Sepehr Navid

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Isfahan, Iran

Education

- **Master of Science – Microbiology: GPA 4/4**

  Isfahan University of Medical Sciences (MUI), Iran (Ranked 9th in Iran)
  Sep 2015 – Jan 2018
  - 1st place graduation rank in the program
  - Thesis: Isolation and molecular identification of pathogenic Actinomycetes from patients with incurable diseases

- **Bachelor of Science - Laboratory Science**

  Shahrekord University of Medical Sciences, Iran
  Sep 2011 – Jun 2015
  - Among top students in bioinformatics course
  - Member of the Iranian Bioinformatics Association

Research Interest

Microbial Community	Molecular Biology	Wastewater Treatment
Bacterial &Viral Infections	Biofilms	Microbiota
Environmental Microbiology	3D Bioprinting	Hydrogels
Biomaterial	Novel wound dressing	Biomedical Engineering

Experiences

- **Research Assistant**
  Core Research Facilities, Isfahan University of Medical Sciences
  Mar 2022 – Present
  Tasks:
  - evaluating and investigating the antibacterial properties of materials
  - Isolation and Identification of Bacteria
  - extracting protein/DNA/RNA
  - running PCR and real-time qPCR
  - leading Sanger sequencing experiments, conducting sequence analysis
  - cell culture
  - ISO 17025 & 10995

- **Molecular Laboratory Technologist (Volunteering during the covid-19 pandemic)**
  Basir Medical lab (Center of SARS-CoV-2 Diagnosis)
  Jan 2020 – Feb 2022
  Tasks:
    - extracting viral RNA and performing RT real-time PCR for detecting COVID-19
    - extracting viral DNA and performing RT real-time PCR for detecting HPV
    - supervising the performance of Good Laboratory Practice(GLP) among employees managing and updating the protocols for quality control
    - Teaching the safety of the Covid-19 laboratory, RNA extraction and Real-Time PCR testing to trainees

- **Medical Laboratory Technologist**
  Ordibehesht Surgery Center
  Jun 2018 – Mar 2020
  Tasks:
    - performing different assays on various samples received from clinical chemistry, hematology, blood banking, serology, and medical microbiology divisions, conducting microbial analysis of urine/stool samples

Publication

- Mehdi Mehdikhani, Pinar Yilgör Huri, Seyed Ali Poursamar, Niloofar Etemadi, Sepehr Navid, Mahan Farzan, Mahour Farzan, Melika Babaei, Mohammad Rafienia, A hybrid 3D-printed and electrospun bilayer pharmaceutical membrane based on polycaprolactone/chitosan/polyvinyl alcohol for wound healing applications, International Journal of Biological Macromolecules, 20 Novamber 2024, pages 136692 (2024)
  Status: published

- Mehrdad Shamskilani; Saleh Najafi Chaleshtori; Sepehr Navid; Sasan Farsirad, Azadeh Babaei, Application of Membrane Bioreactor Integrated with UV Disinfectionfor Simultaneous Greywater reatment and SARS-CoV-2 Removal. International Journal of Environmental Science and Technology.28 July 2023.20, pages 11041–11048 (2023)
  Status: published

- Asghar Eskandarinia, Mosayeb Gharakhloo, Paria Khaloo Kermani, Sepehr Navid, Ali Salami, Darioush khodabakhshi, Ali Samadi, Antibacterial Self-healing Bilayer Dressing for Epidermal Sensors and Accelerate Wound Repair. Carbohydrate polymers. Volume 319, 1 November (2023)
  Status: published

- Sepehr Navid; Mohammad Refienia; Asghar Eskandarinia; Ramin Hamidi Farahani, Physicochemical, antibacterial,antibiofilm, and wound healing properties of chitosan/alginate blend film containing tannic acid for wound dressing
  Status: in preparation

- SepehrNavid,BaharSadegh-Ehdaei,MehdiShabani,MelikaHasani,Arezoo Mirzaei,Kiarash Ghazvini, Masoud Youssefi, and Masoud Keikha. "The case reportof Mycobacterium arupense wound infection in diabetes mellitus patients; the first report andliterature review." Access Microbiology 2, no. 4 (2021)
  Status: published

- SepehrNavid, Saeid Arzhang, Arezoo Mirzaei, Amirhosein Kefayat, and Zohre Naderi. Misleading of the diagnosis of Mycobacterium attributed lung diseases to malignancy due to smear, culture and PCR negative results: A lesson from a case report.Indian Journal of Tuberculosis 67, no. 3 (2021): 371-373
  Status: published

- Eskandarinia,Asghar,AmirhoseinKefayat,MariaAgheb,MohammadRafienia,MoloudAmini Baghbadorani, Sepehr Navid, Karim Ebrahimpour, Darioush Khodabakhshi, and Fatemeh Ghahremani. A novel bilayer wound dressing composed of a dense polyurethane/propolis membrane and a biodegradable polycaprolactone/gelatin nanofibrous scaffold. Scientific reports 10, no. 1 (2020): 1-15
  Status: published

