2020

Zohreh Fattahi, PhD

[Curriculum vitae (cv)]

Personal Information:

Name: Zohreh Fattahi
Birth Date: September 21, 1984
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Education:

1. **PhD in Medical Genetics**
Genetics Research Centre, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran (2012- 2017).
Thesis Title: Elucidating the role of causative mutation in *ZBTB11* gene, identified by linkage analysis followed by next generation sequencing in a family with Intellectual Disability
Supervisor: Prof. Hossein Najmabadi

2. **Master of Philosophy (MPhil)**
Genetics Research Centre, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran (2012-2014).

3. **M.Sc. in Human Genetics**
Genetics Research Centre, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran (2007-2010).
Thesis Title: Linkage analysis of 6 prevalent loci (*DFNA2*, *DFNA3*, *DFNA6*, *DFNA8/12*, *DFNA9*, and *DFNA20/26*) in 20 families with autosomal dominant non syndromic hearing loss
Supervisor: Prof. Hossein Najmabadi

4. **B.Sc. in Cellular & Molecular Biology**
Department of Biology, Shiraz University, Shiraz, Iran (2002-2006).

Work Experience

1. **Research Assistant Professor**, Genetics Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran (2019-Current).

2. **Research Assistant** in Research Projects, Genetics Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran (2010-2019)

- **Iranome Project (Catalogue of Iranian genome variation)**
- **Genetic basis of Intellectual Disability, Hereditary Hearing Loss, Neuromuscular Disorders**

3. **Supervisor of NGS team** at Kariminejad-Najmabadi pathology and genetics center (2012-2019)

Languages:

- English: Fluent
  - MSRT(MCHE) score:74/100
- Persian: Excellent

Research Experience:

1. PhD thesis; **elucidating the role of causative mutation in *ZBTB11* gene, identified by linkage analysis in families with Intellectual Disability.**
   In this thesis, as part of ongoing systematic studies to identify candidate ID genes, linkage analysis and next generation sequencing revealed *ZBTB11*, as a novel candidate ID gene. The functional assessment of the mutation and role of this gene in brain development was then investigated using in vitro localization studies, ChIP-seq analysis and an animal model applying *drosophila melanogaster*. In conclusion, we reported two ID families segregating *ZBTB11* biallelic mutations disrupting Zn2+-binding motifs, and provided functional evidence linking ZBTB11 dysfunction to this phenotype.

2. Research Assistant in **Iranome Project (Catalogue of Iranian genome variation)**;
   Human genome variation databases have been playing a crucial role in interpreting genetic variations in the human genome and understanding the genetic of human disorders. However, many ethnic groups (such as Iranians) are not represented in current human genome variation databases. It is well known that many human genome variations are ethnicity-specific and we cannot build a complete picture of genetic variations in the human genome without having representatives from all different ethnic groups in those databases. In addition, lack of representatives from specific populations and ethnic groups in human genome databases may lead to marginalization of members of those populations, which might put them in danger of discrimination by depriving them of the

benefits of new advances in genetic technologies and its associated medical advances. Iranome database (www.iranome.com/ www.iranome.ir) was established by performing whole exome sequencing on 800 individuals from eight major ethnic groups in Iran.

3. Research Assistant in a project on **genetic basis of Intellectual Disability**. This project was performed by direct collaboration with Max Planck institute for molecular genetics in Berlin and as a part of GENCODYS, which is a research consortium dedicated to discover the functions and dysfunctions of the brain. The advent of Linkage analysis in addition to next generation sequencing led to identification of 50 novel genes (Najmabadi et al. Nature. 2011) in 2011 and 77 other novel genes in 2018 (Hu et al. Mol Psychiatry. 2018).

4. Genetic diagnosis of heterogeneous disorders applying whole exome sequencing and targeted next generation sequencing in a clinical diagnostic laboratory; Six years' experience in Kariminejad-Najmabadi pathology and genetics center (http://www.irangenepath.com/en/) as the supervisor of NGS team.

5. Research Assistant in a project focusing on identification of the causal gene in Autoinflammatory Skin Phenotype.

6. Research Assistant in a project focusing on mutation detection of patients with rare hereditary Bardet-Biedl Syndrome.

7. Investigation of ARNSHL (**autosomal recessive non syndromic hearing loss**) families; focusing on DFNB3 (*Myo15A gene*) mutation analysis.

