Nataliia Kozak

Cirriculum vitae

Email: nataliia.kozak01@universitadipavia.it

Skill Highlights

- Molecular biology techniques: DNA extraction, PCR, restriction analysis.
- Statistical and analytical analysis of the experimental data: analysis of variance, group comparisons, probabilities, test authenticity etc. Practical experience with Microsoft Office, STATISTICA
- Stem cell cultivation
- Animal models: drosophila, frog

Personal qualities:

- Strong decision maker
- Creative
- Friendly and communicative
- Complex problem solver
- Responsible

Education

- **2010 – 2015**: V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

Genetics and Cytology Department

30.06.2014 **B.Sc.**

07.06.2015 **M.Sc.** (with honors)

Master thesis: Single nucleotide polymorphism of gene interleukin-6 with type 2 diabetes mellitus.

- **2017 – September 2021: PhD student** on specialty 091 Biology (Genetics and Cytology Department) Theme: Dynamics of natural selection in the urbanized Ukrainian populations.
- **October 2021 – present: PhD student** in Genetics, Molecular and Cellular Biology at the University of Pavia, Italy.

Professional experience

October 2015 – November 2020: lecturer in Kharkiv National Medical University, Medical Biology department. 2015-2016 course held in Russian and Ukrainian languages. 2016-2020 course held in English language.

October 2017 – November 2019: Consultant of 3 master's and 3 bachelor's theses in V.N. Karazin Kharkiv National University

January 2015 – June 2015: engineer in Cryobiochemistry Department of the Institute for Problems of Cryobiology and Cryomedicine of the National Academy of Sciences of Ukraine. Practical experience in cell cultivation and setting of PCR-RFLP

Research Experience

- **Genetics and Cytology Department of V.N. Karazin Kharkiv National University** (Kharkiv, Ukraine): study of reproductive characteristics and dynamics of natural selection in the urbanized Ukrainian population (Crimean Tatar women from Simferopol, Kharkiv citizens, Lutsk citizens, Odessa citizens) 2013-present.
- **Laboratory of the pathophysiology and medical genetics, V. Danilevsky Institute of Endocrine Pathology Problems of National Academy of Medical Science** (Kharkiv, Ukraine): detection of interleukin-6 gene polymorphism *rs2069840* (174G/C) by PCR-RFLP, 2013- 2015.
- **Cryobiochemistry Department of the Institute for Problems of Cryobiology and Cryomedicine of the National Academy of Sciences of Ukraine:** establishing methods of PCR and RT-PCR; recognition of differentiation mesenchymal stromal cells in the early stages by RT-PCR, 2015.

Awards and scholarships

- Awarded with enhanced scholarship for successful studying (2014-2015)
- Full scholarship from Ministry of Education and Science of Ukraine for PhD program (01.10.2017 – 30.09.2021)

Languages

English – B2; Ukrainian – native; Russian – native;

Certifications

Refresher course (certificate): **increasing the psychological and pedagogical qualifications of higher education teachers (2015-2016) KhNMU**.

Cambridge English Level 1 Certificate in ESOL International (First)*. B2 level. Score 170. Certificate number B2314180. Date of issue 24.07.2020.

Scientific interests

Population genetics, demographic genetics, medical genetics, molecular biology, cellular biology.

Scientific production

Articles:

1. **KOZAK N. O.,** ATRAMENTOVA L. A. Indexes of Natural Selection, Migration and Reproductive Characteristics in Lutsk Population, West Ukraine. *European Journal of Development Studies,* Vol. 1, No 3, p. 59 – 64, October 2021. DOI: https://doi.org/10.24018/ejdevelop.2021.1.3.41

2. **KOZAK N. O.,** ATRAMENTOVA L. A. Dynamics of indexes of reproduction and selection in three generations of the urbanized population. *Factors in experimental evolution of organisms*, (26), p.61-66, September 2020. DOI: https://doi.org/10.7124/FEEO.v26.1242

3. **KOZAK N. O.,** ATRAMENTOVA L. A. Crow's indexes in ethnic and social groups of urban population. *Factors in experimental evolution of organisms,* (25) p.49-54, September 2019. DOI: https://doi.org/10.7124/FEEO.v25.1138

4. **KOZAK N. O.,** ATRAMENTOVA L. A. Indexes of natural selection in Kharkiv population. *Factors in experimental evolution of organisms,* (22) p.56-61, September 2018. DOI: https://doi.org/10.7124/FEEO.v22.924

5. **KOZAK N.,** ANTSUPOVA V., MUSTAFAEVA L. Comparison of reproductive characteristics of women from Chernivtsi and Simferopol. / *Academic and scientific challenges of diverse fields of knowledge in the 21st century*, Proceedings of the VII All-Ukrainian Student Scientific Conference with International Participation, Kharkiv, p. 124-128, March 2018. http://foreign-languages.karazin.ua/research/conference-materials

