

Immunodeficiency Diseases Research Center,
Comprehensive Medical Sciences Research Laboratory,
Al-Zahra Research Center Complex,
Isfahan University of Medical Sciences,
Hezar-Jarib Ave, Isfahan, 81746-73461, Iran
Phone: +98-9369448442
L.norouzi@mui.ac.ir, Lnorouzi61@gmail.com

LEYLA NOROUZI-BAROUGH, PHD

Personal Information

Date of Birth: December 26, 1982

Nationality: Iranian

Marital status: Married

Work Experience

2021-Present:

Research associate, Immunodeficiency Diseases Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

2018-2021:

Researcher, Department of Genetics and Molecular Biology, Isfahan University of Medical Sciences

Education

2013-2018:

PhD Student of Molecular Medicine, Qazvin University of Medical Sciences, Qazvin, Iran

Dissertation: The evaluation of CRISPR/Cas9 system to knockout ABCB1 and reversal of chemo-sensitivity in human epithelial ovarian cancer cell line

2011-2013:

MSc Student of Microbiology, Islamic Azad University-Falavarjan Branch (IAUFALA)

Thesis: The study of phenotypic characteristics and molecular tracing of metallo- β -lactamases in carbapenem-resistant *Klebsiella pneumoniae* isolates

2001-2005:

BSc Student of Veterinary Laboratory Sciences, Tehran University, Tehran, Iran

Skills and Capabilities

General molecular biology techniques:

DNA & RNA isolation

Standard PCR, Real-time PCR, RT-PCR

Electrophoresis

Cell culture:

Prokaryotic and eukaryotic cell culture

Isolation and characterization of stem cells

MTT assay

Transformation & transfection techniques

Exosome extraction from cell culture

Cargo loading into exosomes

Genome editing:

CRISPR/Cas9-mediated gene knockdown

Proteomics:

Protein extraction, SDS-PAGE, western blotting

Bioinformatics

Language

Persian (native language), English

Books

The Biology of Cancer (Translation)

Molecular Medicine: An introduction (Translation & edition)

Honors & Awards

The award of "admired book of the year in the field of Medicine" from the minister of culture in 28th National book festival of Iran (October 2021).

International member of American Academy of Allergy, Asthma & Immunology (AAAAI).

Publications

Leyla Norouzi-Barough, Amir Asgari Khosroshahi, Ali Gorji, Fariba Zafari, Mohammad Shahverdi Shahraki, Sadegh Shirian. COVID-19-Induced Stroke and the Potential of Using Mesenchymal Stem Cells-Derived Extracellular Vesicles in the Regulation of Neuroinflammation. *Cell Mol Neurobiol.* 2022; <https://doi.org/10.1007/s10571-021-01169-1>

Hassan Arkaban, Reza Karimi Shervedani, Mostafa Torabi, **Leyla Norouzi-Barough**. Fabrication of a Biocompatible & Biodegradable Targeted Theranostic Nanocomposite with pH-Controlled Drug Release Ability. *Journal of Drug Delivery Science and Technology.* 2022; 72: 103403

Fatemeh Yaghoobi, Zahra Al-Sadat Davoudi, Reza Karimi Shervedani, Mostafa Torabi, **Leyla Norouzi-Barough**. Highly sensitive mixed molecular nanostructures of glutamine and doxorubicin on gold for targeted recognition of A2780 cancer cells using impedance spectroscopy and quartz crystal microbalance. *Sensors and Actuators B: Chemical.* 2021; 345: 130376

Leyla Norouzi-Barough, Ardeshir Bayat. Validation strategies for identifying drug targets in dermal fibrotic disorders. *Drug Discovery Today.* 2021; 26(10): 2474-2485

Leyla Norouzi-Barough, Sadegh Shirian, Ali Gorji, Mohammadreza Sadeghi. Therapeutic potential of mesenchymal stem cell-derived exosomes as a cell-free therapy approach for the treatment of skin, bone, and cartilage defects. *Connective Tissue Research.* 2021; 63(2):83-96.

Leyla Norouzi-Barough, Amir Asgar Khosro Shahi, Farnoosh Mohebzadeh, Ladan Masoumi, Mohammad Reza Haddadi, Sadegh Shirian. Early diagnosis of breast and ovarian cancers by body fluids circulating tumor-derived exosomes. *Cancer Cell International.* 2020; 20:87

Moosa Rahimi Ghiasi, Hamed Mohammadi, Michael E Symonds, Seyed Mohammad Bagher Tabei, Ahmad Reza Salehi, Sima Jafarpour, **Leila Norouzi Barough**, Elnaz Rahimi, Zohreh Amirkhani, Maryam Miraghajani, Rasoul Salehi. Efficacy of insulin targeted gene therapy for type 1 diabetes mellitus: A systematic review and meta-analysis of rodent studies. Iranian Journal of Basic Medical Sciences. 2020; 23(4):406

Leyla Norouzi-Barough, Mohammad Reza Sarookhani, Rasoul Salehi, Mohammad Reza Sharifi, Sahar Moghbelinejad. Bioinformatics design of CRISPR guide RNA for genomic knockout of ABCB1 gene. Biotech Health Sci. 2018; 4(3): e58783.

