CURRICULUM VITAE

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Education:

2001 - 2004	Postdoctoral training, Plant Genomics and Molecular biology, University of California, Davis, CA, USA
1998	Doctor of Philosophy in Animal Physiology St. Petersburg State University (St. Petersburg, Russia) Dissertation: The study of the adaptational changes of erythrocyte electrophoretic mobility in human and animals. Advisor: Viacheslav B. Matiushichev
1992	Master of Science in Animal Physiology Bashkir State University (Russia). Dissertation: Condition of the red blood system of rats under scald trauma. Advisor: Valentina G. Shamratova
1991	Teacher of Biology & Chemistry Bashkir State University (Ufa, Russia)

Employment:

07/2020-current	Director, K-State Integrated Genomics Facility, Kansas State University, Manhattan, Kansas, USA. Research Professor, Department of Plant Pathology, Kansas State University. Graduate Faculty, Interdepartmental Genetics program, Kansas State University.
07/2013-06/2020	Director, K-State Integrated Genomics Facility, Kansas State University, Manhattan, Kansas, USA. Research Associate Professor, Department of Plant Pathology, Kansas State University. Graduate Faculty, Interdepartmental Genetics program, Kansas State University.
01/2008-06/2013	Director, K-State Integrated Genomics Facility, Department of Plant Pathology, Kansas State University, Manhattan, Kansas, USA. Research Assistant Professor, Department of Plant Pathology,

	Kansas State University. Graduate Faculty, Interdepartmental Genetics program, Kansas State University.
10/2007-01/2008	Research Associate, Department of Plant Pathology, Kansas State University, Manhattan, Kansas, USA.
09/2006- 06/2007	Research Associate, Department of Plant Sciences, Laboratory of Jan Dvorak, University of California, Davis, CA, USA.
06/2003 - 08/2006	Postgraduate Researcher, Department of Plant Sciences, Laboratory of Jan Dvorak, University of California, Davis, CA, USA.
12/2001– 06/2003	Visiting Scientist, Department of Plant Sciences, Laboratory of Jan Dvorak, University of California, Davis, CA, USA.
08/1999 – 01/2000	Assistant Professor, Bashkirian State Agricultural University, Ufa, Russia.
09/1996 – 08/1999	Teacher of General Biology in Senior High School #45, Ufa, Russia.
08/1994 – 08/1996	Research scientist, The laboratory of Population Genetics, Institute of Biochemistry and Genetics of Russian Academy of Sciences, Ufa, Russia.
08/1992 – 08/1994	Teacher of General Biology in High School #126, Ufa, Russia.

Research experience:

2008 – Current
Director of Integrated Genomics Facility

Collaborate with scientists on design and execution of genomics experiments, identify emerging technologies and introduce them to the KSU genomics research community. High – throughput genomics, microarrays, real-time PCR, next and third generation sequencing technologies.

2007 – 2008
Research Associate

Application of next generation sequencing technologies for SNP discovery in polyploid wheat.

2006 – 2007
Research Associate

Development, maintenance and distribution of wheat genomic resources at UC Davis – USDA – ARS Wheat Genomics Center (http://wheat.pw.usda.gov/wgc/orders.html).

2005 –2007
Visiting Scientist

Project: Haplotype Polymorphism in the Polyploid Wheats and their Diploid Ancestors (National Science Foundation).
Summary: This is a collaborative project involving seven laboratories across the US. The major goals of the project are the discovery and detection of single nucleotide polymorphisms (SNP) in populations of polyploid wheats and their diploid ancestors, construction of a SNP-based wheat linkage map and characterization of wheat genetic diversity. The data generated by the project is used for development of the public wheat diversity database.
Responsibilities and research activity:
- Sequencing of genes in the populations of polyploid wheats and their diploid ancestors
-SNP discovery

2003 – 2005
Visiting Scientist

Project: Construction of Bacterial Artificial Chromosome (BAC) libraries of diploid ancestors of wheat.
Summary: *Triticum urartu*, *Aegilops speltoides* and *Ae. tauschii* are respectively the immediate diploid sources, or their closest relatives, of the A, B and D genomes of polyploid wheats. BAC libraries for each of these species were constructed, characterize, and high-density filters for library screening were printed. The repetitive and coding DNA content in the genomes of diploid wheats were estimated by BAC end sequencing.
Responsibilities and research activity:
- BAC library construction and high-density filter printing using Q-Bot robotic colony manipulator;
- BAC end sequencing;
- Sequencing of BACs harboring ABC transporter gene locus in *T. durum* and *T. urartu.*

2001 – 2003
Visiting Scientist

Project: Structure and Function of the Expressed Portion of the Wheat Genomes (National Science Foundation).
Summary: This was a collaborative project that involved 10 laboratories in different states. The goal of the project was to decipher the chromosomal location and biological function of 10,000 unique gene motifs in the wheat genomes. The public database generated by the project provided means to study the structure, function, chromosomal location, and evolution of the expressed component of the wheat genomes.

Responsibilities and research activity:

- Physical mapping of expressed sequence tags (ESTs) to chromosomal regions using a set of wheat deletion lines;
- BAC sequencing

1995 – 1998

Graduate Student

Project: The study of the adaptational changes of erythrocyte electrophoretic mobility in human and animals. Ph.D.thesis

Summary: The mean value of erythrocyte electrophoretic mobility is very stable parameter. Study of the human and animal erythrocytes and their electrophoretic mobility under different Pathological Conditions and Extreme Treatment showed that such parameters as skewness and kurtosis describing the distribution of electrophoretic mobility could be used diagnostically.

1990 – 1992

Graduate Student

Project: Study of the rat blood system at scald trauma.

Professional Societies:

1. American Association for the Advancement of Science
2. Genetics Society of America
3. Crop Science Society of America

Section Editor (Plant Genomics), 2016-2022:

Functional & Integrative Genomics

***Ad Hoc* Reviewer:**

Current Genomics, G3, Journal of Next Generation Sequencing & Applications, Functional & Integrative Genomics, PLOS One, BMC Genomics, Plant Molecular Biology, Plant Biotechnology Journal, Frontiers in Plant Science, Plants, Agronomy

Teaching experience (Kansas State University):

1. 2008	PLPTH 785, Real-Time PCR workshop (organizer and instructor).
2. 2009	PLPTH 780, Spotted Microarray workshop (organizer and instructor).
3. 2009	BIOCH 767, Recombinant DNA lab (guest lecturer).

