



## **Milad Zandi**

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## **SUMMARY**

Ph.D. in Medical Virology, with strong communication skills developed from extensive teaching experience and ability to work independently or as part of a team. Special expertise in the following areas:

- DNA and RNA Extraction
- RT-PCR & PCR
- Cloning
- Cell culture
- Blotting and PAGE
- Proteins expression in eukaryote/prokaryotic systems
- Recombinant proteins
- Multi-epitope vaccines
- Vaccine animals models
- Vaccine adjuvants
- Nanoparticles
- Cancer

## **EDUCATION**

Tehran University of Medical Sciences  
**Ph.D., Medical Virology** Tehran, Iran

Ahvaz Jundishapur University of Medical Sciences  
**M.Sc., Medical Virology** Ahvaz, Iran

Islamic Azad University  
**B.A., Cellular and Molecular Biology- Microbiology** Sanandaj, Iran

## **RESEARCH EXPERIENCE**

**PhD Project:** Adjuvanticity Evaluation of Cerium Nanoparticles in Animal Rabies Vaccine.

**Master Project:** Production Recombinant Protein VP7 Rotavirus Strain RF and Produce Antibody Against of it in Rabbit Model.

## **Presentation in international meeting**

- Challenges among virus an Nrf2 signaling pathway. 2017. (10th International Congress of Laboratory and Clinic).
- Challenging for expression bovine rotavirus full-length VP7 protein in prokaryotic system . 2016. (9th International Congress of Laboratory and Clinic).

## **Projects**

- 1- Improve sensitivity of rapid tests of SARS-CoV-2 virus detection using a novel metagenomic method; a collaborative study between Iraian Network for Research in Viral Diseases (INRVD) and Medical University of Vienna (MUV).  
( IR.TUMS.MEDICINE.REC.1399.1261)
- 2- Characterization of Immunogenetic Factors influencing Multisystem Inflammatory Syndrome (MIS-C) in Iranian Covid-19 Pediatrics by using Whole-Exome Sequencing.  
(IR.TUMS.MEDICINE.REC.1399.916)

- 3- Comparison of clinical, laboratory and imaging criteria between hospitalized patients and dead patients due to severe acute respiratory syndrome Corona Virus 2019 (COVID-19) in Iran.  
(IR.TUMS.VCR.REC.1399.599)
- 4- Clinical and molecular epidemiology of COVID-19 along with the production of 3 diagnostic elements about the circulating virus in Iran; a multicenter, nationwide study.  
( IR.TUMS.VCR.REC.1399.378)
- 5- Molecular Evaluation of Co-infection between SARS-CoV-2 and Community-Acquired Pneumonia (CAP) in COVID-19 patients in Abadan city  
(IR.ABADANUMS.REC.1399.156)
- 6- Evaluation of co-infection with SARS-COV-2 and influenza A virus in patients with covid-19 disease  
( IR.ABADANUMS.REC.1399.137)
- 7- Investigating the adjuvant properties of cerium nanoparticles in animal rabies vaccine  
(IR.TUMS.SPH.REC.1398.181)
- 8- Phylogenetic analysis and genetic diversity of SARS coronavirus-2 from fecal samples of patients with Covid-19 disease.  
( IR.ABADANUMS.REC.1399.093)
- 9- Systematic review of the role of different genotypes of human papillomavirus in retinoblastoma  
( IR.HUMS.REC.1400.277)
- 10- Measurement of antibody level against vaccines injected against SARS Cov2 virus in health care personnel of medical centers in the country  
( IR.TUMS.MEDICINE.REC.1400.583)
- 11- Identification of microbial pathogens in patients with respiratory tract infection using Multiplex Real-Time Polymerase Reaction (PCR) technique  
(IR.TUMS.SPH.REC.1400.165)
- 12- Evaluation of co-infection rotavirus with SARS-COV-2 in patients with covid-19 disease with gastrointestinal symptoms and gastroenteritis in Abadan city.  
( IR.ABADANUMS.REC.1399.123)
- 13- Design and production of educational software for the prevention and control of mobile-based viral hepatitis in the Android system  
( IR.ABADANUMS.REC.1399.084)
- 14- Comparison of the effect of Covid-19 pandemic on the vaccination status of children in the first six months of 1999 and the first six months of 1998 in Abadan health centers  
( IR.ABADANUMS.REC.1399.148)
- 15- Evaluation of gastrointestinal symptoms caused by SARS coronavirus-2 in patients with Covid-19: Systematic review and meta-analysis  
( IR.TUMS.SPH.REC.1399.184)
- 16- An overview of Covid-19 and its effects on the liver.  
(IR.HUMS.REC.1399.563)
- 17- Evaluation of neurological symptoms caused by SARS coronavirus-2 in patients with Covid-19: A systematic review  
(IR.TUMS.MEDICINE.REC.1399.1134)
- 18- Investigating the role of SARS-CoV-2 accessory proteins in the pathogenesis of Covid-19.  
(IR.ABADANUMS.REC.1401.061)

