment Committee: Chair, 2009
- 3) Departmental Liaison for Communication of basic research to popular media, 2008-present

- 4) Department Liaison for Communication with the American Society for Horticultural Sciences. 2008-
- 5) Departmental Liaison for Communication of basic research to popular media, 2008
- 6) Committee Chair: information technology 2007/2008
- 7) Committee Chair: information technology, 2007/2008
- 8) Computational Biology Faculty Search Committee member, 2008
- 9) Graduate Program Committee member, 2001-present
- 10) Seminar Committee member, 2002-2005/6
- 11) Commencement, 2003
- 12) Greenhouse Committee member, 2002
- 13) Special Assignment for assessing the impact of the Botany department merge, 2002

Service to the Profession (since 1997 when the Candidate was tenured and promoted to Associate professor at North Dakota State University):

- 1) Founding Editor-in-Chief, Horticulture Research, Published by Nature Publishing Company
- 2) Associate Editor: Journal of Agricultural Biotechnology: 10/2009-current
- 3) Associate Editors: Plant Cell Tissue Organ Culture: 10/2008-current
- 4) Reviews Editor: Plant Cell Tissue Organ Culture: 7/2009-6/2010
- 5) Reviews Editor: In Vitro Cellular and Developmental Biology: 2006-2009
- 6) Secretariat of Consortium for Plant Biotechnology Research (CPBR), Inc., 2003-present
- 7) North Dakota State University Representative to the CPBR

Service for the American Society for Horticultural Sciences (ASHS):

- 1) **Initiation of Working Groups:**
 - a. Initiated the Horticultural Bioenergy Crops Working Group
 - b. Initiation of Oriental Horticulture Working Group
- 2) **Organizing Workshop and Colloquium:**
 - a. Organized Workshop, Title: Fruit functional genomics. Annual Meeting of ASHS, July 19-24, 2009
 - b. Organizer for Colloquium. Title: Systems Biology for Horticultural Crops and How to Participate. Annual Meeting, July 19-24, 2008. The second most prestigious technical program at the ASHS annual meeting next to the Plenary Section
 - c. Biotechnology Workshop co-organizer. ASHS 2007 annual meeting
 - d. Co-organizer for the Workshop: Funding Horticultural Plant Biotech Research at the ASHS conference, 2005
 - e. Organizer for Horticultural Biotechnology Workshop. Title: Advances of Biotechnologies in Ornamental Horticulture, ASHS, 2004
- 3) **Committee Service**
 - a. Fellow Selection Committee: 2016-2019

- b. Member of Nomination Committee, 2010-2013
 - c. Member of National Issues Task Force Committee, 2007-current
 - d. Member of the membership Committee, 2008-2013
 - e. Member of Endowment Fund Committee, ASHS, 2006-2011
 - f. Member of the Advisory Committee of the VP for Research, 2008-2009
 - g. The Horticultural Bioenergy Crops Working Group
Chair, 2007-2008, 2008-2009
 - h. Ornamental Publication Award Selection Committee:
 - i. Chair, 2008-2009
 - ii. Member, 2006-2008
 - i. Chair, the Biotechnology Working Group, 2003-2004
 - j. Chair-elect, the Biotechnology Working Group, 2000-2002
 - k. Secretary, the Biotechnology Working Group, 1998-2000
 - l. Member, the International Horticulture Advisory Council, 1997-2003
 - m. Member, the Outstanding Graduate Educator Award Committee, 1997-1999
 - n. Chair, the Outstanding International Horticulturist Award Committee, 2000-2001
 - o. Member, the Outstanding International Horticulturist Award Committee,
1997-2000
 - p. Member, the Nursery Industry Educator Award Committee, 1997-1999
 - q. Asian Horticulture (previously Chinese Horticulture Working Group) 1996
 - r. Chair, 1996, 1997, 1998
- 4) Peer-Reviewed Proposals for National and other funding agencies (**only those at UT**):
- USDA-NRI, 2002, 2003, 2004
 - NSF, 2001, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2016
 - BARD, 2000, 2002, 2004
 - Chinese NSF: 2007, 2013, 2014, Panel, 2012
- 5) Manuscript reviews
- Regularly review manuscripts for the following journals:
- Molecular Biology and Evolution
 - Plant Physiology
 - Plant Biotechnology Journal
 - Plant Journal
 - New Phytologist
 - HortScience
 - Journal of ASHS
 - Plant Molecular Biology
 - New Forest
 - Gene
 - Plant Cell Tissue Organ Culture
 - Comparative and Functional Genomics
 - Applied Microbiology and Biotechnology

- Plant Cell Reports
- In vitro Cell. Dev. Biol.-Plant
- Scientia Horticultrae
- Plant Biology
- BMC Plant Biotechnology
- BMC Plant Biology
- Plant Breeding
- PlosOne
- Euphytica
- Australian Journal Grape and Wine Research
- Tree Genetics and Genomics
- Frontiers in Plant Sciences
- Scientific Reports

Service to the Public/Community:

- 1) Vice President for Membership, Organization of Chinese Americans (OCA), a civil rights organization, 2007-2010
- 2) OCA Leader for Adopt a Highway: 2005-2008
- 3) A Board of Directors, OCA, Secretary, 2005-2006
- 4) Council Chair, East Tennessee Chinese Association, 2006/2007
- 5) A Board of Directors for the East TN Chinese School, 2003-2005
- 6) A Board of Directors for the Knoxville Chapter of the National Conference of Community Justice (NCCJ), now, Knox Area Conference of Community Justice (KACCJ), 2004-2005



October 18, 2017

Signature

Date

Reference Providers:

1. Dr. Scott Senseman: Professor and Department Head, Department of Plant Sciences University of Tennessee Knoxville, TN 37996
Phone: 865-974-7974 ssensema@utk.edu
2. Dr. Caula Beyl, Professor, Dean of College of Agriculture and Natural Resources, 126 Morgan Hall, University of Tennessee, Knoxville, TN 37996, Phone: 865-974-7303 cbeyl@utk.edu
3. Dr. William Brown, Dean, AgResearch, UT Agricultural Experimental Station, 103 Morgan Hall, University of Tennessee, Knoxville, TN 37996 Phone: 865-974-7121 wbrown15@utk.edu
4. Robert Trigiano Professor, Department of Entomology and Plant Pathology
University of Tennessee
Knoxville, TN 37996 Phone: 865-974-0221, rtrigian@utk.edu

Dr. Trigiano hired me at UT and currently my colleague working in the similar research area.