

Curriculum Vitae
Masood Sepehrimanesh, Ph.D.

PERSONAL INFORMATION:

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Louisiana Tech University
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Born: September 19, 1985
Status: U.S. Permanent Resident (Green card holder)

PRESENT STATUS:

Assistant Professor in Biology, School of Biological Sciences, Louisiana Tech University, Ruston, LA

EDUCATION AND TRAINING

2022-2024	Research Fellow	Department of Biochemistry and Molecular Biology, LSU Health Science Center, LA
2019-2021	Research Fellow	Department of Biology, UL Lafayette, LA
2015	Educational Fellow	NIH Clinical Center, Bethesda, MD
2014-2019	-----	Department of Biochemistry, Shiraz- and Guilan University of Medical Sciences
2014	Ph.D.	Biochemistry, Shiraz University, Shiraz
2010	DVM	Shiraz University, Shiraz
2003	Diploma	Experimental Sciences, NOTDT, Sabzevar

ACADEMIC EMPLOYMENT HISTORY:

Assistant Professor , School of Biological Sciences, Louisiana Tech University, Ruston, LA	09.2024- Current
<ol style="list-style-type: none">1. Research in the field of bioelectromagnetic and neuroscience2. Teach course in cell biology, molecular biology, Physiology	
Postdoc Fellow , Department of Biochemistry and Molecular Biology, LSU Health Shreveport, LA, USA	05.2022- 08.2024
<ol style="list-style-type: none">1. Successfully converted fibroblasts to motor neurons from ALS patients and confirmed their identity.2. Successfully reprogrammed ALS-iPSC to motor neurons using lentivirus and discovered novel interrupted proteins.3. Successfully converted healthy and ALS- iPSCs to motor neurons using small molecules and confirmed their identity.4. Supervising biochemical and protein aspects of graduated students' projects.	
Biochemistry Matter Expert , Unity Environmental University, New Gloucester, ME, USA	01.2022- 04.2022
<ol style="list-style-type: none">1. Developed instructional materials for the biochemistry course.2. Created laboratory materials for the biochemistry lab course.	
Postdoc Research Associate , Department of Biology, University of Louisiana at Lafayette, LA, USA	03.2020- 12.2021
<ol style="list-style-type: none">1. Evaluated the effects of FUS and TDP-43 mutations on the nucleocytoplasmic transport in neurodegenerative diseases such as ALS/FTD.2. Successfully generated human neurodegenerative model of ALS using iPSC and direct reprogramming of fibroblast to motor neurons.3. Supervised biochemical and protein aspects of graduated and undergraduate students' projects.4. Gave lectures on Advanced Cell Biology.	
Postdoc Fellow , New Iberia Research Center, University of Louisiana at Lafayette, LA, USA	02.2019- 02.2020
<ol style="list-style-type: none">1. Evaluated the viral dynamics and immune responses to Simian Immunodeficiency Virus infection of nonhuman primates, a model of human HIV infection by flow cytometry and viral titer assessments.2. Designed HIV cure strategies to activate and eliminate virus reservoirs under antiretroviral therapy.3. Prepared the SIV stocks by infecting primates and collecting PBMC, then cultured them and ran cytological tests to evaluate SIV infectious activity.	

Assistant Professor of Biochemistry and Laboratory Manager, Shiraz University of Medical Sciences and Guilan University of Medical Sciences, IR 02.2014-01.2019

1. Taught Biochemistry and Molecular Biology to MD students.
2. Found autophagic biomarkers in gastric cancer.
3. Found three medicinal plants to treat oral mucositis and ulcerative colitis.
4. Planned and executed scientific projects, formulating research methods and suggested options for improvement, and preparing manuscripts.
5. Presented and discussed scientific findings in national and international meetings.
6. Contributed to preliminary data, background and significance, and experimental design for grant proposals, especially a big cohort.
7. Set up and run new laboratory serving tests for patients including PCR, blood analysis, and cytokines measurements.
8. Supervised and advised Fellowship, DDS, and MD students.

Visiting Professor and Lecturer of Biochemistry, Department of Basic Sciences and Biology, Razi University of Kermanshah, Estahban Higher Education Center, and Kazerun Azad University, IR 10.2010-07.2015

1. Taught biochemistry, cellular and molecular biology to MS students.
2. Taught laboratory biochemistry to MS students.
3. Taught general biochemistry (replication, transcription, translation, metabolism and hormones, structure, and function of biomolecules) to DVM students.