- 19- The role of lipids in the pathogenesis of viral gastroenteritis.  
(IR.ABADANUMS.REC.1401.010)
- 20- Systematic review of classical and molecular diagnosis methods of lymphocytic choriomeningitis virus.  
(IR.ABADANUMS.REC.1400.121)
- 21- Determination of serum levels of neutralizing and anti-spike antibodies and evaluation of cellular immunity following SARS-Cov-2 Vaccination in Iranian Health Care Workers in Tehran Province.  
(IR.TUMS.MEDICINE.REC.1400.1119)
- 22- SARS-CoV-2 infection in children and adults.  
(IR.ABADANUMS.REC.1400.011)
- 23- Biosensors for detection of Crimean-Congo hemorrhagic fever virus.  
(IR.ABADANUMS.REC.1399.217).
- 24- Co-infection of SARS-CoV-2 and respiratory syncytial virus in children.  
(IR.ABADANUMS.REC.1399.218)

### Books

Number	Title	Pulisher	ISBN
1	The Challenge of Protein Purification: Principles and Methods	Yazd Shahid Sadoughi University of Medical Sciences	9789648444537
2	An overview on viral diagnosis, workplace health, and immunology	Abadan University of Medical Sciences	9786222491086
3	An overview of the world of viruses	Ahwaz Medical Science and Technology Publications	9786222490706

### Reviewer of Journals

Journal	Impact Factor
Lancet Infectious Disease	71
Journal of Medical Virology	21
Reviews in Medical Virology	11.04
International Journal of Nanomedicine	7.03
Journal of Inflammation Research	6.922
Annals of Clinical Microbiology and Antimicrobials	6.78
Frontiers in Public Health	6.46
Infectious Disease and Therapy	6.11
Scientific Reports	4.9
Viruses	5.81
Journal of Oral Microbiology	5.83
Annals of Medicine	5.34
Infection and Drug Resistance	4.00
Pathogens	4.53
BMC Public Health	4.13
Annals of Clinical Microbiology and Antimicrobials	3.94
Diagnostics	3.706
Acta Neuropsychiatrica	3.403
Asian Biomedicine	1.4

### Student Advisor

Number	Thesis title	Student	University
1	Comparison of the effect of Covid-19 pandemic on the vaccination status of children in the first six months of 1399 and the first six months of 1398 in Abadan health centers	Medical student	Abadan university of medical sciences
2	Design and production of educational software for the prevention and control of mobile-based viral hepatitis in the Android system	Medical student	Abadan university of medical sciences

### Editorial Board

Journal	Impact
Frontiers in Microbiology	6.06
BMC Microbiology	4.46

## Publications

Number	Title	Journal	Impact Factor	Position	Year
1	ORF9c and ORF10 as accessory proteins of SARS-CoV-2 in immune evasion	Nature reviews. Immunology	108.55	1 <sup>st</sup> Correspondence Author	2022
2	ORF8/ORF8a: a difference between SARS-CoV-2 and SARS-CoV	European Respiratory Journal	33.80	1 <sup>st</sup> Correspondence Author	2021
3	Monkeypox virus neurological manifestations in comparison to other orthopoxviruses	Travel Medicine and Infectious Disease	21	1 <sup>st</sup> Correspondence Author	2022
4	Interplay between Cellular Metabolism and DNA viruses	Journal of Medical Virology	22	1 <sup>st</sup> Correspondence Author	2022
5	ORF8a as a viroporin in SARS-CoV-2 infection?	Cytokine & Growth Factor Reviews	17.66	1 <sup>st</sup> Correspondence Author	2021
6	Monkeypox virus crosstalk with HIV; ?where do we stand now	International Journal of Surgery	13.4	2 <sup>st</sup> Correspondence Author	2022
7	Target genes used for biosensor development in COVID-19 diagnosis	Biosensors and Bioelectronics	12.54	1 <sup>st</sup> Correspondence Author	2021

