Arsham Mikaeili Namini

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Education

- **B.Sc. in Biology, Kharazmi University, Tehran, Iran** 2019 – 2023 (Expected)
  GPA (110 Credits): 3.65 / 4.0
- **Diploma Of Natural Sciences, National Organization for Development of Exceptional Talents (Shahid Soltani1)** 2014 – 2018
  CGPA: 3.9 / 4.0

Research Interests

- Cancer Biology
- Computational Biology
- Biomedical Data Science
- Biomedical Informatics
- Molecular Genetics
- Systems Biology

Publication

An in silico comparative transcriptome analysis identifying hub lncRNAs and mRNAs in brain metastatic small cell lung cancer (SCLC). Arsham Mikaeili Namini, Motahareh Jahangir, Maryam Mohsen, Ali Asghar Kolahi, Hossein Hassanian-Moghaddam, Zeinab Mazloumi, Marzieh Motallebi, Mojgan Sheikhpour, Abolfazl Mobafagh*. (2022). **Scientific Reports**. https://doi.org/10.21203/rs.3.rs-1636020/v1

Comparative analysis of protein-protein interaction networks in metastatic breast cancer. Hossein Hozhabri, Roxana Sadat Ghasemi Dehkohneh, Seyed Morteza Razavi, S. Mostafa Razavi, Fatemeh Salarian, Azade Rasoul, Jalil Azami, Melika Ghasemi Shiran, Zahra Kardan, Negar Farrokhzad, **Arsham Mikaeili Namini** , Ali Salari*. (2022). **PLoS ONE** 17(1): e0260584. https://doi.org/10.1371/journal.pone.0260584

Comparison of nucleotide base and inactive vaccines accomplishment to neutralised new variants of SARS-CoV2- in US and China. Arsham Mikaeili Namini , Mohammadamin Mahmanzar, Karim Rahimian, Samaneh Tokhanbigli, Mahsa Mollapour Sisakht, Amin Farhadi, Mahsa Mousakhan Bakhtiari, Youping Deng*. (2022) **(Under review)(IJID) (IF: 12)*(NIH Grant : 2U54CA143727*)**

The mutation dynamics of the spike protein and the rate of vaccination as the trojan horse against COVID-19. Samaneh Tokhanbigli, Karim Rahimian, Mohammadamin Mahmanzar, **Arsham Mikaeili Namini** , Shahrzad Ahangarzadeh, Reza Mahmanzar, Brian G. Oliver*, Youping Deng*. (2022). **(Under review)(Journal of Infection) (IF: 38.6) (*NIH Grant : 5P30GM114737*)**

The First Country to Be Identified Sustainable Mutations of SARS-COV2 Whole Genome Sequence Samples Based on Natural Selection. Mohammadamin Mahmanzar, Taleb Hoseini, Karim Rahimian, **Arsham Mikaeili Namini**, Shahrzad Ahangarzadeh, Reza Mahmanzar, Youping Deng*. (2022). (BioRxiv) https://doi.org/2022.07.18.500565/10.1101

Research Experience

1. Computational Analysis Network on Biological Observation Institute Director
June 2022 - Present

- Developed an all-in-one platform to analyze biological data easy, fast, and efficient. The only available tool at the moment is Express-A
- Express-A can use both microarray and RNASeq data to reach the DEGs and many different analyses in an interactive way between selected cohorts.
- **Website:** canobo.org — Tutorial video

2. Shahid Beheshti University of Medical Sciences
June 2022 – Present

Research fellow with Prof. Abolfazl Movafagh

- Analysis microarray data to study mRNAs and lncRNAs deregulation in metastatic small cell lung cancer.
- Performed Survival analysis and multiple gene interaction analyses to validate the candidate genes.
- Revealing potential biomarker for brain metastatic SCLC. — *Project approval*

3. University of Hawai'i at Mānoa
August 2021 – Present

Research fellow with Prof. Youping Deng

- Tracking mutation patterns on a whole-genome scale of 6 million COVID-19 sequences.
- Studied region-specific mutations to demonstrate the achievement rate of different vaccine types.

4. Scientific illustrator
October 2019 – Present

Illustrator for papers and biological articles, including Pathways, Figures, charts, and interaction models.

5. Internship — Royan Institute (ACECR)
July 2021

A three-week internship focused on essential laboratory skills for research purposes, including MEF cell culture and cryobiology techniques. Histotechniuqe and slide preparation and female embryology surgery techniques.

6. Systems Biology of the Next Generation Company (SBNGC)
May 2022 - August 2022

Research Assistant

- Meta-analysis project aimed nine different metastatic breast cancer cohorts.
- Teaching an introduction to R programming and many packages for microarray metadata analyses.

Technical Strengths

- DNA extraction, cDNA synthesis, PCR (Regular and RT), primer design, Gel electrophoresis (regular and 2D), and Gel documentation.
- Developing spectrum sequencing for protein de novo assembly (spectrometry-based proteomics).
- PCR-Seq, DNA Purification and ABI 3130 Operation for Sanger sequencing.
- Oocyte examination and manual extraction from ovary tissue and Skilled in animal models (especially mus musculus) Handling, restraining, and autopsy.
- Analyzing RNASeq and microarray gene expression profiling data and reaching DEGs and WGCNA dendrogram.
- Familiar with Data structure for metadata and meta-analysis projects.

Projects

- **Pan-Cancer Atlas project based on TCGA and GEO datasets (ongoing)** ***GitHub***
- Evaluation of DEGs and WGCNA to train a machine learning module
- **Expression analysis utlizing GEO** transcriptomics data detects critical mRNAs and lncRNAs have triggered brain metastatic SCLC. ***GitHub***
- **Motif exploring** in Mycobacterium tuberculosis (MTB) genome, finding the A-domain of gramicidin synthetase, as a part of final assignment of **Bioinformatic Specialization course**. ***GitHub***
- Staphylococcus aureus genome assembly and a brief study on **methicillin-resistant Staphylococcus aureus (MRSA).** ***GitHub***

Awards and Certificates

- **Bioinformatics Specialization**, UC San Diego, USA. **(7 Courses)** *Validation*
- **Introduction to Genomic Technologies**, Johns Hopkins University, USA. *Validation*
- **Python for Genomic Data Science**, Johns Hopkins University USA. *Validation*
- **Algorithm for DNA sequencing**, Johns Hopkins University USA. *Validation*
- **NCBI's Primer-BLAST to design and analyze PCR primers**, NIH, USA. *Validation*
- **Emerging Science of Extracellular Vesicles**, Royan Institute, Tehran, Iran. *Validation*
- **International Cancer Webinar**: Bench to Bedside, Dana-Farber Cancer Institute, USA. *Validation*

Computer Skills

- **Programming languages:** Python, R, JavaScript, Jupyter Notebook.
- **Bioinformatics Tools:** BLAST, Oligo 7, SPSS, QUAST, MEME, SPAdes Assembler, Bioedit, pyMOL, VMD, Cytoscape, Galaxy.
- **General Tools:** Adobe Illustrator, Adobe XD, Adobe InDesign, Final Cut Pro and Microsoft Office, Endnote, Mendeley, Slack, Notion

Languages

Persian: Native, English: Upper intermediate — TOEFL IBT (TBD)

German (reading knowledge)*(ZA1 Zertifikat)(ID-Number: ZA11857272)*

Hobbies

- Classical Music (Professional Pianist, especially Romanticism), Sport (volleyball and soccer), experienced in video and sound recording-editing. Senior UI&UX designer in *Whatsgaming* company.