



Marjan Motamedi

Location: Iran, Shiraz

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Employment

- **2017-present**
Assistant Professor of medical mycology in School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
- **2014-2017**
Special scholarship of Shiraz University of Medical Sciences, Shiraz, Iran.

Educational History

- **2012 – 2017**
Ph.D. in Medical Mycology Department of Medical Mycology & Parasitology, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences Tehran, Iran.
- **2009-2011**
Master of Science in Medical Mycology Department of department of Medical Mycology & Parasitology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
- **2006-2008**
Bachelor of Science in Medical Laboratory Sciences, School of Paramedical Sciences, Shiraz University of Medical Sciences, Shiraz, Iran.

Executive Records

- Secretary of Accreditation Committee of Medical Mycology of Shiraz University of Medical Sciences
- Deputy Research Advisor of School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
- Director of Laboratories, Industry Relations Unit of School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.

Thesis

- **M.S**, Study on determination of the chemical composition and antifungal activities of Mentha piperita and Satureja macrosiphon essential oils against Candida, Cryptococcus and Aspergillus species.

- **Ph.D**, Study on Differentiation of onychomycosis to three groups of dermatophyte, *Candida* and saprophytic directly from clinical specimens by multiplex Real Time PCR.

Journal Articles

- Zomorodian K, Rahimi MJ, Pakshir K, Motamedi M, Ghiasi MR, Rezashah H. Determination of antifungal susceptibility patterns among the clinical isolates of *Candida* species. *Journal of global infectious diseases*. 2011;3(4):357.
- Zomorodian K, Rahimi MJ, Safaei A, Bazargani A, Motamadi M, Kharazi M, et al. Analysis of beta-hemolysis in human blood agars by *Streptococcus pyogenes*. *Journal of microbiological methods*. 2011;85(3):233-4.
- Saharkhiz MJ, Motamedi M, Zomorodian K, Pakshir K, Miri R, Hemyari K. Chemical composition, antifungal and antibiofilm activities of the essential oil of *Mentha piperita* L. *ISRN pharmaceuticals*. 2012;2012.
- Moein MR, Zomorodian K, Pakshir K, Yavari F, Motamedi M, Zarshenas MM. Trachyspermum ammi (L.) Sprague Chemical Composition of Essential Oil and Antimicrobial Activities of Respective Fractions. *Journal of evidence-based complementary & alternative medicine*. 2015;20(1):50-6.
- Zarei F, Mirhendi H, Motamedi M, Ahmadi B, Nouripour-Sisakht S, Zarrinfar H, et al. Black *Aspergillus* species isolated from clinical and environmental samples in Iran. *Journal of medical microbiology*. 2015;64(11):1454-6.
- Mirhendi H, Zarei F, Motamedi M, Nouripour-Sisakht S. *Aspergillus tubingensis* and *Aspergillus niger* as the dominant black *Aspergillus*, use of simple PCR-RFLP for preliminary differentiation. *Journal de Mycologie Médicale/Journal of Medical Mycology*. 2016;26(1):9-16.
- Pakshir K, Zakaei A, Motamedi M, Rahimi Ghiasi M, Karamitalab M. Molecular identification and in-vitro antifungal susceptibility testing of *Candida* species isolated from patients with onychomycosis. *Current Medical Mycology*. 2015;1(4):26-32.
- Mirhendi H, Motamedi M, Makimura K, Satoh K. Development a diagnostic pan-dermatophyte TaqMan probe real-time PCR assay based on beta tubulin gene. *Mycoses*. 2016.
- Motamedi M, Ghasemi Z, Shidfar MR, Hosseinpour L, Khodadadi H, Zomorodian K, et al. Growing incidence of non-dermatophyte onychomycosis in Tehran, Iran. *Jundishapur journal of microbiology*. 2016;9(8).
- Motamedi M, Mirhendi H, Zomorodian K, Khodadadi H, Kharazi M, Ghasemi Z, et al. Clinical evaluation of β -tubulin real-time Pcr for rapid diagnosis of dermatophytosis, a comparison with mycological methods. *Mycoses*. 2017;60(10):692-6.
- Pakshir K, Mohamadi T, Khodadadi H, Motamedifar M, Zomorodian K, Alipour S, et al. Proteolytic activity and cooperative hemolytic effect of dermatophytes with different species of bacteria. *Current medical mycology*. 2016;2(4):9.
- Asl IG, Motamedi M, Shokuhi GR, Jalalizand N, Farhang A, Mirhendi H. Molecular characterization of environmental *Cladosporium* species isolated from Iran. *Current medical mycology*. 2017;3(1):1.