8	An overview on the seven pathogenic human coronaviruses	Reviews in Medical Virology	11.04	4 <sup>st</sup> Correspondence Author	2021
9	Role of ORF8a as accessory protein in apoptosis induction in SARS-CoV-2 infection	Reviews in Medical Virology	11.04	1 <sup>st</sup> Correspondence Author	2021
10	Planarian secretory cell nidovirus: The largest genome of RNA viruses	Reviews in Medical Virology	11.04	1 <sup>st</sup> Correspondence Author	2021
11	Design of a Multi-epitope Vaccine against SARS-CoV-2 using Immunoinformatics approach	International Journal of Biological Macromolecules	8	2 <sup>st</sup>	2021
12	Diagnosis of COVID-19: hemagglutinin-esterase gene is used for molecular assays	Expert Review of Molecular Diagnostics	5.67	1 <sup>st</sup> Correspondence Author	2021
13	Role of hemagglutinin esterase protein in neurological manifestation of COVID-19	Fluids and Barriers of the CNS	6.96	1 <sup>st</sup> Correspondence Author	2021
14	Relation between ORF8a and the mitochondrial protein TOM70 in SARS-CoV-2 infection	Acta Physiologica	7.52	1 <sup>st</sup> Correspondence Author	2021
15	Pooled Prevalence Estimate of Ocular Manifestations in COVID-19 Patients: A Systematic Review and Meta-Analysis	Iranian Journal of Medical Sciences	ISI	2 <sup>st</sup>	2021

16	Comment on Alfassam et al. "Development of a Colorimetric Tool for SARS-CoV-2 and Other Respiratory Viruses Detection Using Sialic Acid Fabricated Gold "Nanoparticles	Pharmaceutics	6.5	1 <sup>st</sup> Correspondence Author	2021
17	The SARS-CoV-2 NSP-2, NSP-12 and Spike partial sequence conservation in stool samples from Abadan, Iran	Biotechnology and Applied Biochemistry	2.43	1 <sup>st</sup>	2022
18	Severe acute respiratory syndrome coronavirus-2 and its structural proteins	Journal of Cellular Physiology	6.3	1 <sup>st</sup> Correspondence Author	2021
19	Ribosome Profiling: A Useful Approach to Discover Hidden Corners of SARS-CoV-2	Cell journal	2,48	1 <sup>st</sup> Correspondence Author	2022
20	Role of Glycoprotein Hemagglutinin-Esterase in COVID-19 Pathophysiology	Stem Cell Reviews and Reports	5.74	1 <sup>st</sup> Correspondence Author	2021
21	Can seasonal influenza vaccine for 2019/2020 has cross reactivity with some of SARS-CoV-2 proteins?	International Journal of Infectious Diseases	3.62	1 <sup>st</sup> Correspondence Author	2021
22	Worldwide prevalence of microbial agents' coinfection among COVID-19 patients: A comprehensive updated systematic review and meta-analysis	Journal of Clinical Laboratory Analysis	2.35	4 <sup>st</sup>	2021



23	SARS-CoV-2 as a betacoronavirus comprises five structural proteins	Infection Genetics and Evolution	3.34	1 <sup>st</sup> Correspondence Author	2021
24	Comparison between various biosensor methods for human T-lymphotropic virus-1 (HTLV-1) detection	Molecular Biology Reports	2.31	2 <sup>st</sup>	2021
25	Vulvovaginal candidiasis in Iran: A systematic review and meta-analysis on the epidemiology, clinical manifestations, demographic characteristics, risk factors, etiologic agents and laboratory diagnosis	Microbial Pathogenesis	3.7	5 <sup>st</sup>	2021
26	COVID-19 associated central nervous system manifestations, mental and neurological symptoms: A systematic review and meta-analysis	Reviews in the Neurosciences	4.3	1 <sup>st</sup> Correspondence Author	2021
27	Construction Of Cerium Oxide Nanoparticles And Their Cytotoxicity Evaluation In Vitro And In Vivo	International Journal of Medical Toxicology and Forensic Medicine	Q4	1 <sup>st</sup>	2021
28	Severe acute respiratory syndrome-2 encodes hemagglutinin esterase?	Reviews in Medical Virology	6.98	1 <sup>st</sup> Correspondence Author	2021
29	Expression of Salmonella typhimurium and Escherichia coli flagellin protein and its functional characterization as an adjuvant	Microbial Pathogenesis	3.7	5 <sup>st</sup>	2021
	Viral Coinfection among COVID-19 Patient				

