

CURRICULUM VITAE

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ALI AFGAR, Ph.D. of Medical Biotechnology

Address

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Assistant Professor

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Place of birth: Bam- Iran

Marital status: married

Nationality: Iranian

Native speaker: Persian & L2: English(UPPER INTERMEDIATE)

Education

Ph.D (Oct. 2016): Medical biotechnology, Department of Biotechnology, Iran Institute of Pasteur, Tehran, Iran.

M.Sc. (2005): Medical Parasitology, Kerman University of Medical Sciences, Kerman, Iran.

BS (1997): Medical Sciences Laboratory, Kerman University of Medical Sciences, Kerman, Iran,

Associate Degree (1994): Medical Sciences Laboratory, Zahedan University of Medical Sciences, Zahedan, Iran.

Professional Background

- Nov2016 to Present Department of Parasitology and Mycology, Kerman University of Medical Sciences, Kerman, Iran, as an assistant professor and my duties included:
 - Teaching medical protozoology and helminthology to undergraduate students and medical laboratory.
 - Teaching Primary Medical Protozoology and Helminthology and related subjects to undergraduate students such as Bs. students.
- 2005-2007: Teaching of biology of Parasite, Parasitology, general Microbiology and Immunology in PUN university
- 1997-2005: Teaching Laboratory of Immunology, School of Nursing Bam.
- 2012 till now: Teaching of Medical Laboratory Immunology at the Medical University of Bam.
- 2012 till now: Teaching of Nursing Immunology in Medical University of Bam
- 2013 till now: Immunology Teaching of Medicine at the University of Bam.
- 2013 till now: Teaching of Medical Genetics in Medicine at the Medical University of Bam.
- 2013 till now: Teaching of Medical Genetics Midwifery since at the University of Medical Sciences Bam.
- 2013 till now: Teaching of Medical Genetics of laboratory sciences at the University of Bam.
- 2013: Teaching of medical genetic of Nursing at the University of Bam.

Researching and Performing projects.

- Guiding projects and students' thesis.
- Supervising and monitoring postgraduate students research projects as a research associate.
- Culture of pathogen intestinal and reproductive Helminth in culture condition.
- Preparation of microscopic specimens for educational purposes.
- Preparation of solutions and media for culture(cancer cell lines and parasite).
- Examining clinical specimens from patients.
- Molecular test for detection and genotyping important medical protozoa by PCR-RFLP,Real time –PCR, ARMS PCR .etc.

Workshops, Seminars, and Conferences Attended:

- 3rd International and 10th National Congress of Parasitology and Parasitic Diseases of Iran (NICOPA10) 2016: Genome editing workshop with an emphasis on modern technology of CRISPER/cas9
- 2016: Advanced data analysis in Real time PCR and the MIQE Guidelines, Kerman, Iran
- 2016: International Workshop on Leishmania and Leishmaniasis immunology, vaccine and drug discovery–therapy, Tehran, Iran.

2016: Workshop, of PBL program, Kerman, Iran
 2016: Workshop of small group and critical thinking, Kerman, Iran
 The 12th bioinformatics workshop, which was hold by Iranian Molecular Medicine Network, 2-4 January 2011. In Pasteur Institute of Iran.
 2010: New diagnosis and treatment of hepatitis B and C "Baqiyatallah Medical Sciences (AS) Research Center of Gastroenterology and Hepatology
 2011: The First Quantitative Real Time PCR workshop, which was hold by Iranian Molecular Medicine Network, 12-13 February 2011. In Pasteur Institute of Iran.
 2007: Workshop on molecular biotechnology techniques in the detection of zoonosis.
 2007: Workshop isolation, identification, epidemiology and new findings in leishmaniasis control.
 2007; Workshop on monitoring, immunization and epidemiology of brucellosis.
 2007: Zoonosis workshop for emerging and re-emerging, new detection methods, strategies for prevention and control
 2005: Epidemiological study of cutaneous leishmaniasis in the cities of Bam in 2004 and identification of parasite species PCR method.
 2005: The prevalence of isolated bacteria from wounds and abscesses and determine antibiotic resistance in patients hospitalized in medical centers in the city of Kerman.
 2000: Retraining Quality Control Hematology(BC,degree)
 2000: Retraining QC(BC,degree)
 1999: Retraining Hormone, Immunology, Immunology Retraining techniques of molecular parasitology approach and Biochemistry. (BC degree).