4. 2009 PLPTH 785, Real-Time PCR workshop (organizer and instructor).
5. 2009 GS FLX Sequencing Workshop (organizer and instructor)
6. 2010 BIOCH 767, Recombinant DNA lab (guest lecturer).
7. 2010 PLPTH 612, Genomics Applications (guest lecturer).
8. 2010 PLPTH 785, Real-Time PCR workshop (organizer and instructor).
9. 2010 PLPTH 780, Affymetrix Microarray workshop (organizer and instructor).
10. 2011 PLPTH 612, Genomics Applications (guest lecturer).
11. 2011 BIOCH 767, Recombinant DNA lab (guest lecturer).
12. 2011 PLPTH 780, Microarray workshop (organizer and instructor).
13. 2011 PLPTH 785, Real-Time PCR workshop (organizer and instructor).
14. 2012 PLPTH 612, Genomics Applications (guest lecturer).
15. 2012 BIOCH 767, Recombinant DNA lab (guest lecturer).
16. 2012 PLPTH 780, Microarray workshop (organizer and instructor).
17. 2012 PLPTH 785, Real-Time PCR workshop (organizer and instructor).
18. 2013 PLPTH 780, 921c, Gene Expression Analysis workshop (organizer and instructor).
19. 2013 PLPTH 785, Real-Time PCR workshop (organizer and instructor).
20. 2013 Fusarium Laboratory workshop (instructor).
21. 2014 PLPTH 612, Genomics Applications (guest lecturer).
22. 2014 PLPTH 780, 921a, Gene Expression Analysis workshop (organizer and instructor).
23. 2015 PLPTH 612, Genomics Applications (guest lecturer).
24. 2015 PLPTH 780, 921c, Gene Expression Analysis workshop (organizer and instructor).
25. 2015 PLPTH 785, 921b, Real-Time PCR workshop (organizer and instructor).
26. 2015 PLPTH610, Biotechnology (guest instructor).
27. 2016 AGRON 680, Plant Genetics (guest instructor).
28. 2016 BIOCH 767, Recombinant DNA lab (guest lecturer).
29. 2016 AGRON/PLPTH 610, Biotechnology (guest instructor)
30. 2017 PLPTH 780, 921a, Gene Expression Analysis workshop (organizer and instructor).
31. 2017 FDSCI 600, Food Microbiology (guest instructor).
32. 2018 PLPTH 885, Genomic Technologies Workshop (organizer and instructor).
33. 2018 Droplet Digital PCR workshop, part I (organizer).
34. 2018 Droplet Digital PCR workshop, part II (organizer).
35. 2018 Wheat CAP RNA-Seq workshop (organizer and instructor).
36. 2019 PLPTH 885, Genomic Technologies Workshop (organizer and instructor).
37.2022 PLPTH 885, Genomic Technologies Workshop (organizer and instructor).

Peer review publications:

1. 2022 Wang W, Yu Z, He F, Bai G, Trick HN, **Akhunova A**, Akhunov E. Multiplexed promoter and gene editing in wheat using a virus-based guide RNA delivery system. ***Plant Biotechnol J***. 2022 Aug 16. doi: 10.1111/pbi.13910. Online ahead of print.
2. 2022 Chen YY, Schreiber M, Bayer MM, Dawson IK, Hedley PE, Lei L, **Akhunova A**, Liu C, Smith KP, Fay JC, Muehlbauer GJ, Steffenson BJ, Morrell PL, Waugh R, Russell JR. The evolutionary patterns of barley pericentromeric chromosome regions, as shaped by linkage disequilibrium and domestication. ***Plant J.*** 2022 Sep;111(6):1580-1594.
3. 2022 He F, Wang W, Rutter WB, Jordan KW, Ren J, Taagen E, DeWitt N, Sehgal D, Sukumaran S, Dreisigacker S, Reynolds M, Halder J, Sehgal SK, Liu S, Chen J, Fritz A, Cook J, Brown-Guedira G, Pumphrey M, Carter A, Sorrells M, Dubcovsky J, Hayden MJ, **Akhunova A**, Morrell PL, Szabo L, Rouse M, Akhunov E. Genomic variants affecting homoeologous gene expression dosage contribute to agronomic trait variation in allopolyploid wheat. ***Nat Commun.*** 2022 Feb 11;13(1):826.
4. 2022 Jordan KW, Bradbury PJ, Miller ZR, Nyine M, He F, Fraser M, Anderson J, Mason E, Katz A, Pearce S, Carter AH, Prather S, Pumphrey M, Chen J, Cook J, Liu S, Rudd JC, Wang Z, Chu C, Ibrahim AMH, Turkus J, Olson E, Nagarajan R, Carver B, Yan L, Taagen E, Sorrells M, Ward B, Ren J, **Akhunova A**, Bai G, Bowden R, Fiedler J, Faris J, Dubcovsky J, Guttieri M, Brown-Guedira G, Buckler E, Jannink JL, Akhunov ED. Development of the Wheat Practical Haplotype Graph Database as a Resource for Genotyping Data Storage and Genotype Imputation. ***G3 (Bethesda).*** 2022 12(2):jkab390. Contribution no. 22-173-J from the Kansas Agricultural Experiment Station.
5. 2021 Nyine M, Adhikari E, Clinesmith M, Aiken R, Betzen B, Wang W, Davidson D, Yu Z, Guo Y, He F, **Akhunova A**, Jordan KW, Fritz AK, Akhunov E. The Haplotype-Based Analysis of Aegilops tauschii Introgression Into Hard Red Winter Wheat and Its Impact on Productivity Traits. ***Front Plant Sci.*** 2021, 12:716955. Contribution no. 22-174-J from the Kansas Agricultural Experiment Station.
6. 2021 Wang W, Tian B, Pan Q, Chen Y, He F, Bai G, **Akhunova A**, Trick HN, Akhunov E. Expanding the range of editable targets in the wheat genome using the variants of the Cas12a and Cas9 nucleases. ***Plant Biotechnol J.*** 2021, 19(12):2428-2441 Contribution no. 22-175-J from the Kansas Agricultural Experiment Station.
7. 2020 Jordan KW, He F, Fernandez de Soto M, **Akhunova A**, Akhunov E. Differential chromatin accessibility landscape reveals structural and functional features of the allopolyploid wheat chromosomes. ***Genome Biol.*** 2020, 21:176. Contribution no. 21-188-J from the Kansas Agricultural Experiment Station.
8. 2020 DeWitt N, Guedira M, Lauer E, Sarinelli M, Tyagi P, Hao Q, Fu D, Murphy JP, Marshall D, **Akhunova A**, Jordan K, Akhunov Eduard, Brown-Guedira G. Sequence based mapping identifies a candidate

transcription repressor underlying awn suppression at the B1 locus in wheat. ***New Phytol.*** 2020, 225:326-339. Contribution no. 20-145-J from the Kansas Agricultural Experiment Station.

9. 2019 Wang W, Pan Q, Tian B, He F, Chen Y, Bai G, **Akhunova A**, Trick HN, Akhunov E. Gene editing of the wheat homologs of TONNEAU1-recruiting motif encoding gene affects grain shape and weight in wheat. ***Plant J.*** 2019, 100:251-264. Contribution no. 20-146-J from the Kansas Agricultural Experiment Station.
10. 2019 He F, Pasam R, Shi F, Kant S, Keeble-Gagnere G, Kay P, Forrest K, Fritz A, Hucl P, Wiebe K, Knox R, Cuthbert R, Pozniak C, **Akhunova A**, Morrell PL, Davies JP, Webb SR, Spangenberg G, Hayes B, Daetwyler H, Tibbits J, Hayden M, Akhunov E. Exome sequencing highlights the role of wild-relative introgression in shaping the adaptive landscape of the wheat genome. ***Nat Genet.*** 2019 51:896-904. Contribution no. 20-147-J from the Kansas Agricultural Experiment Station.
11. 2019 Gardiner LJ, Brabbs T, **Akhunova A**, Jordan K, Budak H, Richmond T, Singh S, Catchpole L, Akhunov E, Hall A. Integrating genomic resources to present full gene and promoter capture probe sets for bread wheat. ***GigaScience*** 2019 8(4). Contribution no. 20-148-J from the Kansas Agricultural Experiment Station.
12. 2018 Wang W, Simmonds J, Pan Q, Davidson D, He F, Battal A, **Akhunova A**, Trick HN, Uauy C, Akhunov E. Gene editing and mutagenesis reveal inter-cultivar differences and additivity in the contribution of TaGW2 homoeologues to grain size and weight in wheat. ***Theor Appl Genet***. 2018 131:2463-2475. Contribution no. 19-155-J from the Kansas Agricultural Experiment Station.
13. 2018 Jordan K, Wang S, He F, Chao S, Lun Y, Paux E, Sourdille P, Sherman J, **Akhunova A**, Blake N, Pumphrey M, Glover K, Dubcovsky J, Talbert L, Akhunov E. The genetic architecture of genome-wide recombination rate variation in allopolyploid wheat revealed by nested association mapping. ***Plant J.*** 2018 95:1039-1054. Contribution no. 19-156-J from the Kansas Agricultural Experiment Station.
14. 2018 Wang W, Pan Q, He F, **Akhunova A**, Chao S, Trick H, Akhunov E. Transgenerational CRISPR-Cas9 Activity Facilitates Multiplex Gene Editing in Allopolyploid Wheat. ***The CRISPR Journal*** 2018 1:65-74. Contribution no. 19-157-J from the Kansas Agricultural Experiment Station.
15. 2017 Salcedo A, Rutter W, Wang S, **Akhunova A**, Bolus S, Chao S, Anderson N, De Soto MF, Rouse M, Szabo L, Bowden RL, Dubcovsky J, Akhunov E. Variation in the AvrSr35 gene determines Sr35 resistance against wheat stem rust race Ug99. ***Science*** 2017 358:1604-1606. Contribution no. 18-259-J from the Kansas Agricultural Experiment Station.
16. 2017 Danilova T, **Akhunova A**, Akhunov E, Friebe B, Gill B. Major structural genomic alterations can be associated with hybrid speciation in Aegilops markgrafii (Triticeae). ***Plant J.*** 2017 92:317-330. Contribution no. 17-121-J from the Kansas Agricultural Experiment Station.

