Curriculum vitae

Name: **Sara Nemati**

Birth date**: 20 Agust 1985**

Marriage**: Married.**

Ph.D of Medical Parasitology

Address: Shahid Beheshti University of Medical Sciences, Velenjak, Chamran highway, Tehran, Iran

Phone Number: +989128352691

Email: Sara.nemati@sbmu.ac.ir, Sara.nemati64@yahoo.com

Educations

BSc degree: Biology, Azad University, Iran

MSc degree: Medical Parasitology, Zanjan University of Medical Sciences, Zanjan, Iran.

Thesis subject: *In Vivo and in Vitro Investigation on Anti- Leishmania Efficacy of Artemisinin on Iranian Strain of Leishmania major*

Year: 2009-2012

PhD degree: Medical Parasitology, Zanjan University of Medical Sciences, Zanjan, Iran.

Thesis subject: *Phylogenetic study of pathogenic isolates of Leishmania species in Iran by the multilocus sequence typing*

Year: 2012-2017

Focused area

Gastrointestinal Parasitic diseases; Medical and veterinary parasitology; Environmental microbiology; Foodborne and Waterborne Microbiology; Host-parasite interaction; Diagnostic techniques; Immuno-Parasitology; Molecular analysis and networking.

Skills

1. Multidisciplinary team supervising.
2. Scientific proposal and grant writing.
3. Scientific writing.
4. Wet lab and molecular lab specialist for Foodborne and Waterborne Diseases.
5. Environmental, water, and wastewater sample processing.
6. Advanced experiences for designing and conducting molecular tests (conventional PCR, Real-time PCR [absolute quantification, relative quantification, HRM, melt curve analysis, and etc], LAMP PCR, …).
7. Nano-Biosensor designing for detection of microsporidia.
8. Starting works on Lab-on-a chip detection tests and biosensors.
9. Working on cell culture, western blotting, small interfering RNAs (siRNA and micro RNAs), drug-cell interactions, and host-parasite interactions.
10. Statistical, phylogenetic, and population genetic software (MEGA, PopArt, DnaSP, Graph Pad Prism, and SPSS).
11. Animal lab studies.

Experience

1. **Assistant Professor_**at Foodborne and Waterborne Diseases Research Center, Research Institute for Gastroenterology and Liver Diseases, Shahid Beheshti University of Medical Sciences from 2014 until now.
2. **Supervising of Ph.D and MSc students**

Projects

A. Principal investigator of finished projects:

1. Study of the epidemiology of *Trichostrongylus* spp., and its species and types in endemic regions of Guilan province using PCR/sequencing of COX gene.
2. Evaluation of *Toxoplasma* Immunization capability against *Mycobacterium tuberculosis* and evaluation of its effect via P2X7R pathway in THP1 Cell line
3. Study the effects of combination between Azathioprine and *Toxoplasma gondii* on THP-1 cell line via mTORC1 and autophagy signaling
4. Validation of molecular methods for detection of waterborne pathogens and indicator microorganisms for fecal contamination of water.
5. Evaluation of anti-toxoplasma effects of nanoparticles containing *plant extract* in vitro on cell line (Vero cell)
6. Design and fabrication of label-free biosensor for the detection of parasite
7. Occurrence of foodborne parasites (*Toxoplasma gondii* and *Sarcocystis* spp) in meat products marketed in Tehran
8. Molecular analysis of internal transcribed spacer 2 of *Dicrocoelium dendriticum* isolated from cattle, sheep, and goat in Iran
9. Molecular characterization of *Cryptosporidium* skunk genotype in raccoons (*Procyon lotor*) in Iran: concern for zoonotic transmission

B. Principal investigator of ongoing projects:

1. Designing and fabrication of label-free biosensor for the detection of Microsporidia.
2. Study of the prevalence of foodborne parasites (*Toxoplasma gondii* and *Sarcocystis* spp) in meat products supermarkets in Tehran, Iran.
3. Evaluation of anti-toxoplasma effects of nanoparticles containing *plant extract* in vitro on cell line (Vero cell)
4. Fungal microbiota dysbiosis in IBD and IBS
5. Designing and application of loop-mediated isothermal amplification (LAMP) technique for rapid, accurate, and specific detection of Blastocystis spp. in water, vegetables and patients' samples, comparing with Real-Time PCR
6. Evaluation of anti-*Toxoplasma* effects of lipid nanoparticles carrying Tea tree oil on *Toxoplasma gondii* tachyzoites in Vero Cells"

