

## Afsoon Afshari

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### Summary of Qualifications

- Specific research activities include working on PhD thesis project, which is: Identification of the relationship between expression level of IL-17, IL-21, IL-23 and also Toll-like receptors with CMV disease in liver transplanted patients,
- Working on a project of microRNAs LNA-array in transplanted patients: MicroRNA extraction from cultures and tissues, making cDNA of microRNAs and Real-time PCR of them,
- 4-year experience in teaching Genetics and related lab techniques to Genetic students in Zarghan Azad University,
- 4-year experience in teaching Genetics and related lab techniques to Cellular microbiology students in Kazeroon Azad University,
- Ability of designing all kinds of primers and probes for simple, multiplex, Real-time and other kinds of PCRs in human, Bacteria and Viruses (such as: CMV, BKV, CCHF, EBV),
- Ability to work with some Bioinformatics tools like: many kinds of blasts (protein, nucleotide), primer-blast, primer designing,
- 2-year experience as a molecular biologist researcher, Specific research activities include working on M.Sc thesis project, which was: Site-directed mutagenesis in E.coli EPSPS gene in order to make it resistance to Glyphosate herbicide,
- 5-month experience in antibody engineering, Studied and analyzed variety of related research articles from scientific magazines and internet web site sources,
- Training and instructing students in research labs.

### Education

Jun 2018- Oct 2020

**Shiraz University of Medical Sciences**

Shiraz, Iran

**Degree: Postdoctoral**

**Project Subject:**

Differentiation of Wharton's jelly derived mesenchymal stem cells (MSCs) into hepatocyte-like cells using microRNAs and concentration gradient generator

Sept 2008- 2014

**Science and research Azad University**

Fars, Iran

**Degree: *PhD of Molecular Genetics***

**Thesis Project Subject:**

Identification of the relationship between expression level of IL-17, IL-21, IL-23 and also Toll-like receptors with CMV disease in liver transplanted patients

Sept. 2000- Sept. 2003  
**Khatam University**  
Tehran, Iran

**Degree:** *Honours Master of Science in Molecular Cell Biology*

**Thesis Project Subject:**

Site directed mutagenesis in E. coli EPSPS gene in order to make tolerance to Glyphosate herbicide

Sept. 1996- Jun. 2000  
**Shiraz University**  
Shiraz, Iran

**Degree:** *Honours Bachelor of Science in Molecular Cell Biology*

## **Work Experience**

Nov 2020- present

**Shiraz Nephro-Urology Research Center, Shiraz Medical University**

Shiraz, Iran

**Degree: Assistant Professor**

Jul 2018- Oct 2020

**Shiraz Medical University, Transplant research center, Fars, Shiraz, Iran**

**Position: Postdoctoral fellow**

Sept 2013- Jun 2018

**Zarghan Azad University, Fars, Zarghan, Iran**

**Position: Teaching to BSc and MSc students**

Sept 2008- Sept 2014

**Science and research branch, Azad University, Fars, Iran**

**Position: PhD Student**

Sept 2008- Sept 2014

**Transplant Research Center, Shiraz, Namazi Hospital, Iran**

**Position: Research assistant**

Sept 2005- Sept 2009

**Kazeroon Azad University, Fars, Kazeroon, Iran**

**Position: Teaching**

March 2002- October 2003

**National Institute for Genetic Engineering and Biotechnology (NIGEB)**

Tehran, Iran

**Position: Research Assistant (Master Student)**

April 2003- Sep 2005

**Position: Research Assistant**

Working on different research projects, such as:

- Detection of *H.pylori* by using specific primers for specific genes of *H.pylori*

