In the name of God

Marzieh Mojbafan

E-MAIL: marziyeh_mojbafan@yahoo.com

Education:

Academic Profile	Filed	University	Year of Passing
PhD	Medical Genetics	Pasteur Institute of Iran incorporation with Tehran University of Medical Sciences	2011-2016
M.Sc. Genetics	Molecular Genetics	Isfahan University	2006-2009
B.Sc. Genetics	Genetics	Shahed University	2001-2005

PhD Dissertation title: Molecular mapping of common genes involved in autosomal recessive Limb Girdle Muscular Dystrophy using linked STRs to these genes in 30 Iranian families

M.Sc. thesis title: Investigation on expression of several peroxisomal genes in comparison with *Oct4* and *Nanog* during neurogenesis of P19 cells (at Royan Institute).

ACADEMIC PROJECTS & EXPERIENCE:

- 2008: stable transfection of P19 cells (a kind of mouse embryonic stem cell).
- 2008: neural differentiation of P19 cells.

- 2008-2009: gene expression analysis of *PEX3* and *Catalase* and *PeP* comparing with pluripotent and neural marker genes during neural differentiation of P19 cells.

- 2009-2010: study of the polymorphism of multiple drug resistance genes among Iranian strains of Mycobacterium tuberculosis

- 2010: miRNA expression profile in diabetic patients under treatment of embryonic and mesenchymal stem cell therapy

- 2011 till now: Molecular mapping of common genes involved in autosomal recessive Limb Girdle Muscular Dystrophy using linked STRs to these genes in 30 Iranian families

PUBLICATIONS:

1. Mojbafan M, Afsartala Z, Amoli MM, Mahmoudi M, Yaghmaei P, Larijani B, Ebrahim-Habibi. A Alpha amylase gene expression profile in hepatocyte cell culture following acarbose treatment, *Journal of Pharmacological Reports*, 2016

2. Abiri M, Karamzadeh R, Mojbafan M, Alaei MR, Jodaki A, Safi M, Kianfar S, Bandehi Sarhaddi A, Noori-Daloii MR, Karimipoor M, Zeinali S. In silico analysis of novel mutations in Maple Syrup Urine Disease patients from Iran, *Journal of Metabolic Brain Disease*, 2017

3. Marzieh Mojbafan, Seyed Hasan Tonekaboni, Maryam Abiri, Soudeh Kianfar, Ameneh Sarhadi, Yalda Nilipour, Javad Tavakkoly-Bazzaz, Sirous Zeinali. Linkage study revealed complex haplotypes in a multifamily, affected with LGMD, due to different mutations in *CAPN3* gene in a single ethnic group in Iran**.** *Journal of Molecular Neuroscience.*2016

4. Mojbafan M, Nilipour Y, Tonekaboni SH, Bagheri S, Bagherian H, Sharifi Z, Zeinali Z, Tavakkoly-Bazzaz J, Zeinali S. A rare form of limb girdle muscular dystrophy

(type 2E) seen in an Iranian family detected by autozygosity mapping. *Journal of neurogenetics*, 2016

5. Mojbafan M, Nilipour Y, Tonekaboni SH, Tavakkoly-Bazzaz J, Zeinali S. A novel mutation in alpha sarcoglycan gene in an Iranian family with limb girdle muscular dystrophy 2D. *Neurological research*. 2016

6. Yazdani N, Mojbafan M, Taleba M, Amiri P, Nejadian F, Ashtiani MK, Amoli MM. Sex-specific association of RANTES gene -403 variant in Meniere's disease. *Eur Arch Otorhinolaryngol*. 2015 Sep;272(9):2221-5

7. Mojbafan, M., Ghaedi, K., Razavi SH., Karamali, F., Karbalei, KH., Tanhaei, S., Rabiei, F., Nasr Esfahani, M.H., Baharvand. Analysis of Catalase and *PEX*3 Gene Expression Levels in the Neural Differentiation Process of P19 Cells. *Genetics in the 3rd Millennium.* 2012.

8. Ostadsharif M, Ghaedi K, Hossein Nasr-Esfahani M, Mojbafan M, Tanhaie S, Karbalaie K, Baharvand H. The expression of peroxisomal protein transcripts increased by retinoic acid during neural differentiation**.** *Differentiation*. 2010.

9. Mojbafan, M., Ghaedi, K., Razavi SH., Karamali, F., Karbalei, KH., Tanhaei, S., Rabiei, F., Nasr Esfahani, M.H., Baharvand, H. Creation of a Stable P19 Cell Line Producing PTS2-EGFP. Journal of Isfahan Medical School. 2010; 28(110): 495-502.

10. Mojbafan, M., Ghaedi, K., Razavi SH., Tanhaei, S., Rabiei, F., Nasr Esfahani. Optimization of RT-PCR conditions for estimation of peroxisomal genes (Catalase, PEX3) expression compare with pluripotent genes (Nanog, Oct4) expression in stem cells. Genetics in 3rd Millennium. 2010, 7(4): 1856-1863

11. Mojbafan, M., Ghaedi, K. 2008. A review on application of stem cells in treatment of neural disease. Genetics in 3rd Millennium. 1: 1255-1259.

