

Margarita Kislukhina

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Education

- 09/2014 - 06/2016: Master's Degree of Science in Biology, Taras Shevchenko National University, Kyiv, Ukraine
Thesis: "*Development of anticancer metronomic photodynamic therapy*"
Mentor: Dr. Pr. Gamalia M. F.
GPA: 3.90
- 09/2010 - 06/2014: Bachelor Degree of Science in Biology, Taras Shevchenko National University, Kyiv, Ukraine
Thesis: "*Metronomic photodynamic therapy*"
Mentor: Dr. Pr. Gamalia M. F.

Work Experience

- 05/2025 - now **EMORY University, Department of Urology**
Visiting Researcher
Design and development of novel antibodies and protein binders targeting MHC:peptide complexes using computational protein engineering and single B cell-based discovery (single-cell sequencing). Optimized binding interfaces through in silico design and validated interactions via structural modeling and molecular docking.
- 09/2021 - now **STAB VIDA, LDA./ NOVA University of Lisbon**
Marie Curie Early-Stage Researcher/Ph.D. student
New immunoassay development, monoclonal antibody development using the hybridoma technique and phage display cloning, recombinant antibody development, biocorona mapping, and detection assay development.
- 09/2017 - 11/2020: **MAIN MILITARY MEDICAL CLINICAL CENTER «MMCH»**
Volunteer
Statistical processing, classification of drugs, document management, storage management, assistance with sponsor searches, and organizational support.
- 06/2016 - 08/2017: **LLC "KAERHER"**
Assistant
Document management, working with a large amount of input data, statistical processing of data, organization of local and international events, registration of contracts, etc.
- 02/2015 - 03/2015: **Internship at the Institute of Materials and Environmental Chemistry of the Hungarian Academy of Sciences, Center for Natural Sciences**
Synthesis of carbonic microparticles with silver or gold spray for use as an antibacterial agent for water purification

11/2013 - 06/2016: **RE Kavetsky Institute of Experimental Pathology, Oncology, and Radiobiology of the National Academy of Sciences of Ukraine, Technician**

Biological research - photodynamic therapy of oncological and bacteriological diseases, participation in the creation of a new composite for target drug delivery, participation in the development of the method of chronic photodynamic therapy of tumors, the use of superparamagnetic particles with silver as an antibacterial agent

Qualifications

Biology skills:

- Gene cloning: design of plasmid DNA constructs, primer design, cDNA synthesis, PCR, LAMP, FRET
- Epigenetic: DNA/RNA isolation from cells and tissues, real-time PCR
- Monoclonal antibody development (hybridoma technique, phage display), recombinant antibody development
- RNA analysis: isolation and purification of total RNA from bacteria, mammalian cells, and tissues, transcriptional profiling, denaturing RNA gel electrophoresis, quantitative RT-PCR
- Protein purification and characterization: bacterial protein expression and purification, SDS/PAGE electrophoresis, western and dot blot, immunoprecipitation, HPLC, LPLC, AKTA system, solid-phase peptide synthesis
- Cell culture: T and B lymphocytes cell culture, bacterial cell culture and transformation, mammalian cell culture, glomerular cells of C6 rats culture, and stem cells isolation
- Immunohistochemistry: Enzyme-linked immunosorbent assay (ELISA)
- Immunofluorescence, confocal microscopy
- Developing new forms of pharmaceutical products and compounds, such as antiseptics, targeted drug delivery systems, and detection assays
- Tests for bactericidal effects of antimicrobial agents in vitro
- Work with nanoparticles (core-shell gold and silver nanoparticles, silica nanoparticles with different types of surface functionalization, etc.)
- NanoDrop Microvolume Spectrophotometers and Fluorometers

Animal Models

Mouse and rat handling, oral gavage, intraperitoneal and tail injections, and small animal surgery.

Leadership

Exceptional communication, organizational, public speaking, and mentoring skills

Languages

English (advanced), Ukrainian (native)

Additional Information:

Work with statistics at Origin, Mathematics, JAVA, and R.

Scientific interests:

- Development of point-of-care diagnostics technics
- Nanotechnology applications for immunotherapeutic strategies and cancer vaccines
- Immunotherapy and vaccine development

Posters and Oral Presentations

11.2013 Scientific and practical confrontation "Cell technologies in obstetrics, gynecology, neonatology, and pediatric neurology", Kyiv, Ukraine

04.2014 Workshop "Biochemical Methods for the Identification of Bacteria", Kyiv, Ukraine, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

Kislukhina M.O., Taranetz L.P. "Using the chronic variant of photodynamic therapy on glomerular cells of C6 rats", oral and poster presentation at the International Conference "Microbiology and immunology - the development outlook in the 21st century", Kyiv, Ukraine, 2014 - p. 145

Kislukhina M.O., Lavrynenko O.M., Dolynskiy G.A., Nosov V.V, "Antimicrobial properties of FeFe₂O₄ and Ag⁰ nanocomposites", poster presentation at the III International Conference "Nanotechnologies". Tbilisi, Georgia, 2014, p. 75 - 76.

Kislukhina M.O., "Application of a hydrogel composite with methylene blue for photodynamic therapy", poster presentation at the X International Conference "Biology: from the molecule to the biosphere", Kharkiv, Ukraine, 2015, p. 104 - 105.

Kislukhina M.O., "Development of nanocomposites for metronomic photodynamic anticancer therapy", oral presentation at the IV International Conference "Nanotechnologies". Tbilisi, Georgia, 2016, p. 102.

Kislukhina M.O. "Development of monoclonal antibodies for biomolecular corona mapping and quantification assay" poster presentation at the XIV International Conference "PEGS Europe". Lisbon, Portugal, 2023.

Peer-reviewed Publications

Mukola Gamaleia, **Margarita Kislukhina**, The chronic model of PDT when acting on cells of glomerular C6 rats in vitro, «The use of lasers in medicine and biology». 2013; № 4

Gennafiy Dolynskiy, Yulia Samchenko, Natalia Pasmurceva, Tatiana Poltoratckaya, Zoya Ulberg, **Margarita Kislukhina**, Mukola Gamaleia, Photobactericidal properties of hydrogel nanocomposite with methylene blue. International Scientific and Practical Journal t. XII, «Photobiology and Photomedicine», 2015, № 3, 4 (12). p. 86-91.

Patents and intellectual property

Title: "Phage display immuno-NAAT method"

Status: Provisional Patent (Patent Pending)

Filing Date: October 2024

Summary: "Development of the new diagnostic assay combining phage display and NAAT enables rapid, sensitive, and cost-effective biomarker detection."

Affiliation: Conducted during tenure at STABVID LDA.