

Biography (narrative) for Dr. I. Y. Abdurakhmonov:

Prof. Ibrokhim Yulchievich Abdurakhmonov was born on February 19, 1975 in Govasoy village of Chust region, Namangan district, Uzbekistan in the family of a biology teacher. In 1981, he attended one of the high schools in his village and graduated it after 11th grade education in 1992 with honorary "Gold medal". His interest in biology comes primarily from his high school time and because of family environment that he brought-up. His father, being a graduate of biology department of current National University of Uzbekistan, became a distinguished biology teacher of the region and was directing his son, Ibrokhim, to this interesting field of biology. A small home library of biology books, popular and scientific journals, and education materials, collected by his father, caught Ibrokhim's attention and interest to be a biologist.

In 1990, being from remote village 8th grade high schoolboy, Ibrokhim first won regional Olympiad (contest in biology between high school attendees) on biology; then, the same year, he got the third honorary awarded place in the Republican Olympiad on biology, organized by of the Ministry of Higher and Secondary education of Uzbekistan. Two consequent years in 1991 and 1992, attending the Republican biology Olympiad between high school students, he was awarded first-degree diploma of the Ministry of Higher and Secondary Education of Uzbekistan. Because of these outstanding achievements, in 1991, he attended one of the prestigious contest at that time - "All Former Soviet Union Biology Olympiad" of high school students as a 10th grade member of Uzbekistan team. After graduating high school in 1992, being a winner of Republican Biology Olympiad and a 'Gold Medal' holder from his high school graduation, he was admitted to the Biology Department of the National University of Uzbekistan without any entrance examination.

During his 5-year studies in the National University, he showed himself as an outstanding talented student and won all Republican Biology Olympiads between biology students of all Uzbekistan Universities. He was awarded with State scholarship named after Mirzo Ulughbek, the famous Uzbek scholar and astronomer. As a student at the National University, during 1993-1997, he also worked at the Genetic Engineering and Biotechnology laboratory of the Institute of Genetics, Academy of Uzbek Sciences, as a part time technician and research assistant. In 1997, he graduated the National University with honorary "Red" diploma with Master of Science equivalence degree in biotechnology and teacher of biology and chemistry. Later in 1997, he was admitted to PhD program at the Institute of Genetics and Plant experimental Biology, Academy of Sciences of Uzbekistan.

In 1998, among several young talented Uzbek scientists and students of several fields, he was awarded with Uzbekistan Presidential "UMID" foundation grant to study at Texas A&M University on the field of genetic engineering. In 2001, Ibrokhim successfully graduated Texas A&M University with the Master of Science degree in Plant Breeding with the outstanding research achievements on molecular cloning and characterization of unknown phytochrome gene family in cotton species. In 2001, he returned to Uzbekistan and continued his PhD studies at the Institute of Genetics and Plant Experimental Biology.

In 2002, Ibrokhim defended his PhD dissertation on development of DNA-markers for marker-assisted-selection of cotton and become a senior scientist of the Institute. During 2002 -2008, he received and led two large USDA-funded projects on cotton genomics, and in collaboration with USA scientists, published fundamental results of his grant subject. In 2008, because of these outstanding achievements in cotton genomics area, he successful defended his Doctor of Sciences dissertation in genetics subject and received Doctor of Science degree in Biology. In 2011, he became full professor in molecular genetics and molecular biotechnology, which is considered the top scientific degree in Uzbekistan.

Since 2001, he delivers lectures on specific courses molecular genetics, genetic engineering and biotechnology to the students of the National University of Uzbekistan. In the training department of the Center of Genomics and Bioinformatics he also delivers training lectures and hands on training to the students and teachers of Tashkent Agrarian University, National University of Uzbekistan, Tashkent pharmaceutical Institute with whom he established specific educational agreements. He supervises many bachelor and master of sciences degree diploma of university students and is a scientific advisor for many PhD and Doctor of Science dissertations.

