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RESEARCH EXPERIENCES

Research Plant Molecular Geneticist /Director of USDA Central Small Grain Genotyping Center, Manhattan, KS (2003-present)

Professor of Department of Agronomy (2009) and Director of Sequence and Genotyping Facility (Since 2006), Kansas State University, Manhattan, KS

Research Emphasis: Discover new generation molecular markers and implement high-throughput DNA markers in US hard winter wheat breeding programs, map QTL for economically important wheat traits, develop high-throughput markers for the QTLs, investigate functional genomics of wheat resistance to multiple diseases and abiotic stresses, and clone important wheat genes.

Assistant Professor of Wheat Molecular Genetics and Breeding
Oklahoma State University, Stillwater OK, 1999-2002

Research Emphasis: Wheat molecular genetics and molecular breeding

Plant Molecular Biologist

NCAUR/ ARS/ USDA, Peoria, IL, 1998-1999

Research Emphasis: Mapping wheat resistance to mycotoxin (DON), and investigating pathogenesis of *Fusarium graminearum* on wheat.

Postdoctoral Research Associate

Department of Crop Science, University of Illinois, Urbana, IL, 1997

Research Emphasis: Wheat breeding and molecular mapping of wheat resistance to scab.

Postdoctoral Research Associate

Department of Plant and Soil Science, Texas Tech University, Lubbock, Texas, 1996

Research Emphasis: molecular mapping of Tef and sorghum.

Visiting Scientist and Research Assistant

Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN, 1990-1995

Research Emphasis: Wheat scab: host resistance, molecular marker and epidemiology.

Wheat Breeder

Food and Crop Institute, Jiangsu Academy of Agric. Sci., Nanjing, China, 1985-1989.

Research Emphasis: Wheat breeding and genetics.

EDUCATION

1995 Ph.D. Purdue University, Plant Pathology.

1985 M.S. Nanjing Agricultural University, Nanjing, China, Plant Genetics and Breeding.

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

AWARDS AND PROFESSIONAL AFFILIATION

- 2013 Elected Fellow, Crop Science Society of American
- 2012 ASA Tengtou Agricultural Science Award, ASA
- 2011 ‘USDA Secretary’s Honor Award for “Helping America promote sustainable agricultural production and biotechnology exports as America works to increase food security”’.
- Honorary Distinguished Professor, Jiangsu Acad. of Agric. Sci., Nanjing, China (Since 2011).
- 2010 Elected Fellow, American Society of Agronomy
- Associate Editor, Journal of Biomedicine and Biotechnology (since 2009)
- Editorial board member, PeerJ (since 2012)
- Honor Professorship, Guangzhou University, Guangzhou, China (2009)
- Honor Professorship, Northwest Agricultural and Forestry University, Shannxi, China (2009)
- Guest Professor and Adjunct Graduate Faculty, Jilin University, Jilin, China (2009)
- 2006 National Friendship Award, Chinese Government, the highest rank award to foreign scientists who made outstanding contributions to scientific research and economic development in China.
- 2004 Jiangsu Province Friendship Award, Jiangsu Provincial Government, China.
- Member, Gamma Sigma Delta, Honor Society of Agriculture
- Member, Sigma Xi
- American Phytopathological Society
- Crop Science Society of American
- Agronomy Society of American
- Who is Who in America
- American Association for the Advancement of Science

GRANT FUNDED:

1. Babar 2016-2019. Advancing harvest index in wheat through genomics enabled physiological breeding. USDA/NRI /NIFA-NYYP. \$919,751
2. Dubcovsky et al. 2016-2021. Validation, characterization and deployment of QTL for grain yield components in wheat. USDA/NRI /NIFA-NYYP-Coordinated Agricultural Project (WheatCAP). \$10,000,000
3. Guihua Bai. 2014-16. Mapping and Deploying FHB Resistance QTL in US Hard Winter Wheat. USDA through US Wheat and Barley Scab Initiative. \$150,000

