

Curriculum Vitae

A) Personal data :

First Name : Somayeh

Surname : Shatizadeh Malekshahi

Gender : Female

Nationality: Iranian

Languages spoken:

1.Farsi-Native language

2.English: speak/read/write with high proficiency

Address and Phone number :

Jalal highway, Department of Virology, Faculty of medical sciences, Tarbiat modares university, Tehran, Iran

Tel: +9821 82883880

Fax: +9821 82883561

E-Mail: s.shatizadeh@modares.ac.ir; sshatizadeh@gmail.com

B) Education and professional History

1. I got Ph.D of Medical Virology in School of Public Health, Tehran University of Medical Sciences.

My comprehensive exam score was: 20

I have been selected as a one of the exceptional Talent students with the certificate from Exceptional Talent Development Center.

2. I got master of medical virology in School of Public Health, Tehran University of medical sciences.

3. I got Bachelor's of Science of laboratory technology (lab science) in Mashhad University of Medical sciences.

Achivemant:

1st place of Master's Entrance Exam

2nd place of PhD's Entrance Exam

C) Indicate any workshop(s)/special course(s) which you previously attended:

Place : Tehran University of Medical Sciences

Fields : Scientific writing course

Date : 2008

Place: Tehran University of Medical Sciences

Field : Endnote

Date : 2009

Place : Iran University of Medical Sciences

Field : Real time PCR

Date : 2008

Place: Tehran University of Medical Sciences

Field : SPSS course

Date : 2008

Place : Tehran University of Medical Sciences

Field : The principles of primer design

Date : 2011

Place: Tehran University of Medical Sciences

Field : Real Time PCR workshop

Date : May 2010-12-20

Place: Tehran University of Medical Sciences

Field : How to publish a scientific journal article

Date : 2011

Place:. Tehran University of Medical Sciences

Field: Workshop of Research Strategy in Medical Sciences

Date: 2011

Place: Tehran University of Medical Sciences

Field: Teaching strategies and education techniques

Date :2012

Place: Tehran University of Medical Sciences

Field : How to publish a scientific journal article

Date : 2013

Place: Iran University of Medical Sciences

Field: Microarray

Date : 2014

Place: Iran University of Medical Sciences

Field: Laboratory analysis of oncogenes as determinant of the course of cancer therapy

Date : 2014

Place: Tehran University of Medical Sciences

Field: The first symposium of Ebola (scientific facts and challenges)

Date: 2014

Scientific conferences:

Place: Tehran University of Medical Sciences

Field: MERS coronavirus and monitoring in Iran

Date: 2014

Place: Tehran University of Medical Sciences

Field: Hepatitis control program in Iran

Date: 2014

Place: Tehran University of Medical Sciences

Field: Human lymphotropic virus (HTLV1 & 2) in Iran

Date: 2014

Place: Tehran University of Medical Sciences

Field: Crimean-Congo hemorrhagic fever in Iran

Date: 2014

Place: Tehran University of Medical Sciences

Field: Non-coding RNA: Role, Biogenesis, Mechanism and their application in viral infection

Date: 2014

Place: Tehran University of Medical Sciences

Field: HIV status and control in Iran

Date: 2014

D) Indicate subject of your thesis

My Msc Thesis :

Detection of common respiratory viruses in clinical specimens from children under six years old by multiplex PCR

My Ph.D Thesis :

Targeting nucleoprotein and fusion of respiratory syncytial virus by siRNA molecules in cell culture system

E) Indicate name (s) of the article /research /research proposals (Including its abstract in English) if any in which you have been involved.

Presentations and congresses :

1. Presented article as poster in the 5th Iranian Congress of Virology and 1st Congress of Vaccine :
Detection of respiratory virus co-infection in children younger than 5 years of age, 2009.
2. Presented article as poster in 7th Congress of laboratory and clinic and 1st congress of clinical laboratory, 2013.
3. Presented article as poster in 8th Congress of laboratory and clinic, 2016
4. Presented article in the WHO virtual conference “COVID-19, Influenza and RSV: Surveillance-Informed Prevention and Treatment”, October 2021

English Publications (Research articles):