In 2012, he initiated, justified, established and was appointed as a director for new, unique,

independent and interagency public research institution - "the Center of Genomics and Bioinformatics" under Academy of Sciences of Uzbekistan, Ministry of Agriculture and water Resources, and "UzCottonIndustry" association, Uzbekistan. In 2016, the Center become one of the largest and youngest research institutions of Academy of Sciences of Uzbekistan.

He is one of the leaders of genomics science in Uzbekistan, and his research areas include plant genomics, germplasm characterization and genetic mapping, marker-assisted selection, transgenomics, proteomics and bioinformatics. Prof. Abdurakhmonov currently serves as associate editors of International Journal of Plant Genomics, and Journal of Integrated OMICs. He also acts as members of editorial board of the American Journal of Plant Science, Journal of Plant Sciences & Molecular Breeding, etc. He is a member of International Cotton Genome Initiative (ICGI). He serves as an executive committee member of the International Cotton Researchers Association (ICRA), Washington D.C., USA. He is one of appointed members of executive committee of the Supreme Attestation Committee at the Cabinet of Ministries of Uzbekistan with the responsibility of coordination and attestation of specialized scientific boards awarding doctoral degrees in biology, agricultural sciences, and veterinary. Professor Abdurakhmonov has been appointed as the Uzbek National Contact Point for the Theme "Food, Agriculture & Fisheries and Biotechnology" of the 7th Framework Programme for Research and Technological Development set up by the European Commission.

He has received many awards for his scientific contributions such as 2010 TWAS prize in agriculture for his fundamental contribution to understanding genetic diversity and its exploitation in cotton genome, and government award – 2010 chest badge "Sign of Uzbekistan" for development of genomics science in Uzbekistan. He was recently recognized and honored as "ICAC Cotton Researcher of the Year 2013" for his outstanding contribution to cotton genomics and biotechnology. In 2014, he was elected as a The World Academy of Sciences (TWAS) Fellow on Agricultural Sciences. In 2015, he was elected as a co-chair of "Comparative Genomics and Bioinformatics" workgroup of International Cotton Genome Initiative (ICGI).

Prof. Abdurakhmonov has two brothers and two sisters, all have graduated from National University with Biology degree. He is married and has three sons.

Short biography of Prof. Ibrokhim Y. Abdurakhmonov:

Ibrokhim Y. Abdurakhmonov received his B.S. Degree (1997) *in biotechnology* from the National University of Uzbekistan, M.S. degree *in plant breeding* (2001) from Texas A&M University of USA, PhD degree (2002) *in molecular genetics*, Doctor of Science degree (2009) *in genetics*, and full professorship (2011) *in molecular genetics and molecular biotechnology* from the Institute of Genetics and Plant Experimental Biology, Academy of Sciences of Uzbekistan. He founded (2012) and is currently leading the Center of Genomics and Bioinformatics of Uzbekistan. He serves as an associate editor/editorial board member of several international and national journals on plant sciences. He received Government award – 2010 chest badge "Sign of Uzbekistan", 2010 TWAS prize, and "ICAC Cotton Researcher of the Year 2013" for his outstanding contribution to cotton genomics and biotechnology. He was elected as The World Academy of Sciences (TWAS) Fellow (2014) on *Agricultural Science* and as a co-chair/chair of "Comparative Genomics and Bioinformatics" workgroup (2015) of International Cotton Genome Initiative (ICGI).