## Publications

- 1) Simultaneous Substitution of Gly96 to Ala & Ala183 to Thr in EPSPS gene of E. coli and transformation of rapeseed in order to make tolerance of Glyphosate, Danial Kahrizi, Ali-Hatef Salmanian, **Afsoon Afshari**, Ahmad Moieni and Amir Mousavi, *Plant Cell Rep.* **2007**;26(1):95-104.
- 2) Yeast of the Oral cavity is the reservoir of Helicobacter pylori, Ali-Hatef Salmanian, Farideh Siavoshi, Fereshteh Akbari, **Afsoon Afshari**, Reza Malekzadeh. *Journal of Oral Pathology & Medicine.* **2008**; 37(6):324-8. doi: 10.1111/j.1600-0714.2007.00632.
- 3) \* Interleukin-17 Gene Expression and Serum Levels in Acute Rejected and non-Rejected Liver Transplant Patients, **Afsoon Afshari**, Ramin Yaghobi, Mohammad Hossein Karimi, Mojtaba Darbooei, Negar Azarpira. *Iran J Immunol*, **2014**; 11(1):29-39. doi: IJv11i1A4.
- 4) \* IL-17 mRNA Expression and Cytomegalovirus Infection in Liver Transplant Patients, **Afshari A**, Yaghobi R, Karimi MH, Darbouy M, Azarpira N, Geramizadeh B, Malek-Hosseini SA, Nikeghbalian S. *Exp Clin Transplant*, **2015**; Suppl 1:83-9.
- 5) Evaluation of immunomodulatory effects of mesenchymal stem cells soluble factors on miR-155 and miR-23b expression in mice dendritic cells, Aida karachi, Mehdi Fazeli, Mohamhmad Hossein Karimi, Bita Geramizadeh, Ali Moravej, Shaghayegh Ebrahimnejad, **Afsoon Afshari**. *Immunol. Investig*, **2015**; 44(5):427-37. doi: 10.3109/08820139
- 6) Association of the IL-27 gene expression and HBV infection in liver transplanted patients, Abdolhossein Zare, Mohammad Hossein Karimi, Ahmad Rashki, Bita Geramizadeh, **Afsoon Afshari**, Hamid Reza Miri, Ramin Yaghobi. *Experimental and Clinical Transplantation*, **2016**; 15(5):554-560. doi: 10.6002/ect.2015.0243.
- 7) \* Evaluation of Interleukin-21, 23 and 27 mRNA expression and protein level in liver transplant patients, **Afshari Afsoon**, Yaghobi Ramin, Azarpira Negar, Gerami Zadeh Bital, Malek Hosseini Seyed Ali, Darbouy Mojtaba, Karimi Mohammad Hossein, *Iranian journal of asthma, allergy and immunology*, **2018**; 17(4):298-307. doi: 10.18502/ijaa.v17i4.89.
- 8) Association between IRF1 Gene Expression and Liver Enzymes in HBV-infected Liver Transplant Recipients with and without Experience of Rejection, S. H. Nabavizadeh, S. Janfeshan, M. H. Karimi, A. Eidi, R. Yaghobi, **A. Afshari**, B. Geramizadeh, S. A. Malek-Hosseini, F. Kafilzadeh, *International Journal of Organ Transplantation Medicine*, **2018**;9(2):68-74
