

Veronika Romero

2963 S 9000 W, Magna, UT 84044 | Phone: +1 (801) 865-7954

Email: dr.veronika.romero@gmail.com | [LinkedIn](#) | [GitHub](#) | [Google Scholar](#) | [Website](#)

Professional Summary

Mission-driven scientist with over 15 years of experience with strong background in life sciences, biomedical research, and healthcare. Proficient in diverse laboratory techniques in neuroscience and pathophysiology with cell culture being my technical gem. Passionate about analysis, visualization, and interpretation of complex data. Curiosity-driven critical thinker able to pick up new concepts and techniques quickly. A problem-solver who can bridge multiple disciplines, communicate effectively with colleagues from different backgrounds, and optimize workflows.

Technical Skills

- **Data Wrangling and Analysis Tools:** R, Python, SQL, SPSS, Excel
- **Data Visualization:** R (ggplot2, shiny), Python (Matplotlib, Seaborn), Tableau
- **Statistical Methods:** correlation, linear and logistic regression, Kolmogorov-Smirnov test, t-test, Wilcoxon, Mann-Whitney, Kruskal-Wallis tests, ANOVA, chi-square, Fisher's exact test, Kaplan Meier Analysis, etc
- **Machine Learning:** Dimensionality Reduction, Random Forest, Clustering, k-NN, Regression
- **Other Tools:** Quarto, MS Office, front-end web development, Adobe Photoshop & Illustrator

Model systems

- Rodents (rats, mice)
- Zebrafish
- Mammalian cell culture:
 - human induced pluripotent stem cells (iPSC)
 - iPSC-and embryonic stem cell derived neurons and organoids,
 - primary rodent neuronal hippocampal cultures,
 - primary neonatal rat cardiomyocytes,
 - HEK

Laboratory techniques

- Mammalian cell culture
- Transduction and transfection of cultured cells with CRISPR/Cas9 constructs and siRNA
- Single nuclei isolation from dissected mouse hippocampi
- qPCR, PCR, Western Blot
- fluorescent RNA *in situ* hybridizations (RNAscope, HCR)
- ICC, IHC
- confocal imaging
- sample preparation for genomic applications (RNA-seq, single-cell RNA-seq, ChIP-seq, ATAC-seq)

Education

PhD analogue in Pathophysiology

Bogomoletz Institute of Physiology, Kyiv, Ukraine — 2011-2015

Relevant projects: Role of microRNA-1 in experimental pathology of the heart | Genetic factors increasing risks of cardiovascular pathology | Cardiac microRNAs in the blood as predictors for the heart attack outcomes

Doctor of Medicine in General Medicine

Bogomolets National Medical University, Kyiv, Ukraine — 2005-2011

Relevant coursework: Biostatistics | Medical informatics | Epidemiology | Social medicine, healthcare organization and economics

Professional Experience

University of Utah, Salt Lake City, UT

Research Scientist / Laboratory Manager

September 2023 – October 2024

- Studied zebrafish meninges using confocal imaging of transgenic animals and RNA *in situ* hybridizations.
- Analyzed genomic datasets (single-cell and bulk RNA-seq) aimed to establish future research directions.
- Developed and maintained well documented R scripts and reporting workflows to ensure the reproducibility of ETL, analysis, and visualizations of the data.

Senior Laboratory Specialist / Laboratory Manager

March 2021 – September 2023

- Built from scratch and managed a neuroscience genomics laboratory.
- Assisted in establishing and implementing the workflows for laboratory procedures and data analysis.
- Optimized and troubleshooted multiple protocols including primary hippocampal neuron culture, transductions and transfections of cultured neurons, live imaging, and sample preparation for genomic applications (RNA-seq, ChIP-seq, ATAC-seq, etc.).
- Collaborated with researchers across the campus and assisted in optimizing cell culture protocols.

Research Fellow

July 2018 – June 2020

- Studied rare cases of microcephaly using induced pluripotent stem cells (iPSC)-derived organoids.
- Collected, analyzed, and presented data on the project.
- Managed and restocked tissue culture lab.

