

## Author information



### 1. Surname, name:

Shansharova Dinara.

### 2. Position, academic degree, title:

doctor of technical sciences, docent (associate professor), professor of ATU.

### 3. Education:

- Almaty branch of the Dzhambul Technological Institute of Light and Food Industry, diploma with honors ИВ № 335365 dated June 26, 1982, specialty - "Technology of bakery, pasta and confectionery production";
- Almaty branch of the Zhambyl Technological Institute of Light and Food Industry, diploma with honors TB-I № 193941 dated June 16, 1993, specialty - "Economics and management in the sectors of the agro-industrial complex";
- diploma of candidate of technical sciences GK № 0009800 dated July 5, 2002, HAC of the MES of the RK, specialty 05.18.01 - "Technology of processing, storage and processing of cereals, legumes, cereals, fruits and vegetables and viticulture";
- diploma of docent (associate professor) DTS № 0000317 in the specialty "Technology of food products", November 25, 2005;

- diploma of doctor of technical sciences GD № 0002006 dated December 13, 2011, specialty 05.18.01 – “Technology of processing, storage and processing of cereals, legumes, cereals, fruits and vegetables and viticulture”.

#### **4. Field and directions of research, including participation in scientific projects with a brief description of the research results:**

##### *Area and directions of research:*

- technology of bakery, pasta and confectionery industries; food biotechnology.

##### *Participation in scientific projects:*

- scientific supervisor of the project "Comparative study of consumer properties of margarine "Ekouniversal 1203-32" and special-purpose fat "Oilprime 1003-32" in the production of flour confectionery". The project was commissioned by the oil and fat company EFKO (Russia), 2019-2020.

##### Results:

the technology of products with high biological value - oatmeal cookies, gingerbread, custard semi-finished products based on the use of margarine and special-purpose fat of the oil and fat company EFKO was developed, approbation was carried out in production.

- Responsible executor of the project "Galets-Kazakhstan" by order of the Ministry of Defense of the Republic of Kazakhstan, 2017-2018.

##### Results:

the technology of biscuits with a long shelf life for the needs of the military has been developed. The technology, recipes, parameters of the technological process of preparing biscuits in production conditions have been worked out.

- Responsible executor of the project "Development of technology for frozen semi-finished products based on the use of highly effective strains of microorganisms for the production of rye, wheat bread, confectionery", Ministry of Agriculture of the Republic of Kazakhstan, 2015-2017.

##### Results:

the selection of highly effective strains of lactic acid bacteria and yeast resistant to low temperatures was carried out for the preparation of starter cultures, sponges, and dough. The technology, recipes, parameters of the technological process for the preparation of rye, wheat bread, confectionery products based on frozen semi-finished products have been developed.

- Responsible executor of the project "Assessment of the impact of a single customs area on the agro-industrial complex of the Republic of Kazakhstan, including the food and processing industries of the Republic of Kazakhstan", Ministry of Agriculture of the Republic of Kazakhstan, 2010-2011.

Results:

evidence-based recommendations have been developed: to improve the competitiveness of small and medium-sized enterprises in the food industry in Kazakhstan, both in the domestic and international markets; on the technical re-equipment of the branches of the agro-industrial complex of the Republic of Kazakhstan for the formation of a modern type of industry with a high innovative component; on the range of manufactured products in the context of each branch of the food and processing industry, including export-oriented; export-import policy in the context of deepening integration of the countries of the Customs Union.

- Project implementer: "Development of technology for functional pasta for different groups of the population using raw materials of plant origin", 2013-2015.

Results:

a scientifically substantiated selection of species and varieties of local crops of plant origin was carried out on the basis of a study of the chemical composition, amino acid composition of proteins. The technology of functional pasta products for different population groups has been developed and implemented.