Graduate Research and Teaching Assistant, Shiraz University, Shiraz, IR 02.2010-02.2014

1. I found that radiofrequency electromagnetic waves (RF-EMW) from cell phone changed the expression of heat shock proteins, superoxide dismutase, peroxiredoxin-1, and other proteins related to misfolding of proteins and/or stress in the proteome of rat testes.
2. I discovered biomarkers in the serum total proteome of patients with autoimmune diseases such as psoriasis (discovered biomarkers: alpha-1 antitrypsin, retinol binding protein and keratin 10) and lupus (discovered biomarkers: transthyretin, haptoglobin and prothrombin).
3. Taught biochemistry to DVM students.

Bibliography

A. Selected book chapters:

1. **Masood Sepehrimanesh** and Baojin Ding
Lentiviral Delivery of Transcription Factors to Generate Motor Neurons from Human Induced Pluripotent Stem Cells. Chapter 10 in ***Baojin Ding and Yu Tang (eds.), Human Induced Pluripotent Stem Cells, Neuromethods, vol. 210.*** 2024; 115-132.
2. **Masood Sepehrimanesh** and Baojin Ding
Generation of Motor Neurons from Human Induced Pluripotent Stem Cells Using Small Chemical Molecules. Chapter 11 in ***Baojin Ding and Yu Tang (eds.), Human Induced Pluripotent Stem Cells, Neuromethods, vol. 210.*** 2024; 133-146.
3. Masuma Akter, **Masood Sepehrimanesh**, and Baojin Ding
Preparation of Highly Pure hiPSC-Derived Motor Neurons Through Assembling a Co-culture System. Chapter 14 in ***Baojin Ding and Yu Tang (eds.), Human Induced Pluripotent Stem Cells, Neuromethods, vol. 210.*** 2024; 171-184.

B. Selected recent peer-reviewed papers:

1. **Masood Sepehrimanesh** and Baojin Ding
Pathophysiological mechanisms of amyotrophic lateral sclerosis: from gene mutations to cellular dysregulation. 2024; under preparation.
2. Baojin Ding, **Masood Sepehrimanesh**, Jacob Stagra, Xinggui Shen, and Ying Xiao
Dysregulated nuclear Lamin B1 in DYT1 dystonia causes thickened nuclear lamina and disrupts 14-3-3 proteins. 2024; ***iScience***. Under review.
3. **Masood Sepehrimanesh**, Wu Xu and Baojin Ding
Comparative analysis of chemical and lentiviral approaches in generation of hiPSC-derived motor neuron. 2024; ***Neural Regeneration Research***. Accepted.
4. Masuma Akter, **Masood Sepehrimanesh**, Wu Xu, and Baojin Ding
Assembling a coculture system to prepare highly pure induced pluripotent stem cell-derived neurons at late maturation stages. ***eNeuro***. 2024. Accepted.
5. Haochen Cui, **Masood Sepehrimanesh**, Casey S. Coutee, Masuma Akter, Md Abir Hosain and Baojin Ding
Protocol to image and quantify nucleocytoplasmic transport in cultured cells using fluorescent in situ hybridization and a dual reporter system. ***STAR Protocols: Cell Press***. 2022; 3, 101813.
6. Masuma Akter, Haochen Cui, **Masood Sepehrimanesh**, Md Abir Hosain and Baojin Ding
Generation of highly pure motor neurons from human induced pluripotent stem cells. ***STAR Protocols: Cell Press***. 2022; 3(1): 101223.

7. **Masood Sepehrimanesh**, Masuma Akter, and Baojin Ding
Direct conversion of adult fibroblasts into motor neurons. **STAR Protocols: Cell Press**. 2021; 2(4): 100917.
8. Baojin Ding and **Masood Sepehrimanesh**
Nucleocytoplasmic transport: regulatory mechanisms and the implications in neurodegeneration. **International Journal of Molecular Sciences**. 2021; 22: 4165.
9. **Masood Sepehrimanesh** and Baojin Ding
Generation and optimization of highly pure motor neurons from human induced pluripotent stem cells via lentiviral delivery of transcription factors. **American Journal of Physiology Cell Physiology**. 2020; 319(4): 771-780.

