

## Scientific Curriculum Vitae

**Mohsen Moghoofei, Ph.D., Medical Virology**



### **Personal Data**

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First Name: **Mohsen**

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<https://scholar.google.com/citations?user=hk3ulX0AAAAJ&hl=en>



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### **Education**

- **Doctor of Philosophy (PhD)**

Medical Virology, Department of Virology, Faculty of Medicine, Iran University of Medical Sciences (2013-2018), Tehran, Iran.

Thesis: *microRNAs 29, 150, 155, 223 level and their relation to viral and immunological markers in HIV-1 infected naive patients*

- **Master of Science (M.Sc.)**

Medical Microbiology, Department of Microbiology, Faculty of Medicine, Isfahan University of Medical sciences (2011 – 2013), Isfahan, Iran.

Thesis: *Morphological and bactericidal effects of amikacin, meropenem and imipenem on Pseudomonas aeruginosa*

- **Bachelor of Science (B.Sc.)**

Biology, Department of Biology, School of Sciences, Razi University (2007–2011), Kermanshah, Iran.

### **Work experiences**

- **Assistant professor** at Department of Microbiology, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran (2018 to now).
- **Assistant professor** at Infectious Diseases Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran (2020 to now).

### **Research Interests**

- Clinical Virology
- Host-pathogen interaction
- HIV
- Viral latency
- Elite controllers
- Cellular and Molecular Biology
- microRNA
- Immunovirology

### **Skills & Activities**

#### ***-Skills***

- Transcriptomics
- Epigenomics
- Cell and viral culture
- PCR, Real-time PCR
- Elisa
- Immunofluorescence Microscopy

#### ***-Language***

- Persian, Mother tongue
- English, Professional

## Honors and Awards

- Top researcher student, Iran University of Medical Sciences (IUMS), 2015.
- Top researcher student, Iran University of Medical Sciences (IUMS), 2016.

## Publications

### Books

- *Chapter: Virus, Exosome, and MicroRNA: New Insights into Autophagy. Springer 2022*
- *Clinical Virology, Baresh Publication. 2017*

### Journal Articles

1. A. N. McElroy, R. Invernizzi, J. W. Laskowska, A. O' Neill<sup>1</sup>, M. Doroudian, **M. Moghoofei**, S. Mostafaei, F. Li, A. A. Przybylksi, Andrew. G. Bowie, P. G. Fallon, T. M. Maher, C. M. Hogaboam, P. L. Molyneaux, N. Hirani, M. E. Armstrong, S. C. Donnelly. **Candidate role for Toll-like receptor 3 L412F polymorphism and infection in acute exacerbation of idiopathic pulmonary fibrosis.** American Journal of Respiratory and Critical Care Medicine. **2022; 205(5):550-562.**
2. **Mohsen Moghoofei**, Shayan Mostafaei, Nasim Kondori, Michelle E. Armstrong, Farhad Babaei. **Bacterial and viral coinfection in idiopathic pulmonary fibrosis patients: the prevalence and possible role in disease progression.** BMC Pulmonary Medicine. 2022; 22:60.
3. Mostafaei S, Sayad B, Azar ME, Doroudian M, Hadifar S, Behrouzi A, Riahi P, Hussen BM, Bayat B, Nahand JS, **Moghoofei M.** **The role of viral and bacterial infections in the pathogenesis of IPF: a systematic review and meta-analysis.** Respiratory research. 2021 Dec; 22(1):1-4. **(Corresponding Author).**
4. Nahand JS, Khanaliha K, Mirzaei H, **Moghoofei M.** Baghi HB, Esghaei M, Khatami AR, Fatemipour M, Bokharaei-Salim F. **Possible role of HPV/EBV coinfection in anoikis resistance and development in prostate cancer.** BMC cancer. 2021 Dec; 21(1):1-9.
5. Hussen BM, Ahmadi G, Marzban H, Azar ME, Sorayyayi S, Karampour R, Nahand JS, Hidayat HJ, **Moghoofei M.** **The role of HPV gene expression and selected cellular**