Resume/Curriculum vitae for Dr. I. Y. Abdurakhmonov:

Name: Ibrokhim Y. Abdurakhmonov

Birth date: 02.19.1975

Birthplace: Chust region, Namangan district, Uzbekistan

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Web address: <http://genomics.uz>

Education:

- 2011 - Professor in Molecular genetics and molecular biotechnology, Institute of Genetics and PEB, Academy of Sciences of Uzbekistan, Uzbekistan;
- 2008 - Doctor of Biological Sciences (D.Sci) in Genetics, Institute of Genetics and PEB, Academy of Sciences of Uzbekistan, Uzbekistan (scientific consultant: academician Abdukarimov Abdusattor);
- 2005 - Senior scientist in Molecular Genetics, Institute of Genetics and PEB, Academy of Sciences of Uzbekistan, Uzbekistan;
- 2002 - PhD in Molecular Genetics, Institute of Genetics and PEB, Academy of Sciences of Uzbekistan, Uzbekistan (Advisor: academician Abdukarimov Abdusattor);
- 2001 - Master of Science in Plant Breeding, Texas A&M University, USA (Advisor: Prof. Kamal El-Zik; Mentor: Dr. Alan Pepper);
- 1997 - Bachelor/Master of Science in Biotechnology, Tashkent State University, Uzbekistan.

Awards and Recognition:

- 2015 – Member of Asian Council of Science Editors (ACSE);
- 2015 - Elected chair/co-chair of “Comparative Genomics and Bioinformatics” workgroup of International Cotton Genome Initiative (ICGI);
- 2014 - Elected The World Academy of Sciences (TWAS) member on Agricultural Sciences;
- 2013 - “ICAC Cotton Researcher of the Year 2013”, International Cotton Advisory Board (ICAC), USA;
- 2012 - Selected to Chair a AAAS-ASU joint workshop conducted by AAAS and Academy of Sciences of Uzbekistan on September 27-29, 2012, Tashkent, Uzbekistan;
- 2010 - TWAS prize 2010 in agriculture, for fundamental contribution in understanding and exploiting the molecular diversity of the cotton genome;
- 2010 – Uzbekistan Government award chest badge “Sign of Uzbekistan” for the development of genomics and biotechnology sciences in Uzbekistan;
- 2004 - Presiding chair of cotton improvement secession, Beltwide Cotton Conference, San Antonio, Texas, USA
- 2004, 2006 – First-degree diploma of ISTEODOD Foundation (for the first place in the conferences held for specialists studied in the abroad);
- 1999 - Award for the most progressed student in the ELI, Texas A&M University;
- 1998 - The Presidential Scholarship named UMID to study at Texas A&M University;
- 1995 - The State Scholarship named MIRZO ULUGHBEK;
- 1994 - First-degree Diploma of Ministry Higher Education of Uzbekistan;
- 1994 - Tashkent State University’s Honor-scholarship;
- 1993 - First-degree Diploma of Ministry Higher Education of Uzbekistan (for the first place in Republican

Olympiad in Biology, competition between Uzbekistan Universities);
1992 - First-degree Diploma of Ministry Higher and Secondary Education of Uzbekistan (for the first place in Republican Olympiad in Biology, high school completion);
1992- Gold medal for outstanding achievements in high school education;
1991 - The First-Degree Diploma of Ministry Higher and Secondary Education of Uzbekistan (for the first place in Republican Olympiad in Biology, high school completion).

Current position and appointments:

2016 – present - Director of Center of Genomics and Bioinformatics, Academy of Sciences of Uzbekistan;
2012 - 2016- Director of Center of Genomics and Bioinformatics under Academy of Sciences of Uzbekistan, Ministry of Agriculture and Water Resources, and "Uzpakhtasanoat" association;
2012- present - Executive Board member (Presidium) of Supreme Attestation Committee at the Cabinet of Ministers of Uzbekistan;
2012-present - Executive Board Member of International Cotton Research Associations (ICRA), 1629 K Street, NW, Suite 702, Washington, D.C. 20006, USA;
2010 - present - The Uzbek National Contact Point for the Theme "Food, Agriculture & Fisheries and Biotechnology" of the 7th Framework Programme for Research and Technological Development set up by the European Commission.