C. Selected presentations:

1. **Masood Sepehrimanesh** and Baojin Ding
Biochemical identification of proteins disrupted by dysregulated nuclear LMNB1 in DYT1 induced pluripotent stem cells-derived motor neurons. DiscoverBMB 2024, the annual meeting of the American Society for Biochemistry and Molecular Biology, San Antonio, TX, March 2024.
2. **Masood Sepehrimanesh** and Baojin Ding
Generation of patient-specific motor neurons in modeling movement disorder amyotrophic lateral sclerosis. Biomedical Research and Industry Day, LSU Shreveport, LA, November 2023.
3. **Masood Sepehrimanesh**
Generation of patient-specific motor neurons in modeling movement disorder amyotrophic lateral sclerosis. Only postdoc speaker at Graduation Research Day, LSU Health Shreveport, LA, July 2023.

GRANT FUNDING/EXPERINCE:

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| 2023-2024 | National Institute of Neurological Disorders and Stroke
Award# R56 NS133252
“Modeling DYT1 dystonia in patient-derived neurons”
Postdoc fellow: Masood Sepehrimanesh
Principal Investigator: Baojin Ding
\$365,000 |
| 2022-2023 | National Institute of Neurological Disorders and Stroke
Award# R21NS112910
“Determining the pathogenesis of DYT1 dystonia in reprogrammed human neurons” |

- Postdoc fellow: **Masood Sepehrimanesh**
Principal Investigator: Baojin Ding
\$200,913
- 2020-2021 National Institute of Allergy & Infectious Diseases
Award# U19AI142636-02
“Vaccine immunogenicity and efficacy in the rhesus macaque/SHIV model”
Postdoc fellow: **Masood Sepehrimanesh**
Principal Investigator: Francois Villinger
\$1,855,534
- 2019-2020 NIH R01 Grant (R01AI139288)
“Whole body to single cell analysis of the HIV reservoir”
Postdoc fellow: **Masood Sepehrimanesh**
Principal Investigator: Francois Villinger
\$729,273
- 2018-2019 Guilan University of Medical Sciences
“Formulation and physicochemical evaluation of *Calendula officinalis* rectal gel for treatment of acetic acid induced ulcerative colitis (with proctitis involvement) in mouse model”
Principal Investigator: **Masood Sepehrimanesh**
\$2,500
- 2017-2018 Guilan University of Medical Sciences
“Comparison of serum levels of ATG5 in patients with/without *Helicobacter pylori* infection”
Principal Investigator: **Masood Sepehrimanesh**
\$2,000
- 2014-2017 Shiraz University of Medical Sciences
“Comparison of serum proteome of patients suffering from primary sclerosing cholangitis (PSC) alone or with cholangiocarcinoma (CCA) for finding valuable diagnostic biomarkers”
Principal Investigator: **Masood Sepehrimanesh**
\$11,000
- 2010-2014 School of Veterinary Medicine and Research Council of Shiraz University
“Effects of radiofrequency electromagnetic waves (RF-EMW) from cell phone on rat testicular proteome, sera reproductive hormones and antioxidant status”
Research Assistant: **Masood Sepehrimanesh**
Principal Investigator: Saeed Nazifi
\$30,000

MENTORING EXPERIENCE:

2024 Mrs. Sahej Sachdeva, Ding's lab Summer Student, LSU Health Shreveport

Mr. Md Niaz Morshed, Ding's lab Rotation Student, LSU Health Shreveport

2023 Mr. Amdadul Huque, Ding's lab Rotation Student, LSU Health Shreveport

Mrs. Yuntian Duan, Ding's lab Research Associate, LSU Health Shreveport

Mrs. Amarige Yusufji, Ding's lab Summer Student, LSU Health Shreveport

Mr. Cameron Wilson, Ding's lab Summer Student, LSU Health Shreveport

2022 Mrs. Samira Mahmoudi, Ding's lab Rotation Student, LSU Health Shreveport

2020-2021 Mr. Casey A Coutee, Ding's Lab MSc Student of Biology, UL Lafayette
Current status: Manufacturing Chemist at Agilent Technologies

Mr. Jacob Stagra, Ding's lab MSc Student of Biology, UL Lafayette
Current status: Ph.D. Candidate of Neuroscience at UL Lafayette