#### **5. List of the most significant publications (monographs, patents, developed standards):**

1. Shansharova D., Abdraimova D., Luděk Hřivna, Viera Šottníková. Some properties of endogenous  $\alpha$ -amylase inhibitor from wheat grain. // Journal of Microbiology, Biotechnology and Food Sciences. – February, 2014. –№2. - R.241-243. Scopus database;
2. Shansharova D., Abdraimova D. Developing An Assortment of Bakery Products In Kazakhstan From The Standpoint of Healthy Eating. // American-Eurasian Journal of Sustainable Agriculture ISSN: 1995-0748. - May, 2014. - № 8(6).- P. 6-10. Scopus database;
3. Shansharova D., Abdraimova D. Wheat bread functional purpose for prevention of cardiovascular diseases. // Bulgarian Journal of Agricultural Science. - 2014. - No. 5. - R. 34-38. Scopus database;
4. Shansharova D.A., Useмбаева Zh.K. Алменова А.С. Жалпы тамақ өндiрiсiнiн технoлoгiясы пəнiне арналған лабораторы қoқы қыралы. // Алматы: Баспасы АТУ, 2015. - 123p.;
5. Shansharova D.A., Дуiсекенoва R.G. Technology of wheat bread with the use of processed products of elite varieties of berries. // Zh. "Research, results". - 2015. - № 3. - P. 46-48;
6. Shansharova D.A. Influence of rice flour droblenkin on the quality of wheat bread. Zh. "Storage and processing of grain", Dnepropetrovsk, 2017, № 6, pp. 67-68;
7. Shansharova D.A., Iskakova G.K. Zhienbaevaa S.T. and others. Coderlik onim "Syzbazdar" galeti ST-15104006692-ZHShS-03-2017. // Алматы: АТУ publishing house, p. 44;
8. Shansharova D.A., Iskakova G.K. Zhienbaevaa S.T. and others. Technological regulations for the production of biscuits "Syzbazdar" with a long shelf life. Алматы: publishing house // IP "Kulikov", - 2017. - p. 76;

9. Shansharova D.A., Iskakova G.K. Zhiyenbaeva S.T. and others. Organizational standard for Syzbazdar biscuit confectionery products ST-15104006692-TOO-03-2017 // Almaty: ATU publishing house, - 2017. - p. 34;
10. Shansharova D.A., Khakimzhanov A.A. Features of inhibition of  $\alpha$ -amylase isoenzymes from wheat grain by sodium phytate. // J. Plant Physiology and Genetics. - Kiev City. - 2017. - T. 49. № 4. - P. 293-299;
11. Shansharova D.A., Khakimzhanov A.A. G. Inhibition of starch hydrolysis by  $\alpha$ -amylase from wheat grain by cyclodextrins. // "Proceedings of the National Academy of Sciences of the Republic of Kazakhstan". A series of biological and medical. - 2017. - No. 1. January February. pp. 174-179;
12. Shansharova D.A. Study of the quality of wheat bread using corn grits. // J. "Storage and processing of grain", Dnepropetrovsk, 2017, № 5, pp. 53-55;
13. Shansharova D.A. Doctorate. OShOSKOOT 7201 - Theory of production of storage and processing of crop products // Almaty: ATU publishing house, - 2017. - p. 54;
14. Shansharova D.A. TUP development. Doctorate. TTHPPR 7201 - Theory of Technology for Storage and Processing of Crop Products Model Curriculum. // Almaty: ATU publishing house, - 2017. - p. 54;
15. Shansharova D.A. Master's degree. ITHPPR 5301 – Innovative technologies for processing and storing crop products. Typical training program // Almaty: ATU publishing house, - 2017. - p. 51;
16. Shansharova D.A. TUP development. Master's degree. ITHPPR 5301 - Innovative technologies for storage and processing of crop products. Model curriculum. // Almaty: ATU publishing house, - 2017. - p. 51;
17. Shansharova D.A., Useмбаева Zh.K., Maksut A.M. Development of wheat bread technology with the use of processed products of cereal production. // J. "Bulletin of the Almaty Technological University", - 2017. - № 3. - P.30-33;
18. Shansharova D.A., Alashbaeva L.Zh. Screening as an improver for bakery products-selection of microalgae based on Biotest // J. "Bulletin of TarSU" scientific journal of mechanics and technology, No. 2 April-June 2018, p. 35-39;
19. Shansharova D.A., Alashbaeva L.Zh. Evaluation of the quality of wheat flour for microbiological spoilage. // J. "Bulletin of the Almaty Technological University" 2018. - № 4. - P. 56-61;
20. Shansharova D.A., Alashbaeva L.Zh. Biday unnyn zakymdauna sapalyk бага take. // Zh. "Bulletin of the Almaty Technological University" 2018. - № 4. - P. 56-62;
21. Shansharova D.A., Useмбаева Zh.K. The quality of wheat bread with the use of brewer's yeast. Assessment of compliance with regulatory documents. // J. Agrarian Bulletin of the Urals, № 8 (182), 2018, Yekaterinburg, pp. 54-58;
22. Shansharova D.A., Useмбаева Zh.K., Alashbaeva L.Zh. Screening as an improver for bakery products-selection of microalgae based on Biotest // Zh. "Bulletin of TarSU" scientific journal of mechanics and technology, No. 2 April-June 2018, p. 35-39;