Bogomoletz Institute of Physiology, Kyiv, Ukraine

Junior Research Fellow

November 2015 – August 2018

- Collaborated with clinical researchers on the projects in the field of cardiovascular diseases.
- Contributed to experimental designs, analyzed and visualized data, prepared reports.
- Collaborated on 3 shiny applications and 2 publications.

Graduate Research Fellow (PhD student)

August 2011 – November 2015

- Studied microRNA-1 in experimental cardiac pathology using *in vivo* and in culture rat models.
- Analyzed, visualized, and interpreted data. Prepared 5 research papers and presented at the conferences.
- Received a young investigator award from the National Academy of Sciences of Ukraine.

Laboratory Technician

May 2009 – August 2011

- Performed DNA genotyping and evaluated gene expression using qPCR, analyzed data.
- Contributed to multiple projects resulting in 6 research papers and multiple abstracts.

BioLabTech Ltd., Kyiv, Ukraine

Product Manager

December 2016 – June 2017

- Represented a product portfolio of BioLabTech Ltd. in the field of genomics and medical genetics.
- Trained and provided product support to the customers.
- Presented to the audiences of different backgrounds ranging from 1-on-1 to hundreds of participants.

Bogomolets National Medical University, Kyiv, Ukraine

Teaching Associate

August 2011 – October 2013

- Was teaching pathophysiology seminars and labs to year 3 medical students and year 2 dentistry students.
- Developed extracurricular materials, explained complex concepts at different depth levels.

Certification

- **Business Data Analytics** professional program from Utah Valley University — November 2020

Selected workshops and conferences

- Zebrafish Development and Genetics course at the MBL, Woods Hole, USA. 2024
- Workshops by the DELPHI Data Science Initiative at the University of Utah, Salt Lake City, UT:
Introduction to R Carpentries Workshop | Geographical Analysis and Visualization in R Workshop |
Advanced R | Data Cleaning with R | Introduction to Python for Data Analysis |
Natural Language Processing with Applications to Clinical Data Science | Databases and SQL |
Version Control and Collaboration with Git and GitHub
- (audit) Computational Genomics class (prof. Aaron Quinlan). University of Utah. 2024
- Neuroscience Program Snowbird Symposium, Snowbird, UT, USA. [2018, 2019, 2022]
- Summer schools and workshops at BIMS, Max Delbrück Center, Berlin, Germany:
 - 9th Berlin Summer Meeting: 'Brave New RNA'. 2016,
 - 10th Berlin Summer Meetings: 'Smaller Faster Clearer'. 2017
 - de.NBI Summer School Computational genomics and RNA Biology. 2017
 - Workshop on model systems, organoids and the Human Cell Atlas. 2017
- RECOMB 2018, Research in Computational Molecular Biology, Paris, France. 2018
- The Non-Coding Genome EMBO/EMBL Symposium, Heidelberg, Germany. 2013
- The reciprocal interactions of signalling pathways and non-coding RNA EMBO Workshop, Switzerland. 2012

Leadership

- 2016-2018: Established and organized scientific seminars, workshops, and conferences in the field of computational biology and precision medicine. It involved dozens of speakers and hundreds of participants who acquired and advanced their knowledge in the field, found collaborators and mentors including 8 seminars and two major events:
 - [Integrative Biology & Medicine](#)
 - [single-cell RNABIO & organoids](#)
- 2008-2013: Led a pathophysiology interest group at the Bogomolets National Medical University first as a student and then as a member of the teaching faculty.
- Taught multiple R and Python intro workshops to diverse audiences. Co-authored a manual on R for Data Analysis (Ukrainian). Contributed to multiple syllabuses of courses teaching data science.
- Mentored and trained students of different levels.

Additional Information

Languages: English (fluent), Ukrainian (native), russian (native), German (beginner)

Volunteer Experience:

- 2022 – joined a team initiating the urgent support and remote opportunities for researchers in Ukraine upon the beginning of full-scale war. It resulted in new policies and programs. One of publications: Chhugani et al., Science, 2022.
- 2014-2017: volunteer at the scientific outreach events in Ukraine
- 2016-2018 – on volunteer bases, end-to-end organization of scientific events in Ukraine

References

Available upon request.