Job skills:

- Predicting protein structures using common software such as modeller ..
- Performing and designing drug-based topics using molecular docking software such as Autodock and Mulegro and pyrx..
- Performing RNAseq and DNAseq projects using CLC workbench software with human and mouse approaches.
- Conversance with the primer design software such as Gen Runner, Allel ID, Oligoanalyzer 3.1, primer Blast and primer 3 and etc.
- Versed in design and predict the microRNA-specific primers on the genome using software.
- Proficiency in cloning and expression of genes in human cells.
- Full proficiency in specific transfection cancer cells and normal method of lipofectamine and calcium phosphate and polyfects etc.
- Fluent in the transduction of human cancer cell lines, especially second and third generation lentiviral vector methods.
- Familiar and mastered the technique of PCR in the detection of genetic diseases.
- Familiar to study gene expression in eukaryotic and prokaryotic cells using Real Time PCR.

- Familiar in High Resolution Melting (HRM) technique in recognition of epigenetic and genetic SNPs.
- Familiar and proficiency testing in cultured human cells.
- Fluent in MiRNAs prediction to assess the epigenetic alteration using conventional software.
- Familiar and mastered the specific design primer for HRM in the amount of methylation in target genes using conventional software.
- Understanding and mastering in an exclusive review of microRNA expression in human cells using modified oligo(dT) technique and stem-loop method.
- Familiarity with the designer of the three-dimensional structure of proteins using "Modler versions " software and performing molecular docking using "Autodock 4", "Molgero virtual doker " and "pyrex software.

Research and educational interests:

1. Molecular Biotechnology techniques in the diagnosis of infectious diseases.
2. Molecular genetic diagnostic test.
3. Bioinformatics in molecular biology.
4. Design and implementation of diagnostic kits and methods of molecular genetics and genetic engineering.
5. Molecular genetic research related to cancer diagnosis.
6. Bioinformatics in health information management science and molecular biology.
7. Adequate knowledge of statistics and research methodology in software.
- 8-next generation sequencing approach (RNAseq and miRseq..)
- 9-cell therapy and gene therapy

Responsibilities and administrative records.

- 1- Bam's Imam Khomeini hospital laboratory supervisor from 1992 to 1998
- 2- Social Security Lab Supervisor from 2000 to 2008
- 3- ISO audit the Social Security clinics in Kerman province
- 4- Bam partnership with the University of Medical Sciences, Just tuition
- 5- Bam partnership with the University of PUN, Just tuition

Papers Publications

The prediction and expression of miR-203a-p and miR-29b* against DNMT3B as well as TNFAIP3 in melanoma

A Afgar, R Vahidi, M Ebrahimipour, Z Babaei, MJ Mirzaei-Parsa, ...
Gene Reports 25, 101374 2021

Evaluation of expression and serum concentration of anti-Mullerian hormone as a follicle growth marker following consumption of fennel and flaxseed extract in first-generation ...

F Pourjafari, T Haghpanah, F Sharififar, SN Nematollahi-Mahani, A Afgar, ...
BMC Complementary Medicine and Therapies 21 (1), 1-11 2021

Chronic Toxoplasma gondii Infection Potentiates Parkinson's Disease Course in Mice Model

N Firouzeh, N Ziaali, V Sheibani, AH Doustimotlagh, A Afgar, ...
Iranian Journal of Parasitology 16 (4), 527-537 2021

Current Status of Stem Cell Therapy and Nanofibrous Scaffolds in Cardiovascular Tissue Engineering

A Yousefi-Ahmadipour, F Asadi, A Pirsadeghi, N Nazeri, R Vahidi, ...

Regenerative Engineering and Translational Medicine, 1-21 2021

MicroRNA profile of the strobilated worms of *Echinococcus granulosus* derived from in vivo and in vitro systems by using high-throughput approach

A Faridi, M Mansouri, N Macchiaroli, A Afgar, SM Mousavi, MC Rosenzvit, ...

Parasitology Research 120 (9), 3203-3214 2021

Genetic and epigenetic modifications of F1 offspring's sperm cells following in utero and lactational combined exposure to nicotine and ethanol

A Pabarja, SG Hakemi, E Musanejad, M Ezzatabadipour, ...

Scientific reports 11 (1), 1-14 1 2021

Determination of incompatibility group plasmids and copy number of the blaNDM-1 gene in carbapenem-resistant *Klebsiella pneumoniae* strains recovered from different hospitals in ...

S Aslani, S Kiaei, A Afgar, JR Morones-Ramírez, HA Aratboni, A Faridi, ...

Journal of Medical Microbiology 70 (5), 001361 2021

Novel Descriptors Derived from the Aggregation Propensity of Di-and Tripeptides Can Predict the Critical Aggregation Concentration of Longer Peptides

S Zanganeh, L Firoozpour, S Sardari, A Afgar, RA Cohan, N Mohajel

ACS omega 1 2021

In Utero and Lactational Exposure of F1 Adult Pups to Ethanol and Nicotine: Alteration of The Reproductive System and Epigenetic Modifying Enzymes of Sperm Cells?