PUBLICATION

- **Sara Nemati**, Mahsa Mottaghi, Parisa Karami, Hamed Mirjalali. Development of solid lipid nanoparticles-loaded drugs in parasitic diseases. Discover Nano.2024

- **Sara Nemati**, Farzaneh Shalileh, Hamed Mirjalali, Kobra Omidfar. Toward waterborne protozoa detection using sensing technologies. 2023, Frontiers in Microbiology.

- **S. Nemati**, Hanieh Mohammad Rahimi, Anna Meyfour, Hossein Pazoki, Hamid Asadzadeh Aghdaei, Shabnam Shahrokh, Hamed Mirjalali. Evaluation of the mTORC activity in the presence of *Toxoplasma gondii* and azathioprine in human monocyte cell line. 2023. BMC microbiology.

- E Javanmard, H Mohammad Rahimi, **S Nemati**, S Soleimani Jevinani. Molecular analysis of internal transcribed spacer 2 of ***Dicrocoelium dendriticum*** isolated from cattle, sheep, and goat in Iran. BMC Veterinary Research.**2022**

- **Sara Nemati**, Hanieh Mohammad Rahimi, Zahra Hesari, Meysam Sharifdini, Nooshin Jalilzadeh Aghdam, Hamed Mirjalali, Mohammad Reza Zali. Formulation of Neem oil-loaded solid lipid nanoparticles and evaluation of its anti-***Toxoplasma*** activity. BMC Complementary Medicine and Therapies.**2022**

- Hanieh Mohammad Rahimi, Seyed Ahmad Karamati, **Sara Nemati**, Hamed Mirjalali, Mohammad Reza Zali Molecular Identification, Subtypes Distribution, and Alleles Discrimination of ***Blastocystis sp***., Isolated from Immunocompromised Subjects in Iran . Iranian Journal of Parasitology.**2022**

- Hanieh Mohammad Rahimi, Sara Soleimani Jevinani, **Sara Nemati**, Meysam Sharifdini, Hamed Mirjalali, Mohammad Reza Zali Molecular characterization of ***Cryptosporidium*** skunk genotype in raccoons (Procyon lotor) in Iran: concern for zoonotic transmission. Parasitology Research. **2022**

- Saeid Andalib, Hanieh Mohammad Rahimi, Maryam Niyyati, Farzaneh Shalileh, **Sara Nemati**, Soheila Rouhani, Mohammad Reza Zali, Hamed Mirjalali, Panagiotis Karanis. **Free-living amoebae** in an oil refinery wastewater treatment facility. Science of The Total Environment.**2022**

- **S Nemati**, MR Zali, P Johnson, H Mirjalali, P Karanis. Journal of Water and Health 19 (5), 687-704. Molecular prevalence and subtype distribution of ***Blastocystis* sp**. in Asia and in Australia. **2021**

- **S Nemati**, H Hajjaran, S Heydari, A Fazaeli, A Khamesipour, M Falahati Anbaran, M Mohebali, H Mirjalali. Taxonomy, Population Structure and Genetic Diversity of Iranian ***Leishmania*** Strains of Cutaneous and Visceral Leishmaniasis. *Acta Parasitol.* **2021**

- HM Rahimi, **S Nemati**, H Alavifard, K Baghaei, H Mirjalali, MR Zali Soluble total antigen derived from ***Toxoplasma gondii*** RH strain prevents apoptosis, but induces anti-apoptosis in human monocyte cell line.**2021** Folia Parasitologica 68, 026

- **S Nemati**, MF Anbaran, HM Rahimi, MS Hosseini, S Aghaei, N Khalili.Evolutionary and phylogenetic analyses of the barcoding region suggest geographical relationships among ***Blastocystis* sp**., ST3 in humans. **2021**.Infection, Genetics and Evolution, 105151

- H Mohammad Rahimi, S Soleimani Jevinani, **S Nemati**, M Sharifdini.Molecular characterization of ***Cryptosporidium skunk*** genotype in raccoons (Procyon lotor) in Iran: concern for zoonotic transmission. **2021**. Parasitology research.