8. MSc. Thesis; **Linkage analysis of 6 prevalent loci (DFNA2, DFNA3, DFNA6, DFNA8/12, DFNA9, and DFNA20/26) in 20 families with autosomal dominant non syndromic hearing loss**. In this study, twenty large Iranian families with autosomal dominant pattern of inheritance and more than 5 affected members in three generations were selected. Linkage analysis method was used to study the following most prevalent loci DFNA2, DFNA6, DFNA20/26, DFNA9, DFNA8/12, and DFNA3. Results showed high prevalence of DFNA3 (*GJB2*) in Iranian population with autosomal dominant pattern of inheritance.

Skills

- ✓ Basic Molecular Techniques such as PCR, gel electrophoresis, DNA extraction, RNA extraction, Protein extraction
- ✓ Basic genetic engineering techniques such as Cloning, Transformation, Transfection
- ✓ Sire Directed Mutagenesis
- ✓ Immunofluorescence staining technique, Fluorescence Microscopy, ImageJ analysis
- ✓ Real time PCR (qPCR)
- ✓ Conventional Sanger sequencing
- ✓ Whole Exome Sequencing technique
- ✓ ChIP sequencing technique
- ✓ Cell Culture:
  - ➢ Experience in all types of commercial cell lines such as HEK293, HELA and etc.
  - ➢ Establishment of immortalized lymphoblastoid cell lines (LCL)
  - ➢ Establishment of Fibroblast cell culture from skin biopsy
- ✓ Animal models: Experience with Drosophila Melanogaster
- ✓ Linkage analysis and homozygosity mapping of the generated data from whole genome SNP arrays
- ✓ Knowledge on programs running under Linux systems
- ✓ Expert on Whole Exome sequencing analysis; including secondary analysis performed in Linux environment and tertiary analysis applied in research and diagnostic panels
- ✓ Expert in Clinical Exome sequencing
- ✓ ChIP sequencing analysis
- ✓ Computer Skills; Microsoft Word, Excel, Adobe Photoshop

Educational Travel

1. In 2011, I had a research opportunity of 3 months in Max Planck Institute for Molecular Genetics in Berlin, Germany. During this period, I learned principals of linkage analysis, homozygosity mapping, fibroblast cell culture from skin biopsy and lymphoblastoid cell culture.

2. In 2016, I had a sabbatical leave of 6 months in the Centre for Addiction and Mental Health (CAMH) of University of Toronto (U of T). During this period, I performed some important parts of my PhD thesis with higher advance technologies such as localization study, confocal microscopy and ChIP-sequencing.

3. In 2017, I had a short-term research opportunity in Senselab at BOĞAZIÇI University. During this stay, I performed an important part of my PhD project working on *Drosophila melanogaster* and learned some important techniques with this animal model.

H index, Conference papers and Publications

- **H-index: 13 (https://www.scopus.com/authid/detail.uri?authorId=50461248500)**

- **Publications**

1. Beheshtian M, Akhtarkhavari T, Mehvari S, Mohseni M, **Fattahi Z**, Abedini SS, Arzhangi S, Fadaee M, Jamali P, Najafipour R, Kalscheuer VM, Hu H, Ropers HH, Najmabadi H, Kahrizi K., Comprehensive genotype-phenotype correlation in AP-4 deficiency syndrome; Adding data from a large cohort of Iranian patients. Clin Genet. 2020 Sep 7. doi: 10.1111/cge.13845. Online ahead of print.

2. Mehvari S, Larti F, Hu H, **Fattahi Z**, Beheshtian M, Abedini SS, Arzhangi S, Ropers HH, Kalscheuer VM, Auld D, Kahrizi K, Riazalhosseini Y, Najmabadi H., Whole genome sequencing identifies a duplicated region encompassing Xq13.2q13.3 in a large Iranian family with intellectual disability. Mol Genet Genomic Med. 2020 Jul 26:e1418. doi: 10.1002/mgg3.1418. Online ahead of print.

3. Taghizadeh S, Vazehan R, Beheshtian M, Sadeghinia F, **Fattahi Z**, Mohseni M, Arzhangi S, Nafissi S, Kariminejad A, Najmabadi H, Kahrizi K., Molecular Diagnosis of Hereditary Neuropathies by Whole Exome Sequencing and Expanding the Phenotype Spectrum. Arch Iran Med. 2020 Jul 1;23(7):426-433. doi: 10.34172/aim.2020.39.