Research interest and description:

The main goal of my lab is to develop molecular and candidate gene markers, mapping of important QTLs such as fiber quality, flowering, earliness, natural leaf defoliation and resistance to biotic/abiotic stresses in cotton using molecular markers, and localization of mapped QTLs on the chromosome. Furthermore, we are exploring Uzbek cotton germplasm collection with molecular markers to exploit the genetic and agronomic diversity existed in the collection using LD-based association mapping strategy. These all are to facilitate marker-assisted breeding programs in cotton. DNA barcoding of commercialized varieties of Uzbekistan are being performed using "molecular marker technology" to protect intellectual property rights of Uzbek breeders and cotton germplasm collection. We are characterizing the flowering genes in cotton and studying their functions using RNAi gene-knockout technology in cotton tissue culture via somatic embryogenesis. We also are working on cloning and annotating of micro-RNAs from various cotton tissues, including, roots, ovules, and pathogen infected ones. Molecular mapping and characterization of disease resistance (nematode and wilt) genes of cotton is another ongoing research field and interest in my lab. Beyond genomics research, we also are conducting cotton proteomics research to profile a major proteome of cotton with agronomic importance.

International research grants:

1. PI and project manager, Molecular Mapping of Fiber Yield and Quality Genes using Uzbek Cotton Germplasm Resources, \$600000, funded by USDA-ARS/OIRP for 2003-2009.
2. PI and project manager, Characterization and Molecular Mapping of Phytochromes and Flowering Genes in Cotton, \$630000, funded by USDA-ARS/OIRP for 2003-2009.
3. PI and project manager, Molecular characterization and association of genes/QTLs for Fusarium wilt [*Fusarium oxysporum* f. sp. *vasinfectum* (FOV)] disease and development of improved germplasm for FOV resistance in cotton, \$350000, funded by USDA-ARS/OIRP and CRDF for 2009-2012.
4. Co-PI project manager, Evaluation of potential germplasm resistance against root-knot nematode and Fusarium wilt diseases in cotton and development of SNP-based candidate gene markers, \$350000, funded by USDA-ARS/OIRP and CRDF for 2009-2012.
5. PI and project manager, Improvement of drought and salt tolerance of cotton using transgenomics

tools, \$65,000, funded by CRDF/Uzbekistan for 2010-2012.

Editorial activity in scientific journals/books:

- 2016 - Editor of “Microsatellite Markers” and “Phylogenetics” books, Intech, Croatia [http://www.intechopen.com];
- 2016 - Editor of “Bioinformatics” and “Cotton Research” books, Intech, Croatia [http://www.intechopen.com];
- 2015 - Editor of “RNA interference” and “Plant Genomics” books, Intech, Croatia [http://www.intechopen.com];
- 2014 - Editor of “World Cotton Germplasm Resources” book, Intech, Croatia [http://www.intechopen.com];
- 2014- present – Editorial Advisory board member of Reports of Academy of Sciences of Uzbekistan, [http://academy.uz/en/publications/part1.php?ELEMENT_ID=99];
- 2014- present – Editorial board member of Uzbek Biology journal (handling section molecular biology), [http://academy.uz/en/publications/part1.php?ELEMENT_ID=34];
- 2012 - Editor of “Plant Breeding” book, Intech, Croatia (http://www.intechopen.com/);
- 2012 - present - Editorial board member of Journal of Plant Science and Molecular Breeding, Herbert Publications Ltd., London, United Kingdoms, [<http://www.hoajonline.com/Journal-of-Plant-Science-and-Molecular.html#tabs2-2>];
- 2011-present - Editorial Board member of Bulletin of Agricultural Sciences of Uzbekistan [http://www.agriculture.uz/ru.php?/publications/sections/14]
- 2010 - present - Editorial Board member of American Journal of Plant Sciences, SCRIP journals, USA [<http://www.scirp.org/journal/ajps/>];
- 2010 - present-Associated Editor of Journal of Integrated OMICs, Spain [<http://www.jiomics.com/>];
- 2010- present- Advisory board member of the scientific popular periodicals for youth “21-Century Technologies” published by Government of Uzbekistan;
- 2007 – present - Associate Editor of International Journal of Plant Genomics, Hindawi Publications, New York, USA [http://www.hindawi.com/journals/ijpg/editors.html].