4. Dubcovsky et al. 2011-2016. Improved barley and wheat germplasm for changing environments. USDA/NRI /CAP, AFRI. \$25,000,000, \$805,000 to Guihua Bai
5. Guihua Bai. 2012-13. Mapping and Deploying FHB Resistance QTL in US Hard Winter Wheat. USDA through US Wheat and Barley Scab Initiative. \$148,466
6. Guihua Bai. 2010-11. Mapping and Deploying FHB Resistance QTL in US Hard Winter Wheat. USDA through US Wheat and Barley Scab Initiative. \$148,466
7. Guihua Bai. 2009. Mapping novel QTL in Chinese landrace and deploying FHB-resistance QTL in hard winter wheat. USDA through US Wheat and Barley Scab Initiative. \$55,608
8. Guihua Bai. 2008. Mapping novel QTL in Chinese landrace and deploying FHB-resistance QTL in hard winter wheat. USDA through US Wheat and Barley Scab Initiative. \$55,608
9. Guihua Bai. 2007. Characterization of Novel QTL for FHB Resistance in Asian Wheat Cultivars and marker assisted introgression of resistance FHB QTL into hard winter wheat. USDA through US Wheat and Barley Scab Initiative. \$55,000
10. Guihua Bai. 2006. Characterization of Novel QTL for FHB Resistance in Asian Wheat Cultivars. USDA through US Wheat and Barley Scab Initiative. \$49,985
11. Guihua Bai. 2006. Improve FHB Resistance to Hard Winter Wheat by High-throughput Marker-assisted Selection. USDA through US Wheat and Barley Scab Initiative. \$24,503.
12. Dubcovsky et al. 2006-2009. Wheat applied genomics. USDA/NRI /CAP. \$160,000 to Guihua Bai
13. Guihua Bai. 2005. Characterization of Novel QTL for FHB Resistance in Asian Wheat Cultivars. USDA through US Wheat and Barley Scab Initiative. \$55,620
14. Guihua Bai. 2005. Improve Fusarium Head Blight Resistance of Hard Winter Wheat through Marker-assisted Selection. USDA through US Wheat and Barley Scab Initiative. \$ 20,000.
15. Guihua Bai. 2004 Characterization of QTL for FHB Resistance in Wheat Cultivar Wangshuibai. USDA through US Wheat and Barley Scab Initiative. \$43,000
16. Guihua Bai. 2003 Marker-assisted Characterization and Selection of Wheat Cultivars for Scab Resistance. USDA through US Wheat and Barley Scab Initiative. \$55,387
17. Guihua Bai. 2002. Molecular Characterization of QTL for Scab Resistance in Wheat Cultivar Wangshuibai. USDA through US Wheat and Barley Scab Initiative. 40,000
18. Guihua Bai. 2001. "Molecular Breeding-A Promising Tool to Improve Wheat Resistance to Scab". USDA through US Wheat and Barley Scab Initiative \$30,000
19. Guihua Bai. 2000. "Create a molecular map of wheat genes imparting resistance to scab infection and deoxynivalenol (DON) accumulation". USDA through US Wheat and Barley Scab Initiative \$35,000.
20. Guihua Bai. 1999 Fusarium head blight research. Wheat and Barley Scab Initiative. \$15,000
21. Guihua Bai and Brett Carver. 1999-2004 USDA Hatch Project. "Mapping Wheat Genes for Tolerance to Abiotic Stress". \$60,000.
22. Guihua Bai and Brett Carver. 2000-2002. "Developing Wheat Expressed Sequence Tags for Aluminum Tolerance" Target Research Initiative Program, Oklahoma State University Agricultural Research Station \$40,000
23. Guihua Bai. 2000-2002. Molecular Breeding. Oklahoma Wheat Commission. \$120,000.

STUDENTS/OTHER STAFF SUPERVISED

- As the Major Professor or Co-major Professor:

- a. Ph.D. graduated: 8
- b. M.S. graduated: 5
- Currently graduate students in the lab (2016): 5
- Post-doc/visiting scientists:
 - a. Previous Post-docs: 5
 - b. Previous visiting scientists: 30
 - c. Current Post-doc in the lab: 3
 - d. Current visiting scientists: 2
 - e. Undergraduate student: 1