2018 Mrs. Anahid Lavaie Motlagh, DDS Student, School of Dentistry at Guilan University of Medical Sciences
Current status: Private Clinician (DDS)

Dr. Iman Soofi Afshar, Gastroenterohepatologist Fellow at Guilan University of Medical Sciences
Current status: Private Clinician (Gastroentrohepatologist)

2017 Mrs. Fatemeh Abbasi Tashnizi, DVM Student, School of Veterinary Medicine at Shiraz University
Current status: Ph.D. Candidate at National University of Singapore

Mrs. Razieh Ardali, DVM Student, School of Veterinary Medicine at Shiraz University
Current status: Ph.D. Candidate of Immunology, University of Bern, Switzerland

Mrs. Fateme Heidarzad Pahlaviani, PharmD Student,

- School of Pharmacy at Guilan University of Medical Sciences
Current status: Scientific Consultant at Iran Food and Drug Administration (IFDA)
- 2016 Mrs. Seyedeh Mahsa Afra, DDS Student, School of Dentistry at Shiraz University of Medical Sciences
Current status: Private Clinician (DDS)
- Mrs. Shima Keshavarzi, MSc Student, Islamic Azad University, Fars Branch
Current status: Scientific Researcher at Zanjan University of Medical Sciences
- Mr. Mohammad Hossein Nooranizadeh, DVM Student, School of Veterinary Medicine at Shiraz University
Current status: MSc Candidate at Christian-Albrechts-Universität zu Kie, Germany
- Mr. Benyamin Beyzavi, MD Student, School of Medicine at Shiraz University of Medical Sciences
Current status: Private Physician
- 2015 Mr. Amin Allah Dashtiyani, Ph.D. Student at Shiraz University of Medical Sciences
Current status: Professor at Birjand University
- Mrs. Seyedeh Sahar Shojaei, MSc Student, Islamic Azad University, Fars Branch
Current status: Scientific Researcher at Johannes Kepler Universität Linz, Austria
- Mrs. Hananeh Hafezi, MSc Student, Islamic Azad University, Fars Branch
Current status: Ph.D. Candidate at Islamic Azad University

TEACHING EXPERIENCE:

- 2022 Unity Environmental University, Biochemistry Matter Expert to develop Biochemistry and Biochemistry Lab course for BSc students
- 2021 Department of Biology at the University of Louisiana at Lafayette, Lecturer for Advanced Cell Biology for MSc students of Biology
- 2015 Department of Basic Sciences at Estahban High Education Center, Visiting Professor and Lecturer for

	General Biochemistry and Laboratory Biochemistry for BSc students of Food Science
2013-2014	School of Veterinary Medicine, Razi University, Visiting Professor and Lecturer for General Biochemistry and Laboratory Biochemistry for DVM students
2010-2011	Department of Biology at Kazerun Azad University, Visiting Professor and Lecturer for Molecular and Cellular Biology for BSc students

HONORS AND AWARDS:

2024	2 nd Place Best Poster Presentation at Graduation Research Day 2024, LSU Health Shreveport
2023	Selected as the sole Postdoc fellow as speaker at Graduation Research Day 2023, LSU Health Shreveport
2019	Awarded an Honorary Cajun by University of Louisiana at Lafayette
	Global top 1% Peer Review Awards in Clinical Medicine
2018	Top Article in 4th ISERB Award Festival
	Top Thesis in 1st National Festival on Research Thesis (Khayyam Award)
	Outstanding Researcher of Guilan University of Medical Sciences
2017	Top Researcher of 18th Provincial Festival of Research and Technology
2012	Best Ph.D. Student at Comprehensive Exam
2010, 2011 & 2014	Award of the Excellent Student of Shiraz University
2010	Top student in DVM course
2009	First Rank Student in Biochemistry Ph.D. Entrance Exam

PROFESSIONAL MEMBERSHIP:

2023-Present	American Society of Biochemistry and Molecular Biology (ASBMB)
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2023-Present National Postdoc Association (NPA)

2019-Present Iranian American Medical Association (IAMA)

PROFESSIONAL REFERENCES:

To obtain further information about me, please feel free to contact the following scientists:

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3. **Devra Lee Davis**, PhD, MPH, Environmental Health Trust, Teton Village, WY, USA.

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