4. Bazazzadegan N, Vazehan R, Fadaee M, **Fattahi Z**, Abolhassani A, Parsimehr E, Kalhor Z, Faraji Zonooz M, Ahangari F, Dehdahsi S, Samiee F, Jamali P, Habibi H, Nourizadeh Y, Mahdavi S, Beheshtian M, Kariminejad A, Smith RJ, Najmabadi H., Brief Report of Variants Detected in Hereditary Hearing Loss Cases in Iran over a 3-Year Period. Iran J Public Health. 2019 Oct; 48(10):1910-1915.

5. Mehrjoo Z, **Fattahi Z**, Beheshtian M, Mohseni M, Poustchi H, Ardalani F, Jalalvand K, Arzhangi S, Mohammadi Z, Khoshbakht S, Najafi F, Nikuei P, Haddadi M, Zohrehvand E, Oladnabi M, Mohammadzadeh A, Jafari MH, Akhtarkhavari T, Gooshki ES, Haghdoost A, Najafipour R, Niestroj LM, Helwing B, Gossmann Y, Toliat MR, Malekzadeh R, Nürnberg P, Kahrizi K, Najmabadi H, Nothnagel M. "Distinct genetic variation and heterogeneity of the Iranian population." PLoS Genet. 2019 Sep 24; 15(9):e1008385. doi: 10.1371/journal.pgen.1008385. eCollection 2019 Sep.

6. **Fattahi Z**, Beheshtian M , Mohseni M, Poustchi H, Sellars E, Nezhadi H, Amini A, Arzhangi S, Jalalvand K, Jamali P, Mohammadi Z, Davarnia B, Nikuei P, Oladnabi M, Mohammadzadeh A, Zohrehvand E, Nejatizadeh A, Shekari M, Bagherzadeh M, Shamsi-Gooshki E, Börno S, Timmermann B, Haghdoost A, Najafipour R, Khorshid HRK, Kahrizi K, Malekzadeh R, Akbari MR, Najmabadi H." Iranome: A catalogue of genomic variations in the Iranian population." Hum Mutat. 2019 Jul 25. doi: 10.1002/humu.23880. [Epub ahead of print]

7. Beheshtian M, **Fattahi Z**, Fadaee M, Vazehan R, Jamali P, Parsimehr E, Kamgar M, Zonooz MF, Mahdavi SS, Kalhor Z, Arzhangi S, Abedini SS, Kermani FS, Mojahedi F, Kalscheuer VM, Ropers HH, Kariminejad A, Najmabadi H, Kahrizi K. "Identification of disease-causing variants in the EXOSC gene family underlying autosomal recessive intellectual disability in Iranian families." Clin Genet. 2019 Jun; 95(6):718-725. doi: 10.1111/cge.13549. Epub 2019 May 14.

8. M. Hosseini, F. Larti, **Z. Fattahi**, H. Najmabadi, K. Kahrizi "A splice-altering variant in LARP7 gene leads to exon exclusion" Gene Reports, Volume 15, June 2019, Article number 100375

9. Kahrizi K, Huber M, Galetzka D, Dewi S, Schröder J, Weis E, Kariminejad A, **Fattahi Z**, Ropers HH, Schweiger S, Najmabadi H, Winter J. "Homozygous variants in the gene SCAPER cause syndromic intellectual disability." Am J Med Genet A. 2019 Jul;179(7):1214-1225. doi: 10.1002/ajmg.a.61172. Epub 2019 May 9.

10. Neishabury M, Mehri M, **Fattahi Z**, Najmabadi H, Azarkeivan A." Novel variants in Iranian individuals suspected to have inherited red blood cell disorders, including bone marrow failure syndromes." Haematologica. 2020 Jan;105(1):e1-e4. doi: 10.3324/haematol.2019.216069. Epub 2019 May 16.

11. Fattahi, H., **Fattahi, Z.**, Ghorbani, A. "Prospects of third-generation femtosecond laser technology in biological spectromicroscopy" Journal of Optics (United Kingdom), 20(5),054005

12. Kahrizi K, Hu H, Hosseini M, Kalscheuer VM, **Fattahi Z**, Beheshtian M, Suckow V, Mohseni M, Lipkowitz B, Mehvari S, Mehrjoo Z, Akhtarkhavari T, Ghaderi Z, Rahimi M, Arzhangi S, Jamali P, Falahat Chian M, Nikuei P, Sabbagh Kermani F, Sadeghinia F, Jazayeri R, Tonekaboni SH, Khoshaeen A, Habibi H, Pourfatemi F, Mojahedi , Khodaie-Ardakani MR, Najafipour R, Wienker TF, Najmabadi H, Ropers HH. "Effect of inbreeding on intellectual disability revisited by trio sequencing." Clin Genet. 2019 Jan;95(1):151-159. doi: 10.1111/cge.13463. Epub 2018 Nov 19.