**MiRNAs in lung cancer development.** Microbial pathogenesis. 2021 Jan 1; 150:104692. (Corresponding Author).

6. Farahmand M, **Moghoofei M**, Dorost A, Shoja Z, Ghorbani S, Kiani SJ, Khales P, Esteghamati A, Sayyahfar S, Jafarzadeh M, Minaeian S. **Global prevalence and genotype distribution of norovirus infection in children with gastroenteritis: A meta-analysis on 6 years of research from 2015 to 2020.** Reviews in medical virology. 2021 Apr 1:e2237.
7. **Moghoofei M**, Najafipour S, Mostafaei S, Tavakoli A, Bokharaei-Salim F, Ghorbani S, Javanmard D, Ghaffari H, Monavari SH. **MicroRNAs profiling in HIV, HCV, and HIV/HCV co-infected patients.** Current HIV research. 2021 Jan 1; 19(1):27-34.
8. Jamshidi S, Bokharaei-Salim F, Nahand JS, Monavari SH, **Moghoofei M**, Garshasbi S, Kalantari S, Esghaei M, Mirzaei H. **Evaluation of the expression pattern of 4 microRNAs and their correlation with cellular/viral factors in PBMCs of Long Term non-progressors and HIV infected naïve Individuals.** Current HIV research. 2021 Sep 6.
9. Fatemipour M, Nahand JS, Azar ME, Baghi HB, Taghizadieh M, Sorayyayi S, Hussen BM, Mirzaei H, **Moghoofei M**, Bokharaei-Salim F. **Human papillomavirus and prostate cancer: The role of viral expressed proteins in the inhibition of anoikis and induction of metastasis.** Microbial pathogenesis. 2021 Mar 1; 152:104576. (Corresponding Author).
10. Amiri A, Pourhanifeh MH, Mirzaei HR, Nahand JS, **Moghoofei M**, Sahebnasagh R, Mirzaei H, Hamblin MR. **Exosomes and lung cancer: roles in pathophysiology, diagnosis and therapeutic applications.** Current medicinal chemistry. 2021 Jan 1; 28(2):308-28.
11. Sadri Nahand J, **Moghoofei M**, Salmaninejad A, Bahmanpour Z, Karimzadeh M, Nasiri M, Mirzaei HR, Pourhanifeh MH, Bokharaei-Salim F, Mirzaei H, Hamblin MR. **Pathogenic role of exosomes and microRNAs in HPV-mediated inflammation and cervical cancer: a review.** International journal of cancer. 2020 Jan 15; 146(2):305-20.
12. Rezaei M, Mostafaei S, Aghaei A, Hosseini N, Darabi H, Nouri M, Etemadi A, Neill AO, Nahand JS, Mirzaei H, Donnelly SC, Doroudian M, **Moghoofei M**. **The association between HPV gene expression, inflammatory agents and cellular genes involved in EMT in lung cancer tissue.** BMC cancer. 2020 Dec; 20(1):1-1. (Corresponding Author).
13. Nahand JS, Jamshidi S, Hamblin MR, Mahjoubin-Tehran M, Vosough M, Jamali M, Khatami A, **Moghoofei M**, Baghi HB, Mirzaei H. **Circular RNAs: new epigenetic signatures in viral infections.** Frontiers in microbiology. 2020 Jul 31; 11:1853.