PUBLICATIONS

1. G-Q Li, X-Y Xu, G-H Bai, B F. Carver, R Hunger, J M Bonman, J Kolmer, and H-X Dong. 2016. Genome-wide association mapping reveals novel QTL for seedling leaf rust resistance in a worldwide collection of winter wheat. *Plant Genome* 9. doi: 10.3835/plantgenome2016.06.0051
2. J. Cai, S. Wang, T Li, G. Bai. 2016. Multiple minor QTLs are responsible for Fusarium head blight resistance in Chinese wheat landrace Haiyanzhong. *PloS ONE* DOI:10.1371/journal.pone.0163292
3. M. Lin, D. Zhang, S. Liu, G. Zhang, J. Yu, A. K. F. and G. Bai. 2016. Genome-wide association analysis on pre-harvest sprouting resistance and grain color in U.S. winter wheat. *BMC Genomics* 17:794 DOI 10.1186/s12864-016-3148-6
4. L. Ge, J. Yu, H. Wang, D Luth, G. Bai, K. Wang, R Chen. 2016. Increasing seed size and quality by manipulating BIG SEEDS 1 in legume species. *PNAS*. (Accepted)
5. Li, L., Shi, X., Zheng, F., Li, C., Wu, D., Bai, G., Gao, D., Wu, J., Li, T. 2016. A novel nitrogen-dependent gene associates with the lesion mimic trait in wheat. *Theor Appl Genet*. doi:10.1007/s00122-016-2758-3.
6. Zhang, G., Martin, T.J., Fritz, A.K., Miller, R., Chen, M., Bowden, R.L., Bai, G. 2016. Registration of 'Joe' Hard White Winter Wheat. *J Plant Reg*. doi:10.3198/jpr2016.02.0007crc.
7. Jessica K. Cooper, John A. Stromberger, Craig F. Morris, Guihua Bai, and Scott D. Haley. 2016. End-use quality and agronomic characteristics associated with the Glu-B1a1 high molecular weight glutenin allele in U.S. hard winter wheat. *Crop Sci*. 56:1-6.
8. Kumssa, T., Zhao, D., Bai, G., Zhang, G. 2016. Resistance to Wheat streak mosaic virus and Triticum mosaic virus in wheat lines carrying Wsm1 and Wsm3. *Europ J Plant Pathol*. doi:10.1007/s10658-016-1021-8.
9. P. S. Baenziger,* R. A. Graybosch, T. Regassa, R. N. Klein, G. R. Kruger, D. K. Santra, L. Xu, D. J. Rose, S. N. Wegulo, Y. Jin, J. Kolmer, G. L. Hein, M.-S. Chen, G. Bai, R. L. Bowden, and J. Poland. 2016. Registration of 'NE05548' (Husker Genetics Brand Panhandle) Hard Red Winter Wheat. *J Plant Reg*. doi:10.3198/jpr2016.01.0006crc.
10. T. Li, M. Luo, D. Zhang, D. Wu, L. Li, G. Bai. 2016. Effective marker alleles associated with type 2 resistance to Fusarium head blight infection in fields. *Breed Sci*. doi:10.1270/jsbbs.15124.
11. C. Li, T. Li, T. Liu, Z. Sun, G. Bai, F. Jin, Y. Wang, Z.-H. Wang. 2016. Identification of a major QTL for flag leaf glaucousness using a high-density SNP marker genetic map in hexaploid wheat. *J of Integ Agric*. doi: 10.1016/S2095-3119(16)61339-4.

