

# Curriculum vitae

## Dr Nahal Hadi

BSc, MSc, PhD

### Professor of Molecular Bacteriology

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## Professional Summary

I am a member of the educational faculty of medicine, department of bacteriology and virology with 28 years of experience in microbiology and molecular genetics in Shiraz University of Medical Sciences. Providing support to professors, staff, students, and research projects. Additionally, I have 28 years of experience in student's education, professional development and growth. I have managed multiple scientific projects and served as a thesis supervisor for numerous students at the medical, master, and PhD levels. I have also worked as a mentor and advisor for students of various levels. As a regular member, I support university activities and functions in project development and leadership skills. Furthermore, I have experience in managing course programs, hiring academic members and experts, and analyzing data to improve academic success. I am experienced in managing multiple priorities with a positive outlook and am interested in taking on additional responsibilities to achieve team goals.



## Education

- Postdoctoral fellowship in molecular genetics, "The University of Sheffield" Sheffield, UK.
- PhD, in Molecular Microbiology, "The University of Sheffield," Sheffield, UK.
- MSc in Medical microbiology, "Shiraz University of Medical Sciences" Shiraz, Iran
- BSc in Microbiology, " Tehran University" Tehran, Iran



## Academic Skills

- ❖ Teaching
- ❖ Academic Administration
- ❖ Course Design
- ❖ Academic Advising
- ❖ Research Expertise
- ❖ Faculty Collaboration
- ❖ Document Management
- ❖ Collaborative Teamwork
- ❖ Faculty Support
- ❖ Academic Writing
- ❖ Managing Schedules
- ❖ Learning Outcomes Tracking
- ❖ Post-Secondary Career Exploration
- ❖ Project design, Management and Supervision
- ❖ Report Generation
- ❖ Student Advisory
- ❖ IEPs Knowledge
- ❖ Course Scheduling
- ❖ Written and Oral Communication



## Work History-(Teaching/ Administration Positions)

<b>2024</b>	<b>Professor</b> , Bacteriology and virology department, Medical school, Shiraz University of Medical sciences (SUMS), Shiraz, Iran;
<b>2019- Present</b>	<b>Head of Bacteriology and Virology department</b> , Medical school, Shiraz University of Medical sciences (SUMS)
<b>2018-2024</b>	<b>Associate Professor</b> , Bacteriology and virology department, Medical school, Shiraz University of Medical sciences (SUMS), Shiraz, Iran; <b>Laboratory manager</b> , Department of Bacteriology and Virology, SUMS
<b>2019-2021</b>	<b>Research deputy of the Bioinformatics and computational research centre (BCB)</b>
<b>2012-2018</b>	<b>Assistant Professor</b> , Bacteriology and virology department, Medical school, Shiraz University of Medical sciences (SUMS), Shiraz, Iran; <b>Laboratory manager</b> , Department of Bacteriology and Virology, SUMS
<b>2010-2011</b>	<b>Lab demonstrator</b> for MSc students of “Molecular Medicine” 1 year taught course. The university of Sheffield, Sheffield, UK. Post-doctoral Fellowship, The university of Sheffield, Sheffield, UK.
<b>2000-2006</b>	<b>Lecturer of medical bacteriology</b> , Shiraz University of Medical Sciences (SUMS), Shiraz, Iran <b>Medical microbiology lab manager</b> , (SUMS) Shiraz, Iran



## Research interests

My principal research interests lie in the field of molecular genetics in bacteriology, including genotyping, gene knock out, molecular epidemiology, gene cloning and protein expression in a bacterial system. My other research projects are generally focused on quorum sensing (QS) and the other molecular mechanisms controlling bacterial virulence.

Separately, I am currently undertaking a project to find out the presence of carcinogen substances in health care of oncology hospital, by investigating mutagenesis using the Ames test.

I have also been studying and working for years on *Mycobacteria*, *Aeromonas*, *Klebsiella* and many other routine bacteria.

Independently, I take particular interest in use of nanoparticles and nano-materials, for its antibacterial activity in medicine and industry.