Scientific Supervision for PhD dissertations:

1. Buriev Zabardast. “Molecular mapping of loci linked with fiber initiation and development in cotton *Gossypium hirsutum* L. using microsatellite markers “(2005);
2. Abdullaev Alisher. “QTL-mapping of natural leaf defoliation loci in cotton (*G. hirsutum* L.) (2005);
3. Shermatov Shukhrat. “Alu Insertion Polymorphism Frequencies and mtDNA Sequence Diversity in Uzbek population” (2008);
4. Dam Sao Mai. “The effect of antimicrobial agent on genome of the petroleum sulphate – reducing bacteria”(2008);
5. Kushanov Fakhridin. “The Role of Induced Mutagenesis in Conversion of Photoperiod Dependence in Cotton», (2008);
6. Egamberdiev Sharof. “DNA barcoding of the elite cotton cultivars” (2010).

Scientific Supervision for Doctor of Science dissertations:

7. Buriev Zabardast. “Molecular Characterization, Evolution and Biotechnology of MIC-3 genes in cotton “(2014/16).
8. Abdullaev Alisher. “Molecular Characterization, Phylogeny, Linkage disequilibrium and genomewide association mapping of fiber quality genes in Sea Island cotton germplasm, *G. barbadense*. (2014/15 completed)
9. Shermatov Shukhrat. “Molecular Characterization, Evolution and Biotechnology of ESKIMO_1 genes in cotton “(2014/16).”

10. Kushanov Fakhridin. "Genetic mapping of photoperiodic flowering in cotton», (2015/16)
11. Egamberdiev Sharof. "Molecular characterization *Fusarium oxysporum* f. sp. vasinfectum isolates and genetic mapping of FOV resistance in cotton" (2014/15; completed).
12. Ayubov Mirzakamol. "Creation of synthetic oligonucleotide hairpin duplexes for cotton phytochromes inducing RNA interference and obtaining superior "biotech" cotton genotypes (2016/2019)
13. Darmonov Muhtor. "Development of marker-assisted selection (MAS) programs for Upland cotton improvement and obtaining novel MAS cultivars (2016/2019);
14. Shapulatov Umid. " Exploring the genetic mechanisms of cell elongation in plants" (2015/2018), co-supervised with Dr. A. van Krol, University of Wageningen, Netherlands within ERASMUS MUNDUS/TIMUR program of European Union.

Invited and plenary talks and seminars at international level:

1. **Abdurakhmonov I.Y.** (2015). World cotton germplasm status: challenges and tasks ahead. Technical seminar, 74th Plenary meeting of International Cotton Advisory Board (ICAC), December 6-11, 2015, Mumbai, India (invited talk).
2. **Abdurakhmonov I.Y.** (2015). Innovations in genetic engineering. Tashkent International Innovation Forum, Committee for coordination science and technology development, Cabinet of Ministries of Uzbekistan, May 19 - 21, 2015, Tashkent, Uzbekistan (invited talk).
3. **Abdurakhmonov I.Y.** (2014). Uzbekistan's national assessments for Climate Change and Agriculture: Role of Genomics in solving climate change. In: "The Impacts of Climate Change on High Altitude Agriculture in Central Asia and India". AAAS and TWAS, December 9-11, 2014, Trieste, Italy.
4. **Abdurakhmonov I.Y.** (2013). Role of genomic studies in boosting yield and Fiber quality. In: Cotton India 2014 Congress, India Cotton Association, November 24-26, 2014, Mumbai, India.
5. **Abdurakhmonov I.Y.** (2014). Marker-assisted selection of cotton fiber quality. ICGI conference 2014, September 24-29, 2014, Wuhan, China.
6. **Abdurakhmonov I.Y.** (2014). Achievements and perspectives of cotton "omics" in Uzbekistan. International Cotton Conference, March 19-21, 2014. Bremen. Germany.
7. **Abdurakhmonov I.Y.** (2013). Role of genomic studies in boosting yield. Fifth technical seminar, 72nd Plenary meeting of International Cotton Advisory Board (ICAC), September 29-October 4, 2013, Cartagena, Columbia. Available at: https://www.icac.org/cotton_info/publications/tech_seminar/pub_tech_seminar/tis2013, award presentation).
8. **Abdurakhmonov I.Y.** (2013). Uzbekistan approach for growing biotech cotton. Round table on cotton biotechnology, 72nd Plenary meeting of International Cotton Advisory Board (ICAC), September 29-October 4, 2013, Cartagena, Columbia (invited talk).
9. **Abdurakhmonov I.Y.** (2013). Innovative biotechnologies to improve fiber quality. 9th Cotton and textile fair, October 16-18, 2013, Tashkent, Uzbekistan (invited talk).
10. **Abdurakhmonov I.Y.** Phytochrome RNA interference enhances major fiber quality and agronomic traits of cotton (*Gossypium hirsutum* L.). International Cotton Genome Initiative workshop, Raleigh, North Caroline, USA, October 9-12, 2012.
11. **Abdurakhmonov I.Y.** Understanding and utilization of molecular diversity in cotton genome. TWAS Prize 2010 lecture, 22nd General meeting of TWAS, November 20-23, 2011, Trieste, Italy.
12. **Abdurakhmonov I.Y.,** Buriev Z.T., Shermatov S.E., et al. (2011). Marker-assisted selection for complex fiber traits in cotton. 5th World Cotton Research Conference, Spacial session of ICGI, Mumbai, India 7-12 November, 2011 (a special talk).
13. **Abdurakhmonov I.Y., et al.** Utilization of natural diversity in Upland cotton (*G. hirsutum*) germplasm collection for pyramiding genes via marker-assisted selection program. Presentation in 5th Asian Cotton Research and Development Network conference, February, 2011, Lahore, Pakistan.
14. **Abdurakhmonov I.Y.** Invited speaker in the Discovery Symposium organized by Dow AgroSciences Inc.,

Indianapolis, IN, February 2010.

15. **Abdurakhmonov I.Y.**, Devor E.J., Huang L.Y., Buriev Z.T., Makamov A.H., Shermatov Sh.E., Abdugarimov A. Global annotation of small RNA and microRNA mature sequences from developing ovules of *Gossypium hirsutum* L. International Cotton Genome Initiative Research Conference, Plenary Session: Abstracts. China, 2008. P. 11 (a keynote talk).
16. **Abdurakhmonov IY.** Cotton research in Uzbekistan. Invited seminar at Eidgenössische Technische Hochschule (ETH) Zürich, April, 2008.
17. **Abdurakhmonov I.Y.** Exploiting genetic diversity. 4th World Cotton Research Conference: Proceedings. Lubbock, September, 2007. P. 2153 (presented as a plenary talk at WCRC-4).
18. **Abdurakhmonov IY**, Kohel RJ, Saha S, Pepper AE, Yu J, Buriev ZT, Shermatov Abdurakhmonov IY, Buriev ZT, Abdugarimov AA, and Pepper AE. 2006. Molecular Cloning And Characterization Of Phytochrome Gene Family In Cotton (*Gossypium* spp.). Plant and Animal Genome Conference XIV, January 14-19, 2006, San Diego, California. W159 (presented as an invited speaker talk at ICGI workshop).
19. **Abdurakhmonov IY**, Devor E, Abdugarimov A. 2007. Molecular Cloning And Characterization Of Tissue Expressed microRNAs In Cotton, *G.hirsutum* L. Plant And Animal Genome Conference XV, January 13-17, San Diego, California. P820 (presented as an invited talk at MicroRNA-cloning workshop of IDT)
20. **Abdurakhmonov IY**, Kohel RJ, Saha S, Pepper AE, Yu J, Buriev ZT, Shermatov SE, Abdullaev AA, Kushanov FN, Jenkins JN, Scheffler BE, Abdugarimov A 2007. Genome-wide linkage disequilibrium revealed by microsatellite markers and association study of fiber quality traits in cotton. Plant and Animal Genome Conference XV, January 13-17, San Diego, California. W199. (presented as invited speaker at ICGI workshop)