23. Shansharova D.A., Alashbaeva L.Zh. Evaluation of the quality of wheat flour for microbiological spoilage. // J. "Bulletin of the Almaty Technological University" 2018. - № 4. - P. 56-61;
24. Shansharova D.A., Alashbaeva L.Zh. Development of a purification method for an  $\alpha$ -amylase inhibitor for use in bread technology using germinated wheat flour. "Food. Ecology. Quality", Novosibirsk, September 27-28, 2018, pp. 717-719;
25. Shansharova D., Khakimzhanov A.A. Properties and specific functional features of wheat grain  $\alpha$ -amylase/subtilisin inhibitor. // Applied Biochemistry and Microbiology, 2018, Vol. 54, no. 2, pp. 215–219. © Pleiades Publishing, Inc., Moscow 2018, P. 215-219, ISSN 0003-6838, Scopus database, Web Of Science, IF-2,3;
26. Shansharova D.A., Khakimzhanov A.A. Properties and functional features of  $\alpha$ -amylase/subtilisin inhibitor in wheat grain. // J. Applied Biochemistry and Microbiology, 2018, Volume 54, No. 2, pp. 108-114. Scopus database, Web Of Science, IF-2,3;
27. Shansharova D.A., Baiysbaeva M.P. “Halykka kogamdyk tamaqtandyruuda kyzmet körsetetin käsiporyndardyn HACCP kagydalaryn kabyldau” // Oku qyraly. Baspa residential complex "Sagautdinova" Allmaty, 2018, 73 p.;
28. Shansharova D.A., Baiysbaeva M.P. Influence of margarine "Ekouniversal 1203-32" and special purpose fat "Oilprime 1003-32" on the quality of custard gingerbread. // J. "Bulletin of the Almaty Technological University" 2019. - № 1. - P. 56-62;
29. Shansharova D.A., Nurgozhina Zh.K. Research quality of enriched breads in storage. // "Scientific foundations for improving the efficiency of agricultural production", Kharkiv, Ukraine, October 30-31, 2019, p. 11-12;
30. Shansharova D.A., Nurgozhina Zh.K., Alashbaeva L.Zh. The use of grain additives in the production of bread // J. "Bulletin of the Almaty Technological University" 2019. - № 1. - P. 56-62;
31. Shansharova D.A., Alashbaeva L.Zh. Develop a recipe for a finished functional bread product with the addition of calcium-rich crops and lysozyme to whole-grain wheat flour. J. Mechanics and technologies, Taraz, № 2 2020, p. 96-102;
32. Shansharova D.A., Sarsekova A.K., Grivna L. Non-traditional types of local vegetable raw materials in the production of gluten-free flour confectionery. // J "Mechanics and Technologies, Taraz, № 3, 2020, p. 34-38;
33. Shansharova D.A., Sarsekova A.K., Grivna L. Development of recipes and technology for gluten-free cookies based on natural plant materials. // J. "Mechanics and Technologies, Taraz, № 3, 2020, p. 38-42;
34. Shansharova D. A., Alashbayeva L. Study of the effect of cabbage juice (*Brássica olerácea*), as a source of inhibition of microorganisms of the genus *Bacillus* in the preparation of whole grain wheat bread. // International Journal of Engineering Research and Technology. ISSN 0974-3154, Volume 13, Number 11 (2020), pp. 3691-3698. Scopus database;
35. Shansharova D.A., Alashbaeva L.Zh. Physical and chemical properties of whole grain wheat bread with cabbage (*Brassica oleracea*) extract // J. Mechanics and technologies, Taraz, № 2 2020, p. 91-96;

