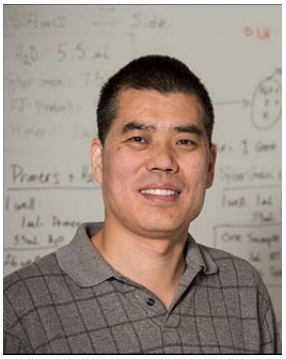
'ICAC RESEARCHER OF THE YEAR 2018'
Nomination Package



Personal Details

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Gender	male
Educational Qualifications	Ph.D.
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Part-1 **Awards and Recognitions on Cotton Research (National)**

S.No.	Year	Name of the Award / Recognition	Awarding Institution	Remarks
1	**2017**	Nominating the Outstanding Professorship	East Carolina University	
2	**2017**	The Achievement in International Research and Creative Activity Award	East Carolina University	Only awarded one faculty
3	**2016**	Thomas Harriot College of Arts and Sciences Reassignment Award	East Carolina University	
4	**2013**	Five Year Research Achievement Award	East Carolina University	Only awarded two faculty
5	**2013**	Academic Affairs Faculty Book "Transgenic Cotton" Award	East Carolina University	
6	**2006**	Fifth Annual Graduate Student Research Poster Competition	Texas Tech University	

Part-2 **Awards and Recognitions on Cotton Research (International)**

S.No.	Year	Name of the Award / Recognition	Awarding Institution	Remarks
1	**2017**	Excellent Scholar Award	XIX International Botanical Congress	
2	**2006**	Excellence in Science	Science/AAAS	
3	**2006**	Agrochemical Division Education Award	American Chemical Society	
4	**2002**	The 10th IAPTC&B Fellowship on transgenic cotton	SIVB	
5	**2000**	2nd place Award of Science and Technology Progress, "The Establishment of Cotton Tissue Culture and High Frequency Plant Regeneration"	Henan Province Government, China	

6	**1999**	Excellent Youth Award	Anyang, China	
7	**1999**	First place Scientific Paper Award, "High frequency somatic embryogenesis and plant regeneration in cotton"	Chinese Academy of Agricultural Science	
8	**1997**	First place Scientific Paper Award, "Anther culture and plant regeneration of cotton (Gossypium klotzschianium antherss)",	Henan Province, China	
9	**1997**	Third place Scientific Paper Award, "Selection of cotton salt-resistant embryogenic cell lines and plant regeneration	Chinese Academy of Agricultural Science	
10	**1996**	Scientific Paper Award	Chinese Association of Agronomy	
11		More than 20 other scientific papers (on cotton) were awarded Excellent Scientific Papers by Henan Province, Ministry of Agriculture of China, respectively (1996-2000)		

Part-3 **Research Papers on Cotton as First Author**

S.No.	Paper Reference (*Harvard Style)	Cited by
1	**Zhang, B.H.** & Wang, Q.L. (2016) MicroRNA, a new target for engineering new crop cultivars. *Bioengineered*, 7(1): 7-10.	**5**
2	**Zhang, B.H.** (2015) MicroRNA: a new target for improving plant tolerance to abiotic stress. *Journal of Experimental Botany*, 66 (7): 1749-1761	**118**
3	**Zhang, B.H.** and Wang, Q.L. (2015) MicroRNA-based biotechnology for plant improvement. *Journal of Cellular Physiology*, 230(1): 1-15.	**76**
4	**Zhang, B.H.** & Pan, X.P. (2009) Expression of microRNAs in cotton. *Molecular Biotechnology* 42 (3): 269-274.	**33**
5	**Zhang, B.H.**, Wang, Q.L., Liu, F., Wang, K.B. & Frazier, TP (2009) Highly efficient plant regeneration through somatic embryogenesis in 20 elite commercial cotton (*Gossypium hirsutum* L.) cultivars. *Plant Omics*, 2(6): 259-268.	**10**
6	**Zhang, B.H.**, Stellwag, E.J., & Pan, X.P. (2009) Large-scale genome analysis reveals unique features of microRNAs. *Gene* 443 (1-2): 100-109.	**115**
7	**Zhang, B.H.**, Pan, X.P., Venne, L., McMurry, S.T., Cobb, G.P. & Anderson, T.A. (2008) Development of a method for the determination of 9 currently used cotton pesticides by gas chromatography with electron capture detection. *Talanta* 75(4): 1055-1060.	**46**
8	**Zhang, B.H.**, Wang, Q.L., Wang, K.B., Pan, X.P., Liu, F., Guo TL, Cobb, G.P. & Anderson, T.A. (2007) Identification of cotton microRNAs and their targets. *Gene* 397(1-2): 26-37	**187**
9	**Zhang, B.H.**, Pan, X.P., Cox SB, Cobb, G.P. & Anderson, T.A. (2006) Evidence that miRNAs are different from other RNAs. *Cellular and Molecular Life Sciences* (CMLS) 63(2):246-254.	**446**
10	**Zhang, B.H.**, Pan, X.P., Cannon C, Cobb, G.P. & Anderson, T.A. (2006) Conservation and divergence of plant microRNA genes. *The Plant Journal* 46 (2): 243-259.	**608**
11	**Zhang, B.H.**, Pan, X.P., Cobb, G.P. & Anderson, T.A. (2006) Plant microRNA: a small regulatory molecule with big impact. *Developmental Biology* 289: 3-16	**559**
12	**Zhang, B.H.**, Pan, X.P., Wang, Q.L., Cobb, G.P. & Anderson, T.A. (2005) Identification and characterization of new plant microRNAs using EST analysis. *Cell Research* 15(5): 336-360	**434**
13	**Zhang, B.H.**, Pan, X.P., Guo TL, Wang, Q.L. & Anderson, T.A. (2005) Measuring gene flow in the cultivation of transgenic cotton (*Gossypium hirsutum* L.). *Molecular Biotechnology*, 31:11-20.	**40**
14	**Zhang, B.H.,** Pan, X.P. & Wang, Q.L. (2005) Development and commercial use of *Bt* cotton. *Physiology and Molecular Biology of Plants* 11: 51-64.	**5**
15	**Zhang, B.H.**, Wang, Q.L. & Wang QP (2004) Bt cotton in India. *Current Science* 86(6): 758-760.	**6**
16	**Zhang, B.H.**, Liu, F., Liu ZH, Wang HM & Yao CB (2001) Effects of kanamycin on tissue culture and somatic embryogenesis in cotton. *Plant Growth Regulation* 33(2): 137-149	**44**
17	**Zhang, B.H.**, Wang, H.M., Liu, F., Li, Y.H. & Liu, Z.D. (2001) *In vitro* assay for 2,4-D resistant in transgenic cotton. *In Vitro Cell Developmental Biology-Plant* 37(2): 300-304.	**5**