- **S Nemati**, H Pazoki, H Mohammad Rahimi, H Asadzadeh Aghdaei.***Toxoplasma gondii*** profilin and tachyzoites RH strain may manipulate autophagy via downregulating Atg5 and Atg12 and upregulating Atg7. **2021**.Molecular Biology Reports 48 (10), 7041-7047

- E Javanmard, **S Nemati**, M Sharifdini, A Rostami, H Mirjalali, M R Zali. The first report and molecular analysis of ***Enterocytozoon bieneusi*** from raccoon (Procyon lotor) in the north of Iran. *Eukaryotic Microbiology*. **2020**.

- H Mohammad Rahimi, **S Nemati**, H Mirjalali, M Sharifdini, MR Zali. Molecular characterization and identification of ***Blastocystis*** and its subtypes from raccoon (Procyon lotor) in the north of Iran. Parasitology Research. *Parasitol Res*. **2020**. doi: 10.1007/s00436-020-06770-9.

- **S Nemati**, A Fazaeli , H Hajjaran, A Khamesipour, M Falahati Anbaran, A Bozorgomid, and F Zarei. Genetic diversity and phylogenetic analysis of the Iranian ***Leishmania*** parasites based on HSP70 gene PCR-RFLP and sequence analysis. *Korean Journal Parasitology*. 2017. doi: 10.3347/kjp.2017.55.4.367

- A Bozorgomid, N Nazari, E Beigom Kia, M Mohebali, H Hajaran, P Hydarian, Y Hamzavi, **S Nemati**, M Aryaeipour, and M Bagher Rokni. Epidemiology of **Fascioliasis** in Kermanshah Province, Western Iran. *Iran J Public Health*. 2018.

- A Haniloo, **S Nemati**, H Nahrevanian, A Fazaeli, M Farahmand. In Vivo and in Vitro Investigation on Anti-Leishmanial Efficacy of Artemisinin on Iranian Strain of **Leishmania** major. *Advanced Studies in Medical Sciences*. 2016.

- F Faezi, H Nahrevanian, M Farahmand, M Sayyah, S K Bidoki and **S Nemati**. Comparative application of three types of L-arginine as nitric oxide precursor for in vivo trial on leishmaniasis in Balb/c mice infected with **Leishmania major**. *Asian Pacific Journal of Tropical Medicine.* doi: 10.3923/ijbc. 110.122. 2015.

- **S Nemati**, H Nahrevanian, H Haniloo, M Farahmand. Investigation on Nitric Oxide and C - reactive protein Involvement in AntiLeishmanial Effects of Artemisinin and Glucantim on Cutaneous Leishmaniasis. *Advanced Studies in Biology*. 2013.

- H Nahrevanian, S P Jafary, **S Nemati**, M Farahmand, E Omidinia. Evaluation of anti-leishmanial effects of killed Leishmania vaccine with BCG adjuvant in BALB/c mice infected with Leishmania major MRHO/IR/75/ER. *Folia Parasitology*. 2013. doi: 10.14411/fp.2013.001.

- **S Nemati**, S P Jafary, H Nahrevanian, M Farahmand, and Sh Nahrevanian. Immuno-Biochemical Alterations in Leishmania major Infected Balb/c Mice after Immunization

with Killed Leishmania Vaccine and BCG as Adjuvant. *Current Research Journal of Biological Sciences*. 2012.

Reference links

1. **Scopus:** https://www.scopus.com/authid/detail.uri?authorId=35311420300
2. **Researchgate:** https://www.researchgate.net/profile/Sara-Nemati
3. **Googlescholar:** https://scholar.google.com/citations?user=JnrL1AEAAAAJ&hl=en
4. **Orcide:** https://orcid.org/0000-0002-5376-988X