

Nurgul A. Sultanova

Professor,
Doctor of Chemical
Sciences

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Professional activities:

The total work experience is more than 20 years.

- Senior lecturer of Al-Farabi Kazakh National University;
- Deputy Dean of Al-Farabi Kazakh National University;
- Deputy Head of the Department of Organic Chemistry and Chemistry of Natural Compounds of Al-Farabi Kazakh National University;
- Associate Professor of the Department of Chemistry and Technology of Organic Substances, Natural Compounds and Polymers of Al-Farabi Kazakh National University;
- Acting Professor of the Department of Chemistry and Technology of Organic Substances, Natural Compounds and Polymers of Al-Farabi Kazakh National University;
- Professor of the Department of Chemistry

Education, academic degree:

Bachelor of Chemistry, Faculty of Chemistry, Al-Farabi Kazakh National University;

Master of Chemistry, Faculty of Chemistry, Al-Farabi Kazakh National University;

Candidate of Chemical Sciences, specialty 02.00.10-bioorganic chemistry, Al-Farabi Kazakh National University;

Doctor of Chemical Sciences in specialty 02.00.10-bioorganic chemistry, Al-Farabi Kazakh National University.

Research fields: bioorganic chemistry, chemistry of natural compounds. Investigation of the chemical composition of biologically active substances (polyphenolic, terpenoid, etc. compounds) from plants and identification of their pharmacological activity (antioxidant, andiabetic, antitumor, antibacterial, antifungal, etc.), creation on their basis of new medicines for medicine and agriculture.

Scientific grants:

- * Development of scientific foundations for the creation of biomaterials using nanostructured sorbents;
- INTAS project "The use of halophyte species diversity for the rehabilitation of salt-affected soil and the production of biologically active compounds in the Aral sea";
- * "Isolation, purification and production of biologically active substances from plants of Kazakhstan" with RSE PCV "Scientific Center of Anti-infectious Drugs" of the Committee of Industry of the Ministry of Industry and Trade of the Republic of Kazakhstan;
- * Development of antidiabetic drugs based on domestic plant raw materials, (scientific supervisor);
- * Technology of processing the aboveground part of industrially significant wild plants of the Republic of Kazakhstan to obtain original medicines in the form of tinctures, tablets and capsules on their basis and their comprehensive study;
- * An innovative project under the grant program of Groups of Senior Researchers (GSNS) for the commercialization of scientific research "Creation of the production of new hydrogels medicinal forms of phytopreparations based on plant raw materials of Kazakhstan".

Courses: Bioorganic chemistry (E), Chemistry of natural compounds (E), Technology of processing plant raw materials (E), Physico-chemical methods of analysis of BAS (M, B), Chromatographic methods of analysis (B), Organic Chemistry (B), Fundamentals of Biochemistry (B).

Scientific internships:

- Research Institute of Chemical Sciences, International Center of Sciences, Karachi, Pakistan (2000, 2001);
- Institute of Organic Chemistry SB RAS, Novosibirsk, Russia (2003);
- University of Rostock, Rostock, Germany (2012);
- University of Potsdam, Potsdam, Germany (2013);
- Al-Farabi Kazakh National University, Institute of Advance Training (2019).

and Biochemistry of Astana Medical University;

 Since September, 2021
 Professor of the Department of Chemistry of the L.N. Gumilev Eurasian National University.

Awards:

Scholarship for talented young scientists of the President of the Republic of Kazakhstan (2004-2006):

Grant of the President of the Republic of Kazakhstan to support young talented scientists (2003);

Honorary diploma and silver medal the International Foundation "Scientific Partnership", Moscow (2013)

Other activities:

Editorial board of the international journal "Eurasian Chemical- Technological Journal" (Scopus).

Main publications: The H Index is 4 (5 Scopus). More than 150 scientific publications; 15 patents of the Republic of Kazakhstan; 2 books, 5 textbooks.

- 1. **Sultanova N.A.**, Makhmoor T., Omurkamzinova V.B., Abilov Zh.A., Atta-ur-Rahman, M.Iqbal Choudhary. Antioxidant and antimicrobial activities of *Tamarix ramosissima* // J. Ethnopharmocology.- **2001.** Vol.78.- P. 201-205
- 2. **Sultanova N.A.,** Abilov Zh.A., Omurkamzinova V.B., M.Iqbal Choudhary. Flavonoids of the aerial part of *Tamarix hispida* // Chemistry of Natural compounds.- **2002.** Vol.38.- № 1.- P. 98-99
- 3. **Sultanova N. A.,** Makhmoor T., Yasin A., Abilov Zh.A., Omurkamzinova V.B, Atta-ur-Rahman, Choudhary M.I. Isotamarixen A New Antioxidant and Propyl Endopeptidase-Inhibiting Triterpenoid from *Tamarix hispida* // Planta Medica. **2004**. Vol. 70, №1. P. 65-67
- 4. Umbetova A.K., Choudhary M.I., Sultanova N.A., Abilov Zh.A. Biological active compounds of *Camphorosma monspeliacum* // Chemistry of Natural compounds. **2005**. № 6. P. 598-599
- 5. Siddiqui B.S., Karzhaubekova Zh.Zh., Burasheva G.Sh., **Sultanova N.A.** Triterpenoids from the Aerial Parts of *Kalidium foliatum* // Helvetica Chimica Acta. **2006**. –Vol. 89. P. 962-970
- Siddiqui B.S., Karzhaubekova Zh.Zh., Burasheva G.Sh., Sultanova N.A. Chemical Constituents of the Aerial Parts of Kalidium foliatum // Chem. Pharm. Bull. – 2007. – Vol. 55, № 9. – P. 356 – 360
- 7. **Султанова Н.А.** Терпеноидный состав некоторых эугалофитов семейств *Tamaricaceae* и *Chenopodiaceae* // Вестник НАН РК, сер. хим. **2009**.-№6. С.62-66.
- 8. Abdel-Hamid R.A., Abilov Zh.A., Saitjanova Sh.B., Gemedzhieva N.G., **Sultanova N.A.** Prelimanary phytochemical screening of *Zygophyllum fabago* // International Journal of Biology and Chemistry.-**2013.** № 2 (6).-P. 60-64
- 9. **Sultanova N.A.**, Abilov Zh.A., Umbetova A.K., Chaudhary M.I. Biological active terpenoids from *Tamarix species* //Eurasian Chemico-Technological Journal, **2013**.- Vol.15. №3.-P. 219-226.
- 10. Abdel-Hamid R. A., Ross S.A., Abilov Z.A., **Sultanova N.A.** Investigation of lipophilic contents and biological activities of hexane fraction of *Zygophyllum fabago* // Applied chemistry and biotechnology. − **2014**. − Vol.8, №3. − P. 70-74.
- 11. Abdel-Hamid R. A., Ross S.A., Abilov Z.A., **Sultanova N.A.** Flavonoids and sterols from *Zygophyllum fabago* // Chemistry of Natural Compounds. -**2016**.- Vol.52. № <u>2</u>.- P 318-319