18	**Zhang, B.H.**, Wang, Q.L. & Zhang WS (2001) Selection for salt tolerance in cotton tissue culture and plant regeneration from NaCl-tolerant embryogenic callus. *Israel J Plant Sci* 49: 187-191.	**8**
19	**Zhang, B.H.**, Feng, R., Liu, F., Zhou DY & Wang, Q.L. (2001) Direct somatic embryogenesis and plant regeneration from cotton (*Gossypium hirsutum* L.) explants. *Israel J Plant Sci* 49: 193-196.	**8**
20	**Zhang, B.H.**, Wang, Q.L. & Liu, F. (2001) Phenotypic variation in cotton (*Gossypium hirsutum* L.) regenerated plants. *Current Science* 81(8): 1112-1115.	**11**
21	**Zhang, B.H.**, Feng, R., Liu, F. & Wang, Q.L. (2001) High frequency somatic embryogenesis and plant regeneration of an elite Chinese cotton variety. *Bot Bulletin of Acad Sin* 42: 7-16.	**92**
22	**Zhang, B.H.**, Liu, F., Yao CB, Gong WK, Liu ZH, Wang HM & Liu YL (2001) Obtained callus resistant to kanamycin from cotton transformation by *Agrobacterium tumefaciens* with GO gene. *Cotton Science* 13(2): 78-81. (In Chinese with English abstract)	**n/a**
23	**Zhang, B.H.** & Wang, Q.L. (2001) Bt-cotton in China. *Current Science*, 81(4): 332-333	**1**
24	**Zhang, B.H.** (2000) Transgenic crops in China. *Science*, 290(5496): 1505-1506.	**1**
25	**Zhang, B.H.**, Guo TL & Wang, Q.L. (2000) Inheritance and segregation of exogenous genes in transgenic cotton. *Journal of Genetics***,** 79(2): 71-75	**25**
26	**Zhang, B.H.**, Liu, F. & Yao CB (2000) Plant regeneration via somatic embryogenesis in cotton. *Plant Cell, Tissue and Organ Culture* 60(2): 89-94.	**78**
27	**Zhang, B.H.**, Liu, F., Yao CB & Wang, K.B. (2000) Recent progress in cotton biotechnology and genetic engineering in China. *Current Science* 79(1): 37-44.	**60**
28	**Zhang, B.H.**, Liu, F. & Wang, Q.L. (2000) Germination of somatic embryos and plant recovery in cotton (*Gossypium hirsutum* L.). *International J Experiment Botany* 68: 39-46.	**2**
29	**Zhang, B.H.** (2000) Regulation of plant growth regulators on cotton somatic embryogenesis and plant regeneration. *Biochemistry* 39 (6): 1567.	**n/a**
30	**Zhang, B.H.** (2000) Resistance management for Bt-transgenic cotton. *Cotton Sci*, 12(3): 164-168.	**n/a**
31	**Zhang, B.H.**, Liu, F., Yao CB, Wang HM & Feng XA (2000) Scanning electron microscope observation on tissue culture and somatic embryogenesis of *Gossypium hirsutum* L. *Chinese Journal of Crop Sciences* 26(1):125-128. (In Chinese with English abstract)	**n/a**
32	**Zhang, B.H.**, Liu, F., Yao CB & Wang HM (2000) High frequency somatic embryogenesis and plant regeneration from cotton elite variety cv. CCRI 19. *Chinese Journal of Crop Sciences* 26(2):239-242. (In Chinese with English abstract)	**n/a**
33	**Zhang, B.H.**, & Guo TL (2000) Frequency and distance of pollen dispersal from transgenic cotton. *Chinese Journal of Applied and Environmental Biology*, 6(1):39-42.	**9**
34	**Zhang, B.H.**, Guo TL & Wang, Q.L. (2000) Inheritance of transgenic cotton. *Life Science Research* 4(2): 136-142. (In Chinese with English abstract)	**3**
35	**Zhang, B.H.**, Liu, F., Liu ZH, Wang HM & Yao CB (2000) Hormone regulation on cotton somatic embryogenesis. *Cotton Science* 12(1): 17-21. (In Chinese with English abstract)	**n/a**
36	**Zhang, B.H.**, Feng, R., Liu, F. & Yao CB (1999) Direct induction of cotton somatic embryogenesis. *Chinese Science Bulletin* 44: 766-767. (In Chinese with English abstract)	**n/a**
37	**Zhang, B.H.**, Li FL, Li XL, Li, F.G., Liu, F. & Yao CB (1999) Effects of genotypes on cotton anther response *in vitro* culture. *Cotton Sciences* 11(2): 92-99.	**n/a**
38	**Zhang, B.H.**, Feng, R., Du XM, Li FL, Wang CY, Feng XA & Li XL (1997) Scanning electron microscope observation on embryogenesis and organogenesis in tissue culture of *Gossypium klotzschianum* Anderss. *Chinese Journal of Electron Microscopy* 16(2):81-86.	**n/a**
39	**Zhang, B.H.** & Zhou Y (1999) Effects of salt-stress on cotton tissue culture and plant regeneration. *Pakistan Journal of Biological Sciences* 2(4):1085-1087.	**n/a**
40	**Zhang, B.H.**, Feng, R. (1998) Achievement, problems and strategies of transgenic insect-resistant cotton. *Chinese Journal of Crop Sciences* 24(2):248-246.	**7**
41	**Zhang, B.H.**, Feng, R., Li XL, Li FL (1996) Anther culture and plant regeneration of cotton (*Gossypium klotzschianum* Anderss). *Chinese Science Bulletin* 41(2): 145-148.	**33**
42	**Zhang, B.H.**, Li XL, Li FL & Li, F.G. (1996) Development of abnormal plantlets and their normalization during cotton tissue culture. *Chinese Journal of Plant Science* 38(11):845-852	**n/a**
43	**Zhang, B.H.**, Li XL (1996) Occurrence and transformation of abnormal embryoids in cotton tissue culture. *Chinese Journal of Crop Sciences* 22(1):107-111.	**6**
44	**Zhang, B.H.**, Wang, Q.L. & Feng, R. 1996. Somatic embryony patterns and plant	**2**