- Eskandarinia,Asghar,AmirhoseinKefayat,MohammadRafienia,MariaAgheb, SepehrNavid, and Karim Ebrahimpour. Cornstarch-basedwound dressing incorporated with hyaluronic acidandpropolis:Invitroandinvivostudies Carbohydratepolymers216 (2019):25-35.
  Status: published

- Khodabakhshi, Darioush, Asghar Eskandarinia, Amirhosein Kefayat, Mohammad Rafienia, Sepehr Navid,SaeedKarbasi,and JamalMoshtaghian."In vitroand in vivo performance of a propolis-coated polyurethane wound dressing with high porosity and antibacterial efficacy."Colloidsand surfacesB: Biointerfaces 178 (2019):177-184
  Status: published

- Khorshidi, Mehdi, Sepehr Navid, Azadi, Davood, Shokri, Darioush, and Shojaei, Hasan. "A case report of brain abscess caused by Nocardia cyriacigeorgica in a diabetic patient." JMM Case Reports 5, no. 9 (2018).
  Status: published

- Sepehr Navid, and Keikha, Masoud. "Misdiagnosis of Mycobacterium abscesses Pulmonary Infection as Pulmonary Tuberculosis."InternationalJournal of Infection 5, no.3 (2018).
  Status: published

- Eskandarinia, Asghar, Mohammad Rafienia, Sepehr Navid, and Maria Agheb. Physicochemical, antimicrobial and cytotoxic characteristics of corn starch film containing propolis for wound dressing." Journal of Polymers and the Environment 26, no. 8 (2018): 3345-3351.
  Status: published

- Eskandarinia, Asghar, Mohammad Rafienia, Sepehr Navid, and Maria Agheb. Physicochemical, antimicrobial and cytotoxic characteristics of corn starch film containing propolis for wound dressing." Journal of Polymers and the Environment 26, no. 8 (2018): 3345-3351.
  Status: published

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  Status: published

Teaching Assistantship

Assistantship in Isfahan University of Medical Sciences
summer 2022-2023
Molecular Biology (The Laboratory Skill learning), Dr. Seyed Hossein Mirhendi

- General introduction to the biomedical research laboratory and the Safety
- DNA/RNA extraction and purification from human blood/tissue samples
- Polymerase chain reaction (PCR), and Agarose gel electrophoresis: participles, methods and applications
- cDNA synthesis, SYBR green-based and Probe-based real time polymerase chain reaction (RT-PCR) principles, Methods and applications
- Sanger Sequencing and DNA sequence analysis.
- Real-time RT-PCR assays for the detection of SARS-CoV-2
- Detection of human papilloma Virus (HPV) by real-time PCR assay

Biological Skills

- PCR
- RT-PCR
- qPCR
- RNA/DNA/ ProteinExtraction
- Agarose gel electrophoresis
- Diagnostic Laboratory Tests
- ELISA
- Biofilm Assay
- Cell culture
- Microbial culture
- E-test, MIC, MBC, Disc diffusion
- MTT
- in vitro and in vivo tests & Working with Laboratory Animals

Computer Skills

- Oligo (Primer Design)
- SPSS
- GraphPad Prism
- CLC Genomics
- R (programing language)
- NGS and Microbiome Data Analysis
- solidworks
- Linux (ubuntu)
- ImageJ
- Adobe software's
- Microsoft office

Memberships

- Elite Member, Iran's National Elites Foundation, 2015-Present
- Member of University Futsal Team, Isfahan University of Medical Sciences, 2014-2018

  Member,National Organization for Development of Exceptional Talents, 2004-2010

Languages

- **Persian**

  Native language
- **English**

  TOEFL Score: 100 (R:25, L:27, S:22, W:26)

Deutsch

A1

Reference

- **Dr. Mohammad Rafienia** (faculty dean)
  Professor Biomedical Engineering
  DepartmentofBiomaterials, Nanotechnology&Tissue Engineering
  Isfahan University of Medical Sciences

  E-mail: m_rafienia@med.mui.ac.ir / **website** link

- **Dr. Mohammadamin Tabatabaiefar**
  Professor of Medical Genetics
  Department of Genetics & Molecular Biology
  Isfahan University of Medical Sciences

  E-mail: tabatabaiefar@med.mui.ac.ir / **website** link

- **Dr. Seyed Hossein Mirhendi Esfahani**
  Professor of Mycology
  Department of Parasitology & Mycology Isfahan University of Medical Sciences

  E-mail: s.h.mirhendi@gmail.com / **website** link

- **Dr. Hadis Rostamabadi**
  Assistant Professor of Nutritional Sciences & Food Technology
  Department of Food Sciences and Technology, Isfahan University
  of Medical Sciences

  E-mail: rostamabadi@nutr.mui.ac.ir / **website** link