17. 2017 Rutter W, Salcedo A, **Akhunova A**, He F, Wang S, Liang H, Bowden R, Akhunov E. Divergent and convergent modes of interaction between wheat and Puccinia graminis f. sp. tritici isolates revealed by the comparative gene co-expression network and genome analyses. ***BMC Genomics*** 2017, 18:291. Contribution no. 18-258-J from the Kansas Agricultural Experiment Station.
18. 2017 Shi F, Tibbits J, Pasam R, Kay P, Wong D, Petkowski J, Forrest K, Hayes B, **Akhunova A**, Davies J, Webb S, Spangenberg G, Akhunov E, Hayden M, Daetwyler H. Exome Sequence Genotype Imputation in Globally Diverse Hexaploid Wheat Accessions. ***Theor Appl Genet***. 2017, 130:1393-1404. Contribution no. 18-257-J from the Kansas Agricultural Experiment Station.
19. 2016 Peng Z, Hu Y, Xie J, Potnis N, **Akhunova A**, Jones J, Liu Z, White FF, Liu S. Long read and single molecule DNA sequencing simplifies genome assembly and TAL effector gene analysis of Xanthomonas translucens. ***BMC Genomics*** 2016, 17:21. Contribution no. 16-199-J from the Kansas Agricultural Experiment Station.
20. 2015 Schwartz AR, Potnis N, Timilsina S, Wilson M, Patane J, Martins J, Minsavage GV, Dahlbeck D, **Akhunova A**, Almeida N, Vallad GE, Barak JD, White FF, Miller SA, Ritchie D, Goss E, Bart RS, Setubal JC, Jones JB and Staskawicz BJ. Phylogenomics of Xanthomonas field strains infecting pepper and tomato reveals diversity in effector repertoires and identifies determinants of host specificity. ***Front. Microbiol.*** 2015, 6:535. Contribution no. 16-034-J from the Kansas Agricultural Experiment Station.
21. 2015 Jordan KW, Wang S, Lun Y, Gardiner LJ, MacLachlan R, Hucl P, Wiebe K, Wong D, Forrest KL, Sharpe AG, Sidebottom CHD, Hall N, Toomajian C, Close T, Dubcovsky J, **Akhunova A**, Talbert L, Bansal UK, Bariana HS, Hayden MJ, Pozniak C, Jeddeloh JA, Hall A, Akhunov E. A haplotype map of allohexaploid wheat reveals distinct patterns of selection on homoeologous genomes. ***Genome Biology*** 2015, 16:48. Contribution no. 15-338-J from the Kansas Agricultural Experiment Station.
22. 2014 Reddy SK, Liu S, Rudd JC, Xue Q, Payton P, Finlayson SA, Mahan J, **Akhunova A**, Holalu SV, Lu N. Physiology and transcriptomics of water-deficit stress responses in wheat cultivars TAM 111 and TAM 112. ***Journal of Plant Phys***. 2014, 171:1289-1298. Contribution no. 15-230-J from the Kansas Agricultural Experiment Station.
23. 2014 Henry IM, Nagalakshmi U, Lieberman MC, Ngo KJ, Krasileva KV, Vasquez-Gross H, **Akhunova A**, Akhunov E, Dubcovsky J, Tai TH, Comai L. Efficient genome-wide detection and cataloging of EMS-induced mutations using next-generation sequencing and exome capture. ***The Plant Cell*** 2014, 26:1382-1397. Contribution no. 15-060-J from the Kansas Agricultural Experiment Station.
24. 2014 Wang S, Wong D, Forrest K, Allen A, Chao S, Huang BE, Maccaferri M, Salvi S, Milner SG, Cattivelli L, Mastrangelo AM, Whan A, Stephen S, Barker G, Wieseke R, Plieske J, IWGSC, Lillemo M, Mather D, Appels

R, Dolferus R, Brown-Guedira G, Korol A, **Akhunova AR**, Feuillet C, Salse J, Morgante M, Pozniak C, Luo MC, Dvorak J, Morell M, Dubcovsky J, Ganal M, Tuberosa R, Lawley C, Mikoulitch I, Cavanagh C, Edwards KJ, Hayden M, Akhunov E. Characterization of polyploid wheat genomic diversity using a high-density 90 000 single nucleotide polymorphism array. ***Plant Biotechnol. J.*** 2014, 12:787-796. Contribution no. 15-059-J from the Kansas Agricultural Experiment Station.

25. 2013 Reddy SK, Weng Y, Rudd JC, **Akhunova A**, Liu S. Transcriptomics of induced defense responses to greenbug aphid feeding in near isogenic wheat lines. ***Plant Science*** 2013, 212:26-36. Contribution no. 14-099-J from the Kansas Agricultural Experiment Station.
26. 2013 Cavanagh CR, Chao S, Wang S, Huang BE, Stephen S, Kiani S, Forrest K, Saintenac C, Brown-Guedira GL, **Akhunova A**, See D, Bai G, Pumphrey M, Tomar L, Wong D, Kong S, Reynolds M, da Silva ML, Bockelman H, Talbert L, Anderson JA, Dreisigacker S, Baenziger S, Carter A, Korzun V, Morrell PL, Dubcovsky J, Morell MK, Sorrells ME, Hayden MJ, Akhunov E. Genome-wide comparative diversity uncovers multiple targets of selection for improvement in hexaploid wheat landraces and cultivars. ***Proc Natl Acad Sci USA*** 2013, 110:8057-8062. Contribution no. 14-232-J from the Kansas Agricultural Experiment Station.
27. 2013 Akhunov E, Sehgal S, Liang H, Wang S, **Akhunova A**, Kaur G, Li W, Forrest K, See D, Šimková H, Ma Y, Hayden M, Luo M, Faris J, Dolezel J, Gill B. Comparative analysis of syntenic genes in grass genomes reveals accelerated rates of gene structure and coding sequence evolution in polyploid wheat. ***Plant Physiol***. 2013, 161:252-265. Contribution no. 13-210-J from the Kansas Agricultural Experiment Station.
28. 2010 Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KR, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo GR, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Tabanao D, Talbert LE, Tian C, Toleno D, Warburton M, You FM, Zhang W, Dvorak J. Nucleotide diversity maps reveal variation in diversity among wheat genomes and chromosomes. ***BMC Genomics*** 2010, 11:702.
29. 2010 **Akhunova AR**, Matniyazov RT, Liang H, Akhunov ED. Homoeolog-specific transcriptional bias in allopolyploid wheat. ***BMC Genomics*** 2010, 11:505.
30. 2009 Luo MC, Deal KR, Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo G, Ma Y, Matthews DE, McGuire PE, Morrell PL, Qualset CO, Renfro J, Tabanao D, Talbert LE, Tian C, Toleno DM, Warburton ML, You FM, Zhang W, Dvorak J. Genome Comparisons Reveal a Dominant Mechanism of Chromosome Number Reduction in Grasses and

Accelerated Genome Evolution in Triticeae. ***Proc Natl Acad Sci USA*** 2009, 106:15780-15785.