	regeneration in *Gossypium hirsutum* L. *Journal of Agricultural Biotechnology* 4(1):44-50.	
45	**Zhang, B.H.**, Feng, R., Zhang WS, Li FL & Wang CY (1996) Study of the method for smearing of cotton callus and the steady of chromosome in cotton tissue culture. *Journal of Agricultural Biotechnology* 4(3): 224-229.	**n/a**
46	**Zhang, B.H.** (1995) A methodology for tissue culture and plant regeneration in cotton. *Southwest Chinese Journal of Agricultural Sciences* 8(4):42-47.	**n/a**
47	**Zhang, B.H.** ,Feng, R., Li FL & Li, F.G. (1995) Embryogenesis and plant regeneration in cotton anther culture. *Chinese Science Bulletin* 40(17):1640-1642.	**n/a**
48	**Zhang, B.H.**, Li FL, Li, F.G. and Li XL (1995) Plant regeneration from cotton anther culture. *Chinese Journal of Agricultural Sciences* 28(5):92-93.	**n/a**

n/a means no citation information available from Google scholar

Part-4 **Research Papers on Cotton as Co-Author**

S.No.	Paper Reference (*Harvard Style)	Cited by
1	Pan, X.P., Nichols, R.L., Li, C. and **Zhang, B.H.** (2018) MicroRNA-target gene responses to root knot nematode (*Meloidogyne incognita*) infection in cotton. *Genomics*, in press.	
2	Li, C, Unver T & **Zhang, B.H.** (2017) A high-efficiency CRISPR/Cas9 system for targeted mutagenesis in cotton (*Gossypium hirsutum* L.). *Scientific Reports*, 7: 43902.	**20**
3	Li C, Unver T & **Zhang, B.H.** (2017) A powerful CRISPR/Cas9 platform for obtaining precise gene knockout mutagenesis in cotton (*Gossypium hirsutum* L.). ISB News REPORT, 2017, p 5-9.	**n/a**
4	Wang, M., Sun RR. Li C, Wang, Q.L. & **Zhang, B.H.** (2017) MicroRNA expression profiles during cotton (*Gossypium hirsutum* L) fiber early development. *Scientific Reports*, 7: 44454.	**2**
5	Sun RR *****, Li CQ, Zhang JB, Li F, Ma L, Tan YG, Wang, Q.L., and **Zhang BH** (2017) Differential expression of microRNAs during fiber development between fuzzless-lintless mutant and its wild-type allotetraploid cotton. *Scientific Reports*, 7:3.	**1**
6	He QL, Jones DC, Li W, Xie F.L.*, Ma J*, Sun RR*, Wang, Q.L., Zhu SJ, and **Zhang, B.H.** (2016) Genome-wide identification of R2R3-MYB genes and expression analyses during abiotic stress in *Gossypium raimondii*. *Scientific Reports*, 6:22980. doi: 10.1038/srep22980	**32**
7	Zhang ZY, Chao MN, Wang SF, Bu JJ, Li F, Wang, Q.L., and **Zhang, B.H.** (2016) Proteome quantification of cotton xylem sap suggests the mechanisms of potassium-deficiency-induced changes in plant resistance to environmental stresses. *Scientific Reports*, 6: 21060.	**9**
8	Ma J*, Liu, F., Wang, Q.L., Wang, K.B., Jones D, & **Zhang, B.H.** (2016) Comprehensive analysis of TCP transcription factors and their expression during cotton (*Gossypium arboreum*) fiber early development. *Scientific Reports*, 6:21535. doi: 10.1038/srep21535.	**13**
9	Gao S, Yang L, Zeng HQ, Yang ZM, Li H, Sun D, Xie F.L.*, **Zhang, B.H.** (2016) A cotton miRNA is involved in regulation of plant response to salt stress. *Scientific Reports*, 6:19736.	**17**
10	Li C, and Zhang, B.H. (2016) MicroRNAs in Control of Plant Development. *J Cell Physiol*. 231(2):303-313. doi: 10.1002/jcp.25125.	**56**
11	Zhang Z, Zhang X, Hu Z, Wang S, Zhang J, Wang X, Wang Q, and **Zhang, B.H.** (2015) Lack of K-Dependent Oxidative Stress in Cotton Roots Following Coronatine-Induced ROS Accumulation. *PLoS One*, 10(5):e0126476. doi: 10.1371/journal.pone.0126476.	**4**
12	Sun RR*, He QL, **Zhang, B.H.**, & Wang, Q.L. (2015) Selection and validation of reliable reference genes in *Gossypium raimondii*. *Biotechnology Letters*, 37(7):1483-93.	**7**
13	Wang, Q.L. and **Zhang, B.H.** (2015) MicroRNAs in cotton: an open world needs more exploration. *Planta*, 241(6):1303-12. doi: 10.1007/s00425-015-2282-8.	**7**
14	Sun RR*, Wang, K.B., Guo TL, Jones DC, Cobb J*, **Zhang, B.H.** & Wang, Q.L. (2015) Genome-wide identification of auxin response factor (ARF) genes and its tissue-specific prominent expression in *Gossypium raimondii*. *Funct Integrative Genomics*, 15(4):481-93.	**10**
15	Ma J*, Guo TL, Wang, Q.L., Wang, K.B., Sun RR*, and **Zhang, B.H.** (2015) Expression profiles of miRNAs in *Gossypium raimondii*. *J Zhejiang Univ-Sci B*, 16(4): 306-313.	**n/a**
16	Xie F.L.*, Wang, Q.L., and **Zhang, B.H.** (2015) Global microRNA modification in cotton	**13**