14. Nahand JS, Esghaei M, Monavari SH, **Moghoofei M**, Kiani SJ, Mostafaei S, Mirzaei H, Bokharaei-Salim F. **The assessment of a possible link between HPV-mediated inflammation, apoptosis, and angiogenesis in Prostate cancer.** International Immunopharmacology. 2020 Nov 1; 88:106913.
15. Sadri Nahand J, Bokharaei-Salim F, Karimzadeh M, **Moghoofei M**, Karampoor S, Mirzaei HR, Tabibzadeh A, Jafari A, Ghaderi A, Asemi Z, Mirzaei H. **MicroRNAs and exosomes: key players in HIV pathogenesis.** HIV medicine. 2020 Apr; 21(4):246-78.
16. Nahand JS, Karimzadeh MR, Nezamnia M, Fatemipour M, Khatami A, Jamshidi S, **Moghoofei M**, Taghizadieh M, Hajighadimi S, Shafiee A, Sadeghian M. **The role of miR-146a in viral infection.** IUBMB life. 2020 Mar; 72(3):343-60.
17. Nahand JS, Mahjoubin-Tehran M, **Moghoofei M**, Pourhanifeh MH, Mirzaei HR, Asemi Z, Khatami A, Bokharaei-Salim F, Mirzaei H, Hamblin MR. **Exosomal miRNAs: novel players in viral infection.** Epigenomics. 2020 Feb;12(4):353-70.
18. Mostafaei S, Manesh PV, Nahand JS, Nesaei A, Sorayyayi S, Abasabadi F, Mirzaei H, Etemadi A, O'Neill A, Donnelly SC, Doroudian M, Armstrong ME, **Moghoofei M**. **The role of Epstein-Barr virus-expressed genes in breast cancer development.** The Breast Journal. 2020 Nov; 26(11):2323-6. (Corresponding Author).
19. Farahmand M, **Moghoofei M**, Dorost A, Abbasi S, Monavari SH, Kiani SJ, Tavakoli A. **Prevalence and genotype distribution of genital human papillomavirus infection in female sex workers in the world: a systematic review and meta-analysis.** BMC public health. 2020 Dec; 20(1):1-4.
20. Yousefpouran S, Mostafaei S, Manesh PV, Iranifar E, Bokharaei-Salim F, Nahand JS, Mirzaei H, Taran M, Babaei F, Sayad B, **Moghoofei M**. **The assessment of selected MiRNAs profile in HIV, HBV, HCV, HIV/HCV, HIV/HBV Co-infection and elite controllers for determination of biomarker.** Microbial pathogenesis. 2020 Oct 1; 147:104355.
21. Rezaei S, Mahjoubin-Tehran M, Aghaee-Bakhtiari SH, Jalili A, Movahedpour A, Khan H, **Moghoofei M**, Shojaei Z, Hamblin MR, Mirzaei H. **Autophagy-related MicroRNAs in chronic lung diseases and lung cancer. Critical reviews in oncology/hematology.** 2020 Jul 18:103063.
22. Mostafaei S, Keshavarz M, Nahand JS, Hassankiadeh RF, Moradinazar M, Nouri M, Babaei F, Ahadi M, Payandeh M, Esker AS, Hajighadimi S, **Moghoofei M**. **Viral infections and risk of thyroid Cancer: a systematic review and empirical Bayesian meta-analysis.** Pathology-Research and Practice. 2020 Apr 1; 216(4):152855. (Corresponding Author).

23. Nahand JS, Taghizadeh-boroujeni S, Karimzadeh M, Borran S, Pourhanifeh MH, **Moghoofei M**, Bokharaei-Salim F, Karampoor S, Jafari A, Asemi Z, Tbibzadeh A. **microRNAs: new prognostic, diagnostic, and therapeutic biomarkers in cervical cancer**. Journal of cellular physiology. 2019 Oct; 234(10):17064-99.
24. Khodabandehlou N, Mostafaei S, Etemadi A, Ghasemi A, Payandeh M, Hadifar S, Norooznezhad AH, Kazemnejad A, **Moghoofei M**. **Human papilloma virus and breast cancer: the role of inflammation and viral expressed proteins**. BMC cancer. 2019 Dec; 19(1):1-1. (Corresponding Author).
25. **Moghoofei M**, Mostafaei S, Nesaei A, Etemadi A, Sadri Nahand J, Mirzaei H, Rashidi B, Babaei F, Khodabandehlou N. **Epstein–Barr virus and thyroid cancer: The role of viral expressed proteins**. Journal of cellular physiology. 2019 Apr; 234(4):3790-9.
26. **Moghoofei M**, Keshavarz M, Ghorbani S, Babaei F, Nahand JS, Tavakoli A, Mortazavi HS, Marjani A, Mostafaei S, Monavari SH. **Association between human papillomavirus infection and prostate cancer: A global systematic review and meta-analysis**. Asia-Pacific Journal of Clinical Oncology. 2019 Oct; 15(5):e59-67.
27. Nouri M, Kamakifar P, Khodabandehlou N, Nahand JS, Tavakoli A, Norooznezhad F, Sorayyayi S, Babaei F, Mostafaei S, **Moghoofei M**. **Association between Parvovirus B19 and anemia in HIV-infected patients**. Medical journal of the Islamic Republic of Iran. 2019; 33:137. (Corresponding Author).
28. Tavakoli A, Esghaei M, Ataei-Pirkooh A, **Moghoofei M**, Ghaffari H, Bokharaei-Salim F. **Current antiretroviral drugs for human immunodeficiency virus infection**. Tehran University Medical Journal. 2019; 77(5).
29. Farjadian F, **Moghoofei M**, Mirkiani S, Ghasemi A, Rabiee N, Hadifar S, Beyzavi A, Karimi M, Hamblin MR. **Bacterial components as naturally inspired Nano-carriers for drug/gene delivery and immunization: Set the bugs to work?.** Biotechnology advances. 2018 Jul 1; 36(4):968-85.
30. Tavakoli A, Ataei-Pirkooh A, Mm Sadeghi G, Bokharaei-Salim F, Sahrapour P, Kiani SJ, **Moghoofei M**, Farahmand M, Javanmard D, Monavari SH. **Polyethylene glycol-coated zinc oxide nanoparticle: an efficient nanoweapon to fight against herpes simplex virus type 1**. Nanomedicine. 2018 Nov; 13(21):2675-90.
31. Sadri Nahand J, Bokharaei-Salim F, Salmaninejad A, Nesaei A, Mohajeri F, Moshtzan A, Tabibzadeh A, Karimzadeh M, **Moghoofei M**, Marjani A, Yaghoubi S. **microRNAs: Key players in virus-associated hepatocellular carcinoma**. Journal of cellular physiology. 2019 Aug; 234(8):12188-225.