36. Shansharova D.A., Alashbaeva L.Zh. Nan onimderin andirude aқbas қуғуққабат shyрынyn (Brassica oleracea) paydalanu tasili. Paidals molelge patent № 6331. 20.08.2021;

37. Shansharova D. A., Alashbayeva L. Development of technology for bakery products. // Food Science and Technology ISSN 010-2061(Print) ISSN 1678-457X (online) doi.jrg/10.1590/fst.61120. № 41(3).2021year. P.775-781. Scopus database, Web Of Science;

38. Shansharova D. A., Nurgozhina Zh. The influence of grain mixtures on the quality and nutritional value of bread. // Potravinarstvo Slovak Journal of Food Sciences. vol. 16, 2022, p. 320-340, <https://doi.org/10.5219/1767>. ISSN: 1337-0960 online. www.potravinarstvo.com © 2022 Authors, CC BY 4.0. Scopus database, Web Of Science.

## **6. Scientific internships:**

- participation in the European Union project Tempus on food safety Institute of food safety Wageningen U. Work programs in this area for undergraduates have been prepared. Netherlands, November 2005;

- postdoctoral research fellowship under the European Union program - Erasmus Mundus at the University of Bologna, Italy from 1.09.2011 to 30.03.2012 (6 months);

- postdoctoral scientific internship under the program of the German Academic Exchange Service DAAD at Hohenheim University, Stuttgart, Germany, from 1.09.2015 to 30.11.2015 (3 months);

- internship at the University of Milan, Italy, within the framework of the Grant of the Ministry of Education and Science of the Republic of Kazakhstan "The best teacher of the university", from 4 to 10 July and from 20 to 26 July 2017;

- internship at the Dresden Technical University, Germany, within the framework of the Grant of the Ministry of Education and Science of the Republic of Kazakhstan "The best teacher of the university", from July 10 to July 20, 2017;

- participation in the GIZ project on the basis of the Kyrgyz state technical university named after I. Razzakov, February 2018;

- diploma for Delivering lectures on food technology at Mendel University in Brno, Czech Republic, from November 18 to 23, 2019;

- internship at the Mühlenchemie Technology Center, "Research of the quality of flour products using gluten-free raw materials based on the use of devices from Perten Instruments, Shopin Technologies", Almaty, October 4-22, 2021.

## **7. Achievements in research, teaching activities (awards):**

- Badge "For merits in the field of science of the Republic of Kazakhstan", certificate № 85, dated November 25, 2017;

- Grant of the MES of the RK "The best teacher of the university", 2016;

- Member of the jury of the International competition of scientific student works "Science of the Black Sea - 2020, 2021, 2022" in the field of "Food Sciences and Technologies".

Prepared by:

- 2 candidates of technical sciences: Zhakayeva N.T. (2008), Almenova A.S. (2010);

- 2 PhD: Abdraimova D.B. (2014), Alashbayeva L.Zh. (2021).

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