31. 2007 Akhunov ED, **Akhunova AR**, Dvorak J. Mechanisms and Rates of Birth and Death of Dispersed Duplicated Genes during the Evolution of a Multigene Family in Diploid and Tetraploid Wheats. ***Mol Biol Evol*** 2007, 24:539-550.
32. 2006 Dvorak J, Akhunov ED, **Akhunova AR**, Deal KR, Luo MC. Molecular Characterization of a Diagnostic DNA Marker for Domesticated Tetraploid Wheat Provides Evidence for Gene Flow from Wild Tetraploid Wheat to Hexaploid Wheat. ***Mol Biol Evol*** 2006, 23:1386-1396.
33. 2005 Akhunov ED, **Akhunova AR,** Dvorak J. BAC libraries of Triticum urartu, Aegilops speltoides and Ae.Tauschii, the diploid ancestors of polyploidy wheat. ***Theor Appl Genet*** 2005, 111:1617-1622.
34. 2004 Matiushichev VB, Shamratova VG, **Akhunova AR**. Correlation of erythrocyte electrophoretic mobility and the velocity of their sedimentation in the norm and renal pathology. ***Klin Lab Diagn*** 2004, 4:22-24.
35. 2003 Akhunov E D, **Akhunova AR**, Linkiewicz AM, Dubcovsky J, Hummel D, Lazo G, Chao S, Anderson OD, David J, Qi L, Echalier B, Gill BS, Miftahudin, Gustafson JP, La Rota CM, Sorrells ME, Zhang D, Nguyen HT, Kalavacharla V, Hossain K, Kianian SF, Peng J, Lapitan NLV, Wennerlind EJ, Nduati V, Anderson JA, Sidhu D, Gill KS, McGuire PE, Qualset CO, Dvorak J. Synteny perturbations between wheat homoeologous chromosomes caused by locus duplications and deletions correlate with recombination rates along chromosome arms. ***Proc Natl Acad Sci USA*** 2003, 100:10836-10841.
36. 2001 Matiushichev VB, Shamratova VG, **Akhunova AR**. Effect of strophanthin on the electrophoretic mobility of blood erythrocytes in adults and children. ***Ross Fiziol Zh Im I M Sechenova*** 2001, 87:248-253.
37. 2000 Matiushichev VB, Shamratova VG, **Akhunova AR**, Gutsaeva DR Sex and age characteristics of the erythrocyte electrophoretic mobility distribution. ***Zh Evol Biokhim Fiziol*** 2000, 36:273-275.
38. 1997 Matiushichev VB, Shamratova VG, **Akhunova AR.** Correlation between electrophoretic mobility of human blood erythrocytes and hemoglobin level in health and in renal pathology. ***Fiziol Chelovek*** 1997, 23:110-112.
39. 1997 Matiushichev VB, Shamratova VG, **Akhunova AR**, Gerchikov AI. Electrophoretic mobility and oxidizing status of rat blood erythrocytes at scald trauma. ***Tsitologiia*** 1997, 39:177-180.
40. 1996 Matiushichev VB, Shamratova VG, **Akhunova AR**. The electrophoretic mobility of the erythrocytes in rats during body adaptation to low-temperature exposure. ***Tsitologiia*** 1996, 38:1171-1173.

Other publications:

1. 2017 Akhunov E, Salcedo A, Rutter W, Wang S, Bolus S, **Akhunova A**, Chao S, Rouse MN, Szabo LJ, Dubcovsky J, Bowden RL. Unraveling the

mechanisms of stem rust resistance conferred by the *Sr35* gene against the Puccinia graminis pathogen. Proceedings of the 13th International Wheat Genetics Symposium, April 23-28, Tulln, Austria. Contribution no. 19-161-A from the Kansas Agricultural Experiment Station.

2. 2016 Wang W, **Akhunova A**, Chao S, Akhunov E. Optimizing multiplex CRISPR/Cas9-based genome editing for wheat. bioRxiv 2016 Jan 1. doi: https://doi.org/10.1101/051342. Contribution no. 17-067-J from the Kansas Agricultural Experiment Station.
3. 2012 Akhunov E, Chao S, Saintenac C, Kiani S, See D, Brown-Guedira G, Sorrells M, **Akhunova A,** Dubcovsky J, Cavanagh C, Hayden M. High-throughput approaches to genome-wide analysis of genetic variation in polyploid wheat. Canadian Journal of Plant Science 2012, 92:596-596.
4. 2011 Akhunov E, Chao S, Catana V, See D, Brown-Guedira G, **Akhunova A**, Dubcovsky J, Cavanagh C, Hayden M. New tools for wheat genetics and breeding: Genome-wide analysis of SNP variation. Proceedings of BGRI Technical Workshop, June 13-16, St. Paul, MN, USA.
5. 2008 **Akhunova A**, Arbieva Z, Grove D, Kubista M, Shipley G. Real-Time PCR Tech Guide. Experts give their advice on how to conduct Real-Time PCR. Genome Technology.
6. 2008 Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KR, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo GR, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Reynolds S, Tabanao D, Talbert LE, Tian C, Toleno D, Warburton M, You FM, Zhang W, Dvorak J. Purifying Selection and Gene Conversion in Polyploid Wheat Evolution. Proceedings of the 11th International Wheat Genetics Symposium, Aug 24-29, Brisbane, Australia.
7. 2003 Dvorak J, Akhunov ED, **Akhunova AR,** Luo MC, Linkiewicz AM, Dubcovsky J, Hummel D, Lazo G, Chao S, Anderson OD, David J, Qi L, Echalier B, Gill BS, Miftahudin, Gustafson JP, La Rota M, Sorrells M, Zhang D, Nguyen HT, Kalavacharla V, Hossain K, Kianian SF, Peng JH, Lapitan NLV, Wennerlind EJ, Nduati V, Anderson JA, Sidhu D, Gill KS, Choi DW, Close TJ, McGuire PE, Qualset CO. New Insights into the Organization and Evolution of Wheat Genomes. Proceedings of the 10th International Wheat Genetics Symposium, Paestum, Italy.

Book chapters:

1. 2013 Kiani S, **Akhunova A**, Akhunov E. Application of next-generation sequencing technologies for genetic diversity analysis in cereals. Cereal Genomics II. Editors: Gupta PK and Varshney RK, Springer, 2nd ed. VIII, 438 p. Contribution no. 14-101-J from the Kansas Agricultural Experiment Station.

