

ZEYNAB MIKAYILZADA

Biologist | PhD Candidate in Molecular Biology

Phone: +994 77 717 79 29 Email: zeynab.mikayilzada@khazar.org , zeynebmirezade13@gmail.com

LinkedIn: Mikayilzada Zeynab ResearchGate: Mikayilzada Zeynab

ABOUT ME

Hard-working, creative, and proactive biologist with specialisation in Biology and Nanobiotechnology, currently pursuing a PhD in Molecular Biology. Combines a strong research background with hands-on teaching experience, and is constantly developing new skills and abilities. Passionate about communicating scientific concepts clearly and motivating students to engage with the natural sciences.

WORK EXPERIENCE

Lab Technician

2022

Medisan (Medikus) Clinic

- Performed clinical laboratory tests and sample analysis
- Handled and processed biological samples
- Operated laboratory equipment and instruments
- Recorded and reported test results in accordance with laboratory protocols
- Maintained laboratory hygiene and safety standards

Private Biology Teacher

2021 – Present

- Delivered individual biology lessons tailored to students' academic needs
- Prepared lesson plans and learning materials covering core biology topics
- Motivated and supported students in developing scientific understanding

EDUCATION AND TRAINING

PhD Candidate, Molecular Biology

2025 – Present

Khazar University

Title of qualification: PhD in Molecular Biology (in progress)

EQF Level: 8

- Advanced theoretical knowledge of molecular biology (gene expression, DNA/RNA analysis, protein structure and function)
- Bioinformatics and computational biology (sequence analysis, genomic data processing, biological databases)
- Statistical analysis and data interpretation methods for biological research
- Academic knowledge of laboratory techniques (PCR, gene cloning, sequencing, cell culture, molecular assays)
- Scientific ethics, biosafety and research methodology

Master's Degree, Nanobiotechnology (English)

2022 – 2024

Baku State University

Title of qualification: Master's Degree in Nanobiotechnology

EQF Level: 7

- Theoretical and practical knowledge of nanobiotechnology (nanomaterials, nanostructures, bio-nano interactions)
- Green synthesis methods of nanoparticles using plant extracts and biological agents
- Characterization methods (UV-Vis spectroscopy, FTIR, SEM/TEM, XRD analysis of nanoparticles)
- Science applied to biological and nanoscale systems (molecular biology, biochemistry, environmentally friendly synthesis approaches)

Dissertation: Synthesis of iron oxide nanoparticles in flavone extracts obtained from the Rosa Canina L. plant and evaluation of antioxidant activity.

Bachelor's Degree, Biology (Russian)

2017 – 2021

Baku State University

Title of qualification: Bachelor's Degree in Biology

EQF Level: 6

- Theoretical and practical knowledge of biological sciences (botany, zoology, genetics, cell biology)
- Laboratory techniques and scientific research methods (microscopy, sample analysis, experimental procedures)
- Science applied to living organisms (biochemistry, physiology, microbiology, ecology)
- Scientific ethics, safety and environmental regulations

PUBLICATIONS

Mechanisms of Influence of Size and Surface Charge on the Bioaccumulation of Nanoparticles in Plants June 2026
Nature and Science journal. Full text available on ResearchGate (profile: Mikayilzada Zeynab).

CONFERENCE PRESENTATIONS

Evaluation of Antioxidant Activity in Rosa Canina Fruits With and Without Seeds (2023)

“Actual Problems of Biology in the Context of Sustainable Development” — Ministry of Education of the Republic of Azerbaijan, Baku State University

Green Synthesis of Iron Oxide Nanoparticles: A Sustainable Approach for Nanomaterial Production

International Conference “Heydar Aliyev and the Development of Modern Biology: Achievements and Challenges” — Ministry of Education, ANAS and AR ETN Institute of Molecular Biology and Biotechnologies

Measurement of Antioxidant Activity of Rosa Canina L. Fruits by the DPPH Method

International Conference “Heydar Aliyev and the Nature of Azerbaijan” (100th anniversary of Heydar Aliyev) — ANAS and AR ETN Institute of Molecular Biology and Biotechnologies

Eco-Friendly Production of Iron Oxide Nanoparticles: Advancing Green Nanotechnology (May 2024)

Scientific-Practical Conference “Role of National Leader Heydar Aliyev in Improving the Environment in Azerbaijan” — Ministry of Ecology and Natural Resources, ANAS, Ministry of Science and Education

PROFESSIONAL DEVELOPMENT

- Workshop: Analysis of Molecular Markers — Software used: Cervus, MEGA, GenAlEx (Dec 2025)
- KS3 Science — Landau Academy, Landau School (Jan–Jun 2023)
- “Her Improvement” Startup Project — Azercell (Oct 2022–May 2023)

CERTIFICATES

- “Her Improvement” Development Program — FemTech / Azercell, 2023
- Application of Modern Genetic Research in Clinical Practice — IMC, Rabin Medical Center, Apr 2023
- Actual Problems of Biology in the Context of Sustainable Development — Baku State University, May 2023

PERSONAL SKILLS

Language skills

Azerbaijani — Native | Russian — Native | Turkish — Native | English — Upper-Intermediate

Digital skills

Microsoft Office Programs; JASP / Jamovi (statistical software)

Occupational skills

Laboratory Equipment Handling; Specimen Collection

Communication and organisational skills

Public Speaking; Active Listening; Motivating Students; Group Learning Mechanics;