32. Keshavarz M, Dianat-Moghadam H, Sofiani VH, Karimzadeh M, Zargar M, **Moghoofei M**, Biglari H, Ghorbani S, Nahand JS, Mirzaei H. miRNA-based strategy for modulation of influenza A virus infection. *Epigenomics*. 2018 Jun; 10(6):829-44.
33. **Moghoofei M**, Mostafaei S, Ashraf-Ganjouei A, Kavosi H, Mahmoudi M. **HBV reactivation in rheumatic diseases patients under therapy: A meta-analysis**. *Microbial pathogenesis*. 2018 Jan 1; 114:436-43.
34. **Moghoofei M**, Monavari SH, Mostafaei S, Hadifar S, Ghasemi A, Babaei F, Kavosi H, Tavakoli A, Javanmard D, Esghaei M, Khodabandehlou N. **Prevalence of influenza A infection in the Middle-East: A systematic review and meta-analysis**. *The clinical respiratory journal*. 2018 May; 12(5):1787-801.
35. **Moghoofei M**, Bokharaei-Salim F, Esghaei M, Keyvani H, Honardoost M, Mostafaei S, Ghasemi A, Tavakoli A, Javanmard D, Babaei F, Garshasbi S. **MicroRNAs 29, 150, 155, 223 level and their relation to viral and immunological markers in HIV-1 infected naive patients**. *Future Virology*. 2018 Sep; 13(09):637-45.
36. Esghaei M, **Moghoofei M**, Keshavarz M, Keyvani H, Bokharaei-Salim F, Farahmand M, Monavari SH. **Trends in surveillance data of influenza virus in Tehran before decreasing dispatch of Iranian Hajj pilgrims to Mecca**. *Medical journal of the Islamic Republic of Iran*. 2018; 32:41.
37. Akya A, Elahi A, **Moghoofei M**, Chegenelorestani R, Nejati A, Babaei F. **Enterovirus Detection in Patients Suspected Aseptic Meningitis by RT-PCR in Kermanshah, Iran**. *Journal of Kerman University of Medical Sciences* (2018): 18-26.
38. Keyvani H, **Moghoofei M**, Bokharaei-Salim F, Mostafaei S, Mousavi SA, Monavari SH, Esghaei M. **Prevalence of respiratory viruses in Iranian patients with idiopathic pulmonary fibrosis**. *Journal of medical microbiology*. 2017 Nov 1; 66(11):1602-6.
39. Zangabad PS, Karimi M, Mehdizadeh F, Malekzad H, Ghasemi A, Bahrami S, Zare H, **Moghoofei M**, Hekmatmanesh A, Hamblin MR. **Nanocaged platforms: modification, drug delivery and nanotoxicity. Opening synthetic cages to release the tiger**. *Nanoscale*. 2017; 9(4):1356-92.
40. Etemadi A, Mostafaei S, Yari K, Ghasemi A, Minaei Chenar H, **Moghoofei M**. **Detection and a possible link between parvovirus B19 and thyroid cancer**. *Tumor Biology*. 2017 May;39(6):1010428317703634. (Corresponding Author).
41. Hadifar S, **Moghoofei M**, Nematollahi S, Ramazanzadeh R, Sedighi M, Salehi-Abargouei A, Miri A. **Epidemiology of multi drug resistant uropathogenic Escherichia coli in Iran: a systematic review and meta-analysis**. *Japanese journal of infectious diseases*. 2016: JJID-2015.