- Jafari Z, Motamedi M, Jalalizand N, Shokoohi GR, Charsizadeh A, Mirhendi H. Comparison of CHROMagar, polymerase chain reaction-restriction fragment length polymorphism, and polymerase chain reaction-fragment size for the identification of *Candida* species. *Current medical mycology*. 2017;3(3):10.
- Kharazi M, Ahmadi B, Makimura K, Farhang A, Kianipour S, Motamedi M, et al. Characterization of beta-tubulin DNA sequences within *Candida parapsilosis* complex. *Current medical mycology*. 2018;4(1):24.
- Motamedi M, Lari MS, Pakshir K, Zomorodian K. Comparing real-time PCR and Calcofluorwhite with conventional methods for rapid detection of dermatophytes: Across-sectional study. *Journal of microbiological methods*. 2019;161:84-6.
- Fasihizade Z, Ahmadi B, Shokoohi GR, Jalalizand N, Motamedi M, Mirhendi H. Differentiating agents of dermatophytosis (*Trichophyton rubrum* and *Trichophyton interdigitale*) in human by dual polymerase chain reaction. *Tehran University Medical Journal TUMS Publications*. 2019;77(4):222-7.
- Motamedi M, Saharkhiz MJ, Pakshir K, Akbarabadi SA, Khordshami MA, Asadian F, et al. Chemical compositions and antifungal activities of *Satureja macrosiphon* against *Candida* and *Aspergillus* species. *Current Medical Mycology*. 2019;5(4):20.
- Pakshir K, Farazmand F, Ghasemi F, Mirhendi H, Zomorodian K, Kharazi M, et al. Translation elongation factor 1-alpha gene as a marker for diagnosing of candidal onychomycosis. *Current Medical Mycology*. 2020;6(1):15.
- Motamedi M, Haghighi L, Omidian M, Sarkari B. Coinfection of *Strongyloides stercoralis* and *Aspergillus* sp. *Interdisciplinary Perspectives on Infectious Diseases*. 2020;2020.
- Zareshahrabadi Z, Zomorodian K, Pakshir K, Mehrabani D, Nouraei H, Motamedi M, et al. morphogenesis and pathogenesis regulation of *Candida albicans* by probiotic bacterium- *Pediococcus acidilactici*. accepted.
- Zareshahrabadi Z, Totonchi A, Rezaei Matehkolaei A, Ilkit M, Ghahartars M, Arastehfar A, et al. Molecular Identification and Antifungal Susceptibility among Clinical Isolates of Dermatophytes in Shiraz, Iran (2017–2019). *Mycoses*. 2020.
- Zareshahrabadi Z, Karimirad M, Pakshir K, Bahmyari R, Motamedi M, Nouraei H, et al. Survey of aflatoxins and ochratoxin A contamination in spices by HPLC-based method in Shiraz, Southern of Iran. *Environmental Science and Pollution Research*. 2021:1-8.
- Zareshahrabadi Z, Karami F, Taghizadeh S, Iraj A, Amani AM, Motamedi M, et al., editors. Green Synthesis of Silver Nanoparticles Using Aqueous Extract of *Lamium album* and their Antifungal Properties. *Journal of Nano Research*; 2021: Trans Tech Publ.
- Faramarzi S, Motamedi M, Rezaei-Matehkolaei A, Aboutalebian S, Ansari S, Didehdar M, et al. A simple multiplex polymerase chain reaction assay for rapid identification of the common pathogenic dermatophytes: *Trichophyton interdigitale*, *Trichophyton rubrum*, and *Epidermophyton floccosum*. *Current Medical Mycology*. 2021.
- Pakshir K, Kamali M, Nouraei H, Zomorodian K, Motamedi M, Mahmoodi M. Molecular characterization and antifungal activity against non-dermatophyte molds causing onychomycosis. *Scientific Reports*. 2021;11(1):1-8.