	(*Gossypium hirsutum* L.). *Plant Biotechnology Journal*, 13(4): 492-500.	
17	Xie F.L.*, and **Zhang, B.H.** (2015) MicroRNA evolution and expression analysis in polyploidized cotton genome. *Plant Biotechnology Journal*, 13(3): 421-434.	**20**
18	Xie F.L.*, Jones, D.C., Wang, Q.L., Sun, R.R., and **Zhang, B.H.** (2015) Small RNA sequencing identifies miRNA roles in ovule and fiber development. *Plant Biotech Journal*, 13: 355-369.	**46**
19	Xie F.L., Wang, Q.L., Sun, R.R., and **Zhang, B.H.** (2015) Deep sequencing reveals important roles of microRNAs in response to drought and salinity stress in cotton. *J Experiment Bot*, 66: 789-804.	**64**
20	Zhang ZY, Xin WW, Wang SF, Zhang X, Dai HF, Sun RR, Frazier T*, **Zhang, B.H.** and Wang, Q.L. (2015) Xylem sap in cotton contains proteins that contribute to environmental stress response and cell wall development. *Funct Integrative Genomics*, 15(1): 17-26.	**18**
21	Ma J*, Wang, Q.L., Sun RR, Xie F.L.*, Jones DC, and **Zhang, B.H.** (2014) Genome-wide identification and expression analysis of TCP transcription factors in *Gossypium raimondii*. *Scientific Reports* 4: 6645.	**31**
22	Sun RR*, Wang, Q.L., Ma J *, He QL and **Zhang, B.H.** (2014) Differentiated expression of microRNAs may regulate genotype-dependent traits in cotton. *Gene* 547(2): 233-238.	**9**
23	He QL, Zhu SJ and **Zhang, B.H.** (2014) MicroRNA-target gene responses to lead-induced stress in cotton (*Gossypium hirsutum* L.). *Funct Integrative Genomics*, 14(3): 507-515.	**15**
24	Li W, Liu W, Wei H, He QL, Chen JH, **Zhang, B.H.**, Zhu SJ (2014) Species-specific expansion and molecular evolution of the 3-hydroxy-3-methylglutaryl coenzyme A reductase (HMGR) gene family in plants. PLoS One, 9(4):e94172.	**13**
25	Wang, M., Wang, Q.L. & **Zhang, B.H.** (2013) Response of miRNAs and their targets to salt and drought stresses in cotton (*Gossypium hirsutum* L.). *Gene*, 530(1):26-32.	**69**
26	Wang, M., Wang, Q.L. & **Zhang, B.H.** (2013) Evaluation and selection of reliable reference genes for gene expression under abiotic stress in cotton. *Gene*, 530(1):44-50.	**37**
27	Xie F.L.*, Xiao P, Chen DL*, Xu L* & **Zhang, B.H.** (2012) miRDeepFinder: a miRNA analysis tool for deep sequencing of plant small RNAs. *Plant Mol Biology*, 80 (1): 75-84.	**259**
28	Xie F.L.*, Sun GL, Stiller JW & **Zhang, B.H.** (2011) Genome-wide functional analysis of the cotton transcriptome by creating an integrated EST database. *PLOS One*, 6(11):e26980	**80**
29	Sun, G.L., Xie F.L.* & **Zhang, B.H.** (2011) Transcriptome-wide identification and stress properties of the 14-3-3 gene family in cotton (*Gossypium hirsutum* L.). *Functional & Integrative Genomics*, 11(4): 627-636.	**25**
30	Liu, F. & **Zhang, B.H.** (2004) Establishment of high frequency somatic embryogenesis and plant regeneration system in cotton. *Cotton Science*, 16: 117-122. (In Chinese)	**n/a**
31	Wang, Q.L., **Zhang, B.H.**, Guo TL & Xu XR (2001) Inheritance of exogenous genes in transgenic cotton. *Life Science Research* 5(4): 345-350.	**n/a**
32	Wen X & **Zhang, B.H.**. (2000) Current status and prospects of transgenic insect-resistant cotton. *Journal of Agricultural Biotechnology*, 8(2): 194-199. (In Chinese)	**12**
33	Liu, F., **Zhang, B.H.**, Yao CB & Wang HM (1999) The effect of kanamycin on the growth and development of cotton embryogenic callus. *Cotton Sciences* 11(2): 70-72. (In Chinese)	**n/a**
34	Liu, F., **Zhang, B.H.**, Liu ZH & Yao CB (1999) Effect of kanamycin on induction and growth of cotton callus. *Journal of Henan University* 29(3): 84-87. (In Chinese)	**n/a**
35	Feng, R., **Zhang, B.H.** (1997) Genotype analysis in cotton tissue culture and plant regeneration. *Acta Agriculturae Boreali-occidentalis Sinica* 6(2):27-30. (In Chinese)	**13**
36	Feng, R., **Zhang, B.H.** & Guo XM (1996) Effects of exogenous *Bt* gene on yield properties and insect resistance of cotton. *Cotton Science*, 8(1): 10-13. (In Chinese)	**14**
37	Feng, R., Guo TL & **Zhang, B.H.** (1996) Study on cotton somaclone variation and its application on cotton genetic and breeding. *J Agricultural Biotechnology* 4(3): 230-237	**n/a**