## Experience

- DNA, RNA and Protein techniques:**
- PCR, RT-PCR, Real time PCR, Gene cloning, Transformation and Bacterial Conjugation, Cassette mutagenesis, Transposon mutagenesis, Gene Expression, DNA analysis, Southern and Western blotting, Protein Over-expression and Purification, SDS-PAGE, Promoter activity assay
- Cell culturing techniques**
- Cell and tissue culturing

- Microscopy techniques** • Different methods of bacterial and cell staining. light, fluorescence, phase contrast and Electron microscopy (TEM)
- Bioinformatics** • Working with many software packages including Artemis, GeneJockey, PlasMap, Sequence Analysis, PyMol, and many other online available programs using in bioinformatics for gene and protein beside and phylogenetic analysis
- Bacterial and enzymatic bioassays** • Conventional Bacteriologic assays including Mycobacterial specific diagnostic tests,  $\beta$ -galactosidase assay, ELISA haemagglutination, AHL reporter bioassay, Ames' Test and so on
- Bacterial Adhesion assays** • Biofilm formation and cell adhesion techniques, cell invasions
- IT and Statistical Skills** • Highly skilled at working with Power-point, Word, Excel, Prism, SPSS, Endnote, Data analysis and statistics, Lecture capture and video making soft wares, AI application in education and research.

## Teaching courses

- Medical Bacteriology for Medicine, Pharmaceutical, Dentistry and International medical students (Teaching In English)
- Medical Bacteriology- Theory and Practical ('3 credit course, fellowships of Laboratory Sciences)
- Systematic Bacteriology ("3 credit course", PhD students of Bacteriology)
- Advanced Genetics ("3 credit course", PhD students of Bacteriology)
- Bioinformatics ("2 credit course", PhD students of Bacteriology)
- Gene cloning ( MSc and Ph.D students)
- Advanced Bacteriology(3 credit course for PhD students of bacteriology)
- Bacterial Pathogenicity (1 credit course for PhD students of bacteriology)
- Molecular Diagnostic ("2 credit course", PhD students of Bacteriology)
- Oral microbiology("1 credit course", PhD students of Bacteriology)
- Antimicrobial agents: ("1 credit course", PhD students of Bacteriology)
- Mycobacteriology- Theory and Practical (PhD students of Bacteriology)
- Microbial Genetics("2 credit course", PhD students of Bacteriology)
- Host and Parasite relationship(2 credit course for MSc students of Microbiology)
- Bacterial Physiology (2 credit course for MSc students of Microbiology)
- Cell and Molecular biology (2 credit course for MSc students of Microbiology)
- Microbial Genetics (2 credit course for MSc students of Microbiology and Virology)
- Practical Molecular Genetics, ("2 credit course" for PhD students of Bacteriology)
- Molecular Diagnostic, (2 credit course for MSc students of Microbiology)



## Professional Memberships

- Society of General Microbiology (SGM)
- Iranian Society of Microbiology



## Publications (book)

1. **Fundamentals of Medical Microbiology** - Volume Three; Robert David, Brian J. Hurl – Translated by: Parvin Hassanzadeh, Nahal Hadi, Keyvan Pakshir, Ghasem Askari; First Edition, 2002 - Shiraz University Publications
2. **Mechanisms of Action and Resistance of Antimicrobial Drugs** - Written by: Dr. Amir Emami, Dr. Gholamreza Hatam, Dr. Nahal Hadi; First Edition - Shiraz University of Medical Sciences Publications 2016 -
3. **Common Zoonotic Pathogens in Urban Rodents** - Written by: Dr. Taher Azimi Khanbegloo, Dr. Nahal Hadi, Sahar Saboor, Sina Nasrollahi Majd - Educational Publications of Arshadan
4. **Mycobacterium Leprae and Non-Tuberculous Mycobacteria** - Written by: Dr. Nahal Hadi, Dr. Taher Azimi Khanbegloo, Farhad Moradi, Abolfazl Rafati, Mahrokh Rajaei, Sina Nasrollahi Majd - Educational Publications of Arshadan
5. **Quorum Sensing and Quorum Quenching** - Communication Systems in Bacteria - Written by Dr. Nahal Hadi, Farhad Moradi - Educational Publications of Arshadan



