**Curriculum vitae**

**Dr. Roya Mirzaei**

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**EDUCATION**

* **Postdoctoral Research Fellow, (**Pharmaceutical Sciences Research Center, Shahid Beheshti University of Medical Sciences**) (**2023-present**)**
* **Ph.D. in Medical Toxicology (**2017 – 2022**)**

**WORK EXPERIENCE**

**(previous academic positions)**

• **Pasteur Institute of Iran, Biotechnology Dept.**

• **Research Assistant**, 2014-2018

* Collaborated with undergraduate and graduate students to provide research guidance and supervision.
* Designed research and experimental studies, executing research techniques, tests and assays.

**• Motamed Cancer Institute, Recombinant Proteins Dept.**

• **Scientific Researcher,** 2021 - 2023

* The main cooperation in the design and implementation of the study method, Information collection and data analysis
* Collaborated with colleague to provide research guidance and supervision.

**ACTIVITIES & HONORS**

* **Member of Society of Toxicology (SOT). Postdoctoral membership. *International Society (USA)*.** 2021-present
* **Member of Iranian Society of Toxicology (IranTox)**. 2018-present
* **Member of Iranian Society of Physiology and Pharmacology (PHYPHA).** 2022- present
* **Compilation of the Educational Assistance Book (IQB: Decennial Iran Question Bank): Bank of Questions and Answers from Ph.D. Exams of Toxicology**, 2018.
* **Translation of Cecil textbook of medicine: cardiovascular diseases (last edition) into Persian**: Elmira Alizadeh, ***Roya Mirzaei***, Sarina Moradian, Shima Heshmat Dehkordi, Seyyed Ali Hosseini Zavareh, Amir Ali Jalali Roudsari. 2021
* **Online teaching on Faradars website (clinical toxicology);** 2022

https://faradars.org/courses/clinical-toxicology-diagnosis-and-treatment-part-i-fvpha101

* **Performed review (Peer Review) for journal:**
	+ *DARU Journal of Pharmaceutical Science***s,** 2023 **IF**: **4.088 (**2 articles**)**
	+ *Iranian Journal of Pharmaceutical Research*, 2024 **IF: 1.8 (**5 articles**)**
	+ *Asian Pacific Journal of Cancer Prevention,* 2024**(**1 article**)**

**ACCOMPLISHMENTS**

PROJECTS (Collaboration)

**1. Evaluation of anti-cancer effects of isolated fractions of Iranian snake venoms. 2014-2016**

This project was conducted at the Venom and Biotherapeutics Molecules Lab., Biotechnology Dept. Pasteur Institute of Iran, Tehran, under the direction of Dr. Shahbazzadeh and Dr. Pooshang Bagheri.

**2. Detection of cloning and gene expression of phospholipase A2 of hemiscorpius lepturus in bacterial expression system. 2016- 2018**

This project was approved by the Pasteur Institute of Iran, Tehran, under the direction of Dr. Shahbazzadeh and Dr. Mirzahosseini.

**3. Design and production of triple antibodies against MUC1, CD3 and Fzd receptors in bacterial host to evaluation the potential of anti-tomur activity on cancer stem cells and cancer cell line and breast cancer mouse model. 2021-2022**

This project was conducted at the Recombinant Proteins Dept. Motamed Cancer Institute, Tehran, Iran, under the direction of Dr. Leila Farahmand.

**4. Efficacy and safety assessment of MUC1-CD3 bi-specific antibodies in cancer dog. 2021-2022**

This project was conducted at the Recombinant Proteins Dept. Motamed Cancer Institute, Tehran, Iran, under the direction of Dr. Leila Farahmand

**5. Evaluation of the effect of the antibody against ER-receptor in response to tamoxifen α36 treatment and surveying the function of this receptor in the development of tamoxifen resistance in MCF-7 breast cancer cell line. 2022**

This project was approved by Motamed Cancer Institute, Tehran, Iran, under the direction of Dr. Leila Farahmand & Dr. keivan Majidzadeh

**PUBLICATIONS**

**1. Strain-Specific Effects of Probiotics on Depression and Anxiety: A Meta-Analysis**

Maryam Rahmannia, Mohadeseh Poudineh, **Roya Mirzaei**, Mohammad Amin, Amir Hashem Shahidi, Mehdi Goudarzi, Ali kheradmand, Hamid Reza Aslani, Majid Sadeghian, Mohammad Javad Nasiri, Leonardo Antonio Sechi\*

