

CURRICULUM VITAE

Name: Yerlan Turuspekov

Citizenship: Kazakhstan

Date and the Place of Birth: May 31, 1964; Semei, Kazakhstan

Education:

2018 (July) – Professor in Biology (Kazakhstan)

2012 (November) – Associate Professor in field of Biology (Kazakhstan)

1992 (July) – Candidate of Sciences (equal to Ph.D.). The work was publicly defended at the scientific commission of the Kazakh Research Institute of Agriculture, Almaty region, Kazakhstan. Place of research: Institute of Botany, Kazakh National Academy of Sciences, Almaty, Kazakhstan, CIS.

1981- 86 (June) – Graduated with diploma from Kazakhstan National University, Biology Department, Almaty, Kazakhstan, former USSR.

Positions and Fellowships:

2016 (May) – *present*: Head of Molecular Genetics Laboratory, Institute of Plant Biology and Biotechnology, Ministry of Education and Science, Timiryazev street 45, Almaty 050040, Kazakhstan

2008 (July) – 2016 (May): Deputy General Director, Institute of Plant Biology and Biotechnology, Ministry of Education and Science, Timiryazev street 45, Almaty 050040, Kazakhstan

2005 (Nov) – 2008 (June): Research Scientist, Dept. of Plants Sciences, Montana State University, Bozeman, MT, USA 59715

2001 (Apr) – 2005 (Nov): Researcher, Wheat and Barley Phys. Lab, National Institute of Crop Science, Tsukuba, Ibaraki, Japan

1999 (Mar) – 2001(Mar): Science and Technology Agency (STA) Fellowship from Japanese Ministry of Science, Barley Breeding Dept., Tohoku Agr Center, Morioka, Japan.

1998 (Jan) – 1999(Jan): NATO/Royal Society Fellowship, Cereals Dept., John Innes Centre, Norwich, UK

1996 (Sep) – 1997(Aug): Fulbright Fellowship, Molecular Biology Dept., Baylor University, Waco, TX, USA

1996 – 2001: Head of Plant Molecular Genetics Lab, Institute of Plant Physiology, Genetics and Bioengineering, National Biotechnology Center, Almaty, Kazakhstan.

1994 – 1996: Senior researcher, Plant Genetics Department, Institute of Plant Physiology, Genetics and Bioengineering, Ministry of Science, Almaty, Kazakhstan.

1990 – 1993: Research scientist, Department of Biochemical Genetics, Institute of Botany, Kazakh Acad. Sci.

1986 – 1990: Post graduate student, Depart of Biochemical Genetics, Institute of Botany, Kazakh Acad. Sci.

Permanent Mailing address:

Institute of Plant Biology and Biotechnology,
45 Timiryazev str, Almaty 050040, Kazakhstan

Tel & fax: 7-727 -3948006

email: yerlant@yahoo.com

Awards:

1995 – Award for Best Young Scientists of Kazakhstan, Kazakhstan Youth Scientists Foundation, Kazakh Academy of Science.

2014 – Award “For contribution to science development in the Republic of Kazakhstan” by Ministry of Education and Sciences of the Republic of Kazakhstan

2015 – “Science Leader” independent Award Winner for nomination “World Science Researcher from the Central Asian Region” by Thomson Reuters and JSC “National Center for Scientific and Technical Information” (Kazakhstan)

Participation in International projects:

1. EU INTAS grant 96-1663 “Application of molecular marker procedures in germplasm evaluation and gene tagging in small grain cereals”. Duration: 1996-1999.
Participants: Italy – Dr. Tuberosa R. (University of Bologna), UK – Dr. Quarrie S. (John Innes Centre), Kazakhstan – Dr. Turuspekov Y. and Dr. Abugalieva S. (IPPGb), Dr. Abugalieva A. and Dr. Yesimbekova M. (Kazakhstan Research Institute of Agriculture)
Coordinator – Dr. Tuberosa R. PI from Kazakhstan side - Dr. Turuspekov Y.
PI of the project – Dr. Korol A. PI from Kazakhstan side – Dr. Turuspekov Y.
2. CRDF grant KAB1-2938-AL-09 “The incorporation of low phytic acid alleles into barley cultivars of Kazakhstan”. Duration 2009-2010. PI – Dr. Victor Raboy (USDA, Aberdeen, Idaho, USA)
Co-PI – Dr. Yerlan Turuspekov (Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan).