- 1) **Somayeh Shatizadeh Malekshahi**, Talat Mokhtari Azad, Jila Yavarian , Shohreh Shahmahmoodi, Maryam Naseri, Farhad Rezaei. Molecular Detection of Respiratory Viruses in Clinical Specimens From Children With Acute Respiratory Disease in Iran. *Pediatrics Infectious Disease Journal*. **2010** Oct;29(10):931-3
- 2) **Somayeh Shatizadeh Malekshahi**, Talat Mokhtari Azad, Shohreh Shahmahmoodi, Jila Yavarian, Farhad Rezaei, Maryam Naseri. First Report of Respiratory Syncytial Virus and Human Metapneumovirus Co-Infection in a 2 year Old kawazaki Patient in Iran. *Iranian Journal of Public Health*. **2010**;39(4):140-2.
- 3) **Somayeh Shatizadeh**, Jila Yavarian, Farhad Rezaie, Mahmood Mahmoodi, Maryam Naseri, Talat Mokhtari Azad. Epidemiological and clinical evaluation of children with respiratory virus infections. *Medical Journal of Islamic Republic of Iran*. **2014** Sep 22;28:102.

- 4) Jalal kiani, **Somayeh Shatizadeh malekshahi**, Zohreh yousefi, Nastaran ghavami, Jila Yavarian. Detection and Typing of Human Papilloma Viruses (HPVs) by Nested Multiplex Polymerase Chain Reaction (NMPCR) Assay in Cervical Cancer. Jundishapur journal of microbiology, **2015** 8(12): e26441.
- 5) Jila Yavarian, **Somayeh Shatizadeh Malekshahi**, Roya Yavarian, Shaghayegh Yazdani, Jalal kiani, Hamidreza Ahmadkhaniha. Type specific detection of Human Herpes virus 6 (HHV6) A and B among schizoprenia and bipolar disorder patients: a case control study. BMC psychiatry **2015**, 15:296.
- 6) **Somayeh Shatizadeh Malekshahi**, Ehsan Arefian, Vahid Salimi, Talat Mokhtari Azad, Jila Yavarian. Potential siRNA molecules against nucleoprotein and M2/L overlapping region of respiratory syncytial virus: in silico design. JJM. **2015**
- 7) **Somayeh Shatizadeh Malekshahi**, Ahmad nejati. Bioinformatics design of potential RNAi therapeutic against genomic and mRNA sequences of Ebola viruses. Gene therapy & molecular biology. **2015**.
- 8) Maryam Tabasi, Talat Mokhtari Azad, Azadeh Shadab, **Somayeh Shatizadeh Malekshahi**, Nazanin Zahra Shafiei Jandaghi, Jila Yavarian. Human bocavirus (HBoV) infections among children less than two years old in Iran during fall and winter 2011-2013. Iranian journal of microbiology. **2016**
- 9) **Somayeh Shatizadeh Malekshahi**, Jila Yavarian, Vahid Salimi, Ehsan Arefian, Talat Mokhtari Azad. Inhibition of Respiratory Syncytial Virus replication by simultaneous targeting of mRNA and genomic RNA using dual targeting siRNA. Molecular biotechnology **2016**
- 10) **Somayeh Shatizadeh Malekshahi**, Nazanin-zahra Shafiei Jandaghi, Jila Yavarian, Azadeh Shadab, Maryam Naseri, Talat mokhtari azad. Detection of respiratory co-infections among adenovirus infected children younger than 5 years old. Archives of pediatrics infectious disease. **2016**.
- 11) Shafiei-Jandaghi NZ, Yavarian J, Faghihloo E, Ghavami N, Ghalejoogh ZY, Kiani SJ, **Malekshahi SS**, Shahsiah R, Jahanzad E, Hosseini M, Azad TM. Prevalence of adeno-associated

virus and human papillomavirus DNA in Iranian women with and without cervical cancer.

Pathology Research & Practice. **2017** May;213(5):457-460

12) **Somayeh Shatizadeh Malekshahi**, Roya Yavarian. Hamidreza Ahmadkhaniha, Seyed Jalal Kiani, Ahmad Nejati, Leila Janani, Jila Yavarian. No molecular evidence of Borna disease virus among schizophrenia and bipolar disorder patients. Iranian Journal of Microbiology. **2017**; 9(2): 112–118.