Leyla Norouzi-Barough, Mohammad Reza Sarookhani, Mohammadreza Sharifi, Sahar Moghbelinejad, Saranaz Jangjoo, Rasoul Salehi. Molecular mechanisms of drug resistance in ovarian cancer. Journal of cellular physiology. 2018; 233(6): 4546-4562.

Reza Karimi Shervedani, Hadiseh Mirhosseini, Marzieh Samiei Foroushani, Mostafa Torabi, Fatemeh Rahnemaye Rahsepar, **Leila Norouzi-Barough**. Immobilization of methotrexate anticancer drug onto the graphene surface and interaction with calf thymus DNA and 4T1 cancer cells. Bioelectrochemistry. 2018; 119: 1-9.

Leyla Norouzi-Barough, Mohammadreza Sarookhani, Rasoul Salehi, Mohammadreza Sharifi, Sahar Moghbelinejad. CRISPR/Cas9, a new approach to successful knockdown of ABCB1/P-glycoprotein and reversal of chemosensitivity in human epithelial ovarian cancer cell line. Iranian journal of basic medical sciences. 2018; 21(2): 181.

Hossein Fazeli, Razie Kamali Dolatabadi, Azade Taraghian, Bahram Nasr Nasr, Sharareh Moghim, **Leyla Norouzi**. Carbapenem Resistance Pattern of Multiple Drug-Resistant and Extended-Spectrum Beta-Lactamase-Positive Klebsiella pneumonia in Isfahan. International Journal of Enteric Pathogens. 2016; 2(4): 21495.

Hossein Fazeli, **Leyla Norouzi-Barough**, Ali Mohammad Ahadi, Dariush Shokri, Hamid Solgi. Detection of New Delhi Metallo-Beta-Lactamase-1 (NDM-1) in carbapenem-resistant *Klebsiella pneumoniae* isolated from a university hospital in Iran. *Hippokratia*. 2015; 19(3): 205.

Hossein Fazeli, Hamid Solgi, Seyed Asghar Havaei, Dariush Shokri, **Leyla Norouzi Barough**, Fateme Zahra Zamani. Carbapenem and fluoroquinolone resistance in multidrug resistant *Pseudomonas aeruginosa* isolates from al-zahra hospital, Isfahan, Iran. *Journal of Medical Microbiology and Infectious Diseases*. 2014; 2(4): 147-152.

Dariush Shokri, Sina Mobasherizadeh, **Leyla Norouzi Barough**, Majid Yaran. Isolation and Identification of Carbapenemase KPC Producing Strains of Enterobacteriaceae and Determination of Their Antibiotic Susceptibility Patterns. *Journal of Isfahan Medical School*. 2013; 31: 248.

Presentations

Leyla Norouzi, Rasoul Salehi, Mohammadreza Saroukhani, Mohammadreza Sharifi. Latest News on CRISPR/Cas9 Technology. The 3rd National Molecular Medicine Congress (Poster). 2016. Isfahan-Iran.

Leyla Norouzi-Barough, Rasoul Salehi, Mohammadreza Saroukhani. Immunotherapy of Ovarian Cancer. The 13th International Congress of Immunology and Allergy of Iran (Poster). 2016. Tabriz-Iran.

Leyla Norouzi-Barough, Hossein Fazeli, Ali Mohammad Ahadi, Hamid Solgi, Dariush Shokri. Tracing of New Delhi Metallo Beta-Lactamase-1 (NDM-1)-producing *Klebsiella pneumoniae* among carbapenem clinical isolates at a university hospital in Iran/ The First International Conference on Science and Engineering. The first International Conference on Science and Engineering (Poster). 2015. Dubai- United Arab Emirates.

Leyla Norouzi-Barough, Hossein Fazeli, Ali Mohammad Ahadi. Metallo- β -lactamases Detection in Carbapenem Resistant *Klebsiella Pneumoniae* and their role in Nosocomial Infections. The 13th Iranian and the 2nd International Congress of Microbiology (Poster). 2012. Ardabil-Iran.

References

Dr. Roya Sherkat

Head of Isfahan Immunodeficiency Diseases Research Center, Isfahan University of Medical Sciences. Isfahan, Iran.

Phone: +98-9133271126

Email: Sherkat@med.mui.ac.ir

Prof. Rasoul Salehi

Head of Genetics and Molecular Biology Department, Isfahan University of Medical Sciences. Isfahan, Iran.

Phone: +98-9131147928

E-mail: m_salehi@med.mui.ac.ir

Prof. Ali Gorgi

Director of Epilepsy Research Center, Department of Neurosurgery, Westfälische Wilhelms-Universität Münster, Münster, Germany

E-mail: gorjial@uni-muenster.de

Dr. Sadegh Shirian

Associate Professor. Head of Pathology Department, School of Veterinary Medicine, Shahrekord University, Shahrekord, Iran.

Phone: +98-9132814047

E-mail: Shirian@shirazu.ac.ir