Gut Pathogens (2024) **IF:4.3**

**2.Production of novel recombinant anti-EpCAM antibody as targeted therapy for breast cancer**

**Roya Mirzaei**, Soodaeh Shafiee, Rana Vafaei, Malihe Salehi, Neda Jalili, Zahra Nazerian , Ahad Muhammadnajad , Fatemeh Yadegari , Mohamad Reza Esmailinejad , Leila Farahmand \*

*International immunopharmacology* (2023) **IF: 5.71**

**3.Increased Risk of Primary Ovarian Insufficiency by High-Fructose Diet: A 90 Day Hormonal and Immunohistochemical Study in Wistar Rats**

**Roya Mirzaei**, Sepideh Arbabi Bidgoli\*, Roya Khosrokhavar, Shahram Shoeibi, Hamdreza Ahmadi Ashtiani.

*Environmental Science and Pollution Research* (2022) **IF: 5.8**

**4.The Role of High-Fructose Diet in the liver function of rodent models: A Systematic Review of Molecular Analysis**

**Roya Mirzaei \*,** Roya Khosrokhavar , Sepideh Arbabi Bidgoli

*IRANIAN BIOMEDICAL JOURNAL* (2023)

**5.Repurposing the drug, ivermectin, in COVID-19: toxicological points of view**

Farshad M. Shirazi, **Roya Mirzaei**, Samaneh Nakhaee, Amir Nejatian, Omid Mehrpour\*

*European Journal of Medical Research* (2022) **IF: 4.98**

**6.Development of a MET-targeted single-chain antibody fragment as an anti-oncogene targeted therapy for breast cancer**

Rana Vafaei, Zohreh Khaki, Malihe Salehi, Neda Jalili, Mohammad Reza Esmailinejad, Ahad Muhammadnajad, Seyed Mahdi Nassiri, Alireza Vajhi, Shima Moradi Kalbolandi, **Roya Mirzaei**, Leila Farahmand

*Investigational New Drugs* (2023) **IF: 3.65**

**7.Synthesized Anti-HER2 Trastuzumab-MCC-DM1 Conjugate: An Evaluation of Efficacy and Cytotoxicity**

Soodabeh shafiee, **Roya Mirzaei**, Malihe Salehi, Neda Jalili, Amir Taheri, Leila Farahmand\*

*Iranian Journal of Immunology* (2023) **IF: 1.6**

**8*.* Increased Risk of Cerebral dysfunction by High-Fructose Diet Consumption: A 90 -Day Study in Female Rats**

**Roya Mirzaei**, Sepideh Arbabi Bidgoli\*, Roya Khosrokhavar, Shahram Shoeibi, Hamidreza Ahmadi Ashtiani

Health Biotechnology and Biopharma (2023)

**9*.* Toxicity assessment of high fructose corn syrup-55: a repeated dose oral toxicity study in uterus and ovaries of female rats**

**Roya Mirzaei**, Sepideh Arbabi Bidgoli\*, Roya Khosrokhavar, Shahram Shoeibi, Hamdreza Ahmadi Ashtiani.

Medical Science Journal of Islamic Azad University – Tehran (2023)

**10.Evaluation of cytotoxicity of isolated fractions from the venom of Iranian cobra snake on skin cancer cell line, B16F10**

Hedieh Farajpoor Moghadam, Delavar Shahbazzadeh, **Roya Mirzaei\***

Medical Science Journal of Islamic Azad University – Tehran (2023)

**11.Assessment of cytotoxicity of isolated fractions from the venom of Iranian viper, Macrovipera lebetina on Brain cancer cell line, U-87MG**

Maryam Haghpanah, **Roya Mirzaei**\*, Kamran Pooshang Bagheri, Delavar Shahbazzadeh\*

Health Biotechnology and Biopharma (2019)

**12.Anti-cancer Activity of Fractions Derived from Venom of Iranian Cobra Snake (Naja naja oxiana ) on Breast Cancer Cell Line 4T1**

**Roya Mirzaei**, Delavar Shahbazzadeh, Kamran Pooshang Bagheri\*

Iranian Journal of Infectious Diseases and Tropical Medicine (2016)

**13.Evaluation of Toxicity and Anticancer Activity of Isolated Fraction from the Venom of Iranian Viper, Macrovipera lebetina on Lung Cancer Cell Line, TC-1**