13) Zohreh Yousefi Ghalejoogh, Simin Mirakhor Samani, **Somayeh Shatizadeh Malekshahi**, Reza Shahsiah, Jila Yavarian, Seyed Jalal Kiani. Human papilloma virus infection and fascin over-expression in squamous cell carcinoma of the cervix. Med J Islam Repub Iran. **2018**;32:134

14) Emad Behboudi, Talat Mokhtari-Azad, Jila Yavarian, Nastaran Ghavami, Seyed Mahmood Seyed Khorrami, Farhad Rezaei, Javad Charostad, **Somayeh Shatizadeh Malekshahi** & Nazanin Zahra Shafiei-Jandaghi. Molecular detection of HHV1-5, AAV and HPV in semen specimens and their impact on male Fertility. Human fertility. **2019**. 22 (2), 133-138.

15) Zahra Sayyadi-Dehno, Seyed Mahmood Seyed Khorrami, Nastaran Ghavami, Fahimeh Ghotbi-Zadeh, Maryam Khushideh, Mostafa Hosseini, **Somayeh Shatizadeh Malekshahi**, Nazanin-Zahra Shafiei-Jandaghi. Molecular Detection of Adeno-Associated Virus DNA in Cases of Spontaneous and Therapeutic Abortion. **2019**, 38 (3) 206–214.

16) **Somayeh Shatizadeh Malekshahi**, Shaghayegh Razaghipourb, Yazdan Samieipoor, Farhad B. Hashemib, Ali Akbar Rahbari Maneshd, Anahita Izadid, Ebrahim Faghiglooe, Nastaran Ghavamic, Talat Mokhtari-Azadc, Vahid Salimi. Molecular characterization of the glycoprotein and fusion protein in human respiratory syncytial virus subgroup A: Emergence of ON-1 genotype in Iran. Infection, Genetics and Evolution. 71 **2019**. 166–178.

17) Nazanin-Zahra Shafiei-Jandaghi, Jila Yavarian, **Somayeh Shatizadeh Malekshahi**, Maryam Naseri, Azadeh Shadab, Nastaran Ghavami, Talat Mokhtari-Azad. Identification of adenovirus species in Iranian pediatric population with severe acute respiratory infections. Future Virol. **2019**. 14(09), 577–583.

18. Mohammad Reza Jabbari , Hoorieh Soleimanjahi, Mahboubeh Hajiabdolbaghi, Mohammad Sarraf-Shirazi, **Somayeh Shatizadeh Malekshahi**. Cytomegalovirus End Organ Disease in Iranian HIV-1 Infected Patients with CD4+ Cell Counts Less Than 100 Cells/mm. *IRCMJ* 3. **2019**. 21 (11); e95288
19. Javad Charostad, Talat Mokhtari-Azad, Jila Yavarian, Nastaran Ghavami, Seyed Mahmood Seyed Khorrami, Emad Behboudi, Somayeh Jalilvand, **Somayeh Shatizadeh Malekshahi**, Nazanin Zahra Shafiei-Jandaghi. Detection of Human Herpes Viruses 1-5 in Miscarriage: A case-control study. *International journal of reproductive biomedicine*. **2020**; 18(7): 501–508
20. **Somayeh Shatizadeh Malekshahi**, Jila Yavaria, Robabeh Salehi, Farhad Babaei, Seyed Ali Ahmadi, Nastaran Ghavami, Maryam Naseri ,Mostafa Hosseini , Talat Mokhtari-Azad& Nazanin Zahra Shafiei-Jandaghi. Epstein-Barr and BK virus in cancerous and noncancerous prostate tissue. *Future Virology*. **2020**. Vol. 15, No. 1.
21. Abouzar Babaei, **Somayeh Shatizadeh Malekshahi**, Neda Pirbonyeh, Jamal Sarvari, Afagh Moattari. Phylogenetic analysis and circulation pattern of human metapneumovirus strains in children with acute respiratory infection in Iran, 2014–2015. *Future Virology*. **2020**; 15 (7): 419-427.
22. Jila Yavarian, Nazanin-Zahra Shafiei-Jandaghi, Kaveh Sadeghi, **Somayeh Shatizadeh Malekshahi**, Vahid Salimi, et al. First Cases of SARS-CoV-2 in Iran, 2020: Case Series Report. *Iranian journal of public health*. **2020** Aug;49(8):1564-1568.
23. **Somayeh Shatizadeh Malekshahi**, Yazdan Samieipour, Ali Akbar Rahbarimanesh, Anahita Izadi, Nastaran Ghavami, Shaghayegh Razaghipour, Maryam Naseri, Talat Mokhtari-Azad, Vahid Salimi. Genetic characterization of G protein in respiratory syncytial virus ON-1 genotype in Tehran. *Future virology*. **2020**; 15 (11): 725-734
24. Mohammad Reza Jabbari, Hoorieh Soleimanjahi, **Somayeh Shatizadeh Malekshahi**, Mohammad Gholami, Leila Sadeghi, Minoos Mohraz. Frequency of Cytomegalovirus Viral Load in Iranian Human Immunodeficiency Virus-1-Infected Patients with CD4+ Counts< 100 Cells/mm³. *Intervirology*. **2021**.