12. B.F. Carver, C. M. Smith, W.-Po. Chuang, R. M. Hunger, J.T. Edwards, L. Yan, G. Brown-Guedira, B. S. Gill, G. Bai, and R. L. Bowden. 2016. Registration of OK05312, a High-Yielding Hard Winter Wheat Donor of Cmc4 for Wheat Curl Mite Resistance. *J Plant Reg.* 10:75–79.
13. S. Sukumaran, X. Li, X. Li, C. Zhu, G. Bai, R. Perumal, M. R. Tuinstra, P.V. Vara Prasad, S. E. Mitchell, T. T. Tesso, and J. Yu. 2016. QTL Mapping for Grain Yield, Flowering Time, and Stay-Green Traits in Sorghum with Genotyping-by-Sequencing Markers. *Crop Sci.* 56:1429–1442 .
14. G-Q. Li, X-Y Xu, G. Bai, B. F. Carver, R. Hunger, and J. M. Bonman. 2016. Identification of Novel powdery mildew resistance sources in Wheat. *Crop Sci.* 56:1817-1830.
15. C-L. Li, G. Bai, B. F. Carver, S. Chao and Z. Wang. 2016. Single nucleotide polymorphisms linked to quantitative trait loci for grain quality traits in wheat. *The Crop J.* 4:1–11.
16. J. Fakthongphan, G. Bai, P. St. Amand, R. A. Graybosch, and P. S. Baenziger. 2016. Identification of markers linked to genes for sprouting tolerance (independent of grain color) in hard white winter wheat (HWWW). *Theor Appl Genet.* 129:419–430, DOI 10.1007/s00122-015-2636-4.
17. X. Zhang, G. Bai, R Xu and G. Zhang. 2016 Wheat streak mosaic virus resistance in eight wheat germplasm lines. *Plant Breed.* 135:26–30.
18. Z. Su, S. Jin, Y. Lu, G. Zhang, S. Chao, G. Bai. 2016. Single nucleotide polymorphism tightly linked to a major QTL on chromosome 7A for both kernel length and kernel weight in wheat. *Mol Breed.* 36:15, DOI 10.1007/s11032-016-0436-4.
19. Amy Bernardo, Shan Wang, Paul St. Amand, Guihua Bai. 2015. Using Next Generation Sequencing for Multiplexed Trait-Linked Markers in Wheat. *PloS One.* DOI:10.1371/journal.pone.0143890
20. C-L Li, G. Bai, B. F. Carver, S. Chao and Z. Wang. 2015. Mapping quantitative trait loci for plant adaptation and morphology traits in wheat using single nucleotide polymorphisms. *Euphytica.* DOI 10.1007/s10681-015-1594-x .
21. T. Li, D. Zhang, X. Zhou, G. Bai, L. Li, and S. Gu. 2015. Fusarium head blight resistance loci in a stratified population of wheat landraces and varieties. *Euphytica.* DOI 10.1007/s10681-015-1539-4.
22. C-L Li, G. Bai, B. F. Carver, S. Chao and Z. Wang. 2015. Single nucleotide polymorphism markers linked to QTL for wheat yield traits. *Euphytica.* DOI: 10.1007/s10681-015-1475-3.
23. M. K. Das, G. Bai, A. Mujeeb-Kazi and S. Rajaram. 2015. Genetic diversity among synthetic hexaploid wheat accessions with resistance 1 to several fungal diseases. *Genet Res and Crop Evol.* DOI: 10.1007/s10722-015-0312-9.
24. C. Li, G. H. Bai, S. Chao and Z. Wang. 2015. A high-density SNP and SSR consensus map reveals segregation distortion regions in wheat. *Biomed Res Int.* Vol. 2015, Article ID 830618, <http://dx.doi.org/10.1155/2015/830618>
25. J.A. Kolmer, E.S. Lagudah, M. Lillemo, M. Lin, and G. Bai. 2015. The Lr46 gene conditions partial adult plant resistance to stripe rust, stem rust, and powdery mildew in Thatcher wheat. *Crop Sci.* DOI:10.2135/cropsci2015.02.0082