n/a means no citation information available from Google scholar

Part-5 **Oral Presentation on Cotton Research in International Conferences**

S.No.	Conference Proceedings Reference (*Style) as first Author	Country	Year
1	**Invited speaker**. Roles of microRNAs during cotton fiber imitation and early	USA	2018

	development. International Plant & Animal Genome XXVI, Jan 12-18, 2018, San Diego, CA.		
2	**Invited speaker**. microRNA-based biotechnology for crop improvement. The 3rd Int'l Conference on Agronomy and Horticulture. Sanya, China, Nov 28-30	China	2017
3	**Invited speaker**. MicroRNA-mediated mechanism during plant response to abiotic stress and its application. XIX International Botanical Congress. Shenzhen, China, July 23-29, 2017	China	2017
4	**Invited speaker**. Impact of nanoparticles on plant growth and development and the microRNA-mediated regulation. 254th ACS National Meeting in Washington DC, August 19th to 24th, 2017	China	2017
5	**Invited speaker**. MicroRNA-based biotechnology for crop improvement. Ningxia Academy of Agricultural Science, July 4, 2017	China	2017
6	**Invited speaker**. MicroRNAs and its regulatory role in plant development. Jiangsu Normal University, July 2, 2017	China	2017
7	**Invited speaker**. MicroRNAs and its regulatory mechanism during plant response to abiotic stress. Fujiang Agri and Forestry University, June 30, 2017	China	2017
8	**Invited speaker**. MicroRNA-based plant biotechnology. Henan Institute of Sciences and Technology, June 28, 2017	China	2017
9	**Invited speaker**. MicroRNAs as a novel target for crop improvement. Anyang Institute of Technology, June 23, 2017	China	2017
10	**Invited speaker**. MicroRNA Expression Profiles during Cotton Fiber Differentiation and Development. International Plant & Animal Genome XXV, January 14-18, 2017, San Diego, CA.	USA	2017
11	**Invited speaker**. MicroRNA Roles in Cotton Fiber Initiation and Early Development. International Plant & Animal Genome XXV, January 14-18, 2017, San Diego, CA.	USA	2017
12	**Invited speaker**. Development of a comprehensive CRISPR/CAS9 genome editing tool for knocking out microRNA genes for crop improvement. Syngenta, Durham, December 9, 2016	USA	2016
13	**Invited speaker**. MicroRNAs: a New Target for Crop Improvement. Syngenta, Durham, December 9, 2016	USA	2016
14	**Invited speaker**. MicroRNAs: a new target for improving plant tolerance to abiotic environmental stress. College of Life Science, Nanjing Agricultural University. November 24, 2016	China	2016
15	**Invited speaker**. MiRNA roles during cotton fiber differentiation and early development. China-US Cotton Genome Workshop, Nov 18, 2016, Beijing	China	2016
16	**Invited speaker**. MicroRNA roles in cotton fiber initiation and early development. The 2016 World Science Life Conference (2016 WSLC), November 1 -3, 2016, Beijing, China	China	2016
17	**Invited speaker**. MicroRNA: a new target for improving plant tolerance to abiotic stress. The 2016 World Science Life Conference (2016 WSLC), November 1 -3, 2016, Beijing, China	China	2016
18	**Invited speaker**. Roles of microRNAs during cotton fiber differentiation and early development. College of Agronomy, Nanjing Agri Univ. Nov 24, 2016	China	2016
19	**Invited speaker**. MicroRNAs and its function during cotton fiber development. Cotton Research Center, Shandong Academy of Agri Sciences. Nov 22, 2016	China	2016
20	**Invited speaker**. MicroRNAs and its role in plant response to abiotic environmental stress. Biotechnology Research Center, Shandong Academy of Agricultural Sciences. November 21, 2016	China	2016
21	**Invited speaker**. MicroRNA roles during cotton fiber differentiation and early development. China-US Cotton Genome Workshop, Nov 18, 2016, Beijing	China	2016
22	**Invited speaker**. Impact of Nanoparticles on Plant Growth and Development and the MicroRNA-mediated Regulation. The 1st International Conference on Nanotechnology Applications and Implications of Agrochemicals toward Sustainable Agriculture and Food Systems, November 17-18, 2016, Beijing	China	2016
23	**Invited speaker**. MicroRNA-based biotechnology for plant improvement and functional study. The 30th Annual Plant Molecular Biology Retreat. September 23 - 25, 2016, Wrightsville, NC	USA	2016
24	**Plenary speaker**. MicroRNA genetic transformation and its application on crop improvement. 7th International Crop Science Congress (7th ICSC),	China	2016