6. **KOZAK N**., POCHERNYAYEV A., LYTKIN D., GORSHUNSKA M., POCHERNYAYEVA S. Single nucleotide polymorphism of interleukin-6 (*IL-6*) in residents of Kharkiv patients with type 2 diabetes mellitus. *Factors in experimental evolution of organisms,* (16), p.206-209, September 2015. http://utgis.org.ua/journals/index.php/Faktory/issue/view/Faktory_V16_2015

7. MUSTAFAEVA L., **KOZAK N.** Vital characteristics of the reproduction of Crimean Tatar women / Human genetics and pathology. *Problems of evolutionary medicine,* Tomsk, Russia, (10), p.57- 59, 2014. http://www.medgenetics.ru/UserFile/File/Doc/Conference%202014/SBORNIK%202014.pdf

8. MUSTAFAEVA L., **KOZAK N.** Reproductive characteristics of Crimean Tatar women. *Factors in experimental evolution of organisms,* (14), p.214-217, September 2014. http://utgis.org.ua/journals/index.php/Faktory/issue/view/Faktory_V14_2014

Conferences:

1. **KOZAK N.,** ATRAMENTOVA L. Reproductive characteristics and selection indexes of Crimean tatar women according to their sub-ethnic groups. Abstract book "Open readings 2021", 64rd international conference for students of Physics and natural sciences, March 2021. – Vilnius, Lithuania. p.326.
2. **KOZAK N.,** ATRAMENTOVA L. Dynamics of natural selection in the urbanized Ukrainian population. Abstract book "Open readings 2020", 63rd international conference for students of Physics and natural sciences, March 2020. – Vilnius, Lithuania. p.103.
3. **KOZAK N.** Indexes of natural selection in different social and ethnic groups of Kharkiv population. Abstract book "Biology: from a molecule up to the biosphere" XIV international young scientists' conference. Kharkiv: V.N. Karazin Kharkiv National University, November 2019. p.85-87.

4. **KOZAK N.** Differences in reproductive behavior of women from Chernivtsi and Simferopol. Abstract book “Biology: from a molecule up to the biosphere” XIII international young scientists’ conference. Kharkiv: V.N. Karazin Kharkiv National University, November 2018. p.81-82.
5. ANTSUPOVA V. V., **KOZAK N. O.,** KURITSINA S. A., USHKO YA. A., ANOKHINA S. I. Investigation of differential fertility in the Chernivtsi population. “Innovative technology in medicine: experience of Poland and Ukraine”, April 2017, Lublin, Republic of Poland. p. 8-10.
6. POCHERNYAEV A., TYZHNENKO T., ATRAMENTOVA A., GORSHUNSKAYA M., KRASOVA N., LESHCHENKO ZH., GLADKIKH A., OPALEYKO YU., LYTKIN D., **KOZAK N.,** POLTORAK V. Interrelation of *174 G>C* gene polymorphism and circulatory levels of interleukin-6 protein in patients with type 2 diabetes mellitus. "Fourteenth Danilevsky Readings", Institute of Endocrine Pathology. V.Ya. Danilevsky National Academy of Medical Sciences of Ukraine. Kharkiv, March 2015. p.142-143
7. LYTKIN D., **KOZAK N.,** POCHERNYAEV A. Association of polymorphism *174 C / G* of the interleukin-6 *(IL-6*) gene with the incidence of type 2 diabetes mellitus on the example of the Slavic population of Kharkiv. “Ukrainian Biopharmaceutical Journal”, 2015, 5 (40). - Kharkiv: NUPh. p.53
8. POCHERNYAEV A., LYTKIN D., **KOZAK N**., ATRAMENTOVA A., KRASOVA N., GORSHUNSKAYA M., OPALEYKO YU., TYZHNENKO T., POLTORAK V. Polymorphism *174 G>C* of the interleukin-6 gene in patients with type 2 diabetes mellitus. “Endocrinology: abstracts of the VIII Congress of the Association of Endocrinologists of Ukraine”. (19), - Kyiv, Institute of Endocrinology and Metabolism. VP Commissar of the National Academy of Medical Sciences of Ukraine. October 2014. p.339-340
9. **KOZAK N**., KULYMOVA M. Self-renewal of tree species in oak forests of NNP "Gomolshanskiy forests". “Biology: from a molecule up to the biosphere” XII international young scientists’ conference. Kharkiv: V.N. Karazin Kharkiv National University, November 2012. p.229.
10. HLADKOVA Y., **KOZAK N**., KULYMOVA M. Determination of the proportion of triploids among *Pelophylax esculentus* in the NNP "Gomolshanskiy forests" and its environs. “Biology: from a molecule up to the biosphere” XII international young scientists’ conference. Kharkiv: V.N. Karazin Kharkiv National University, November 2012. p.261-262.