## Recent Paper Publications -2018-2024 ([Google Scholar](#))

1. [Aeromonas characteristics in Iran, Southwest Asia; a systematic review and meta-analysis on epidemiology, reservoirs and antibiotic resistance profile from aquatic ...](#) 2025  
F Moradi, N Hadi, A Bazargani, F Abdi, N Ghorbanian  
BMC Veterinary Research 21 (1), 107
2. [Determination of Immunological Properties of Pseudomonas aeruginosa PA103, by Serum Bactericidal Assay & ELISA](#) 2025  
SA Sharafshadehi, SN Seify, MR Mohammadi, MT Sarjam, S Najafi, ...  
Journal of Medical Bacteriology, 40-45
3. [Biofilm formation in mycobacterial genus; mechanism of biofilm formation and anti-mycobacterial biofilm agents](#) 2025  
S Nasrollahian, H Pourmoshtagh, S Sabour, N Hadi, T Azimi, ...  
Current Pharmaceutical Biotechnology
4. [Production of Chicken Egg Yolk Immunoglobulin \(IgY\) against Recombinant TolC Protein From Shigella flexneri Bacteria](#) 2024  
H Samiei-Abianeh, SH Nazarian, A Resaei, N Hadi  
Iranian South Medical Journal 27 (2), 123-137
5. [Superior Performance of Iron-Coated Silver Nanoparticles and Cefoxitin as an Antibiotic Composite Against Methicillin-Resistant Staphylococcus aureus \(MRSA ...](#) 2024  
N Hadi, S Nakhaeitazreji, F Kakian, Z Hashemizadeh, A Ebrahiminezhad, ...  
Molecular Biotechnology 66 (12), 3573-3582
6. [How Nanomaterials Act against Bacterial Structures? A Narrative Review by Focusing on Molecular Mechanism of the Nanoparticles](#) 2024  
M Bahrami, PS Shirazi, F Moradi, N Hadi, S Eslaminezhad  
Microbial Pathogenesis, 107002