	August 14-19, 2016, Beijing, China		
25	**Invited speaker**. MicroRNAs and its role in cotton development. Henan Institute of Sciences and Technology. August 12, 2016	China	2016
26	**Invited speaker**. Small RNAs in Cotton. Institute of Cotton Research, Chinese Academy of Agricultural Sciences. August 10th, 2016.	China	2016
27	**Invited speaker**. MicroRNA-mediated gene regulation and its application in crop improvement. Jiangsu Normal University. August 9th, 2016.	China	2016
28	**Keynote speaker**. The role of microRNAs during cotton fiber development. The 2016 Annual Meeting of Chinese Cotton Associate. August 7-9, 2016. Xuzhou	China	2016
29	**Keynote speaker**. MicroRNA-based biotechnology for crop improvement for abiotic stress. The 3rd Conference on Botany. March 2nd to 4th, 2016. Beijing	China	2016
30	**Invited speaker**. MicroRNAs: a new target for improving cotton. Institute of Cotton Research, Chinese Academy of Agricultural Sciences. August 4, 2015	China	2015
31	**Invited speaker**. MicroRNAs: a new target for improving plant tolerance to abiocti stress. Henan Institute of Sciences and Technology. August 2, 2015	China	2015
32	**Invited speaker**. MicroRNAs: Identification and Functional Analysis in Plants. The Department of Bioinformatics and Genomics, University of North Carolina at Charlotte. November 1, 2013	USA	2013
33	**Invited speaker**. Method on identification and functional analysis of microRNAs in plants. College of Life Sciences, Henan Institute of Science and Technology, China, May 24, 2013	China	2013
34	**Invited speaker**. Function of microRNAs in plants. Henan Institute of Science and Technology, China, May 23, 2013	China	2013
35	**Invited speaker**. MicroRNA-mediated gene regulation. North Carolina Biotechnology Center, East Carolina University and Sigma Xi. Feb 22 2010.	USA	2010
36	**Invited speaker**. MicroRNAs: Identification and Functional Analysis in Plants. Department of Plant Biology, North Carolina State University, January 26, 2010.	USA	2010
37	**Invited speaker**. MicroRNAs: a new insight into gene regulation and functions in plants. College of Life Sciences, Henan Ins Sci Tech, China, June 15, 2008	China	2008
38	**Invited speaker**. MicroRNA-mediated gene regulation. Department of Botany, Miami University, February 15-17, 2007.	USA	2007
39	He QL & **Zhang, B.H**. Lead-induced physiological and biochemical changes in cotton. The 7th SETAC World Congress/SETAC North America 37th Annual Meeting, November 6–10, 2016, Orlando, FL	USA	2016
40	**Zhang, B.H.** & He QL. Heavy metal lead induced aberrant expression of microRNAs in cotton. The 7th SETAC World Congress/SETAC North America 37th Annual Meeting, November 6–10, 2016, Orlando, FL	USA	2016
41	Sun RR, Xie F.L. & **Zhang, B.H**. MicroRNA regulation of ovule and fiber development in cotton. The 7th International Crop Science Congress (7th ICSC), August 14-19, 2016, Beijing, China	China	2016
42	**Zhang, B.H.** & Wang, Q.L. MicroRNA-based biotechnology for plant improvement. The 7th International Crop Science Congress (7th ICSC), August 14-19, 2016, Beijing, China	China	2016
43	He QL & **Zhang, B.H**. Genome-Wide Identification of R2R3-MYB Genes and Their Expression Analyses during Abiotic Stress in Cotton. The 7th International Crop Science Congress (7th ICSC), August 14-19, 2016, Beijing	China	2016
44	Li C, Nichols RL, Pan, X.P., **Zhang, B.H.**, Xie F.L. and Zhang YQ (2016) Identification of microRNAs in the Cotton Root-Knot Nematode. The 2016 Beltwide Cotton Conferences, New Orleans, Jan 5-7, 2016.	USA	2016
45	Li C, **Zhang, B.H.**, Zhu LF and Zhang XL (2016) GbWRKY1 Transcription Factor Is a Key Molecular Switch for Plant Defense-to-Development Transition in Cotton. The 2016 Beltwide Cotton Conferences, New Orleans, Louisiana. Jan 5-7, 2016.	USA	2016
46	Li C, **Zhang, B.H.**, Zhu LF and Zhang XL (2015) Cotton GbWRKY1 Transcription Factor Is a key Molecular Switch for Plant Defense-toDevelopment Transition during Infection of Cotton by *Verticillium dahlia*. The 29th Annual Plant Molecular Biology Retreat, Asheville, NC, Sept 18-20.	USA	2015
47	He QL, Ma J, Sun YY and **Zhang, B.H.** (2014) Lead-Induced Physiological	USA	2014