25. Abouzar Babaei, **Somayeh Shatizadeh Malekshahi**, Neda Pirbonyeh, Afagh Moattari. Prevalence and clinical manifestations of herpes simplex virus infection among suspected patients of herpes simplex encephalitis in Shiraz, Iran. *Virusdisease*. **2021**.
26. Erfaneh Hosseini, **Somayeh Shatizadeh Malekshahi**, Masoumeh Pourjabali, Nazanin-Zahra Shafiei-Jandaghi, Nastaran Ghavvami, Jila Yavarian. Survey of BK and JC polyomaviruses, human cytomegalovirus and human papillomavirus in different types of brain tumors in Iranian patients. *Gene Reports*. **2021**; 23: 101106.
27. MG Barzoki, **SS Malekshahi***, M Shayestehpour. In vitro evaluation of antiviral activity of Shouchella clausii probiotic strain and bacterial supernatant against herpes simplex virus type 1 *Archives of Microbiology* 2022; 204 (8), 522.
28. J Yavarian, M Javaherian, **SS Malekshahi**, Z Ahmadinejad, F Ghiasvand et al. The Persistence Time of SARS-CoV-2 RNA in Hospitalized COVID-19 Patients: A Prospective Study. *Infectious Disorders-Drug Targets*. 2022.
29. S Zadheidar, J Yavarian, Z Heydarifard, A Nejati, K Sadeghi, N Ghavami, Abbasi S, **Shatizadeh Malekshahi S**, Mokhtari-Azad T, Shafiei-Jandaghi NZ. Molecular epidemiology of human adenoviruses in children with and without respiratory symptoms: Preliminary findings from a case-control study. *BMC pediatrics* 2022; 22 (1), 1-7
30. A Teimoori, H Mirshahabi, B Khansarinejad, H Soleimanjahi, H Karimi, Rasti M, **Shatizadeh Malekshahi S**. Significant alteration of IFN stimulated genes expression in MA104 cells infected with bovine rotavirus RF strain. *Journal of Immunoassay and Immunochemistry* 2023; 44 (1), 56-65
31. E Zafari, H Soleimanjahi, A Mohammadi, A Teimoori, **Shatizadeh Malekshahi S**. Comparison of IgA Antibody Titer Induced by Human-Bovine Rotavirus Candidate Vaccine with Bovine Rotavirus and Rotarix. *Archives of Razi Institute* 2023; 78 (1), 405-412
32. Heydarifard Z, Shafiei-Jandaghi NZ, Safaei M, Tavakoli F, **Shatizadeh Malekshahi S***. Comparison of clinical outcomes, demographic, and laboratory characteristics of hospitalized

COVID-19 patients during major three waves driven by Alpha, Delta, and Omicron variants in Tehran, Iran. *Influenza Other Respir Viruses*. 2023, 9;17(8):e13184.

33. Nazanin-Zahra Shafiei-Jandaghi, Forough Tavakoli, Jila Yavarian, Vahid Salimi, Kaveh Sadeghi, Sevrin Zadheidar, Ahmad Nejati, **Somayeh Shatizadeh Malekshahi**, Talat Mokhtari-Azad. How to tackle single target gene positive results of SARS-CoV-2 real-time PCR: A cross-sectional study. *Health Sci Rep* 2023. 31;6(9):e1538.