- 9) Association of MicroRNA Polymorphisms with Hepatocellular Carcinoma in an Iranian Population, Zhaleh Farokhizadeh, Sahar Dehbidi, Bita Geramizadeh, Ramin Yaghobi, Seyed Ali Malek Hosseini, Mehrdad Behmanesh, Mohammad Hossein Sanati, **Afsoon Afshari**, Ali Moravej, Mohammad Hossein Karimi, *Annals of Laboratory Medicine*, **2019**; 39(1):58-66. doi: 10.3343/alm.2019.39.1.58
- 10) Increasing of the interferon- $\gamma$  gene expression during polyomavirus BK infection in kidney transplant patients, Neda Zareei, Hamid Reza Miri, Mohammad Hossein Karimi, **Afsoon Afshari**, Ramin Yaghobi, *Microbial Pathogenesis*, **2019**; 129: 187-194. doi: 10.1016/j.micpath.2019.02.015
- 11) Fas, FasL and Foxp3 gene expression in post-liver transplant autoimmune hepatitis patients with and without acute rejection, Keivan Shams, Kurosh Kalantar, Mohamad H Karimi, Meysam Nasiri, **Afsoon Afshari**, Zahra Amirghofran, *Clin Exp Hepatol.* **2019**; 5(2):103-108. doi:10.5114/ceh.2019.85076
- 12) \* Association between Interleukin-21, 23 and 27 expression and protein level assessment in Cytomegalovirus infected liver transplant patients, **Afsoon Afshari**, Ramin Yaghobi, Mohammad Hossein Karimi, Negar Azarpira, Bita Geramizadeh, Mojtaba Darbouy, Seyed Ali Malek Hosseini, *International Journal of Organ Transplantation Medicine*, **2020**; 11(1): 27-34.
- 13) \* Different approaches for transformation of Mesenchymal stem cells into Hepatocyte-like cells, **Afsoon Afshari**, Sara Shamdani, Georges Uzan, Sina Naserian, Negar Azarpira, *Stem Cell Research & Therapy*, **2020**; 11. doi.org/10.1186/s13287-020-1555-8
- 14) Toll-like receptors 2 and 4 gene expression in renal transplant rejection, Mozhdeh Heidari, Padideh Ebadi, Sanaz Abbasi, **Afsoon Afshari**, Ramin Yaghobi, Mehdi Salehipour, Mohammad Hossein Karimi, *Experimental and clinical transplantation*, **2020**; 18 (7): 757-762. 10.6002/ect.2019.0242.
- 15) Evaluation of microRNA Gene Polymorphisms in Liver Transplant Patients with Hepatocellular Carcinoma, Sahar Dehbidi, Zhaleh Farokhizadeh, Mohammad Hossein Karimi, **Afsoon Afshari**, Mehrdad Behmanesh, Mohammad Hossein Sanati, Bita Geramizadeh, Ramin Yaghobi, *Hepatitis Monthly*, **2020**, 20(7): e102690, doi: 10.5812/hepatmon.102690.
- 16) \*Alterations in MicroRNA Gene Expression Profile in Liver Transplant Patients with Hepatocellular Carcinoma, **Afsoon Afshari**, Ramin Yaghobi, Mohammad hossein Karimi, Javad Mowla, *BMC Gastroenterology*, **2021**, 21:262, <https://doi.org/10.21203/rs.3.rs-42044/v2>

