Ali Karimi Bavandpour CV

Contact Information:

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Objective: Ph.D. student in Cell and Molecular Biology at Michigan State University, East Lansing, MI.

Research Interests

- Vaccine Design & Development: Viral and Bacterial
- Drug Design: Antibiotic resistance
- Pathogenesis: Gram Positive/Negative Bacteria, Viral

Education

- **Ph.D. in Cell and Molecular Biology**
  - Michigan State University, East Lansing, MI (2022 - Present)
- **M.Sc. in Medical Microbiology (Top Student)**
  - Tarbiat Modares University, Tehran, Iran (2013 – 2016)
  - Thesis Title: Comparing the role of mesoporous silica nanoparticles and mesoporous carbon nanoparticles in inducing the systemic and mucosal immune responses against recombinant subunit B of cholera toxin in a rabbit animal model.
  - CGPA: 17.36 out of 20
- **B.Sc. in Cellular and Molecular Biology**
  - Shahid Chamran University, Ahvaz, Iran (2009 – 2013)
  - CGPA: 15.56 out of 20

Work Experience

- **Clinical Research Associate**
  - Orchid Pharmed Company, 2016 – 2020
- **CEO and Founder**
  - Viona Behdasht Parsian, 2020 – 2021

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Research Experience

- **Characterization of biofilm formation and virulence factors of Staphylococcus aureus isolates**
    - Scientific Advisor, Contributor, and Investigator.
    - Medical Microbiology Dept., Shahid Beheshti University of Medical Sciences, Tehran, Iran (2019 – 2020)
- **Tocilizumab and Liraglutide: Drug Clinical Research (Phase III)**
    - Clinical Research Associate (CRA), Orchid Pharmed Co., Clinical Research Dept., Cinnagen Co., Tehran, Iran (2019 – 2020)
- **Denosumab and Aflibercept: Drug Clinical Research (Phase III)**
    - Clinical Research Associate (CRA), Orchid Pharmed Co., Clinical Research Dept., Cinnagen Co., Tehran, Iran (2016 – 2019)
- **Comparing the role of mesoporous silica nanoparticles and mesoporous carbon nanoparticles**
    - Senior Investigator, First Author, Research Assistant in Prof. Bakhshi's lab, Tarbiat Modares University, Tehran, Iran (2014 – 2017)
- **Investigating the genetics and epidemiology of enteric bacteria**
    - Research Assistant to Prof. Bakhshi's lab, Tarbiat Modares University, Tehran, Iran (2013 – 2014)

Teaching Experience

- **Introduction to Bioinformatics for PhD Students (3 credits)**
    - Teaching Assistant, Tarbiat Modares University, 2016 – 2019
- **Introduction to Molecular Cloning for MSc and PhD Students (1 Credit)**
    - Teaching Assistant, Tarbiat Modares University and Shahid Beheshti University of Medical Sciences, 2016 – 2019
- **Introduction to Molecular Biology Methods: Flow Cytometry and Mass Spectrometry for PhD students (1 Credit)**

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- Teaching Assistant, Tarbiat Modares University and Shahid Beheshti University of Medical Sciences, 2015 – 2019

Skills

- **Experimental (Molecular/Cellular) Skills:**
  - Molecular cloning | Protein expression | Purification of recombinant proteins | Western blot | SDS PAGE | PCR | Real-time PCR | Gel electrophoresis | Cell culture Mouse and rabbit animal models | ELISA
- **Computer Skills:**
  - Programming/Data Analysis: MATLAB, Python

Certificates

- Molecular Docking, Shahid Beheshti University of Medical Science, Eslahchi Lab (2016)
- Master of Business Administration, University of Tehran (2020-2022)

Honors and Awards

1. Ranked as the top MSc student based on GPA and thesis quality (2016)
   - Medical Microbiology Department, Tarbiat Modares University, Tehran, Iran
2. Awarded a full scholarship for the MSc Program (tuition fee waiver) (2013)
   - Tarbiat Modares University, Tehran, Iran
3. Ranked 10th among 5000 participants in the National MSc University Entrance Exam (2013)

Publications

1. Characterization of biofilm formation and virulence factors of Staphylococcus aureus isolates from pediatric patients in Tehran, Iran. DOI: 10.22038/ijbms.2020.36299.8644
   - Authors: Kadkhoda, H., Ghalavand, Z., Nikmanesh, B., Kodori, M., Houri, H., Maleki, D., Karimi, A., Eslami, G.
   - Iranian Journal of Basic Medical Sciences (2020)

2. The roles of mesoporous silica and carbon nanoparticles in antigen stability and intensity of the immune response against recombinant subunit B of cholera toxin in a rabbit animal model. DOI: 10.1016/j.ijpharm.2019.118868
    - Authors: Karimi, A., Bakhshi, B., and Peerayeh, S.
    - International Journal of Pharmaceutics (2020)
3. Patent: Cholera Prevention Oral Vaccine. Number and date of invention registration: 92815-15.07.2017 (2017)
4. Poster: The production and utilization of mesoporous silica nanoparticles for targeted drug delivery of recombinant CTB protein to GALT. 2nd National Conference of Biological Sci., Damghan (2016)
    - Authors: Karimi, A., Bakhshi, B., and Peerayeh, S
5. Poster: Cloning and Optimization of CTB Expression. 2nd National Conference of Biological Sci., Damghan (2016)
    - Authors: Karimi, A., Bakhshi, B., and Peerayeh, S

Languages

- English: Fluent - TOEFL iBT Overall 115 (Reading:30 Listening:30 writing:27 speaking:28)
- Persian: Mother Tongue
- Kurdish: Native

References

1. Bita Bakhshi, PhD
    - Associate Professor, Medical Microbiology Department, Tarbiat Modares University, Tehran, Iran
    - Email: b.bakhshi@Modares.ac.ir
    - Phone: +9821-82884558
2. Ali Hashemi, PhD
    - Professor, Department of Bacteriology, Shahid Beheshti University of Medical Sciences, Tehran, Iran
    - Email: ali.hashemi@sbmu.ac.ir
3. Malihe Talebi, PhD

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