Oral presentations, meeting abstracts:

1. 2022 Jordan KW, Bradbury P, Miller Z, Nyine M, He F, **Akhunova A**, Bowden RL, Fiedler JD, Faris JD, Dubcovsky J, Guttieri MJ, Brown-Guedira GL, Buckler ES, Jannick JL, Akhunov E. Wheat Practical Haplotype Graph As a Resource for Genotyping Data Storage and Genotype Imputation. Plant and Animal Genome XXIX Conference, January 8-12, 2022, online.
2. 2021 Nyine M, Adhikari E, Clinesmith M, Jordan K, **Akhunova A**, Fritz A, Akhunov E. Genomic Patterns and Phenotypic Effects of Introgression from a Wild Relative into Hard Red Winter Wheat. ASA, CSSA, SSSA International Annual Meeting. A Creative Economy For Sustainable Development. November 7-10, 2021, Salt Lake City, UT, USA.
3. 2020 Ward BP, **Akhunova A**, Jordan K, He F, Ren J, Brown-Guedira G, Akhunov E. High Density Genotyping and Diversity Analysis of a Historical Panel of Soft Winter Wheat Germplasm from the Eastern United States. Plant and Animal Genome XXVIII Conference, January 11-15, 2020, San Diego, CA, USA.
4. 2020 DeWitt N, Guedira M, Lauer E, Sarinelli JM, Tyagi P, Fu D, Hao QQ, Murphy P, Marshall D, **Akhunova A**, Akhunov E, Jordan K, Brown-Guedira G. Identification of a Transcriptional Repressor Underlying B1 Awn Suppression in Wheat. Plant and Animal Genome XXVIII Conference, January 11-15, 2020, San Diego, CA, USA.
5. 2020 He F, Pasam R, Shi F, Kant S, Keeble-Gagnere G, Kay P, Forrest K, Fritz A, Hucl P, Wiebe K, Knox R, Cuthbert R, Pozniak C, **Akhunova A**, Morrell PL, Davies JP, Webb SR, Spangenberg G, Hayes B, Daetwyler H, Tibbits J, Hayden M, Akhunov E. Adaptive Introgression from Wild Emmer into Bread Wheat Revealed by Sequencing 1000 Wheat Exomes. Plant and Animal Genome XXVIII Conference, January 11-15, 2020, San Diego, CA, USA.
6. 2020 He F, Wang W, Rutter WB, **Akhunova A**, Fernandez de Soto M, Szabo LJ, Jordan K, Rouse M, Akhunov E. Integrating Gene Expression Mapping, Epigenetics and GWAS to Understand the Genetic Control of Agronomic Traits in Hexaploid Wheat. Plant and Animal Genome XXVIII Conference, January 11-15, 2020, San Diego, CA, USA.
7. 2020 He F, Wang W, Rutter WB, **Akhunova A**, Fernandez de Soto M, Szabo LJ, Jordan K, Rouse M, Akhunov E. Integrating eQTL, Genome Editing, Epigenetics and GWAS to Understand the Genetic Control of Phenotypic Traits in Hexaploid Wheat. 2020 ASA-CSSA-SSSA International Annual Meeting, November 9-13, 2020. Virtual Meeting.
8. 2019 Wang W, Tian B, Pam Q, Chen Y, He F, **Akhunova A**, Evanega SD, Yan L, Trick H, Akhunov E. NIFA: CRISPR-based precision breeding in wheat. 2019 National Association of Plant Breeders Annual Meeting. Aug. 25-29, 2019, Pine Mountain, GA, USA.
9. 2019 He F, Pasam R, Shi F, Kant S, Keeble-Gagnere G, Kay P, Forrest K, Fritz A, Hucl P, Wiebe K, Knox R, Cuthbert R, Pozniak C, **Akhunova A**, Morrell PL, Davies JP, Webb SR, Spangenberg G, Hayes B, Daetwyler H, Tibbit J, Hayden M, Akhunov E. Exome sequencing highlights the

role of historic wild relative introgression in broadening the adaptive potential of modern bread wheat. 1st International Wheat Congress. July 22-26, 2019, Saskatoon, Canada.

10. 2019 Wang W, Pan Q, Chen Y, Tian B, He F, **Akhunova A**, Evanega SD, Yan L, Trick H, Akhunov E. CRISPR-based precision breeding in wheat. 1st International Wheat Congress. July 22-26, 2019, Saskatoon, Canada.
11. 2019 DeWitt N, Guedira M, Lauer E, Sarinelli M, Tyagi P, Hao Q, Fu D, Murphy JP, Marshall D, **Akhunova A**, Jordan K, Akhunov E, Brown-Guedira G. Sequence based mapping identifies a candidate transcription repressor underlying awn suppression at the B1 locus in wheat. 1st International Wheat Congress. July 22-26, 2019, Saskatoon, Canada.
12. 2019 **Akhunova A**. Integrated Genomics Facility: updates. Ecological genomics summer research forum. July 10th, 2019. KSU, Manhattan, KS, USA.
13. 2019 Wang W, Pan Q, Chen Y, Tian B, He F, **Akhunova A,** Evanega SD, Yan L, Trick H, Akhunov E. Applications of Gene Editing to Improve Yield Component Traits in Wheat. In vitro biology meeting, June 8-12, 2019, Tampa, Florida, USA.
14. 2019 He F, Pasam R, Shi F, Kant S, Keeble-Gagnere G, Kay P, Forrest K, Fritz A, Hucl P, Wiebe K, Knox R, Cuthbert R, Pozniak C, **Akhunova A**, Morrell PL, Davies JP, Webb SR, Spangenberg G, Hayes B, Daetwyler H, Tibbits J, Hayden M, Akhunov E. Exome sequencing highlights the role of historic wild relative introgression in broadening the adaptive potential of modern bread wheat. 2019 Annual Meeting, American Society of Plant Biologists, Midwestern Section. March 16-17, West Virginia University, Morgantown, WV, USA.
15. 2019 Akhunov E, **Akhunova A**, Chen Y, Evanega SD, He F, Pan Q, Tian B, Trick HN, Wang W, Yan L. Possibility of CRISPR-Based Precision Breeding in Wheat. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
16. 2019 Jordan K, Wang S, He F, Chao S, Lun Y, Paux E, Sourdille P, Sherman J, **Akhunova A**, Blake N, Pumphrey M, Glover K, Dubcovsky J, Talbert L, Akhunov E. Genetic Architecture of Genome-Wide Recombination Rate Variation in Wheat Revealed by Nested Association Mapping. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
17. 2019 **Akhunova A**. K-State Integrated Genomics Facility: Wheat Genomics and Beyond. Department of Plant Pathology seminar. September 19th, 2019, KSU, Manhattan, KS, USA.
18. 2018 Pan Q, He F, **Akhunova A**, Chao S, Trick HN, Akhunov E. Application of CRISPR/Cas9 technology to analyzing gene function in the wheat genome and improving agronomic traits, Nebraska Plant Breeding Symposium, 2018 March 13th, 2018, University of Nebraska, Lincoln, NE, USA.
19. 2018 Wang W, Pan Q, He F, Fernandez de Soto M, Ren J, Chen Y, Tian B, **Akhunova A**, Chao S, Trick HN, Akhunov E. Application of CRISPR/Cpf1-Based Genome Editing in Polyploid Wheat. Plant and Animal Genome meeting, Jan 13-17, San Diego, CA, USA.