THE LIST OF SELECTED PUBLICATIONS:

a) In international scientific journals:

1. **Abdurakhmonov IY** (corresponding author), Ayubov MS, Ubaydullaeva KA, Buriev ZT, Shermatov SE, Ruziboev HS, Shapulatov UM, Ulloa M, Yu JZ, Percy RG, Saha S, Sharma GC, Devor EJ, Sripathi VR, Kumpatla SP, Van Der Krol A, Kater HD, Khamidov K, Salikhov SI, Jenkins J, Abdugarimov A and Pepper AE. 2016. RNA interference for functional genomics and improvement of cotton (*Gossypium* spp.). *Front. Plant Sci.* **7**:202. doi: 10.3389/fpls.2016.00202.
2. Shapulatov UM, Buriev ZT, Ulloa M, Saha S, Devor EJ, Ayubov M, Norov TM, Shermatov SE, Abdugarimov A, Jenkins JM, **Abdurakhmonov IY** (corresponding author). 2015. Characterization of small RNAs and their targets from *Fusarium oxysporum* infected and non-infected cotton root tissues. *Plant Molecular Biology Reporter*. 1–9. doi: 10.1007/s11105-015-0945-z.
3. Abdullaev A, Salakhutdinov IB, Egamberdiev SS, Kuryazov Z, Glukhova LA, Adilova AT, Rizaeva SM, Ulloa M, and **Abdurakhmonov IY**. 2015. Analyses of *Fusarium* wilt race 3 resistance in Upland cotton (*Gossypium hirsutum* L.). *Genetica*. **143**, 385–392. doi:10.1007/s10709-015-9837-2 .
4. Sukumar S, Stelly DM, Makamov AK, Ayubov MS, Raska D, Gutiérrez OA, Manchali S, Jenkins JN, Deng D, and **Abdurakhmonov IY**. 2015. Molecular confirmation of *Gossypium hirsutum* chromosome substitution lines. *Euphytica*. **205**: 459-473 DOI: 10.1007/s10681-015-1407-2.
5. Egamberdiev SS, Salakhudinov IB, Abdullaev AA, Ulloa M, Saha S, Rajabov F, Mullaohunov B, Mansurov D, Jenkins J, **Abdurakhmonov IY** (corresponding author). 2014. Detection of *Fusarium oxysporum* f. sp. *vasinfectum* race 3 by single-base extension method and allele-specific polymerase chain reaction. *Canadian Journal of Plant Pathology*, ID: 905496; DOI:10.1080/07060661.2014.905496
6. **Abdurakhmonov IY**, Buriev ZT, Saha S, Jenkins JN, Abdugarimov A, Pepper AE. 2014. Phytochrome