Roghayeh Molaeian, **Roya Mirzaei**, Delavar Shahbazzadeh, Kamran Pooshang Bagheri\*

Iranian Journal of Infectious Diseases and Tropical Medicine (2017)

**14.Anticancer Effect of Isolated Fraction from Hemiscorpius lepturus Venom on Brain Cancer Glioblastoma Cells**

M.zareie nejad, **Roya.Mirzaei**, D.shahbazzadeh, K.pooshsng bagheri

Iranian Journal of Infectious Diseases and Tropical Medicine (2017)

**15.Review of Commercial Snake Antivenoms (Systematic Analysis of Clinical Data) (Under Revision)**

**Roya Mirzaei**, Marzieh Ghodrati, Fatemeh Pashaei, Samaneh Nakhaee, Farshad M Shirazi, Omid Mehrpour\*

Toxin Reviews (2024) **IF: 3.16**

**PRESENTATIONS**

1. Leila farahmand\*, **Roya Mirzaei**, Amir Taheri, Neda jalili, Malihe Salehi

Second International Congress on Biological and Health Sciences, Turkey (2022)

Evaluation of Efficacy of Synthesized Antibody-Drug Conjugate (Maytansinoid- Trastuzumab Monoclonal); A Lab-Scale Study

2. **Roya Mirzaei**, Maryam Akhgari

The 13th international addiction congress. Iran (2019)

Investigation of the Spread of Novel Psychoactive Substances (NPS); Its Damages and Disadvantages in Modern Societies

3. **Roya Mirzaei\***, Delavar Shahbazzadeh, Kamran Pooshang Bagheri, Hedieh Farajpoor Moghadam

15th Iranian congress of toxicology. Iran (2019)

Toxicity Study of Isolated Fractions from the Iranian Snake (Naja Naja Oxiana) Venom on Breast and Skin Cancer Cell Lines

**CERTIFICATIONS**

1. **«Introduction to Systematic Review & Meta-Analysis» Online Course**

Johns Hopkins University, https://www.coursera.org. Date: 12 Jun 2020

1. **«Principles of Working with Laboratory Animals» Online Course**

National Institute for Medical Research Development (NIMAD), Tehran, Iran.

The National Committee for Ethics in Biomedical Research, Ministry of Health and Medical Education, Tehran, Iran. Date: Jun 10, 2020

1. **Introduction to Data Analytics Using Microsoft Power BI**

Alison - Free Online Learning. Date: Jul 2021

1. **Academic Writing Course for Laboratory Animal Studies According to ARRIVE 2020 Guidelines**

Kimia Science Educational Institute (Aveed). Date: Mar 2021

1. **Winter School of Bioinformatics of Proteins and Vaccine Design**

Ahvaz Jundishapur university of medical sciences (USERN). Date: Feb 2023

**TECHNICAL SKILLS as an EXPERT**

* Chromatography: FPLC, HPLC, ION Exchange
* Protein Purification
* Protein Quantification Assays: Bicinchoninic Acid (BCA), Bradford, Ultraviolet Absorption
* Electrophoresis: SDS- PAGE
* Cell Culture Method, MTT Assay
* Real-time PCR
* Cloning and Protein Expression
* Western blot
* Enzyme-linked immunosorbent assay (ELISA)
* Animal trials
* Immunohistochemistry (IHC)
* Histopathology (H & E staining)
* Flow Cytometry
* Research Methodology
* EndNote
* SPSS
* Graph Pad Prism
* Power Point
* Excel
* Word

**INTERESTS**

* Toxicology and Mechanistic Toxicology
* Molecular biology
* Cancer biology
* Immunology
* Immunotoxicology
* Purification of proteins and natural products
* Recombinant Proteins
* Pharmacology
* Bioinformatics
* Neurosciences
* Team working

**PERSONAL STRENGTHS**

* Good Interpersonal, highly motivated and enthusiastic and capable of working on own initiative

**PERSONAL PROFILE**

* Hobby: Interested in reading books and scientific papers, particularly Toxicology and Pharmacology and related fields. Painting & Cooking

**CONTACT & ACADEMIC PROFILES**

**Email**: mirzaei.roya@gmail.com, mirzaei.roya@sbmu.ac.ir

**Linkedin**: https://www.linkedin.com/in/roya-mirzaei-10938a7b/

**Researchgate**: <https://www.researchgate.net/profile/Roya-Mirzaei-2>