- 7 [Molecular characterization of superbugs \*K. pneumoniae\* harboring extended-spectrum  \$\beta\$ -lactamase \(ESBL\) and carbapenemase resistance genes among hospitalized patients in ...](#) 2024  
F Moradi, M Akbari, R Vakili-Ghartavol, M Ostovari, N Hadi  
Heliyon 10 (17)
- 8 [An update on alternative therapy for \*Escherichia coli\* caused urinary tract infections; a narrative review](#) 2024  
S Nasrollahian, F Moradi, N Hadi, R Ranjbar, S Ranjbar  
Photodiagnosis and Photodynamic Therapy, 104075
- 9 [Detection of \*Yersinia enterocolitica\*, \*Shigella\* spp. and \*Salmonella\* spp. in \*Rattus norvegicus\* captured from Tehran, Iran](#) 2024  
T Azimi, S Nasrollahian, S Sabour, N Hadi, L Azimi, F Fallah, ...  
Future Microbiology 19 (5), 377-384
- 10 [Expression and purification of TolC as a recombinant protein vaccine against \*Shigella flexneri\* and evaluation of immunogenic response in mice](#) 2024  
R Veisi, S Nazarian, J Fathi, N Hadi  
Microbial Pathogenesis 188, 106539
- 11 [Production of egg yolk antibody \(IgY\) against a chimeric protein containing IpaD, StxB, and TolC antigens from \*Shigella\*: An investigation of its prophylactic effects against Shiga toxin \(Stx\) and \*Shigella dysenteriae\* in vitro and in vivo](#) 2024  
Nahal Hadi, Shahram Nazarian, Saber Rouhi, Seyed Edris Hosseini, Javad Fathi  
Heliyon
- 12 [Ralstonia pickettii bloodstream infection in the patient with Guillain-Barre syndrome under plasmapheresis](#) 2024  
F Moradi, J Gorginpour, A Dezhkam, N Hadi  
New Microbes and New Infections, 101218
- 13 [Expression and purification of TolC as a recombinant protein vaccine against \*Shigella flexneri\* and evaluation of immunogenic response in mice](#) 2024  
R Veisi, S Nazarian, J Fathi, N Hadi  
Microbial Pathogenesis, 106539
- 14 [Investigating the Prevalence and Clinical Significance of \*Helicobacter pylori\* in Hospital-ized Patients Undergoing Endoscopy in Namazi Hospital, Shiraz](#) 2023  
F Moradi, S Mohammadi, F Kakian, N Hadi  
Iranian South Medical Journal 26 (2), 102-113
- 15 [Superior Performance of Iron-Coated Silver Nanoparticles and Cefoxitin as an Antibiotic Composite Against Methicillin-Resistant \*Staphylococcus aureus\* \(MRSA ...](#) 2023  
N Hadi, S Nakhaeitazreji, F Kakian, Z Hashemizadeh, A Ebrahiminezhad, ...  
Molecular Biotechnology, 1-10
- 16 [Quinolone resistance and biofilm formation capability of uropathogenic \*Escherichia coli\* isolates from an Iranian inpatients' population](#) 2023  
E Rastegar, Y Malekzadegan, R Khashei, N Hadi  
Molecular Biology Reports 50 (10), 8073-8079
- 17 [The first evidence of Seoul hantavirus, hepatitis E virus and rabies virus in \*Rattus norvegicus\* in Tehran, Iran](#) 2023  
T Azimi, S Nasrollahian, S Sabour, N Hadi, L Azimi, N Rahbarian, ...  
Future Virology 18 (11), 691-697
- 18 [Investigate the immunogenic and protective effect of trivalent chimeric protein containing IpaD-StxB-TolC antigens as a vaccine candidate against \*S. dysenteriae\* and \*S. flexneri\*](#) 2023  
J Amani, S Nazarian, N Hadi, SA Mirhosseini, R Ranjbar, HS Abianeh  
Microbial Pathogenesis 178, 106066
- 19 [Green Synthesized Iron-Coated Silver Nanoparticles: Economic Bimetallic Nanoparticles Potential Against Methicillin-Resistance \*Staphylococcus aureus\*](#) 2023  
S Nakhaeitazreji, N Hadi, SM Taghizadeh, N Moradi, F Kakian, ...  
Molecular Biotechnology, 1-11
- 20 [A global overview of the most important zoonotic bacteria pathogens transmitted from \*Rattus norvegicus\* to humans in urban environments](#) 2022  
S Sabour, T Azimi, A Nasser, N Hadi, A Mohsenzadeh, A Shariati  
Infectious Medicine
- 21 [An in silico Design, Expression and Purification of a Chimeric Protein as an Immunogen Candidate Consisting of IpaD, StxB, and TolC Proteins from \*Shigella\* spp.](#) 2022  
J Fathi, S Nazarian, E Kordbacheh, N Hadi  
Avicenna Journal of Medical Biotechnology 14 (3), 247