Papers under revision / under preparations

1. Identification of calpainopathy in 15 Iranian patients, with report of four novel mutations in CAPN3 gene
2. Unexpected allelic Heterogeneity in CAPN3 gene within a large consanguineous family. Under revision
3. Spectrum of DYSF gene mutations in Iranian patients. under preparation
4. Analysis of beta sarcoglycanopathy in Iran: an evidence of founder effect. under preparation
5. Multiplex PCR analysis of 16 (11 Novels) STR markers linked to six autosomal recessive limb girdle muscular dystrophy genes in Iranian population
6. Frequencies of 16 (11 Novel) STR markers linked to DYSF, CAPN3, SGCA, SGCB, SGCG and SGCD genes used for homozygosity mapping of recessive limb girdle muscular dystrophy

BOOK COMPILATION & TRANSLATION

1. **Gene cloning and DNA analysis. An introduction. 6th edition. T.A Brown.** Translated in Persian
2. **A comprehensive overview of cellular and molecular biology.** Compilation
3. **A comprehensive database of Biotechnology questions for the PhD national exam**

TALK PRESENTATIONS IN NATIONAL / INTER NATIONAL CONFERENCES

- ***First report of two novel mutations in alpha sarcoglycan gene in two Iranian families with LGMD***; 1st international and 9t national Iranian neurogenetic congress; 2-4march 2016, Tehran, Iran

- ***Molecular diagnosis of limb girdle muscular dystrophies***; 1st International and 9t National Iranian Neurogenetic Congress; 2-4march 2016, Tehran, Iran

- ***Analysis of peroxisomal genes (Catalase and PEX3) expression during the neurogenesis steps of P19 cells by semi-quantitative RT-PCR analysis***; 4th annual congress of Iranian Neurogenetics Society (neurodegenerative diseases). November 2010, Tehran, Iran

- ***Creation of stable cell line producing pUcD3.hygro.PTS2-EGFP***; Provincial Conference of New Advances in Nursing and Midwifery; December 2008, Isfahan, Iran

- ***Genetic basis and diagnosis of amenorrhea;*** Provincial Conference of New Advances in Nursing and Midwifery; December 2008, Isfahan, Iran

POSTER PRESENTATIONS IN NATIONAL / INTER NATIONAL CONFERENCES

- ***Calpainopathy: a survey of novel mutations in Iranian families***, 5TH international congress of mycology. Lyon convention center- France. 14-18 march 2016.

- ***A novel mutation in SGCA gene: clinical and genetic analysis of an Iranian family with LGMD2D*** , 5TH international congress of mycology. Lyon convention center- France. 14-18 march 2016.

- ***Molecular and haplotype analysis of calpainopathy in Iran with reporting novel mutations,*** European Human Genetics Conference (ESHG). Barcelona-Spain.21-24 march 2016.

- ***Molecular diagnosis of beta-sarcoglycanopathy: reporting two novel mutations in Iran,*** 14TH international congress of neuromuscular disease (ICNMD). Toronto-Canada. 5-9 July 2016.

- ***Profile analysis of peroxisomal marker gene expression comparing with OCT4 and Nanog during neural differentiation of P19 cells***, 15th national and 3rd international conference of biology, Tehran on 19th to 21st August, 2008.

- ***Optimization of peroxisomal marker genes in comparison with OCT4 and Nanog during neural differentiation of P19 cells***, 4th Royan International Twin congress, Tehran on 27th to 29th August, 2008.
- ***Application of stem cells in curing neural disease***, first national congress of cytotechnology and its application, Mashhad on 11th and 12th Nov, 2008.

- ***Primer designing for peroxisomal genes, Pex3 and Catalase comparing with pluripotent and neural genes***, national conference of bioinformatics, Shiraz on 27th and 28th Feb, 2009.

- ***Gene expression of peroxisomal Catalase during neural differentiation of P19 cells***, 5th Royan International Twin congress, Tehran, 23th to 25th Sep.

- ***Gene expression of PEX3 during neural differentiation of P19 cells***, 10th Iranian congress of biochemistry and 3rd international congress of biochemistry and molecular biology, Tehran, 16th to 19th Nov.

WORKSHOP ATTENDED:

- **Preliminary teaching methods** which was held Tehran University of Medical Sciences; December 2014.

- **Scientific writing** which was held by **Springer** publication at Tehran University of Medical Sciences; 28th Nov 2011.

- **Real time PCR technique** workshop which was held by **Fargene** Company at Pasteur Institute of Iran. September 2010.

Journal Reviewer:

- **Journal of Diabetes & Metabolic Disorders**
- **Iranian Biomedical Journal**

TECHNICAL SKILLS:

1. **MOLECULAR BIOLOGY SKILLS**
   - Designing suitable primers by soft wares such as Oligo6 and Primer3, Gene Runner
   - RNA and DNA extraction from cells
   - DNA extraction from blood using salting out method
   - Haplotype analysis and autozygosity mapping
   - RFLP
   - Multiplex PCR method and its optimization
   - ARMS-PCR
   - STR marker design
   - MLPA
   - Reverse Transcriptase Polymerase Chain Reaction (RT-PCR).
   - Semi- quantitative RT-PCR by soft wares such as Gene Tool.
   - Cell culture techniques and working with stem cells such as P19.
   - Transfection of P19 cells (introducing exogenous genes to the cells).
   - Neural differentiation of P19 cells.
   - Creation of stable cell line producing PTS2-EGFP
   - Immunocytochemistry.
2. **COMPUTER SKILLS**
   - **Scientific softwares:** Ensemble ،SIFT ،Polyphen ،mutation taster ،HSF ، EVS ،CADD ،HGMD, Primer3, Oligo 6, Gene Tool, BLAST,
   - **General softwares:** MS Word//PowerPoint/ Adobe Photoshop.
   - **Statistical softwares:** Excel/ SPSS.