MOOSA REZWANI
CURRICULUM VITAE

CONTACT INFORMATION

- **Email:** moosa.rezwani@ulb.be , moosa.rezwani@gmail.com
- **Website:** https://moosa-r.com
- **Location:** Brussels, Belgium
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EDUCATION

- **Ph.D.** 2022-2026
  - Université Libre de Bruxelles (ULB), Brussels, Belgium
  - ULB Center for Research in Immunology (U-CRI) - Institute for Medical Immunology (IMI) - Department of Pharmacotherapy and Pharmaceutics
  - Biomedical and Pharmaceutical Science
  - Advisor: Prof. David Vermijlen

- **M.Sc.** 2016-2019
  - Tarbiat Modares University, Tehran, Iran
  - Department of Immunology - Faculty of Medical Sciences
  - 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 (UT), Tehran, Iran
  - Faculty of Cell and Molecular Biology - School of Biology
  - Cell and Molecular Biology

RESEARCHES AND PROJECTS

- **Disruption in NK Cells and Tumors' Protein-Protein Interaction Network, a Pan-Cancer Analysis** 2020-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This is still an unpublished project.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 part of a series conducted by the Iranian Blood Transfusion Organization to introduce blood transfusion waste products as a sustainable and cost-effective 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 approach 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, Research paper**)** 2020-2021

The R package, *rbioapi*, is an interface to biological and medical databases and web services. This package provides consistency, a smooth learning curve for the users, and scalability for the developers. To date, *rbioapi* fully supports Enrichr, JASPAR, miEAA, PANTHER, Reactome, STRING, and UniProt. I aim to expand this list and make rbioapi as comprehensive as possible by inviting collaborations and contributions.

- **parapurrr: Do purrr in Parallel**
  (Open-source R package software - Links: GitHub Repo.**)** 2021

The R package, *parapurrr*, offers a simple yet fully customizable way to iteratively run functions in R using multiple CPU cores (instead of the default, one). The package parapurrr deliver that by bridging purrr to foreach package and its adaptors. All of purrr's mapping functions and every foreach adaptor available in CRAN are supported.

HONORS AND AWARDS

- **Received research grant** 2017
  National Institute for Medical Research Development (*NIMAD*), g*rant* Number 982968
- **Scored 99th percentile in Iran's master's degree entrance examination** 2016
- **Scored 99th percentile in Iran's national universities entrance examination** 2010

SKILLS AND EXPERIENCES

- **Laboratory Skills:**

Flow cytometry, Mammalian cells culture, ELISA, qPCR, 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.), Mouse handling

- **Bioinformatics and Data Science:**

R programming language, RNA-seq analysis, Software development, High-throughput data analysis, Systems biology, Graphs and network analysis, Data processing, Machine learning, Big data, 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 are Reliable and Economic Source of Natural Killer Cells*. Iranian Journal of Immunology, 2022 (Accepted, Manuscript ID IJI-2108-2158)
- **Moosa Rezwani**, Ali Akbar Pourfathollah, Farshid Noorbakhsh, *Disturbances in NK Cells and Tumors' Protein-Protein Interaction Network, a Pan-Cancer Analysis*, 2022 (Analysis completed, manuscript in prep.)

LANGUAGES

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

CERTIFICATES

- **Supervised Machine Learning: Regression and Classification** 2022
  (Coursera Certificate)
- **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)