A Pabarja, SG Hakemi, E Musanejad, M Ezzatabadipour, ...

2021

Quantifying the load of *Echinococcus granulosus* eggs in experimental dog infection using probe-based copro-qPCR analysis

M Riahi, MA Mohammadi, A Afgar, H Kamyabi, S Nasibi, MF Harandi

Journal of Parasitic Diseases 44 (4), 730-736 1 2020

Biological and morphological consequences of dsRNA-induced suppression of tetraspanin mRNA in developmental stages of *Echinococcus granulosus*

SM Mousavi, A Afgar, MA Mohammadi, S Mortezaei, A Faridi, B Sadeghi, ...

Parasites & vectors 13 (1), 1-10 4 2020

Comparative analysis of miRNA expressions in different developmental stages of *Echinococcus granulosus* in mono-phasic and di-phasic culture systems.

S Mortezaei, A Afgar, B Sadeghi, MA Mohammadi, SM Mousavi, ...

Infectious disorders drug targets 1 2020

In vitro effects of glutathione on Transforming Growth Factor beta and Epidermal Growth Factor Receptor genes expression in the protoscoleces and strobilated worms of ...

SJ Nosratabadi, NH Roodbari, A Afgar, MH Modarressi, A Farsinejad, ...

Gene Reports 20, 100786 2020

Intestinal expression of miR-130b, miR-410b, and miR-98a in experimental canine echinococcosis by stem-loop RT-qPCR

A Faridi, A Afgar, SM Mousavi, S Nasibi, MA Mohammadi, ...

Frontiers in veterinary science 7, 5074 2020

Serum 25-hydroxyvitamin D level and vitamin D receptor (VDR) polymorphisms in patients infected with *Leishmania tropica*: a case control study

H Shabandoust, I Sharifi, O Raiesi, MI Getso, ED Saedi, A Afgar, ...
Journal of Parasitic Diseases 44 (1), 40-48 2020
 Protective effects of hydro-alcoholic extract of *foeniculum vulgare* and *linum usitatissimum* on ovarian follicle reserve in the first-generation mouse pups
 F Pourjafari, T Haghpanah, F Sharififar, SN Nematollahi-Mahani, A Afgar, ...
Heliyon 5 (10), e02540 12 2019
 The effect of albendazole sulfoxide on the expression of miR-61 and let-7 in different in vitro developmental stages of *Echinococcus granulosus*
 S Mortezaei, A Afgar, MA Mohammadi, SM Mousavi, B Sadeghi, ...
Acta tropica 195, 97-102 11 2019
 Evaluation of the antigenic epitopes of EgAgB/1 and EgAgB/4 subunit antigens in G1 and G6 genotypes of *Echinococcus granulosus* using bioinformatics
 M Ebrahimipour, A Afgar, M Barati, MA Mohammadi, MF Harandi
Gene Reports 15, 100361 3 2019
 Toxicopathological effects of meglumine antimoniate on human umbilical vein endothelial cells
 A Khosravi, I Sharifi, H Tavakkoli, AR Keyhani, A Afgar, Z Salari, ...
Toxicology in Vitro 56, 10-18 5 2019
 Calmodulin-specific small interfering RNA induces consistent expression suppression and morphological changes in *Echinococcus granulosus*
 SM Mousavi, A Afgar, MA Mohammadi, S Mortezaei, B Sadeghi, ...
Scientific reports 9 (1), 1-9 9 2019
 Differential expression of TLRs 2, 4, 9, iNOS and TNF- α and arginase activity in peripheral blood monocytes from glucantime unresponsive and responsive patients with ...
 RT Oliaee, I Sharifi, A Afgar, A Jafarzadeh, AT Kareshk, M Bamorovat, ...
 2019
 Differential expression of TLRs 2, 4, 9, iNOS and TNF- α and arginase activity in peripheral blood monocytes from glucantime unresponsive and responsive patients with ...
 RT Oliaee, I Sharifi, A Afgar, A Jafarzadeh, AT Kareshk, M Bamorovat, ...
Microbial pathogenesis 126, 368-378 11 2019
 Through oxaliplatin resistance induction in colorectal cancer cells, increasing ABCB1 level accompanies decreasing level of miR-302c-5p, miR-3664-5p and miR-129-5p
 M Ghanbarian, A Afgar, R Yadegarazari, R Najafi, L Teimoori-Toolabi
Biomedicine & Pharmacotherapy 108, 1070-1080 21 2018
 Vascular apoptosis associated with meglumine antimoniate: In vivo investigation of a chick embryo model
 A Khosravi, I Sharifi, H Tavakkoli, AR Keyhani, A Afgar, Z Salari, ...
Biochemical and biophysical research communications 505 (3), 794-800 8 2018
 Experimental and field investigation of non-biting flies as potential mechanical vectors of *Echinococcus granulosus* eggs
 S Hemmati, AA Afshar, MA Mohammadi, A Afgar, S Nasibi, MF Harandi
Experimental parasitology 189, 43-48 3 2018
 Unresponsiveness to meglumine antimoniate in anthroponotic cutaneous leishmaniasis field isolates: analysis of resistance biomarkers by gene expression profiling
 RT Oliaee, I Sharifi, A Afgar, AT Kareshk, A Asadi, A Heshmatkhah, ...
Tropical Medicine & International Health 23 (6), 622-633 33 2018