26. S. Liu, S. K. Sehgal, M. Lin, J. Li, H. N. Trick, B. S. Gill and G. Bai. 2015. Independent mis-splicing mutations in TaPHS1 causing loss of pre-harvest sprouting (PHS) resistance during wheat domestication. *New Phytol.* doi: 10.1111/nph.13489
27. A.M.H. Ibrahim, J. Rudd, R. Devkota, J. Baker, R. Sutton, B. Simoneaux, G. Opeña, R. Herrington, L. Rooney, L. Dykes, J. Awika, L. R. Nelson, A. Fritz, R. L. Bowden, R. A. Graybosch, Y. Jin, B. W. Seabourn, X. Chen, J. Kolmer, P. St. Amand, G. Bai, and R. Duncan. 2015. Registration of ‘TAM 305’ wheat. *J Plant Reg* 9:325-330.
28. M. Lin, S. Cai, S. Wang, S. Liu, G. Zhang and G. Bai. 2015. Genotyping-by-sequencing (GBS) identified SNP tightly linked to QTL for pre-harvest sprouting resistance. *Theor Appl Genet.* DOI 10.1007/s00122-015-2513-1.
29. X. Yu, P.M. Pijut, S. Byrne, T. Asp, G. Bai, Y. Jiang. 2015. Candidate Gene Association Mapping for Winter Survival and Spring Regrowth in Perennial Ryegrass. *Plant Sci.* 235:37-45.
30. X.K. Shen, L.X. Ma, S.F. Zhong, N. Liu, M. Zhang, W.Q. Chen, Y.L. Zhou, H.J. Li, Z.J. Chang, X. Li, G.H. Bai . H. Y. Zhang, F. Q. Tan . Z. L. Ren . P. G. Luo. 2015. Identification and genetic mapping of the putative *Thinopyrum Intermedium* derived dominant powdery mildew resistance gene PmL962 on wheat chromosome arm 2BS. *Thor Appl Genet.* DOI 10.1007/s00122-014-2449-x.
31. X. Xu and G. Bai. 2015. Whole genome resequencing: changing the paradigms of SNP detection, molecular mapping and gene discovery. *Mol. Breed.* 35:33, DOI 10.1007/s11032-015-0240-6.
32. Y. Currie, M. Chen, R. Nickolov, G. Bai, L. Zhu. 2014. Impact of transient heat stress on polar lipid metabolism in seedlings of Wheat near-isogenic lines contrasting in resistance to Hessian Fly (*Cecidomyiidae*) infestation. *Arthropod-Plant Interactions* 107:2196-2203
33. X. Xu, G. Bai, B. F. Carver, K. Zhan, Y. Huang, and D. Mornhinweg. 2014. Evaluation and reselection of wheat resistance to Russian wheat 1 aphid biotype 2. *Crop Sci.* 55:1-7
34. P. S. Baenziger, R. A. Graybosch, T. Regassa, R. N. Klein, G. R. Kruger, D. K. Santra, L. Xu, D. J. Rose, S. N. Wegulo, Y. Jin, J. Kolmer, G. L. Hein, Ming-Shun Chen, Guihua Bai, Robert L. Bowden, and Jesse Poland. 2014. Registration of ‘NE06545’ (Husker Genetics brand Freeman) hard red winter wheat. *J. Plant Reg.* 8:279–284.
35. Berg, J.E., D.M. Wichman, K.D. Kephart, J.L. Eckhoff, R.N. Stougaard, P.F. Lamb, J.H. Miller, D.L. Nash, W.E. Grey, M. Johnston, D. Gettel, R. Larson, Y. Jin, J.A. Kolmer, X. Chen, G. Bai, and P.L. Bruckner. Registration of ‘Colter’ wheat. *J. Plant Reg.* 8:285–287.
36. J.T. Eckard, J.L. Gonzalez-Hernandez, S. Chao, P. St Amand, G. Bai. 2014. Construction of dense linkage maps “on the fly” using early generation wheat breeding populations. *Mol. Breed.* DOI 10.1007/s11032-014-0116-1.
37. Scott D. Haley, Jerry J. Johnson, Frank B. Peairs, John A. Stromberger, Emily E. Hudson-Arns, Scott A. Seifert, Rebecca A. Kottke, Victoria A. Valdez, Jerry J. Nachtman, Jeff B. Rudolph, Guihua Bai, Xianming Chen, Robert L. Bowden, Yue Jin, James A. Kolmer, Ming-Shun Chen and Bradford W. Seabourn. 2014. Registration of ‘Cowboy’ wheat. *J. Plant Reg.* 8: 2: 169-172. doi:10.3198/jpr2013.12.0075crc.
38. R. A. Graybosch,* P. S. Baenziger, D. K. Santra, T. Regassa, Y. Jin, J. Kolmer, S. Wegulo, Guihua Bai, Paul St. Amand, Xianming Chen, B. Seabourn, F. Dowell, R. Bowden, and D.M. Marshall. 2014. Registration of ‘Mattern’ Waxy (Amylose-free) winter wheat. *J. Plant Reg.* 8:43–48 doi: 10.3198/jpr2013.08.0045crc.