20. 2018 Jordan K, Wang S, Chao S, Lun Y, Paux E, Sourdille P, Sherman J, **Akhunova A**, Blake N, Pumphrey M, King R, Phillips AL, Uauy C, Dubcovsky J, Talbert L, Akhunov E. Genetic Architecture of Recombination Rate and Its Effects in Allopolyploid Wheat. Plant and Animal Genome meeting, Jan 13-17, San Diego, CA, USA.
21. 2018 Wang W, Pan Q, Chen Y, Tian B, He F, **Akhunova A**, Evanega S, Yan L, Trick HN, Akhunov E. Genome Editing for Improving Wheat Yield and Yield-Related Traits. USDA NIFA-International Wheat Yield Partnership Project Director Meeting/ USDA NIFA Wheat CAP Annual Meeting, Jan.14th, San Diego, CA, USA.
22. 2017 Wang W, Pan Q, He F, Chao S, **Akhunova A**, Yan L, Trick H, Akhunov E. Application of Multiplex CRISPR/Cas9-Based Genome Editing Strategy for Targeting Multiple Agronomic Genes in Wheat. ASA, CSSA, and SSSA Annual Meeting, Oct. 22-25, Tampa, FL, USA.
23. 2017 He F, Wang W, Salcedo A, Wang S, Rutter W, Jordan K, **Akhunova A**, Szabo L, Rouse M, Akhunov E. Dissecting the genomic architecture of Puccinia graminis f. sp. tritici – Wheat interaction. 2017 Grand Challenges Annual Meeting. Oct. 2-3, Washington DC, USA.
24. 2017 Wang W, He F, Pan Q, Chao S, **Akhunova A**, Evanega S, Yan L, Trick H, Akhunov E. CRISPR / Cas9 based genome editing for improving wheat yield and yield-related traits. National Association of Plant Breeders, Aug 7-10, UC Davis, CA, USA.
25. 2017 Danilova T, **Akhunova A**, Akhunov E, Friebe B, Gill BS. Major chromosomal rearrangements are associated with hybrid speciation in Aegilops markgrafii (Triticeae). International Triticeae Symposium, June 12-16, Wernigerode, Germany.
26. 2017 Akhunov E, Salcedo A, Rutter W, Wang S, Bolus S, **Akhunova A**, Chao S, Rouse MN, Szabo LJ, Dubcovsky J, Bowden RL. Unraveling the mechanisms of stem rust resistance conferred by the *Sr35* gene against the Puccinia graminis pathogen. 13th International Wheat Genetics Symposium, April 23-28, Tulln, Austria.
27. 2017 Wang W, He F, Pan Q, Chao S, Trick HN, **Akhunova A**, Akhunov E. Application of Multiplex CRISPR/Cas9-Based Genome Editing Strategy for Targeting Multiple Agronomic Genes in Wheat. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
28. 2017 Rutter W, Salcedo A, **Akhunova A**, Wang S, Bowden RL, Akhunov E. Divergent and Convergent Modes of Host-Pathogen Interaction Revealed by the Comparative Gene Co-Expression Network and Genome Analyses of Puccinia graminis f. sp. tritici Isolates on a Susceptible Wheat Host. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
29. 2017 Salcedo A, Rutter W, Wang S, **Akhunova A**, Szabo LJ, Rouse MN, Bowden RL, Dubcovsky J, Akhunov E. Identification of Avirulence Genes in the Wheat-Puccinia graminis (Pgt) Pathosystem by EMS Mutagenesis and Diversity Analyses. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
30. 2017 Jordan K, Wang S, Chao S, Lun Y, Paux E, Sourdille P, Dubcovsky J, Sherman J, **Akhunova A**, Talbert L, Akhunov E. Nested Association

Mapping Population Resource for Studying the Genetic Basis of Trait Variation in Wheat. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.

31. 2017 He F, Wang W, Salcedo A, Rutter W, Chao S, Jordan K, **Akhunova A**, Dubcovsky J, Szabo LJ, Rouse MN, Akhunov E. Dissecting the Genomic Architecture of Puccinia graminis f. sp. tritici – Wheat Interaction. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
32. 2017 Salcedo A, Rutter W, Wang S, Bolus S, **Akhunova A**, Bowden RL, Rouse MN, Szabo LJ, Dubcovsky J, Akhunov E. Unraveling the Mechanisms of Stem Rust Resistance Conferred by the Sr35 Gene against Puccinia graminis f. sp. tritici (Pgt). Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
33. 2017 Jordan K, Wang S, Chao S, Lun Y, Paux E, Sourdille P, Sherman J, **Akhunova A**, King R, Phillips AL, Uauy C, Dubcovsky C, Talbert L, Akhunov E. Genetic Architecture of Recombination Rate Variation in Wheat Revealed By Analyzing a Nested-Association Mapping Population and Reverse Genetic Screens. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
34. 2017 Danilova TV, **Akhunova A**, Akhunov E, Gill BS, Friebe B. Major structural genomic alterations are associated with hybrid speciation in Aegilops markgrafii (Triticeae). Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
35. 2016 Hayden MJ, Wang S, Rutter W, **Akhunova A**, Lun Y, Jordan K, Wang W, Forrest K, Sawbridge TI, Petkowski J, Kant S, Daetwyler HD, Shi F, Kay P, Pasam R, Chao S, Wong D, Tibbits J, Hayes B, Talbert L, Dubcovsky J, Akhunov E. Population-scale functional and structural diversity of the wheat genome revealed by transcriptome and exome sequencing. Plant and Animal Genome meeting, Jan 9-13, San Diego, CA, USA.
36. 2015 Jordan K, Wang S, Lun Y, **Akhunova A**, Forrest K, Dubcovsky J, Talbert L, Bansal U, Bariana HS, Hayden M, Akhunov E. Population Genomics of Allopolyploid Wheat. ASA, CSSA and SSSA International Annual Meeting, Nov 15-18, Minneapolis, MN, USA.
37. 2015 Akhunov E, Jordan K, Wang S, Lun Y, **Akhunova A**, Talbert L, Hayden M. Population Genomics of Allopolyploid Wheat Adaptation. The annual meeting of the American Society of Plant Biologists (ASPB), July 26-30, Minneapolis, MN, USA.
38. 2015 Jordan K, Wang S, Lun Y, Chao S, Dubcovsky J, Sherman J, **Akhunova A**, Talbert L, Akhunov E. Sequence-Based Map Development of Wheat NAM Populations. Plant and Animal Genome meeting, Jan 10-14, San Diego, CA, USA.
39. 2014 Akhunov E, Salcedo A, Lou Y, Zhang W, Li C, **Akhunova A,** Rutter W, Wang S, Cantu D, Rouse MN, Dubcovsky J. Functional genomics of stem rust - wheat pathosystem. USDA Project Director meeting for Plant Biology Programs, May 14-15, Washington DC, USA.
40. 2014 Jordan K, Wang S, Gardiner L, Lun Y, Hall N, Dubcovsky J, Pozniak C, **Akhunova A**, Talbert L, Hall A, Akhunov EA. First Generation

Haplotype Map of Wheat Genome. Plant and Animal Genome meeting, Jan 11-15, San Diego, CA, USA.