- 17) TLR2 and TLR4 mRNA expression levels in liver transplant patients with acute rejection, Zahra Keshavarz, Neda Zareei, **Afsoon Afshari**, Mohammad Hossein Karimi, Ramin Yaghobi, Seyed Ali Malek Hosseini, *Immunobiology* 226, **2021**, 152107
- 18)\* Covid-19 pathogenesis in prostatic cancer and TMPRSS2-ERG regulatory genetic pathway, **Afsoon Afshari**, Sahar Janfeshan, Ramin Yaghobi, Jamshid Roozbeh, Negar Azarpira, *Infection, Genetics and Evolution*, 88, **2021**, 104669
- 19)\* Inter-regulatory role of miRNAs in interaction between viruses and stem cells, **Afsoon Afshari**, Ramin Yaghobi, Ghazal Rezaee, *World Journal of stem cells*, **2021**, 13(8): 985-1004
- 20)\* *MiR-770-5p*, *miR-661* and *miR-571* expression level in serum and tissue samples of foot ulcer caused by diabetes mellitus type II in Iranian population, Rashin VatanIman, Seyed Hossein Malekpour, **Afsoon Afshari**\*, Maryam Zare, *Molecular Biology Reports*, **2021**, 48:7811–7818, <https://doi.org/10.1007/s11033-021-06798-9>
- 21) Importance of miR-UL-148D Expression Pattern in Cytomegalovirus Infected Transplant Patients, M. Golshan, R. Yaghobi, B. Geramizadeh, **A. Afshari**, J. Roozbeh, S. A. Malek-Hosseini, *Int J Org Transplant Med* **2021**; Vol. 12 (4)
- 22)\* The effect of BKV reactivation on cytokines behavior in kidney transplanted patients, Zahra Rahimi, Ramin Yaghobi, **Afsoon Afshari**\*, Jamshid Roozbeh, Mohammad Javad Mokhtari, Ali Malek Hosseini, *BMC Nephrology*, **2022**, 23:20, <https://doi.org/10.1186/s12882-021-02645-y>
- 23) The effect of BK polyomavirus large T antigen on CD4 and CD8 T cells in kidney transplant recipients, MR Foroudi, R Yaghobi, **A Afshari**, J Roozbeh, SM Miresmaeili, A Javid, **2022**, *Transplant Immunology*, 101655
- 24)\* Cytomegalovirus microRNAs level determination in kidney recipients post transplantation, **Afsoon Afshari**, Ramin Yaghobi and Mehdi Golshan, *Virology Journal*, **2022**, 19:147, <https://doi.org/10.1186/s12985-022-01880-5>
- 25)\* Antiproliferative Effects of Ferulic, Coumaric, and Caffeic acids in HepG2 Cells by hTERT Down-regulation, **Afsoon Afshari**, Mahmoodreza Moein, Afshin Afsari, Zahra Sabahi, *Advances in Pharmacological and Pharmaceutical Sciences*, **2022**, Volume 2022, Article ID 1850732
- 26) Special Considerations on Insulin Resistance Induced Hyperandrogenemia in Women with Polycystic Ovaries Syndrome: A Prominent COVID-19 Risk Factor, J Roozbeh, S Janfeshan, **A Afshari**, A Doostkam, R Yaghobi, *International Journal of Molecular and Cellular Medicine (IJMCM)*, **2022**, 11 (2).
- 27)\* Host and viral RNA dysregulation during BK Polyoma virus infection in KTRs, Ramin Yaghobi, **Afsoon Afshari**, Jamshid Roozbeh, *WIREs RNA*, **2022**, e1769.
- 28) The relation of NCCR variations and host transcription factors gene regulation in *BK polyomavirus* infected kidney transplant patients, Ilnaz Sahragard, Ali Mohammadi, Ramin Yaghobi, Maryam Pakfetrat, **Afsoon Afshari**, Hassan Sharifi d, Mehran Ghaemi, *Gene*, **2023**, 147567.
- 29) The effect of the BK polyomavirus large T antigen on the function and maturity of the CD4+ T cell subsets in kidney transplant recipients, Maryam Rahimi Foroudi, Ramin Yaghobi, **Afsoon Afshari**, Jamshid Roozbeh, Seyed Mohsen Miresmaeili, Amaneh Javid, *Transplant Immunology*, **2023**, 80:101884.
- 30) Impaired CD4+ Cytotoxic T Lymphocyte Activity in Polyomavirus BK Infected Kidney Transplant Recipients, Nasrin Noshadi, Ramin Yaghobi, **Afsoon Afshari**, Mohsen Forouzanfar, and Saeede Soleimanian, *Iran J Allergy Asthma Immunol*, **2023**; 22(4):379-389.
- 31) A New Duplication in 668 to 672 Sites of *UL54* Gene in *Cytomegalovirus* Ganciclovir Resistant Liver Transplanted Patients, Leila Jaliliani, Ramin Yaghobi, Bita Geramizadeh, **Afsoon Afshari** and Mohammadhossein Karimi, *Jundishapur J Microbiol*, **2023**; 16(9): e137970.
- 32)\* Host miRNA polymorphisms in viral induced hepatocellular carcinoma outcomes: A common disease underlying liver transplantation, **Afsoon Afshari**, Mohammad Hossein Karimi, Ramin Yaghobi, **2023**, *IJOTM*, Inpress.
- 33)\* Study the mRNA level of IL-27/IL-27R pathway molecules in kidney transplant rejection, Aftab Karimi, Ramin Yaghobi, Jamshid Roozbeh, Zahra Rahimi, **Afsoon Afshari**, Zahra Akbarpoor, Mojdeh Heidari, **2023**, *Archivio Ital Urologia and Andrologia*, Inpress.