42. Hadifar S, Sedighi M, Mostafaei S, Miri A, Amiri H, Abiri R, Babaei F, Kabir K, **Moghoofei M**. **Prevalence of hepatitis E infection in the general population of Iran: a systematic review and meta-analysis**. *Future Virology*. 2017 Apr; 12(4):227-36.
43. Monavari SH, Hadifar S, Mostafaei S, Miri A, Keshavarz M, Babaei F, **Moghoofei M**. **Epidemiology of rotavirus in the Iranian children: A systematic review and meta-analysis**. *Journal of global infectious diseases*. 2017 Apr; 9(2):66.
44. Javanmard D, Ziaee M, Ghaffari H, Namaei MH, Tavakoli A, Mollaei H, **Moghoofei M**, Mortazavi HS, Monavari SH. **Human parvovirus B19 and parvovirus 4 among Iranian patients with hemophilia**. *Blood research*. 2017 Dec 31; 52(4):311-5.
45. Maracy MR, Mostafaei S, **Moghoofei M**, Mansourian M. **Impact of HIV risk factors on survival in Iranian HIV-infected patients: A Bayesian approach to retrospective cohort**. *HIV & AIDS Review. International Journal of HIV-Related Problems*. 2017 Jan 1; 16(2):100-6.
46. Karimi M, Mirshekari H, Basri SM, Bahrami S, **Moghoofei M**, Hamblin MR. **Bacteriophages and phage-inspired nanocarriers for targeted delivery of therapeutic cargos**. *Advanced drug delivery reviews*. 2016 Nov 15; 106:45-62.
47. Esfahani BN, Moghim S, Safaei HG, **Moghoofei M**, Sedighi M, Hadifar S. **Phylogenetic analysis of prevalent tuberculosis and non-tuberculosis mycobacteria in Isfahan, Iran, based on a 360 bp sequence of the rpoB gene**. *Jundishapur journal of microbiology*. 2016 Apr; 9(4).
48. **Moghoofei M**, Fazeli H, Poursina F, Esfahani BN, Moghim S, Vaez H, Hadifar S, Safaei HG. **Morphological and bactericidal effects of amikacin, meropenem and imipenem on Pseudomonas aeruginosa**. *Jundishapur journal of microbiology*. 2015 Nov; 8(11). **Corresponding Author**.
49. Sedighi M, Vaez H, **Moghoofei M**, Hadifar S, Oryan G, Faghri J. **Molecular detection of metallo- $\beta$ -lactamase gene blaVIM-1 in imipenem-resistant Pseudomonas aeruginosa strains isolated from hospitalized patients in the hospitals of Isfahan**. *Advanced biomedical research*. 2015;4.
50. Sedighi M, Vaez H, **Moghoofei M**, Hadifar S, Oryan G, Faghri J. **Molecular detection of metallo- $\beta$ -lactamase gene blaVIM-1 in imipenem-resistant Pseudomonas aeruginosa strains isolated from hospitalized patients in the hospitals of Isfahan**. *Advanced biomedical research*. 2015; 4.
51. **Moghoofei M**, Fazeli H, Poursina F, Nasr-Esfahani B, Moghim S, Vaez H, Hadifar S, Sedighi M, Safaie H. **Effects of environmental conditions on the morphologic**



- change of *Pseudomonas aeruginosa* and its association with antibiotic resistance in burn patients.** Biological Journal of Microorganism.2015; 21-28.
52. Vaez H, Faghri J, Isfahani BN, Moghim S, Yadegari S, Fazeli H, **Moghoofei M**, Safaei HG. **Efflux pump regulatory genes mutations in multidrug resistance *Pseudomonas aeruginosa* isolated from wound infections in Isfahan hospitals.** Advanced biomedical research. 2014; 3.
53. Hadifar S, Moghim S, Gasemian-Safaei H, Fazeli H, Farid F, **Moghoofei M**, Sedighi M, Nasr-Esfahani B. **Identification of Non-Tuberculosis Mycobacteria Isolates by Polymerase Chain Reaction-Restriction Enzyme Analysis of 360-bp Fragment of rpoB Gene.** Journal of Isfahan Medical School. 2014 Feb 28;31(266).