Membership in professional associations and societies

- Medical Council, Iran
- International Society for Human and Animal Mycology (ISHAM)
- Iranian Society of Medical Mycology (ISMM)

Education enrichments:

- Second place in doctoral entrance exam in medical mycology field (2012).
- Getting the Top Student Degree in Master's Degree (2011).

Genes

- Deposit more than 250 genes of various fungi in the GenBank
 - Ribosomal RNA (rRNA) genes
 - Beta tubulin gene
 - Elongation factor 1-alpha
 - Mycophenolic Acid Gene Cluster

Research interest

- Identification of fungal infection by molecular and conventional techniques.
- Epidemiology of fungal infections
- Antifungal susceptibility tests
- Fungal bioinformatics study

Teaching history

Teaching Medical Mycology courses for;

- MSc and PhD students of Medical Mycology
- PhD students of Parasitology
- The student of medicine, dentistry, pharmacology, nursery, midwifery, medical laboratory sciences and other undergraduate students

Editorial activity

Current Medical Mycology Journal

Thesis supervision

- Evaluation of the efficiency of translation elongation factor 1 α gene in the differentiation and phylogeny of different species of *Candida* genus using bioinformatics analysis and nucleotide sequencing of standard species.
- Determination and comparison of anti-leishmaniasis effects of voriconazole, Posaconazole and sertaconazole on causative agents of cutaneous leishmaniasis by flow cytometry assay.
- Molecular identification of *Malassezia* species isolated from neonates hospitalized in the NICU.
- Comparison of different DNA extraction methods for molecular study of isolated fungal element from fungal nail infection (onychomycosis).
- Survey the genotype relationship between *Malassezia* species isolated from infants admitted to NICU and their mothers.
- In vitro evaluation of different concentrations of hydroalcoholic extract of *J Eriobotrya japonica* leaves on common pathogenic fungi.
- Evaluation of the ability of clinical isolates of dermatophytes to produce biofilms in vitro
- In vitro evaluation of different concentrations of hydroalcoholic extract of *Garcinia mangostana* on common pathogenic fungi.
- A retrospective study of epidemiology of mucormycosis in the educational hospitals affiliated with Shiraz University of Medical Sciences.
- Comparison of culture and multiplex PCR methods in the diagnosis of fungal infections of the ear (otomycosis) and differentiation of the two most common causative genus, *Aspergillus* and *Candida*.
- Evaluating of fungal contamination of contact lens maintenance and disinfection solutions cases and effective health behaviours in maintaining them.
- Frequency and type of onychomycosis in patients with nail psoriasis under different treatments.
- Identification of *Aspergillus* species causing atomycosis in Shiraz in 1400 by multiplex PCR

Approved project

- Nucleotide sequence analysis of ten molecular markers in a wide range of dermatophytes (Research Grant).
- Design and evaluation of Real Time PCR method for general detection of fungi and specific identification of *Aspergillus* species in order to determine the fungal contamination of hospital air (Research Grant).
- Isolation and identification of various *Malassezia* species from healthy individuals and patients with tinea versicolor and seborrheic dermatitis directly from the clinical specimen (Research Grant).

Participate in workshops

- Managing invasive fungal infections in ICU patients without malignancies 2021
- Academic writing 2020
- Diagnostic medical mycology 2019
- Quality control in clinical laboratories, 2016

- Writing research articles, 2015
- Peer Review in Medical Sciences, 2014
- DNA sequencing, 2014
- Advanced diagnostic molecular biology training course, 2013
- Diagnostic molecular biology training course, 2012

Laboratory activities

- Drug susceptibility testing determines (disk diffusion, E test, broth microdilution method).
- Extraction DNA from clinical sample (nail, hair and scale) directly.
- Different PCR techniques:
 - Conventional PCR
 - Multiplex PCR
 - PCR RFLP
 - Nested PCR
 - Real time PCR
 - Real time PCR sybr green
 - Taq man probe
- Bioinformatics activities:
 - Primers and probe design
 - Restriction enzyme selection for RFLP PCR
 - Submit sequence data to NCBI
- Cytotoxicity (MTT assay).
- Biofilm formation (XTT assay).