## Under submission papers

- 1) Diagnostic Accuracy of host miRNAs in CMV-infected solid organ transplanted patients: A systematic review
- 2) Regulatory role of T helper 9/Interleukin-9: transplantation view
- 3) Urinary CXCL-10, the prognostic biomarker for Kidney graft injuries: A systematic review and meta-analysis
- 4) Prediction of Kidney Graft Function Outcomes by Treg Cell Markers: FoxP3 and CD25
- 5) The role of non-protein-coding RNAs in ischemic acute kidney injury
- 6) CXCLs and CXCR3 mRNA Expression Level in Viral Hepatitis Infected Liver Transplants
- 7) Impact of BK Polyomavirus NCCR variations in post kidney transplant outcomes

- 8) BK Polyomavirus Large T antigen and Cancer production
- 9) Detecting Drug-Resistant HCMV Mutations in Liver Transplant Recipients: A Study of the UL97 Gene
- 10) MicroRNAs as a tool for gene regulation in liver cirrhosis
- 11) Differential expression gene analysis finds the responsible genes for development of tubular progenitor cells into adult renal proximal tubule epithelial cells
- 12) Exploring Innovative Techniques for Differentiation of Mesenchymal Stem Cells from Warton's Jelly into Cells Resembling Hepatocytes

## Presentations

- ❖ 8<sup>th</sup> Iranian genetic congress, 20-22 May, **2003**. Site-directed mutagenesis in *E.coli* EPSPS gene to make tolerance to Glyphosate herbicide. Afshari A., Moshashaii, M. and Salmanian A.H.  
And also, I had a poster presentation with the same subject, which won the best price of the congress.
- ❖ 16<sup>th</sup> Iranian plant protection congress, 28 Aug- 1 Sep., **2004**. Glyphosate tolerant induction in Rapeseed (*Brassica napus*) via transformation with mutated bacterial EPSPS gene. D. Kahrizi, A.H. Salmanian, A. Afshari, A. Moosavi, A. Moeini and Gh. Karimzadeh.
- ❖ 8<sup>th</sup> Iranian crop production and breeding congress, 24-26 Aug., **2004**. Isolation, cloning, molecular analysis and making point mutation in bacterial EPSPS gene in order to make *Brassica napus* resistant to Glyphosate. A.H. Salmanian, D. Kahrizi, A. Afshari, A. Moosavi, A. Moeini and Gh. Karimzadeh
- ❖ 8<sup>TH</sup> Iranian biotechnology congress, 6-8 July, **2013**. Study of the expression level of IL-17 in liver transplanted patients by comparative Real-time PCR. A.Afshari, R. Yaghoobi, M. Karami, N. Azarpira, M. Darbouy, B. Gerami Zadeh. (poster)
- ❖ 15<sup>th</sup> International Congress of Immunology, Milan, Italy, August 22-27, **2013**. Study of IL-23 expression level in liver transplanted patients. A.Afshari, R. Yaghoobi, M. Karami, M. Darbouy. (poster)
- ❖ 12<sup>th</sup> International congress of immunology and allergy of Iran, Tehran, Iran, 29 April- 2 May **2014**. Increase of IL-21 expression level in acute rejection experiencing liver transplant patients. A.Afshari, R. Yaghoobi, M. Karimi, N. Azarpira, M. Darbouy, B. Gerami Zadeh.
- ❖ 12<sup>th</sup> International congress of immunology and allergy of Iran, Tehran, Iran, 29 April- 2 May **2014**. Evaluation of the mRNA level of TLR2 in acute rejected liver transplant patients. **A. Afshari**, R. Yaghoobi, M. Karami, N. Azarpira, M. Darbouy, B. Gerami Zadeh. (Poster)
- ❖ ERA-DATA congress, Paris, France, **2022**, MO1008: The Role of IL-27/IL-27R in BKPYV Reactivation and Graft Rejection in Kidney Transplant Recipients, **A Afshari**, J Roozbeh, R Yaghoobi, Nephrology Dialysis Transplantation 37 (Supplement\_3), gfac088. 010 (miniOral)
- ❖ The 9th International Congress of Iranian Society of Organ Transplantation (IRSOT), Iran, Shiraz, **2023**, The role of moR-US4-1 during cytomegalovirus reactivation in kidney transplanted patients, **Afsoon Afshari**, Ramin Yaghoobi (oral speaker)

## Patents

- 1- Producing the gene resistant to Glyphosate herbicide through inserting point mutation in EPSPS gene of *E.coli*
- 2- Designing a kit entitled "miRNA and moRNA detection kit for viral, animal and human small RNAs (Patent No. 139750140003007502).

## Other Achievements

1-Familiar with some softwares:

- ❖ STATA, TAC (transcriptome analysis console), Cytoscape, Gephi, PyRx, Chimera, Marvin, ....

## References:

- 1- Dr. Ramin Yaghoobi  
E-mail: [rayaviro@yahoo.com](mailto:rayaviro@yahoo.com)

2- Dr. Negar Azarpira

E-mail: [azarpira@yahoo.com](mailto:azarpira@yahoo.com)

3- Dr. Ali hatef Salmanian

E-mail: [salman@nrcgeb.ac.ir](mailto:salman@nrcgeb.ac.ir)

4- Dr. Jamshid Roozbeh

E-mail: [roozbehj@hotmail.com](mailto:roozbehj@hotmail.com)