30	Groups: An Update Systematic Review and Meta-Analysis	BioMed research international	3.4	4 <sup>st</sup>	2021
31	Role of Hemagglutinin-esterase protein in SARS-CoV-2 infection?	Cell Biology International	3.6	1 <sup>st</sup> Correspondence Author	2021
32	Prevalence of human papilloma virus (HPV) genotypes between outpatients males and females referred to seven laboratories in Tehran, Iran	Infectious Agents and Cancer	3.6	6 <sup>st</sup>	2022
33	The Role of Bacterial and Fungal Human Respiratory Microbiota in COVID-19 Patients	BioMed Research International	3.4	3 <sup>st</sup>	2021
34	A Multi-Center Retrospective Study of Clinical features, Laboratory Characteristics, and Outcomes of 166 Hospitalized Children with Coronavirus Disease 2019 (COVID-19); A Preliminary Report from Iranian Network for Research in Viral Diseases (INRVD)	Pediatric Pulmonology	3.03	5 <sup>st</sup>	2021
35	The Role of microRNAs in the Viral Infections	Current Pharmaceutical Design	3.4	2 <sup>st</sup>	2019
	Hemagglutinin-esterase cannot be considered as a	Molecular Diversity	2.94	1 <sup>st</sup>	

36	candidate for designing drug against COVID-19			Correspondence Author	2021
37	Future developments in biosensors for field-ready SARS-CoV-2 virus	Biotechnology and Applied Biochemistry	2.4	2 <sup>st</sup>	2020
38	A review of COVID-19 vaccines and major considerations for diabetic patients	Biotechnology and Applied Biochemistry	2.43	2 <sup>st</sup>	2020
39	Biosensor as an alternative diagnostic method for rabies virus detection: A literature review	Biotechnology and Applied Biochemistry	2.43	1 <sup>st</sup>	2021
40	The role of lipids in the pathophysiology of coronavirus infections	Osong Public Health and Research Perspectives	Q2	1 <sup>st</sup> Correspondence Author	2021
41	Chronic stress and Alzheimer's disease	Biotechnology and Applied Biochemistry	2.43	2 <sup>st</sup>	2021
42	The role of miRNAs in COVID-19 disease	Future Virology	1.8	2 <sup>st</sup>	2021
43	miR-200c-3p upregulation and ACE2 downregulation via bacterial LPS and LTA as interesting aspects for COVID-19 treatment and immunity	Molecular Biology Reports	2.31	2 <sup>st</sup>	2021
44	A review on EBV encoded and EBV-induced host microRNAs expression profile in different lymphoma types	Molecular Biology Reports	2.31	4 <sup>st</sup>	2021

45	Helicase (NSP13) as a structural protein of SARS-CoV-2?	Iranian journal of immunology	1.6	1 <sup>st</sup> Correspondence Author	2021
46	Biosensor-based methods for Crimean-Congo hemorrhagic fever Virus detection	Journal of Vector Borne Diseases	0.7	1 <sup>st</sup> Correspondence Author	2022
47	Severe acute respiratory syndrome coronavirus 2 and respiratory syncytial virus coinfection in children	Osong Public Health and Research Perspectives	Q2	1 <sup>st</sup> Correspondence Author	2021
48	Global estimate of ocular manifestations in COVID-19 patients: a comprehensive systematic review and meta-analysis on observational studies	Iranian Journal of Medical Sciences	Q1	2 <sup>st</sup>	2021
49	CRISPR-Cas System: A Promising Diagnostic Tool for Covid-19	Avicenna Journal of Medical Biotech	Q3	4 <sup>st</sup>	2022
50	Bacterial Co-infection among COVID-19 patient groups: an update Systematic review and Meta-analysis	New Microbes and New Infections	Q3	3 <sup>st</sup>	2021
51	HPV infections in retinoblastoma: a systematic review	Journal of Clinical Laboratory Analysis	Q3	4 <sup>st</sup>	2021
	Gastrointestinal Manifestations of the COVID-19: A Systematic	Journal of Biostatistics and Epidemiology			2021