Aberrant expression of miR-141 and nuclear receptor small heterodimer partner in clinical samples of prostate cancer

M Khorasani, L Teimoori-Toolabi, TN Farivar, M Asgari, M Abolhasani, ...

Cancer Biomarkers 22 (1), 19-28 12 2018

MiR-608 regulating the expression of ribonucleotide reductase M1 and cytidine deaminase is repressed through induced gemcitabine chemoresistance in pancreatic cancer cells

A Rajabpour, A Afgar, H Mahmoodzadeh, JD Radfar, F Rajaei, ...

Cancer chemotherapy and pharmacology 80 (4), 765-775 23 2017

Insilco new aspects of peptide-based vaccine designing for human papilloma virus infection

M Moazami-goodarzi, R Fotouhi-Ardakani, A Afgar

International Journal of Bioinformatics Research and Applications 13 (3 ... 1 2017

MiR-339 and especially miR-766 reactivate the expression of tumor suppressor genes in colorectal cancer cell lines through DNA methyltransferase 3B gene inhibition

A Afgar, P Fard-Esfahani, A Mehrtash, K Azadmanesh, F Khodarahmi, ...

Cancer biology & therapy 17 (11), 1126-1138 36 2016

STUDY OF EFFECT OF MIR-608 ON CDA EXPRESSION LEVEL IN TWO SURGICAL SAMPLES OF PANCREATIC CANCER

A RAJABPOUR, F RAJAEI, ALI AFGAR, J RADFAR, A PEYMANI, ...

2016

ongoing projects:

- 1- Evaluation of antimony-resistant genes expression profile in axenic promastigote and intracellular amastigote in unresponsive, lopoid and sensitive clinical isolates of anthroponotic cutaneous leishmaniasis in endemic foci of Kerman province
- 2- Prevalence of Giardia lamblia infection in patients referred to Besat clinic in kerman city in 2019
- 3- Evaluation of behavioral disorders, biochemical changes immune and responses in induced Parkinson by MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine) in BALB/c mice with Toxoplasma gondii infection
- 4- Designing and determination of the effects of new peptides derived Echinococcus granulosus on Colon and hepatocellular carcinoma cancer cells
- 5- Evaluation of Qualitative Alterations of Band 3 Protein Among Different Canine Anemia and Comparison of Flow Cytometry Efficiency with Standard Method
- 6- Evaluation of Quantitative Alterations of Red Blood Cell Membrane Proteins Among Different Canine Anemia Using Electrophoresis
- 7- Evaluation of curcumin effects on immunomodulatory properties of cancer associated fibroblasts isolated from human breast cancer
- 8- Evaluation of the Effects of Cyclooxygenase 2 Inhibition on Immunomodulatory proerties of Cancer Associated Fibroblasts Isolated from Human Breast Cancer
- 9- Survey and compration of MicroRNA profiling of Echinococcus granulosus adult worms derived from in-vivo and in-vitro system by using next generation sequencing approach and

- comparison of expression level of selected microRNAs of infected and control dogs intestinal tissue
- 10- Study of 210, 22, 155 and 133b MicroRNAs gene expression in macrophage of C57BL/6 and Balb/c mice infected to *Leishmania major*, in vivo
 - 11- Study of 210,133b,155,and 22 MicroRNAs gene expression level in J774A1 mouse macrophage cell line infected with two strains of Glucantime susceptible/resistance of *Leishmania tropica*
 - 12- Evaluation Geographic distribution and phylogeny in cutaneous leishmaniasis species in endemic regions of Iran (2016-2018)
 - 13- Evaluation genetic characterization of multi-drug resistant *Klebsiella pneumoniae* encoding New Delhi Metalo-beta-lactamse (NDM)
 - 14- Investigation of molecular phylogeny of *Plasmodium* species on 18S rRNA gene using clinical specimens of peripheral blood expansion in southeast of Iran
 - 15- Study of miRNAs expression in different in vitro developmental stages of *Echinococcus granulosus* and the effect of Albendazole sulphoxide on their expression