34. Jila Yavarian, **Somayeh Shatizadeh Malekshahi**, Marziyeh Faraji-Zonouz, Shirin Kalantari, Sevrin Zadheidar, Sara Saghafi, Faezeh Tarpour, Arash Letafati, Akram sadat Ahmadi, Nazanin-Zahra Shafiei-Jandaghi, Talat Mokhtari-Azad. Impact of COVID-19 on the changing pattern of human orthopneumovirus (respiratory syncytial virus) infection in Iran. *BMC Infect Dis*. 2023;23(1):591.

English Publications (Systematic review and meta-analysis articles):

1. Mohammad Farahmand, **Somayeh Shatizadeh Malekshahi*** , Mohammad Reza Jabbari , Mohammad Shayestehpour. The landscape of extrapulmonary manifestations of human parainfluenza viruses: A systematic narrative review. *Microbiol Immunol*. **2021**. 65(1):1-9.

2. **Somayeh Shatizadeh Malekshahi**, Jila Yavarian, Nazanin-Zahra Shafiei-Jandaghi, Talat Mokhtari-Azad, Mohammad Farahmand. Prevalence of human metapneumovirus infections in Iran: a systematic review and meta-analysis. *Fetal and pediatric pathology*. **2019**. 1-11.

3. **Somayeh Shatizadeh Malekshahi**, Hoorieh Soleimanjahi, Fariba Dorostkar, Vahid Salimi, Mohammad Farahmand. Survey of BK Virus in Renal Transplant Recipients in Iran: A Systematic Review and Meta-Analysis. *Intervirolgy*. **2020**; 17;1-9

4. **Somayeh Shatizadeh Malekshahi**, Jila Yavarian, Nazanin-Zahra Shafiei-Jandaghi. Usage of peptidases by SARS-CoV-2 and several human coronaviruses as receptors: A mysterious story. *Biotechnology and applied biochemistry*. **2020**.

5. Zahra Heydarifard, Jila Yavarian, **Somayeh Shatizadeh Malekshahi**, Sevrin Zadheidar, Talat Mokhtari-Azad, Shafiei-jandaghi NZ. SARS-CoV-2: an imperative maternal-fetal concern. *Iranian Journal of Microbiology*. **2021**.13 (4), 427.

6. Hadiseh Bagheri, **Somayeh Shatizadeh Malekshahi**, Mehrdad Ravanshad. A review of influenza virus infection during pregnancy. *Pathobiology Research* **2021**. 24 (1), 27-35.
7. Z Heydarifard, S Zadheidar, J Yavarian, **S Shatizadeh Malekshahi**, et al. Potential role of viral infections in miscarriage and insights into the underlying molecular mechanisms *Congenital Anomalies* **2022**; 62 (2), 54-6.
8. A Pouremamali, A Babaei, **SS Malekshahi**, A Abbasi, N Rafiee. Understanding the pivotal roles of ACE2 in SARS-CoV-2 infection: from structure/function to therapeutic implication. *Egyptian Journal of Medical Human Genetics* 2022; 23 (1), 1-10
9. Gholami Barzoki M, **Shatizadeh Malekshahi S***, Heydarifard Z, Mahmodi MJ, Soltanghoreae H. The important biological roles of Syncytin-1 of human endogenous retrovirus W (HERV-W) and Syncytin-2 of HERV-FRD in the human placenta development. *Mol Biol Rep.* 2023;50(9):7901-7907.
10. **Shatizadeh Malekshahi S***, Farahmand M, Choobin H. SARS-CoV-2 Related Viral Respiratory Co-Infections: A Narrative Review. *Tanaffos.* 2023 Jan;22(1):19-26.

