

MOOSA REZWANI

CURRICULUM VITAE

CONTACT INFORMATION

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EDUCATION

- **M.Sc.** 2016-2019
Tarbiat Modares University, Tehran, Iran
Medical Immunology
Thesis: “Natural Killer Cells Extraction from Used Leuko-Reduction Filters in Blood Transfusion”
Advisor: Prof. Ali Akbar Pourfathollah
- **B.Sc.** 2010-2015
University of Tehran, Tehran, Iran
Cell and Molecular Biology

RESEARCHES AND PROJECTS

- **Disturbances in NK Cells and Tumors’ Protein-Protein Interaction Network, a Pan-Cancer Analysis** 2019-Present
This is still an unpublished project.
- **Establishing Blood Transfusion waste products as a source of NK cells (Part of M.Sc. Thesis)** 2017-2019
Our project was one of several projects carried out by the Iranian Blood Transfusion Organization with the primary goal of introducing blood transfusion waste products as a sustainable and economic source of bio-molecules and cells. This is particularly important in under-developed countries where fundings and resources are limited. Methods including flow cytometry, immune cells isolation, ELISA, cell culture, and killing assays were used. NK cells obtained by our method is comparable to peripheral blood’s NK cells in term of viability, Sub-populational composition, and function.
- **rbioapi: User-Friendly R Interface to Biologic Web Services’ API (Open-source R package software – Links: [CRAN](#), [GitHub Repo.](#), [Website](#))** 2020-2021
We developed an R package, *rbioapi*, a consistent, user-friendly, and scalable interface to biological and medical databases and web services. To date, *rbioapi* fully supports Enrichr, JASPAR, miEAA, PANTHER, Reactome, STRING, and UniProt. We aim to expand this list and make *rbioapi* as comprehensive as possible. To this end, we developed an infrastructure that facilitates collaborations and the implementation of new services.

- **parapurrr: Do purrr in Parallel**
(Open-source R package software - Links: [GitHub Repo.](#)) 2021
We developed a simple yet fully customizable way to run functions iteratively in R using multiple CPU cores (instead of the default, one). The package parapurrr achieves that by bridging purrr to foreach package and its adaptors. We added support for all purrr's map family functions and every foreach adaptor available in CRAN.

SKILLS AND EXPERIENCES

- **Laboratory Skills:**
Flow cytometry, Mammalian cells culture, ELISA, qPCR, Mouse handling, Immune cells isolation (FACS, MACS), Western blotting (familiar with), General genetics lab skills (RNA isolation, Transduction, Genes cloning, Gel electrophoresis, etc.), General biochemistry lab skills (Chromatography, Spectrophotometry, Density gradient centrifugation, etc.)
- **Bioinformatics and Data Science:**
R programming language, RNA-seq analysis, Microarray analysis, Software development, High-throughput data analysis, Systems biology, Data processing, Machine learning, Graphs and network analysis, Bioconductor, Primer design
- **Tools:**
Git, Unix/Linux shell and Bash scripting, Cloud computing and working with remote servers, Python (familiar with), FlowJo, SPSS, SQL (familiar with), Microsoft Office

PUBLICATIONS

- **Moosa Rezwani**, Ali Akbar Pourfathollah, Farshid Noorbakhsh, rbioapi: user-friendly R interface to biologic web services' API, *Bioinformatics*, Volume 38, Issue 10, 15 May 2022, Pages 2952–2953, <https://doi.org/10.1093/bioinformatics/btac172>
- **Moosa Rezwani**, Abdulbaset Mazarzaei, Zahra Abbasi-Malati, Ali Akbar Pourfathollah, Leukocyte-Reduction Filters as Reliable and Economic Source of Natural Killer Cells. *Iranian Journal of Immunology*, 2022 (Accepted, Manuscript ID IJI-2108-2158)

LANGUAGES

- **English:** Proficient
- **Arabic:** Proficient
- **Persian:** Native
- **Larestani:** Native

CERTIFICATES

- **Experimental Methods in Systems Biology** 2016
([Coursera Certificate](#))
- **Introduction to Systems Biology** 2016
([Coursera Certificate](#))
- **Biology Meets Programming: Bioinformatics for Beginners** 2016
([Coursera Certificate](#))
- **Making Biologic Medicines for Patients: The Principles of Biopharmaceutical Manufacturing** 2016
([edX Certificate](#))
- **Data Science and Machine Learning Essentials** 2015

- [\(edX Certificate\)](#)
- **Introduction to Computer Science and Programming Using Python** 2015
[\(edX Certificate\)](#)
- **The Immune System: New Developments in Research** 2015
[\(edX Certificate\)](#)