### **Conference Papers**

- The Possible Role of Viral Infection in Pathogenesis and Progression of Idiopathic Pulmonary Fibrosis. ***ASV meeting 2022.***
- Study of relationship between Parvovirus B19 Gene expression and increased inflammation and Thyroid Disease. ***8<sup>th</sup> international congress of Laboratory and Clinic, Tehran, Iran. Oral Presentation.***
- Molecular Epidemiology of Rotavirus Gastroenteritis Strains in Iranian Children during 2015–2016. ***10<sup>th</sup> International Congress of Clinical Microbiology, Sanandaj, Iran. Oral Presentation.***
- The Possible Role of Viral Infection in Pathogenesis and Progression of Idiopathic Pulmonary Fibrosis. ***The ASV 2022 virtual meeting (P11-7).***
- The identification and antimicrobial resistance of *Pseudomonas aeruginosa* in burn patients referring to Emam Mousa Kazem Hospital- Isfahan. ***7<sup>th</sup>International Congress of Clinical Microbiology, Shiraz, Iran. Poster***
- Effects of environmental conditions on the morphologic change of *Pseudomonas aeruginosa* and its association with antibiotic resistance in burn patients. ***7<sup>th</sup> international congress of Laboratory and Clinic and 1<sup>st</sup>Conference of Clinical Virology. Tehran, Iran. Poster***
- Effects of environmental conditions on the induction of the *Pseudomonas aeruginosa* coccoid form. ***2<sup>nd</sup> Iranian congress of Medical Bacteriology. Tehran, Iran. Poster***

- Molecular Epidemiology of Rotavirus Gastroenteritis Strains in Iranian Children during 2015–2016. *10<sup>th</sup> International Congress of Clinical Microbiology, Sanandaj, Iran. Oral Presentation.*

### **Research Projects**

1. microRNAs 29, 150, 155, 223 level and their relation to viral and immunological markers in HIV-1 infected naive patients
2. Prevalence of rhinovirus infections in children with asthma
3. The assessment of the expression level of miRNA 27, 29, 122, 149, 150,155, 199, 221, 223 and let7 in three patients' group, HIV, HIV/HCV co-infection and elite controllers for determination of biomarker
4. Bacterial and Viral Coinfection in Idiopathic Pulmonary Fibrosis Patients: the Prevalence and Possible Role in Disease Progression
5. Evaluation of miRNA-122, miRNA-149, miRNA-199a, miRNA- let7 expression in HIV, HBV and HIV-HBV co-infection patients
6. The role of Human Papilloma Virus in Lung Cancer Development
7. The Association Between HPV Infection and Breast Cancer: A Global Meta-Analysis
8. The frequency of respiratory viral and bacterial infection in the Iranian patients with idiopathic pulmonary fibrosis
9. Assessing role of the simultaneous effects of HPV, B19 and EBV and their viral factors on progression of breast, lung and thyroid cancers: application of structural equation modeling
10. The Role of Human Papillomavirus (HPV) Infection in Chronic Inflammation and Resistance of Prostate Cancer Cells to Anoikis
11. MicroRNAs Profiling in HIV, HCV and HIV/HCV Coinfected Patients
12. Simultaneous Effects of Viral Factors of HPV and EBV on progression of Breast and Thyroid Cancers: Application of Path Analysis
13. The role of Viral infection and cellular miRNAs in Lung cancer
14. Evaluation of the expression level of miR-106a, miR-150, miR-200 and PD-, TIM-3 as the target genes in two groups of patients with mild and severe COVID-19 compared to healthy individuals

15. Investigation of the possible association between human papillomavirus and chemotherapy resistance in breast cancer specimens
16. Evaluation of the expression level of miR-106a, miR-150, miR-200, and their target genes (PD-1 and TIM-3) in mild and severe COVID-19 patients compared with healthy controls

### **Membership in Scientific Societies**

- **Iranian Society for Virology (ISV)**
- **American Society for Virology (ASV)**
- **American Society for Microbiology (ASM)**
- **Microbiology Society (MicroSoc)**

### **Teaching Experiences**

- Virology:
  - a. Clinical Course: Medical Doctor, Dentistry, Pharmacology and Medical Laboratory Sciences
  - b. Basic course: B.Sc., M.Sc. and Ph.D. course
  - c. Practical Virology: B.Sc., M.Sc. and Ph.D. course
- Cell and Molecular Biology: M.Sc. of Microbiology
- Oral infections: Ph.D. course

### **Journal Reviewer or Editor**

- **Reviewer:** *Journal of Antimicrobial Chemotherapy, The Journal of Infectious Diseases, Cells Journal, Microbial Pathogenesis, Tumor Biology, BMC Cancer, Immunopharmacology and Immunotoxicology, Pathology-Research and Practice.*