3. Member of ADAPTAWHEAT project supported by 7th FP of the European Union. Duration: 2012-2015. Coordinator: Dr. Simojn Griffiths (John Innes Centre, Norwich, UK).
4. Member of project “Key techniques for sand Dune Stabilization and Vegetation Recovery in the typical regions of the countries along the Silk Road Economic Belt”, supported by Ministry of Science and Technology of the People's Republic of China. Duration 2017-2020. PI – Dr. X. Wang (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, Lanzhou, China)

Current list of local projects of the laboratory (2018-2020):

1. AP05131328. Title “QTL mapping of agronomic traits of durum wheat *Triticum durum* Desf. based on genome-wide association study”
2. AP05131592. Title “Genome-wide associations study of resistance to fungal diseases of soybean in Kazakhstan”
3. AP05131621 Title “Informational system for molecular genetic and botanical documentation of wild flora in Kazakhstan”

List of Publications:

1. Turuspekov Y., Genievskaya Y., Baibulatova A., Zatybekov A., Kotuhov Y., Imanbayeva A., Abugalieva S. Phylogenetic taxonomy of *Artemisia* L. species from Kazakhstan based on *matK* analyses // **Proceedings of the Latvian Academy of Sciences**. – 2017. . – Vol.6. DOI: 10.1515/prolas-2017-0068
2. Turuspekov Y., Baibulatova A., Yermekbayev K., Tokhetova L., Chudinov V., Sereda G., Ganai M.W, Griffiths S., Abugalieva S. GWAS for plant growth stages and yield components in spring wheat (*Triticum aestivum* L.) harvested in three regions of Kazakhstan // **BMC Plant Biology**. – 2017. – DOI: 10.1186/s12870-017-1131-2.
3. Zatybekov A., Abugalieva S., Didorenko S., Gerasimova Y., Sidorik I., Anuarbek Sh., Turuspekov Y. GWAS of agronomic traits in soybean collection included in breeding pool in Kazakhstan // **BMC Plant Biology**. – 2017. Suppl.4 doi: 10.1186/s12870-017-1125-0.
4. Abugalieva S., Volkova L., Genievskaya Y., Ivaschenko A., Kotukhov Y., Sakauova G., Turuspekov Y. Taxonomic assessment of *Allium* species from Kazakhstan based on ITS and *matK* markers // **BMC Plant Biology**. – 2017. – Vol.17 (2). – P.51-60. DOI: 10.1186/s12870-017-1194-0
5. Genievskaya Y., Abugalieva S., Zhubanysheva A., Turuspekov Y. Morphological description and DNA barcoding study of sand rice (*Aqriophyllum squarrosum*, Chenopodiaceae) collected in Kazakhstan // **BMC Plant Biology**. - 2017. doi: 10.1186/s12870-017-1132-1
6. Abugalieva S, Didorenko S, Anuarbek S, Volkova L, Gerasimova Y, Sidorik I, Turuspekov Y (2016) Assessment of Soybean Flowering and Seed Maturation Time in Different Latitude Regions of Kazakhstan. **PLoS ONE** 11(12): e0166894. doi:10.1371/journal.pone.0166894.
7. Turuspekov Y., Ormanbekova D., Rsaliev A., Abugalieva S. 2016. Genome-wide association study on stem rust resistance in Kazakh spring barley lines // **BMC Plant Biology**. 16(1):13-21. doi 10.1186/s12870-015-0686-z