	Changes and Stress-Responsive Mirnas Expression in Cotton. The 2014 Beltwide Cotton Conferences, New Orleans, Louisiana. January 6-8, 2014.		
48	Xie F.L., Sun YY and **Zhang, B.H.** (2014) Deep Sequencing Identifies Cotton miRNA Roles in Response to Stress of Drought and Salinity. The 2014 Beltwide Cotton Conferences, New Orleans, Louisiana. January 6-8, 2014.	USA	2014
49	**Zhang, B.H.**, Xie F.L., Wang, Q.L. and Jones D. *Small RNA sequencing identifies miRNA roles in fiber development*. 2014 ICGI Research Conference. Wuhan, China. September 25-28, 2014.	China	2014
50	He QL, Ma J, Sun RR & **Zhang, B.H**. *Lead-induced physiological changes and stress responsive miRNA expression in cotton*. Society of Environmental Toxicology and Chemistry (SETAC) North America 34th Annual Meeting, Nashville, TN, 17-21 November. 2013	USA	2013
51	Sun GL & **Zhang, B.H**. *Identification, Characterization and Expression Analysis of MicroRNAs in Cotton*. In Vitro Biology Meeting, Raleigh, NC. June 4-8, 2011.	USA	2011
52	Sun GL & Zhang, B.H. *MicroRNAs and Their Diverse Functions in Plants*. In Vitro Biology Meeting, Raleigh, NC. June 4-8, 2011.	USA	2011
53	Xie F.L., Xiao P & **Zhang, B.H**. *Target-align: a Tool for Plant MicroRNA Target Identification*. In Vitro Biology Meeting, Raleigh, NC. June 4-8, 2011.	USA	2011
54	**Zhang, B.H.**, Pan, X.P. & Wang, Q.L. *Identification of conserved cotton microRNAs and their targets*. The International Cotton Genome Initiative (ICGI) 2008 Research Conference, Anyang, China, July 8-11, 2008	USA	2008
55	**Zhang, B.H**. *Identification of Conserved Cotton MicroRNAs and Their Targets*. The 2007 Beltwide Cotton Conferences, New Orleans. Jan 9-12, 2007.	USA	2007
56	**Zhang, B.H.**, Feng, R., Li, F.G., Liu CL, Liu, F. & Yao CB. Somatic embryogenic patterns and production of artificial seeds in *Gossypum hirsutum* L. Proceedings of the *4th Asia Pacific Conference on Agricultural Biology*, Darwin, Australia, 1998	Australia	1998
57	**Zhang, B.H.**, Feng, R., Li, F.G., Liu, F. & Yao CB. Plant regeneration from another culture of cultivated and wild species of *Gossypium* genus. In: Larkin PJ (ed.) Agricultural Biotechnology: Laboratory, Field and Market. Proceedings of the *4th Asia-Pacific Conference on Agricultural Biotechnology*, Darwin 13-16 July 1998. Canberra, UTC Publishing. pp. 164-165.	Australia	1998
58	Feng, R., **Zhang, B.H.**, Zhang WS & Wang, Q.L. Genotype analysis in cotton tissue culture and plant regeneration. In: Larkin PJ (ed.) Agricultural Biotechnology: Laboratory, Field and Market. Proceedings of the *4th Asia-Pacific Conference on Agricultural Biotechnology*, Darwin 13-16 July 1998. Canberra, UTC Publishing. pp.161-163.	Australia	1998

Part-6 **Books / Book Chapters on Cotton as First Author**

S.No.	Reference (*Harvard Style)	Country	Year
1	**Zhang, B.H.** (2012). Transgenic Cotton. Springer Science+Business Media, New York	USA	2012
2	**Zhang, B.H.** & Feng, R. (2000) *Cotton Pest-resistance and Transgenic Pest-resistant Cotton*. Beijing: Chinese Agri Science and Technology Press	China	2000
3	**Zhang, B.H.** & Zhang, L.Z. (1998) *Pest-resistant Cotton and its Cultivation*. Jinan: Shangdong Science and Technology Press.	China	1998
4	**Zhang, B.H.** & Zhao, B.S. (1997) *Cotton Biotechnology and its Application*. Beijing: Chinese Agricultural Press.	China	1997
5	**Zhang, B.H.** (2012) Transgenic cotton: from biotransformation methods to agricultural application. In Zhang, B.H. (ed.), Transgenic Cotton. Springer Science+Business Media, New York.	USA	2012
6	**Zhang, B.H.** (2012) *Agrobacterium*-mediated transformation of cotton. In Zhang, B.H. (ed.), Transgenic Cotton. Springer Science+Business Media, New York.	USA	2012
7	**Zhang, B.H.**, Wang, M., Zhang, X, Li CQ & Wang, Q.L. (2012) Overexpression of miR 156 in cotton via Agrobacterium-mediated transformation. In Zhang, B.H. (ed.), Transgenic Cotton. Springer Science+Business Media, New York.	USA	2012

8	**Zhang, B.H.**, Wang, H.M., Liu, F., & Wang, Q.L. (2012) A simple and rapid method for determining transgenic cotton plants. In Zhang, B.H. (ed.), Transgenic Cotton. Springer Science+Business Media, New York.	USA	2012
9	**Zhang, B.H.** & Wang, Q.L.. (2003). Transgenic cotton. In Singh RH & Jiwal PK (eds), Plant Genetic Engineering. Houston: Sci-Tech Publisher Company	USA	2003
10	**Zhang, B.H**. (1999). Cotton biotechnology. In Mao SC (ed), Cotton Development in China. Beijing: China Agricultural Press	China	1999