- 22 [Synthesis of mesoporous antimicrobial herbal nanomaterial-carrier for silver nanoparticles and antimicrobial sensing](#) 2022  
N Moradi, SM Taghizadeh, N Hadi, A Ghanbariasad, A Berenjian, ...  
Food and Chemical Toxicology 165, 113077
- 23 [Quorum-quenching activity of some Iranian medicinal plants](#) 2021  
F Moradi, N Hadi  
New Microbes and New Infections 42, 100882
- 24 [Rehabilitation, a necessity in hospitalized and discharged people infected with COVID-19: a narrative review](#) 2021  
N Sedighimehr, J Fathi, N Hadi, ZS Rezaeian  
Physical Therapy Reviews 26 (3), 202-210
- 25 [Frequency and Antimicrobial Resistance of Shigella Species in Iran During 2000 – 2020](#) 2021  
F Moradi , NHadi , M Akbari , Z Hashemizadeh , R Rouhi Jahromi
- 26 [Rehabilitation, a necessity in hospitalized and discharged people infected with COVID-19: a narrative review](#) 2021  
N Sedighimehr, J Fathi, N Hadi, ZS Rezaeian  
Physical Therapy Reviews 26 (3), 202-210
- 27 [Quorum-quenching activity of some Iranian medicinal plants](#) 2021  
Farhad Moradi, Nahal Hadi  
<https://doi.org/10.1016/j.nmni.2021.100882> - Available online 23 April 2021, 100882
- 28 [Rehabilitation, a necessity in hospitalized and discharged people infected with COVID-19: a narrative review](#) 2021  
N Sedighimehr, J Fathi, N Hadi\*, ZS Rezaeian  
Physical Therapy Reviews, 1-9
- 29 [Inquiry about Anti-bacterial & Anti-Quorum sensing effects of Dionysia revolute Boiss against secondary bacterial infections isolated from patients with SARS COVID-19; in vitro ...](#) 2021  
N Hadi, F Moradi, RR Jahromi, M Akbari  
Herbal Medicines Journal 5 (3)
- 30 [Determining spa-type of methicillin-resistant Staphylococcus aureus \(MRSA\) via high-resolution melting \(HRM\) analysis, Shiraz, Iran](#) 2020  
Z Hashemizadeh, A Bazargani, D Kalantar-Neyestanaki, S Mohebi, N Hadi\*..  
BMC research notes 13 (1), 1-4
- 31 [Epidemiology of Kidney Stone and Bacterial Strains with Antibiotic Resistance in Shiraz, Southwest of Iran during 2014-2019](#) 2020  
F Kakian, M Ghasemi Palangi, N Hadi\*  
International Journal of Epidemiology and Health Sciences
- 32 [Evaluation the Expression of Efflux Pump Genes “Tap & P55 in Mycobacterium Tuberculosis Clinical Isolates in Fars, Iran](#) 2020  
F Khoob, MSS Abadi, N Hadi\*, F Avazzadeh, Z Zarei
- 33 [Characterization and antibiotic resistance pattern of diffusely adherent Escherichia coli \(DAEC\), isolated from paediatric diarrhoea in Shiraz, southern Iran](#) 2020  
K Javadi, S Mohebi, M Motamedifar, N Hadi\*  
New Microbes and New Infections 38, 100780
- 34 [Evaluation of quorum-sensing inhibitory effects of extracts of three traditional medicine plants with known antibacterial properties](#) 2020  
F Moradi, N Hadi\*, A Bazargani  
New Microbes and New Infections 38, 100769
- 35 [Antibacterial activity and mechanism of action of chitosan nanofibers against toxigenic Clostridioides \(Clostridium\) difficile Isolates](#) 2020  
MSS Abadi, E Mirzaei, A Bazargani, A Gholipour, H Heidari, N Hadi\*  
Annali di igiene: medicina preventiva e di comunita 32 (1), 72-80
- 36 [A Five-Year Retrospective Multicenter Study on Etiology and Antibiotic Resistance Pattern of Bacterial Meningitis Among Iranian Children](#) 2019  
N Hadi, K Bagheri  
Infection Epidemiology and Microbiology 5 (4), 17-24
- 37 [Determining spa-type of methicillin-resistant Staphylococcus aureus \(MRSA\) via High-Resolution Melting \(HRM\) analysis, Shiraz, Iran](#) 2019  
N Hadi, Z Hashemizadeh, A Bazargani, S Mohebi, ...
- 38 [Virulence genes profile and biofilm formation ability of Acinetobacter baumannii strains isolated from inpatients of a tertiary care hospital in southwest of Iran](#) 2019  
S Jahangiri, Y Malekzadegan, M Motamedifar, N Hadi\*  
Gene Reports 17, 100481
- 39 [Characterization of SCCmec, spa types and Multi Drug Resistant of methicillin-resistant Staphylococcus aureus isolates among inpatients and outpatients in a referral hospital ...](#) 2019  
Z Hashemizadeh, N Hadi\*, S Mohebi, D Kalantar-Neyestanaki, ...  
BMC research notes 12 (1), 1-6