8. Volis S., Ormanbekova D., Yermekbayev K., Abugalieva S., Turuspekov Y., Shulgina I. 2016. Genetic architecture of adaptation to novel environmental conditions in a predominantly selfing allopolyploid plant // **Heredity**. doi: 10.1038/hdy.2016.2
9. Turuspekov Y., Plieske J., Ganai M., Akhunov E., Abugalieva S. 2015. Phylogenetic analysis of wheat cultivars in Kazakhstan based on the wheat 90 K single nucleotide polymorphism array. **Plant Genetic Resources**. doi:10.1017/S1479262115000325.
10. Turuspekov Y., Abugalieva S., Ermekbayev K., Sato K. 2014. Genetic characterization of wild barley populations (*Hordeum vulgare* ssp. *spontaneum*) from Kazakhstan based on genome wide SNP analysis // **Breeding Science** 64:399-403.
11. Abugalieva S., Baibossynova S., Kondybayev A., Podolskih A., Turuspekov Y. 2014. Genetic and phenotypic variation of rice collection in Kazakhstan // **Proceeding of applied botany, genetics and breeding** 75(4):46-59.
12. Abugalieva A.I., Turuspekov E.K., Abugalieva S.I., Savin T.V. 2014. Genetic markers and biochemical evaluation in the winter triticale identification and breeding // **Communications in Agricultural and Applied Biological Sciences** 79(4):233-239.
13. Turuspekov Y., Sariev B., Chudinov V., Sereda G., Tokhetova L., Ortaev A., Tsygankov V., Doszhanov M., Volis S., Abugalieva S. 2013. Genotype x environment interaction patterns for grain yield of spring barley in different regions of Kazakhstan // **Russian journal Genetika** 49 (2): 196-205. 10.1134/S1022795413020129
14. Abugalieva S., Sereda G., Chudinov V., Sariev B., Turuspekov Y. 2013. Analysis of agronomic traits of oat world collection grown in three regions of Kazakhstan // **Proceeding of applied botany, genetics and breeding** 171:168-174.
15. Abugalieva A., Abugalieva S., Quarry S., Turuspekov Y., Chakmak I., Savin T., Ganeev V. 2012. Fe, Zn and S content in B kernels of doubled haploid population of common wheat Chinese Spring x SQ1 // **Vavilov's Journal of genetics and breeding** 16(4/2):894-900.
16. Nair SK, Wang N, Turuspekov Y, Pourkheirandish M, Sinsuwongwat S, Chen G, Sameri M, Tagiri A, Honda I, Watanabe Y, Kanamori H, Wicker T, Stein N, Nagamura Y, Matsumoto T, Komatsuda T. 2010. Cleistogamous flowering in barley arises from the suppression of microRNA-guided HvAP2 mRNA cleavage. **Proceedings of the National Academy of Sciences of the United States of America** (PNAS) 107(1):490-495.
17. Abugalieva S., Ledovskoy Y., Abugalieva A., Quarrie S., Turuspekov Y. 2010. Mapping of quantitative traits loci for grain protein content in common wheat // **Asian and Australasian Journal of Plant Science and Biotechnology** 4 (1):21-26, Print JSSN 1752-3818.
18. Ledovskoy Y., Abugalieva S., Turuspekov Y. 2010. Comparative Assessment of the Genetic Variation in Wild and Cultivated Barley Based on SSR Markers // **Asian and Australasian Journal of Plant Science and Biotechnology**. 4 (1):35-41, Print JSSN 1752-3818.
19. Turuspekov Y., Honda I., Watanabe Y., Stein N., Komatsuda T. 2009. An inverted and micro-colinear genomic regions of rice and barley carrying the *cly1* gene for cleistogamy. **Breeding Science** 59:657–663
20. Turuspekov Y., Beecher B., Darlington Y., Bowman J., Blake T.K., Giroux M.J. 2008. Hardness Locus Sequence Variation and Endosperm Texture in Spring Barley // **Crop Science** 48:1007–1019.