41. 2014 Wang S, Jordan K, Lun Y, **Akhunova A**, Hall A, Pozniak C, Cavanagh C, Chao S, Hayden M, Talbert L, Akhunov E. Application of Haplotype-Based Genetics in Wheat. Plant and Animal Genome meeting, Jan 11-15, San Diego, CA, USA.
42. 2014 Gray M, Shelton J, Chellapilla S, Bello N, Brown S, **Akhunova A**, Liang H, Garrett K, Akhunov E, Morgan T, Johnson L. Transcriptional differences of mesic and xeric ecotypes of an ecologically-dominant prairie grass Andropogon gerardii to abiotic stress. Plant and Animal Genome meeting, Jan 11-15, San Diego, CA, USA.
43. 2014 Jordan K, Wang S, Gardiner L, Lun Y, Hall N, Dubcovsky J, Pozniak C, **Akhunova A**, Talbert L, Hall A, Akhunov E. A Diversity Map of the Hexaploid Wheat Genome. Plant and Animal Genome meeting, Jan 11-15, San Diego, CA, USA.
44. 2014 Shelton J, Herndon N, Gray M, Liang H, Durrett T, Johnson L, **Akhunova A**, Brown S. Multi-K-Mer de novo Transcriptome Assembly, Validation, and Count Summarizing for Four Plant Taxa. Plant and Animal Genome meeting, Jan 11-15, San Diego, CA, USA.
45. 2014 Akhunov E, Sehgal S, Jordan K, **Akhunova A**, Lun Y, Liang H, Gill B, Wang S. Genomic Redundancy in Young Polyploids: Does It Play an Important Role in Adaptation? Plant and Animal Genome meeting, Jan 11-15, San Diego, CA, USA.
46. 2013 Akhunov ED, Wans S, Jordan K, Lun Y, **Akhunova A,** Chao S, Pozniak C, Cavanagh C, Dubcovsky J, Talbert L, Hayden M. A haplotype map of wheat and its utility for wheat genetics and breeding. The 12th International Wheat Genetics Symposium, Sept 8-14, Yokohama, Japan.
47. 2013 Akhunov E, Saintenac C, Zhang W, Salcedo A, Liang H, Cantu D, **Akhunova A**, Rouse M, Trick H, Dubcovsky J. Functional Genomics of stem rust-wheat pathosystem. USDA Project Director meeting for Plant Biology Programs, May 22-23, Washington DC, USA.
48. 2013 Akhunov E, Liang H, Saintenac C, Zhang W, Salcedo A, Lun Y, Xu SS, Bowden RL, Szabo LJ, Cantu D, **Akhunova A**, Rouse M, Dubcovsky J. Genomic Architecture Of Rust-Wheat Interaction: Implications For Breeding Disease-Resistant Crops. W773. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
49. 2013 Johnson L, Gray M, **Akhunova A**, Brown SJ, Chellapilla S, Morgan TJ, Garrett K, Liang H, Akhunov E. Phenotypic and genetic variation in a dominant forage and biofuel grass along the Great Plains' precipitation gradient: a reciprocal garden approach. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
50. 2013 Reddy SK, Liu S, **Akhunova A**, Weng Y, Rudd J, Xue Q, Payton P, Mahan J. Comparative Transcriptomics Involving Greenbug and Water-Deficit Stress Responses in Hard-Red Winter Wheat. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
51. 2013 Jordan K, Wang S, **Akhunova A**, Lun Y, Saintenac C, Pozniak C, Hall A, Talbert L, Akhunov E. Targeted Re-Sequencing Of Polyploid Wheat

Genome. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.

52. 2013 Akhunov E, Wang S, Chao S, Brown-Guedira G, See D, **Akhunova A**, Forrest K, Allen AM, Tuberosa R, Morgante M, Cattivelli L, Dvorak J, Luo M, Sorrells M, Feuillet C, Salse J, Dubcovsky J, Edwards KJ, Ganal MW, Cavanagh C, Hayden MJ. Analysis of Genome-Wide Patterns of Genetic Variation Across Wheat Genome using 90,000 SNP iSelect Assay. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
53. 2013 Akhunov E, Liang H, Saintenac C, Zhang W, Salcedo A, Lun Y, Xu SS, Bowden RL, Szabo LJ, Cantu D, **Akhunova A**, Rouse M, Dubcovsky J. Genomic Architecture of Rust-Wheat Interaction: Implications for Breeding Disease-Resistant Crops. P0258. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
54. 2013 Wang S, **Akhunova A**, Lun Y, Chao S, See D, Brown-Guedira G, Chalhoub B, Akhunov E. Homoeologous imbalance of gene expression in polyploid wheat. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
55. 2013 Shelton J, Gray M, Brown SJ, Chellapilla S, **Akhunova A**, Akhunov E, Liang H, Johnson L. De novo transcriptome profiling of two edaphically and phenotypically divergent grasses: dominant forage grass big bluestem Andropogon gerardii and drought- sand bluestem Andropogon gerardii ssp. Hallii. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
56. 2012 **Akhunova A**. K-State Integrated Genomics Facility: Whole Genome in 24 hours? Yes, we can! Department of Plant Pathology seminar. September 27th, 2012. KSU, Manhattan, KS, USA.
57. 2012 Krishna Reddy S, **Akhunova A**, Rudd JC, Devkota R, Xue Q, Payton P, Mahan J, Liu S. Gene Expression Profiling of Water Deficit Stress Responses in Widely Adapted Wheat Cultivars TAM 111 and TAM 112. The annual meeting of the American Society of Plant Biologists (ASPB), July 20-24, Austin, Texas, USA.
58. 2012 Akhunov E, Wang S, Chao S, Stephen S, Huang E, Saintenac C, See D, Carter A, Brown-Guedira G, Forrest K, Wong D, Pumphrey M, Bai G, Bowden R, Baenzinger PS, Talbert L, Anderson JA, Dreisigacker S, Chen J, Campbell K, **Akhunova A**, Korzun V, Sorrells M, Dubcovsky J, Cavanagh C, Hayden M. Nonparametric tests reveal multiple selection events in the wheat genome. International Triticeae Mapping Initiative meeting, June 24-29, Fargo, North Dakota, USA.
59. 2012 Krishna Reddy S, Weng Y, Rudd JC, **Akhunova A**, Liu S. Transcriptome Profilng of Defense Responses to Greenbug Feeding in Wheat. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
60. 2012 Dubcovsky J, Saintenac C, Zhang W, Li C, Cantu D, **Akhunova A**, Liang H, Rouse M, Akhunov E. New approaches to rust resistance in wheat. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.

61. 2012 Akhunov E, Sehgal S, Liang H, Wang S, **Akhunova A**, Li W, Forrest K, See D, Simkova H, Hayden M, Luo MC, Faris J, Dolezel J, Gill BS. Alternative splicing and coding sequence evolution in polyploid wheat. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.
62. 2012 Akhunov E, Wang S, Catana V, Kiani S, Saintenac C, Hayden M, Cavanagh C, Forrest K, **Akhunova A**, Dubcovsky J, Brown-Guedira G, Coram T, Sorrells M, See D, Chao S. Genome-wide patterns of SNP variation in wheat: tools and resources for breeding and studying genetics of agronomic traits. USDA program directors meeting, Jan 13th, San Diego, CA, USA.
63. 2011 **Akhunova A**. K-State Integrated Genomics Facility: bringing the power of genomics to your lab. Department of Plant Pathology seminar. December 8th, 2011. KSU, Manhattan, KS, USA.
64. 2011 Akhunov E, Chao S, Saintenac C, Kiani S, See D, Brown-Guedira G, Sorrels M, **Akhunova A**, Dubcovsky J, Cavanagh C, Hayden M. High-throughput approaches to genome-wide analysis of genetic variation in polyploidy wheat. 1st Canadian Wheat Symposium, Nov. 30- Dec. 2, Manitoba, Canada.
65. 2011 Akhunov E, Chao S, Catana V, See D, Brown-Guedira G, Sorrels M, **Akhunova A**, Dubcovsky J, Cavanagh C, Hayden M. Genome-wide analysis of SNP variation in wheat. Development and use of molecular markers for crop improvement meeting. Oct 29-31, New Delhi, India.
66. 2011 Krishnareddy S, Weng Y, Rudd JC, **Akhunova A**, Liu S. Transcriptome Profilng of Defense Responses to Greenbug Feeding in Wheat. The 6th International Conference on Genomics, Nov. 12-15, OCT East, Shenzhen, China.
67. 2011 Akhunov E, Chao S, Saintenac C, Catana V, Kiani S, See D, Brown-Guedira G, Sorrels M, **Akhunova A**, Dubcovsky J, Cavanagh C, Hayden M. Next generation tools for wheat genetics and breeding: high-throughput SNP genotyping assays and sequence-based genotyping. 21st International Triticeae Mapping Initiative (21st-ITMI), Sept 4-9, Mexico City, Mexico.
68. 2011 Catana V, Hayden M, Forrest K, **Akhunova A**, See D, Dubcovsky J, Distelfeld A, Sorrells M, Brown-Guedira G, Chao S, Akhunov E. Large-Scale Discovery Of Gene-Associated SNPs In Polyploid Wheat Transcriptome. Plant and Animal Genome meeting, Jan 14-17, San Diego, CA, USA.
69. 2011 Akhunov E, Sehgal S, **Akhunova A**, Liang H, Catana V, Kaur G, Luo MC, Simkova H, Dolezel J, Gill BS. Sequencing And Analysis Of The Wheat Chromosome 3A Gene Space. Plant and Animal Genome meeting, Jan 14-17, San Diego, CA, USA.
70. 2011 Akhunov E, Catana V, Hayden M, Forrest K, **Akhunova A**, Dubcovsky J, Distelfeld A, Brown-Guedira G, Coram T, Sorrells M, See D, Chao S. Single Nucleotide Polymorphism (SNP) markers for high-throughput genotyping of wheat genome. USDA program directors meeting, Jan 13th, San Diego, CA, USA.