Farsi Publications:

- 1) Co-infection of adenovirus with swine-origin influenza A (H1N1) and report of adenovirus with respiratory syncytial virus: report of two cases. **Somayeh Shatizadeh Malekshahi**, Jila Yavarian, Maryam Naseri, Farhad Rezaei, Talat Mokhtari Azad. *Tehran University Medical Journal*;68(9), Dec 2010; 66-71
- 2) M Shokoofeh, S Shatizadeh Malekshahi, H Soltanghoreae, A Soltani. Vertical transmission of BK virus in pregnancy: A narrative review. *Yafteh* 22 (3). 2020.
- 3) Somayeh Shatizadeh Malekshahi, Kiana Ketabi. Introduction of Chromosomally integrated human herpesvirus 6 and its clinical implications. *Pathobiology Research.* 2020; 23 (4): 55-66.

3) Ameneh Omid, Somayeh Shatizadeh Malekshahi, Parsa Veisi. Extrapulmonary Manifestations of Coronavirus Disease 2019: A Narrative Review. Journal of Arak University of Medical Sciences. 2020; 23 (5): 604-613.

4. Shatizadeh Malekshahi S, Omid A, Veisi P. The Impact of COVID-19 during Pregnancy on Fetal Brain Development. Razi Journal of Medical Sciences. 2022;29(9):159-171.

5. Shatizadeh Malekshahi S, Tahamtan A, Salim V. Whole-inactivated SARS-CoV-2 vaccines: from fear to hope. Koomesh -Volume 24, Issue 5. 2022, 567 - 569

6. M Gholi, S Shatizadeh Malekshahi, T Bamdad. Evaluation of the Effect of MAGE-A3 Tumor Antigen on the Oncolytic Activity of Reovirus in Colorectal Cancer Cell Lines. Research in Medicine. 2023. Vol. 47; No. 2.

Research projects:

Principal investigator & Acting director:

- 1) Detection of Borna Disease Virus P40 Region in Peripheral Blood Mononuclear Cells and Investigation the Homology of its RNA with the genomes of Schizophrenia and Bipolar patients in Comparison with Normal Control Groups.2011-2012
- 2) Detection of co-infection of Coxsackie virus, Boca virus, Influenza and mycoplasma pneumonia in adenovirus infected children younger than five years age.
- 3) Targeting nucleoprotein and fusion of respiratory syncytial virus by siRNA molecules in cell culture system
- 4) Molecular epidemiology and genetic characteristics of the fusion protein (F) of respiratory syncytial virus (RSV) circulation in Iran and evaluation of mutations in the Palivizumab region.
- 5)Detection of Polyomavirus BK & JC in brain tumor specimens

Co-investigator:

- 1) The expression of Fascin marker in HPV infected cells of the cervical cancer in patients of Imam Khomeini Hospital, Tehran.2012-2013
- 2) Detection and type identification of Herpes Virus 6 genome in Peripheral Blood Mononuclear Cells of Schizophrenia and Bipolar patients in Comparison with Normal Control Groups.2013

- 3) Simultaneous identification of respiratory viral co-infection in non-influenza patients in National Influenza Center.
- 4) Detection and phylogenetic analysis of Boca virus infection in children under 5 years of age.

Supervisor of 5 MSc theses and co-advisor of 3 MSc thesis

- 1) Investigation of BK virus DNA in product of conception including placenta, embryo and autopsy samples to elucidate a possible route of BK virus transmission from mother to fetus
- 2) Effect of a probiotic strain of *Bacillus clausii* on the replication of herpes simplex virus type 1 in the cell culture system
- 3) Simultaneous detection of respiratory syncytial virus and human metapneumovirus in negative and/or positive respiratory specimens for SARS-CoV-2 by Multiplex Real-time RT-PCR
- 4) Investigation of the simultaneous prevalence of active BK Virus, Cytomegalovirus, and Epstein Barr Virus infection and their correlation by host factors in kidney transplant recipients
- 5) Investigation of the prevalence of HSV-2 IgG antibodies and associated risk factors in two groups of azoospermic males and seeking sex selection

Book

Viral Vaccines, 2014 (Published)

Laboratory Techniques Experiences:

1. Cell Culture
2. ELISA esp. IgM capture ELISA
3. Virus culture and cell culture.
4. Serological techniques Including HI, HA, IF, ELISA.
- 5- Molecular Technique including PCR , Real-Time PCR, Multiplex PCR
- 6- Cloning
- 7-PBMC isolation
- 8-Plaque assay

9-RNA/DNA extraction

10-TCID50

F) Membership :

Iranian Society of Virology, 2008 to present