39. D. Zhang, R.L. Bowden, J. Yu, B.F. Carver, G.-H. Bai. 2014. Association Analysis of Stem Rust Resistance in U.S. Winter Wheat. *PLoS ONE* 9(7): e103747. doi:10.1371/journal.pone.0103747.
40. Jin Cai and Guihua Bai. 2014. Quantitative trait loci for Fusarium head blight resistance in Huangcandou x 'Jagger' wheat population. *Crop Sci. Firstlook*. doi: 10.2135/cropsci2013.12.0835
41. Shuyu Liu, Jackie C. Rudd, Guihua Bai, Scott D. Haley, Amir M.H. Ibrahim, Qingwu Xue, Dirk B. Hays, Robert A. Graybosch, Ravindra N. Devkota, and Paul St Amend. 2014. Molecular markers linked to genes important for hard winter wheat production and marketing in the U.S. Great Plains. *Crop Sci.* doi: 10.2135/cropsci2013.08.0564
42. Shubing Liu, Xiping Yang, Dadong Zhang, Guihua Bai, Shiaoman Chao, William Bockus. 2014. Genome-wide association analysis identified SNPs closely linked to a gene resistant to Soil-borne wheat mosaic virus *Theor. Appl. Genet.* DOI 10.1007/s00122-014-2277-z.
43. J.E. Berg, P.F. Lamb, J.H. Miller, D.M. Wichman, R.N. Stougaard, J.L. Eckhoff, K.D. Kephart, D.L. Nash, W.E. Grey, D. Gettel, R. Larson, Y. Jin, J.A. Kolmer, X. Chen, G. Bai, and P.L. Bruckner. 2014. "Registration of 'Warhorse' wheat". *J. Plant Reg.* 8: 2: 173-176. doi:10.3198/jpr2014.01.0001crc.
44. Scott D. Haley, Jerry J. Johnson, Frank B. Peairs, John A. Stromberger, Emily E. Hudson-Arns, Scott A. Seifert, Victoria A. Valdez, Rebecca A. Kottke, Jeff B. Rudolph, Guihua Bai, Xianming Chen, Robert L. Bowden, Yue Jin, James A. Kolmer, Ming-Shun Chen, Bradford W. Seabourn, and Floyd E. Dowell. 2014. "Registration of 'Antero' wheat". *J. Plant Reg.* 8: 2: 165-168. doi:10.3198/jpr2013.12.0072crc.
45. Feng Jin, Guihua Bai, Dadong Zhang, Yanhong Dong, Lingjian Ma, William Bockus, and Floyd Dowell. 2014. Fusarium-Damaged Kernels and Deoxynivalenol in Fusarium-Infected U.S. Winter Wheat. *Phytopathology*. doi:10.1094/PHYTO-07-13-0187-R.
46. Amy Bernardo, Guihua Bai, Jianbin Yu, Fred Kolb, William Bockus, and Yanhong Dong. 2013 "Registration of near-Isogenic winter wheat germplasm contrasting in Fhb1 for Fusarium head blight resistance" *J. Plant Reg.* doi: 10.3198/jpr2013.05.0021crgs.
47. Shubing Liu, Sunish K Sehgal, Jiarui Li, Meng Lin, Harold N Trick, Jianming Yu, Bikram S Gill and Guihua Bai. 2013 "Cloning and Characterization of a Critical Regulator for Pre-harvest Sprouting in Wheat" *Genetics*, doi: 10.1534/genetics.113.152330.
48. C. Cavanagh, S. Chao, S. Wang, B. Emma Huang, S. Stephen, S. Kiani, K. Forrest, C. Sainenac, G. Brown-Guedira, A. Akhunova, D. See, G. Bai, M. Pumphrey, L. Tomar, D. Wong, S. Kong, M. Reynolds, M. Lopez da Silva, H. Bockelman, L. Talbert; J.A. Anderson, S. Dreisigacker, S. Baenziger, A. Carter, V. Korzun, P. L. Morrell, J. Dubcovsky, M. Morell, M. Sorrells, M. Hayden, E. Akhunov. 2013 "Genome-wide comparative diversity uncovers multiple targets of selection for improvement in hexaploid wheat landraces and cultivars". *PNAS* 110:8057-8062
49. F. Jin, D. Zhang, W. Bochus, P. S. Baenziger, B. Carver and G. Bai. 2013. Fusarium head blight resistance in U.S. winter wheat cultivars and elite breeding lines. *Crop Sci.* 53:2006–2013.
50. R. M. Hunger, J. T. Edwards, R. L. Bowden, L. Yan, P. Rayas-Duarte, G. Bai, G. W. Horn, J. A. Kolmer, K. L. Giles, M. Chen, Y. Jin, R. D. Osburn, M. B. Bayles, B W. Seabourn, A. R. Klatt, and B. F. Carver. 2014. Billings' wheat combines early maturity, disease resistance, and desirable grain quality for the southern Great Plains of the USA. *J. Plant Reg.* 8:22-31.