Part-7 **Books / Book Chapters on Cotton as Co-Author**

S.No.	Reference (*Harvard Style)	Country	Year
1	Wang, Q.L., **Zhang, B.H.** et al. (2005) *Cotton Production*. Beijing: Chinese Agricultural Science and Technology Press	China	2005
2	Wang, Q.L., **Zhang, B.H.** et al. (2003) *Plant Tissue Culture*. Beijing: Chinese Agricultural Science and Technology Press	China	2003
3	Wang, M., **Zhang, B.H.** & Wang, Q.L. (2012) Cotton transformation via pollen tube pathway. In Zhang, B.H. (ed.), Transgenic Cotton. Springer Science+Business Media, New York.	USA	2012
4	Wang, M., Wang, Q.L., & **Zhang, B.H.** (2012) An efficient grafting technique for recovery of transgenic cotton plants. In Zhang, B.H. (ed.), Transgenic Cotton. Springer Science+Business Media, New York.	USA	2012
5	Sun GL, Wang, Q.L. & **Zhang, B.H.** (2011) MicroRNAs in Cotton. In Erdmann VA and Barciszewski (Ed.), Non Coding RNAs in Plants. Springer Science+Business Media, New York	USA	2011
6	Pan, X.P., Murashov, A.K., and **Zhang, B.H.** (2010) Monitoring microRNA expression during embryonic stem cell differentiation using quantitative real-time PCR. In Zhang, B.H. & Stellwag E (ed.), RNAi and MicroRNA-mediated Gene Regulation in Stem Cells. New York, Springer.	USA	2010
7	Frazier, T. & **Zhang, B.H**. (2010) Identification of plant microRNAs using expressed sequence tag analysis. In Pereira A (ed.), Plant Reverse Genetics. New York, Springer.	USA	2010
8	Huang, J.Q., Zhang, X.L. & **Zhang, B.H**. (2003). Cotton biotechnology. In Huang ZK (ed), Cotton Genetics and Breeding. Beijing: Chinese Agricultural Science and Technology Press	China	2003
9	**Zhang, B.H.** is one of the major authors (2003) Cotton Genetics and Breeding in China. Jinan: Shangdong Science and Technology Press.	China	2003
10	**Zhang, B.H.** is one of the major authors (1999) Studies on the Sustainable Development of Cotton in China. Beijing: Chinese Agricultural Press.	China	2003
11	Jing, S.R., **Zhang, B.H.** & Zhang, L.Z. (1999) *Transgenic Insect-resistant Hybrid Cotton*. Beijing: Chinese Agri Science and Technology Press.	China	1999
12	**Zhang, B.H.** is one of the major authors (1999) Theory and Practices of Cotton Hybrid Breeding. Beijing: Science Press.	China	1999

Part-8: **Three Most Innovative and Impactful Achievements**

S.No.	Achievements in not more than 100 words each
1	**Dr. Zhang developed an advanced CRISPR/Cas9 genome editing tool and its application on cotton genetics and breeding.** Dr. Zhang is the first scientist who successfully employed CRISPR/cas 9 genome editing technology to knockout an individual functional gene in cotton, including the fiber-related MYB25-like and miRNA genes. Additionally, Dr. Zhang also developed a high efficient approach for obtaining cotton somatic embryogenesis and plant regeneration and a high efficient Agrobacterium-mediated gene transformation in cotton. **Impact**: This power tool and resources open a new strategy and direction for cotton research and breeding community for performing cotton gene functional studies and molecular breeding.
2	**Dr. Zhang's innovative research on small regulatory RNAs.** Dr. Zhang is a pioneer for cotton microRNA study. In the past 10 years, Dr. Zhang has been employing different technologies (deep sequencing, transgenics, genome editing and bioinformatics) to identify and functional analysis of microRNAs in cotton fiber development as well cotton response to

	different biotic and abiotic stress. Among those, many microRNA are identified for genetic and breeding purpose. **Impact**: this provides new targets for cotton improvement, including fiber yield and quality and tolerance to environmental biotic and abiotic stresses.
3	**Breeding 5 cotton cultivars and they are being used in China and internationally.** Dr. Zhang is one of the major contributors for breeding transgenic Bt cotton in China, which has been widely adopted globally. Except the Bt cotton, with collaborating with other breeders, Dr. Zhang have gotten involved in breeding five cotton cultivars that has been widely adopted by cotton farmers in China and also in several Middle-Asian countries. Additionally, Dr. Zhang also created many elite cotton germplam lines using transgenic, somatic variant screening and genome editing. **Impact**: the bred cultivars have generated huge economic benefits for cotton farmers.

Part-9: **Brief Biographical Note** (Not more than 300 words)

Dr. Zhang grew up in a small village in China. Since he was a kid, he helped his parents working in cotton field, which attract his interests on cotton genetic and breeding. He attended China Agricultural University with a major of plant genetic and breeding. After graduated with a bachelor degree in 1991, he joined the Institute of Cotton Research, Chinese Academy of Agricultural Science (ICR-CAAS) where he had worked for more than one decade before he joined Texas Tech University for Ph.D. study in 2003. During he worked in ICR-CAAS, Dr. Zhang majorly worked on cotton biotechnology; he is one of the major contributors for transgenic Bt Cotton in China. After Dr. Zhang received his Ph.D in 2006, he was immediately offered a faculty position by East Carolina University (ECU). Since then, developing cotton genetic tool and resource and cotton small RNA study is Dr. Zhang's major focus. Dr. Zhang is the pioneer for cotton small RNA study. He also develop a high-efficient CRISPR/Cas9 tool for cotton research community for the first time to knockout an individual gene in cotton. Because his great achievement and contribution, he is frequently invited by the international conferences for giving keynote lectures or invited talks, he also frequently serves on grant reviewing panels for more than 40 national and international funding agents. Dr. Zhang is also serving as co-Editor-in-Chief, associate editor or guest editor for 10 international journals, including *Scientific Reports*, *Plant Biotechnology Journal*, and *The Crop Journal*. Dr. Zhang frequently reviews manuscripts for more than 100 international journals, including *Nature*. Additionally, Dr. Zhang won the ECU Five Year Excellent Research and Creative Award, the highest award for ECU faculty and he was also awarded early tenure and early promotion to associate professor in 2006 and then to full professor in 2012.

Part-10: **Citations (from Google Scholar) and RG Score**

Citation Indices	**All**	**Since 2013**
Citations	**10460**	**6505**
h-index	**46**	**41**
I10 index	**104**	**81**
Research-Gate RG Score	**41.56**	

I hereby affirm that the entire information furnished in this application is true to the best on my knowledge.

Baohong Zhang	**March 21st, 2018** **Greenville, North Carolina, USA** Date & Place