- 40 [Determining spa-type of methicillin-resistant Staphylococcus aureus \(MRSA\) via High-Resolution Melting \(HRM\) analysis, Shiraz, Iran](#) 2019  
N Hadi, Z Hashemizadeh, A Bazargani, S Mohebi, ...
- 41 [The First Report of Prevalence of Class 1-3 Integrons in Clinical Isolates of Staphylococcus aureus in Southwestern Iran: A Multicenter Study](#) 2019  
SM Hosseini, N Hadi\*, A Bazargani, A Emami, N Pirbonyeh  
Jundishapur Journal of Microbiology 12 (11)
- 42 [Isolation and Molecular Identification of Aeromonas Wound Infection in Iranian Burn Patients](#) 2019  
N Hadi, Z Mahmoodi, A Emami, Y Malekzadegan, T Valadbeygi  
Infectious Disorders-Drug Targets (Formerly Current Drug Targets-Infectious ...
- 43 [Evaluation of the bacterial frequency causing ventilator associated pneumonia \(VAP\) in patients admitted in internal ICUs and internal wards at Shiraz Teaching Hospitals](#) 2019  
T Khalili, N Samadi, MSS Abadi, MAD Panah, M Motamedifar, N Hadi\*
- 44 [Toxin profiles and antimicrobial resistance patterns among toxigenic clinical isolates of Clostridioides \(Clostridium\) difficile](#) 2019  
H Heidari, HS Ebrahim-Saraie, A Amanati, M Motamedifar, N Hadi, ...  
Iranian journal of basic medical sciences 22 (7), 813
- 45 [Synthesis of zirconium doped copper oxide \(CuO\) nanoparticles by the Pechini route and investigation of their structural and antibacterial properties](#) 2018  
H Mersian, M Alizadeh, N Hadi  
Ceramics International 44 (16), 20399-20408
- 46 [The highly conserved domain of RND multidrug efflux pumps in pathogenic Gram-negative bacteria](#) 2018  
MSS Abadi, A Gholipour, N Hadi\*  
Cellular and Molecular Biology 64 (13), 79-83
- 47 [Study of Comparison Biofilm Production and Frequency of Adhesion Factors among Clinical Isolates of Methicillin Resistant Staphylococcus Aureus from Different Sources of ...](#) 2018  
M Ghasemnezhad, N Hadi, A Emami, A Bazargani, SM Hosseini, ...  
Fresenius Environmental Bulletin 27 (3), 1868-1874
- 48 [Molecular characteristics of multiple and extensive drug-resistant Acinetobacter baumannii isolates obtained from hospitalized patients in Southwestern Iran.](#) 2018  
B Soltani, H Heidari, HS Ebrahim-Saraie, N Hadi, J Mardaneh, ...  
Le infezioni in medicina: rivista periodica di eziologia, epidemiologia ...



### Recent awards:

- Best-professor award in the medical school – 2019



### Reviewer of:

- ❖ Iranian Journal of Basic Medical Sciences
- ❖ Modares Journal of Infection, Epidemiology and Microbiology
- ❖ Drug Delivery & Therapeutics (JDDT)
- ❖ MDPI Insights
- ❖ Acta Tropica
- ❖ The Microbe
- ❖ IJHMR Journal
- ❖ Shiraz E-Medical Journal (SEMJ)



### Language skills

- ❖ Persian (mother language)
- ❖ English (advanced)
- ❖ France (basic)



### Unprofessional Skills

**1998-2007:** Meditation and Yoga instructor



## Interests

- ❖ Yoga
- ❖ Art : Music, Sculpturing, Painting, Photography
- ❖ Book study, philosophy, psychology and spiritual aspects
- ❖ Nature, Traveling
- ❖ Hiking, cycling and walking