21. Turuspekov Y., Martin J.M., Bowman J. G. P., Beecher B. S., Giroux M. J. 2008. Associations between Vrs1 Alleles and Grain Quality Traits in Spring Barley *Hordeum vulgare* L.// **Cereal Chemistry** 85 (6):817–823.
22. Honda I., Seto H., Turuspekov Y., Watanabe Y., Yoshida S. 2006. Inhibitory effects of jasmonic acid and its analogues on barley (*Hordeum vulgare* L.) anther extrusion. **Plant Growth Regulation** 48:201-206.
23. Quarrie S.A., Steed A., Calestani C., Semikhodskii A., Lebreton C., Chinoy C., Steele N., Pljevljakusic D., Waterman E., Weyen J., Schondelmaier J., Farmer P., Saker L., Clarkson D.T., Abugalieva A., Turuspekov Y., Abugalieva S., Tuberosa R., Sanguineti M.C., Hollington P., Aragues P., Royo A., Dodig D. 2005. A genetic map of hexaploid wheat (*Triticum aestivum* L.) from the cross Chinese Spring x SQ1 and its use to compare QTLs for grain yield across a range of environments // **Theoretical and Applied Genetics** 110:865-880.
24. Turuspekov Y., Kawada N., Honda I., Watanabe Y., Komatsuda T. 2005. Identification and mapping of a QTL for rachis internode length associated with cleistogamy in barley. **Plant Breeding** 124:542-545.
25. Honda I., Turuspekov Y., Komatsuda T., Watanabe Y. 2005. Morphological and physiological analysis of cleistogamy in barley. **Physiology Plantarum** 124:524-531.
26. Zhang, D., D. W. Choi, S. Wanamaker, R. D. Fenton, A. Chin, M. Malatrasi, Y. Turuspekov, H. Walia, E. D. Akhunov, P. Kianian, C. Otto, K. Simons, K. R. Deal, V. Echenique, B. Stamova, K. Ross, G. E. Butler, L. Strader, S. D. Verhey, R. Johnson, S. Altenbach, K. Kothari, C. Tanaka, M. M. Shah, D. Laudencia-Chingcuanco, P. Han, R. E. Miller, C. C. Crossman, S. Chao, G. R. Lazo, N. Klueva, J. P. Gustafson, S. F. Kianian, J. Dubcovsky, M. K. Walker-Simmons, K. S. Gill, J. Dvorak, O. D. Anderson, M. E. Sorrells, P. E. McGuire, C. O. Qualset, H. T. Nguyen, T. J. Close. 2004. Construction and evaluation of cDNA libraries for large-scale EST sequencing in wheat (*Triticum aestivum* L.) // **Genetics** 168:595-608.
27. Turuspekov Y, Mano Y, Honda I, Kawada N, Watanabe Y, Komatsuda T. 2004. Identification and mapping of cleistogamy genes in barley // **Theoretical and Applied Genetics** 109:480-487.
28. Turuspekov Y., Adams R., Kearney C. 2002. Genetic diversity in three perennial grasses from the Semipalatinsk nuclear testing region of Kazakhstan after long-term radiation exposure // **Biochemical Systematics and Ecology** 30:809-817.
29. Volis S., Mendlinger S., Turuspekov Y., Esnazarov U. 2002. Phenotypic and allozyme variation in Mediterranean and desert populations of wild barley, *Hordeum spontaneum* Koch. // **Evolution** 56:1403-1415.
30. Volis S., Mendlinger S., Turuspekov Y., Esnazarov U., Abugalieva S., Orlovsky N. 2001. Allozyme variation in Turkmenistan population of wild barley, *Hordeum spontaneum* Koch. // **Annals of Botany** 87:435-446.
31. Turuspekov Y., Nakamura K., Yoshikawa R., Tuberosa R. 2001. Genetic Diversity of Japanese Barley Cultivars Based on SSR Analysis // **Breeding Science** 51 (3):215-218.
32. Adams R, Zong M, Turuspekov Y, Dafforn M, Veldkamp J. 1998. DNA fingerprints reveal clonal nature of *Vetiveria zizanioides* (L.) Nash, Gramineae, and sources of potential new germplasm // **Molecular Ecology** 7:813–818.

33. Adams R. and Turuspekov Y. 1998. Taxonomic reassessment of some Central Asian and Himalayan scale-leaved taxa of *Juniperus* (Cupressaceae) supported by random amplification of polymorphic DNA // **Taxon** 47:75-83.
34. Turuspekov Y., Abugalieva S., Mendlinger S., Volis S. 1996. Polymorphism in population of wild barley *Hordeum spontaneum* K. from Turkmenistan // **Russian Journal Genetika** 32(6):767-773.
35. Biyashev R., Turuspekov Y., Pomortsev A. 1991. The dynamics of allozyme frequencies in experimental populations of barley *Hordeum vulgare* L. **Russian Journal Genetika** 21(11):1388-1392