52	Review and Meta-Analysis with 111 studies		Q3	6 <sup>st</sup>	
53	A literature review on the parvovirus B19 infection in sickle cell anemia and $\beta$ - thalassemia patients	Tropical Medicine and Health	Q2	4 <sup>st</sup>	2020
54	Analysis of NSP4 Gene and Its Association with Genotyping of Rotavirus Group A in Stool Samples	Iranian Biomedical Journal	Q2	4 <sup>st</sup>	2017
55	Coronavirus Disease 2019 (COVID-19): Immune Responses, Transmission, and Clinical Features: An Update	Journal of Cellular & Molecular Anesthesia	Q3	Correspondence Author 4 <sup>st</sup>	2021
56	Highly Conserve Sequences in Envelope, Nucleoprotein and RNA-Dependent RNA Polymerase of SARS-CoV-2 in Nasopharyngeal Samples of the COVID-19 Patients; a Diagnostic Target for Further Studies	Journal of Cellular & Molecular Anesthesia	Q3	Correspondence Author 4 <sup>st</sup>	2021
57	Clinical Symptoms and Types of Samples Are Critical Factors for the Molecular Diagnosis of Symptomatic COVID-19 Patients: A Systematic Literature Review	International journal of microbiology 2021	Q3	1 <sup>st</sup>	2021

58	Design and Development of a Mobile Application for the Control and Prevention of Viral Gastroenteritis as a Public Health Problem	Journal of Liaquat University of Medical & Health Sciences	Q4	1 <sup>st</sup>	2022
59	An in-vitro transcription assay for development of Rotavirus VP7	Iranian Journal of Microbiology	Q3	4 <sup>st</sup>	2017
60	The Spike Protein Mutations and its Effect on SARS-CoV-2 Pathogenesis	Journal of Cellular & Molecular Anesthesia	Q3	1 <sup>st</sup>	2021
61	Autophagy Role as a Double-Edged Sword in Anesthesiology and Critical Care	Journal of Cellular & Molecular Anesthesia	Q3	1 <sup>st</sup>	2021
62	The coronavirus disease 2019 and effect on liver function: a hidden and vital interaction beyond the respiratory system	Reviews in Medical Microbiology	Q3	4 <sup>st</sup>	2021
63	Role of IL-4 in Cytokine Storm Syndrome due to COVID-19 Infection	Journal of Cellular & Molecular Anesthesia	Q3	Correspondence Author	2020
64	Diabetes and coronavirus infections (SARS-CoV, MERS-CoV, and SARS-CoV-2)	Acute Disease	ISI	Correspondence Author	2020

65	Identification of Panton-Valentine leukocidin virulence gene in methicillin—resistant Staphylococcus aureus isolated from clinical specimens of burn patients in Zare Hospitals of Sari, Iran	Acute Disease	ISI	5 <sup>st</sup>	2020
66	Clinical Performance of RT-PCR and Chest CT Scan for Covid-19 Diagnosis; a Systematic Review	Frontiers in Emergency Medicine	PubMed	2 <sup>st</sup>	2020
67	A Comparative Analysis of Clinical Characteristics and Laboratory Findings of COVID-19 between Intensive Care Unit and Non-Intensive Care Unit Pediatric Patients	Frontiers in Emergency Medicine	PubMed	6 <sup>st</sup>	2021
68	<u>The Comparison of Susceptibility to SARS-CoV-2 Infection between Pediatric and Adults</u>	International Journal of Medical Laboratory	-	1 <sup>st</sup>	2017
69	Comparison of the effect of COVID-19 pandemic on the vaccination status of children in the years of 2019 and 2020 in Abadan health centers, Iran	Pars Journal of Medical Sciences	-	2	2021
70	Seroprevalence of Hepatitis E Virus Infection among Patients with Acute Hepatitis Symptoms in Ahvaz, Iran	Acute Disease	ISI	5 <sup>st</sup>	2018

71	A Snapshot of Different Types of Under Research Vaccines Against COVID-9: A Review	Archives of Medical Laboratory Sciences	-	1 <sup>st</sup>	2020
72	Challenging for Expression Bovine Rotavirus (RF Strain) Full-Length VP7 Protein in Prokaryotic System	International Journal of Medical Laboratory	-	1 <sup>st</sup>	2017