RNAi enhances major fibre quality and agronomic traits of the cotton

7. *Gossypium hirsutum* L. Nature Communications 5:3062; DOI:10. 1038/ncomms4062;
8. Abramatorov MB, Amirov OO, Kuchboev AE, Khalilov IM, **Abdurakhmonov IY** (senior author). 2013. Morphological and molecular characterization of *Haemonchus contortus* and *H. placei* (Nematoda: Trichostrongylidae) from Uzbekistan by sequences of the second internal transcribed spacer of ribosomal DNA. *Sci. Parasitol* 14(3):115-120.
9. Ulloa M, **Abdurakhmonov IY**, Perez-MC, Percy R, and Stewart JM. 2013. Genetic diversity and population structure of cotton (*Gossypium* spp.) of the New World assessed by SSR markers. *Botany* 91(4): 251-259.
10. Egamberdiev S, Ulloa M, Saha S, Salakhutdinov I, Abdullaev A, Glukhova L, Adylova A, Scheffler B, Jenkins JN and **Abdurakhmonov IY** (corresponding author). 2013. Molecular Characterization of Uzbekistan Isolates of *Fusarium oxysporum* f. sp. *vasinfectum*. *Journal of Plant Science Molecular Breeding* Vol.2, Issue 1, doi: 10.7243/2050-2389-2-3, <http://www.hoajonline.com/journals/pdf/2050-2389-2-2.pdf>.
11. Abdullaev A, Abdullaev AA, Salakhutdinov I, Rizaeva S, Kuryazov Z, Ernazarova D, **Abdurakhmonov IY**. 2013. Cotton Germplasm Collection of Uzbekistan. In *Cotton Research in Uzbekistan; D. Egamberdieva and I. Abdurakhmonov Eds.* Asian and Australasian Journal of Plant Science and Biotechnology 7 (Special Issue 2), 1-15.
12. Lee JM, Shin ZU, Mavlonov GT, **Abdurakhmonov IY**, Yi TH. Solid-phase colorimetric method for the quantification of fucoidan. 2012. *Appl Biochem Biotechnol.* 2012 Aug 18. [Epub ahead of print] PubMed PMID: 22903325.
13. Buriev ZT, Saha S, Shermatov SE, Jenkins JN, Abdukarimov A, Stelly DM, **Abdurakhmonov IY** (corresponding author). Molecular evolution of the clustered MIC-3 multigene family of *Gossypium* species. *Theor Appl Genet.* 2011 Aug 18. [Epub ahead of print] PubMed PMID: 21850479.
14. Mavlonov GT, Lee JM, Shin HS, Yi TH, **Abdurakhmonov IY** (corresponding author). 2011. Low molecular fucoidan and its macromolecular complex with bee venom melittin. *Advances in Bioscience and Biotechnology* 2: 298-303.
15. Sanamyan MF, Petlyakova JE, Sharipova EA, **Abdurakhmonov IY** (corresponding author). 2011. Cytogenetic Characteristics of New Monosomic Stocks of Cotton (*Gossypium hirsutum* L.). *Genetics Research International* 2011 (2011): 27364.
16. Sanamyan MF, Petlyakova JE, Sharipova EA, **Abdurakhmonov IY** (corresponding author). 2010. Morphological characteristics and identification of new monosomic stocks for cotton (*Gossypium hirsutum* L.). *Advances in Bioscience and Biotechnology* 1: 372-383.
17. Campbell BT, Saha S, Percy R, Frelichowski J, Jenkins JN, Park W, Mayee CD, Gotmare V, Dessauw D, Gband M, Du X, Jia Y, Constable G, Dillon S, **Abdurakhmonov IY** et al., 2010. Status of global cotton germplasm resources. *Crop Sci.* 50: 1161-1179.
18. **Abdurakhmonov IY**, Buriev ZT, Logan-Young CJ, Abdukarimov A, Pepper AE. 2010. Duplication, divergence and persistence in the Phytochrome photoreceptor gene family of cottons (*Gossypium* spp.). *BMC Plant Biol.* 10:119.
19. Buriev ZT, Saha S, **Abdurakhmonov IY***, Jenkins JN, Abdukarimov A, Scheffler BE, Stelly DM. 2010. Clustering, haplotype diversity, and locations of *MIC-3*, a unique root-specific defense-related gene family in Upland Cotton (*Gossypium hirsutum* L.). *Theor Appl Genet* 120(3):587-606 (*equally contributed as a first author).
20. Mavlonov GT, **Abdurakhmonov IY**, Abdukarimov A, Kantety R, and Sharma G. 2009. The Characterization of Major Proteins Expressed in Roots of Four *Gossypium* Species. *J. Cot Sci.* 13:256–264
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