71. 2010 Weng Y, Bai J, **Akhunova A**, Azhaguvel P, Rudd JC. Expression Profiling of R Gene-Mediated Host Defense Against Aphid Feeding In Wheat. Plant and Animal Genome meeting, Jan 9-13, San Diego, CA, USA.
72. 2010 Akhunova A, Matniyazov R, Akhunov E. Genome-Wide Survey Of Homoeolog-Specific Gene Expression In Polyploid Wheat. Plant and Animal Genome meeting, Jan 9-13, San Diego, CA, USA.
73. 2010 **Akhunova A,** Matniyazov R, Akhunov E. Genome-Wide Survey Of Homoeolog-Specific Gene Expression In Polyploid Wheat. Plant and Animal Genome meeting, Jan 9-13, San Diego, CA, USA.
74. 2009 **Akhunova A**, Catana V, Sehgal S, Dolezel J, Simkova H, Kubalakova M, Gill B, Akhunov E. Using next-generation sequencing technology to characterize the gene space of the wheat chromosome 3A. International Triticeae Mapping Initiative meeting, Aug 31-Sept 4, Clermont-Ferrand, France.
75. 2009 Akhunov E, **Akhunova A**, Sehgal S, Gill B. Wheat Genome Sequencing: Testing The Utility of Next Generation Sequencing Technologies. Plant and Animal Genome meeting, Jan 10-14, San Diego, CA, USA.
76. 2009 **Akhunova A**, Macmil S, Qu C, Wang P, Wiley G, Kenton S, Roe B, Akhunov E. SNP Discovery in Polyploid Wheat Using 454 Sequencing Technology. Plant and Animal Genome meeting, Jan 10-14, San Diego, CA, USA.
77. 2008 Dvorak J, Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KR, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo GR, Lundy KE, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Reynolds S, Dindo T, Talbert LE, Tian C, Toleno D, Warburton M, You FM, Zhang W. Wheat diversity map. International Durum Wheat Symposium, June 30-July 3, Bologna, Italy.
78. 2008 Dvorak J, Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KR, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo GR, Lundy KE, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Reynolds S, Dindo T, Talbert LE, Tian C, Toleno D, Warburton M, You FM, Zhang W. Wheat SNP Map. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
79. 2008 Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KR, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo GR, Lundy KE, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Reynolds S, Dindo T, Talbert LE, Tian C, Toleno D, Warburton M, You FM, Zhang W, Dvorak J. Nucleotide Diversity In Polyploid Wheat. Plant and Animal Genome meeting, Jan 12-16, San Diego, CA, USA.
80. 2007 Akhunov ED, **Akhunova AR**, Dvorak J. Mechanisms and Rates of Acireductone Deoxygenase Gene Family Evolution Provide Insights into the Evolution of Large Plant Genomes. Mechanisms and rates of

acireductone deoxygenase gene family evolution provide insights into the evolution of large plant genomes. International Triticeae Mapping Initiative meeting, Apr 16-20, Tiberias, Israel.

81. 2007 Dvorak J, Akhunov E, **Akhunova A**, Anderson O, Anderson J, Blake N, Clegg M, Coleman-Derr D, Conley E, Crossman C, Deal K, Dubcovsky J, Gill B, Gu Y, Hadam J, Heo H, Huo N, Lazo G, Lundy K, Luo MC, Ma Y, Matthews D, McGuire P, Morrell P, Qualset C, Renfro J, Reynolds S, Tabanao D, Talbert L, Tian C, Toleno D, Warburton M, You F, Zhan W. Wheat domestication and genetic diversity. National Wheat Genomics Conference, Nov 30 – Dec 2, Kansas City, MO, USA.

82. 2007 Dvorak J, Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KR, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo HY, Huo N, Lazo GR, Lundy KE, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Reynolds S, Dindo T, Talbert LE, Tian C, Toleno D, Warburton M, You FM, Zhang W. Wheat SNP Markers: Development, Mapping And Deployment. Plant and Animal Genome meeting, Jan 13-17, San Diego, CA, USA.

83. 2007 Akhunov ED, **Akhunova AR**, Saini B, Grishina I, Morrell P, Toleno D, Clegg M, Dvorak J. Genetic Diversity Of Diploid Ancestors Of Wheat. Plant and Animal Genome meeting, Jan 13-17, San Diego, CA, USA.

84. 2006 Akhunov ED, **Akhunova AR**, Anderson OD, Anderson J, Blake N, Clegg M, Coleman-Derr D, Conley E, Crossman C, Deal K, Dubcovsky J, Gill BS, Gu Y, Hadam J, Heo H, Huo N, Lazo G, Lundy K, Luo MC, Ma Y, Matthews D, McGuire P, Morrel P, Qualset C, Renfro J, Reynolds S, Tabanao D, Talbert L, Tian C, Toleno D, Warburton M, You F, Zhang W. Single nucleotide polymorphisms, high-throughput markers for wheat genetics and breeding. International Triticeae Mapping Initiative meeting, Aug 27-31, Victor Harbor, South Australia.

85. 2006 Akhunov ED, **Akhunova AR**, Anderson OD, Anderson JA, Blake N, Clegg MT, Coleman-Derr D, Conley EJ, Crossman CC, Deal KK, Dubcovsky J, Gill BS, Gu YQ, Hadam J, Heo H, Huo N, Lazo GR, Lundy KE, Luo MC, Ma YQ, Matthews DE, McGuire PE, Morrell P, Qualset CO, Renfro J, Reynolds SK, Tabanao D, Talbert LE, Tian C, Toleno D, You FM, Zhang W, Dvorak J. SNP Discovery And Deployment In Polyploid Wheat. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.

86. 2006 Akhunov ED, **Akhunova AR**, Dvorak J. Tracing Immergence of A New Multi-Locus Gene Family During The Past Three Million Years Of Diploid Wheat Evolution. Plant and Animal Genome meeting, Jan 14-18, San Diego, CA, USA.