51. Z. Liu, T. Zhang, C. Li, and G. Bai 2014 Genetic Diversity and Classification of Cytoplasm of Chinese Elite Foxtail Millet [*Setaria italica* (L.) P. Beauv.] Germplasm Crop Sci. 54:659-666.
52. C. Li, M. Chen, S. Chao, J. Yu and G. Bai. 2013. Identification of a novel gene, H34, in wheat using recombinant inbred lines and single nucleotide polymorphism markers. *Theor Appl Genet.* doi: 10.1007/s00122-013-2118-5.
53. Zhang X, Fu J, Hiromasa Y, Pan H, Bai G (2013) Differentially Expressed Proteins Associated with Fusarium Head Blight Resistance in Wheat. *PLoS ONE* 8(12): e82079. doi:10.1371/journal.pone.0082079
54. A. Bakhsh, N. Mengistu, P.S. Baenziger, I. Dweikat, S.N. Wegulo, D. Rose, G. Bai, and K.M. Eskridge. 2013. Effect of Fusarium head blight (FHB) resistance gene *Fhb1* on agronomic and end-use quality traits of hard red winter wheat. *Crop Sci.* doi: 10.2135/cropsci2012.06.0364
55. Z. Liu, R. L. Bowden and G. Bai. 2013 “Molecular markers for leaf rust resistance gene *Lr42* in wheat” *Crop Sci. Firstlook.* doi: 10.2135/cropsci2012.09.0532
56. Y-S Xia, R-H Li, Z-X Ning, G-H Bai, KHM. Siddique, G-J Yan, M. Baum, RK. Varshney, P-G Guo 2013. Single Nucleotide Polymorphisms in *HSP17.8* and Their Association with Agronomic Traits in Barley. *PLoS ONE* 8: e56816. doi:10.1371/journal.pone.0056816
57. A. N. Bernardo, R. L. Bowden, M N. Rouse, M. S. Newcomb, D. S. Marshall and G. Bai. 2013. Validation of molecular markers for new stem rust resistance genes in U.S. hard winter wheat. *Crop Sci.* 53:755–764.
58. Xiaoqing Yu, Guihua Bai, Shuwei Liu, Na Luo, Ying Wang, Douglas Richmond, Paula Pijut, Scott Jackson, Jianming Yu and Yiwei Jiang. 2013. Association of candidate genes with drought tolerance traits in diverse perennial ryegrass accessions. *J. Exp Bot.* doi:10.1093/jxb/ert018.
59. G. R. Carlson, J. E. Berg, R. N. Stougaard, J. L. Eckhoff, P. F. Lamb, K. D. Kephart, D. M. Wichman, J. H. Miller, N. R. Riveland, D. L. Nash, W. E. Grey, Y. Jin, J. A. Kolmer, X. Chen, G. Bai, and P.L. Bruckner. 2013. Registration of ‘Bearpaw’ Wheat. *J. Plant Reg.* doi: 10.3198/jpr2012.07.0009crc.
60. G. R. Carlson, J. E. Berg, K. D. Kephart, D. M. Wichman, P. F. Lamb, J. H. Miller, R. N. Stougaard, J. L. Eckhoff, N. R. Riveland, D. L. Nash, W. E. Grey, Y. Jin, J. A. Kolmer, X. Chen, G. Bai, and P. L. Bruckner 2013. Registration of ‘Judee’ Wheat. *J. Plant Reg.* 7 (2) doi: 10.3198/jpr2012.07.0015crc.
61. Y. Xia, Z. Ning, G. Bai, R. Li, G. Yan, K. H.M Siddique, M. Baum and P. Guo. 2012. Allelic variations of a light harvesting chlorophyll a/b-binding protein gene (*Lhcb1*) associated with agronomic traits in barley. *PLoS ONE* 7(5): e37573. doi:10.1371/journal.pone.0037573.
62. J. Dai, G. Bai, D. Zhang & D. Hong. 2012. Validation of quantitative trait loci for aluminum tolerance in Chinese wheat landrace FSW. *Euphytica.* DOI 10.1007/s10681-012-0807-9.
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