13. Hosseini M, **Fattahi Z**, Abedini SS, Hu H, Ropers HH, Kalscheuer VM, Najmabadi H, Kahrizi K. "GPR126: A novel candidate gene implicated in autosomal recessive intellectual disability" Am J Med Genet A. 2019 Jan;179(1):13-19. doi: 10.1002/ajmg.a.40531. Epub 2018 Dec 14.

14. **Fattahi Z**, Sheikh TI, Musante L, Rasheed M, Taskiran II, Harripaul R, Hu H, Kazeminasab S, Alam MR, Hosseini M, Larti F, Ghaderi Z, Celik A, Ayub M, Ansar M, Haddadi M, Wienker TF, Ropers HH, Kahrizi K, Vincent JB, Najmabadi H. "Biallelic missense variants in ZBTB11 can cause intellectual disability in human." Hum Mol Genet. 2018 Jun 8. doi: 10.1093/hmg/ddy220. [Epub ahead of print]

15. Kazeminasab S, Taskiran II, **Fattahi Z**, Bazazzadegan N, Hosseini M, Rahimi M, Oladnabi M, Haddadi M, Celik A, Ropers HH, Najmabadi H, Kahrizi K." CNKSR1 gene defect can cause syndromic autosomal recessive intellectual disability." Am J Med Genet B Neuropsychiatr Genet. 2018 Dec;177(8):691-699. doi: 10.1002/ajmg.b.32648. Epub 2018 Nov 18.

16. Kariminejad A, Yazdan H, Rahimian E, Kalhor Z, **Fattahi Z**, Zonooz MF, Najmabadi H4, Ashrafi M. "SZT2 mutation in a boy with intellectual disability, seizures and autistic features." Eur J Med Genet. 2018 Oct 22. pii: S1769-7212(17)30664-X. doi: 10.1016/j.ejmg.2018.10.008. [Epub ahead of print]

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18. Edizadeh M, Vazehan R, Javadi F, Dehdahsi S, Fadaee M, Faraji Zonooz M, Parsimehr E, Ahangari F, Abolhassani A, Kalhor Z, **Fattahi Z**, Beheshtian M, Kariminejad A, Akbari MR, Najmabadi H, Nafissi S. "De novo Mutation in CACNA1S Gene in a 20-Year-Old Man Diagnosed with Metabolic Myopathy." Arch Iran Med. 2017 Sep;20(9):617-620. doi: 0172009/AIM.0010.

19. **Fattahi Z**, Kalhor Z, Fadaee M, Vazehan R, Parsimehr E, Abolhassani A, Beheshtian M, Zamani G, Nafissi S, Nilipour Y, Akbari MR, Kahrizi K, Kariminejad A, Najmabadi H. "Improved diagnostic yield of neuromuscular disorders applying clinical exome sequencing in patients arising from a consanguineous population." Clin Genet. 2017 Mar; 91(3):386-402. doi: 10.1111/cge.12810. Epub 2016 Jul 21.

20. Amos JS, Huang L, Thevenon J, Kariminedjad A, Beaulieu CL, Masurel-Paulet A, Najmabadi H, **Fattahi Z**, Beheshtian M, Tonekaboni SH, Tang S, Helbig KL, Alcaraz W, Rivière JB, Faivre L, Innes AM, Lebel RR, Boycott KM; Care4Rare Canada Consortium" Autosomal recessive mutations in THOC6 cause intellectual disability: syndrome delineation requiring forward and reverse phenotyping." Clin Genet. 2017 Jan; 91(1):92-99. doi: 10.1111/cge.12793. Epub 2016 May 24.

21. Fadaee M, Kariminejad A, **Fattahi Z**, Nafissi S, Godarzi HR, Beheshtian M, Vazehan R, Akbari MR, Kahrizi K, Najmabadi H. "Report of limb girdle muscular dystrophy type 2a in 6 Iranian patients, one with a novel deletion in CAPN3 gene." Neuromuscul Disord. 2016 Apr-May; 26(4-5):277-82. doi: 10.1016/j.nmd.2016.02.003. Epub 2016 Feb 15.

22. Faraji Zonooz M, Sabbagh-Kermani F, **Fattahi Z**, Fadaee M, Akbari MR, Amiri R, Vahidnezhad H, Uitto J, Najmabadi H, Kariminejad A. "Whole Genome Linkage Analysis Followed by Whole Exome Sequencing Identifies Nicastrin (NCSTN) as a Causative Gene in a Multiplex Family with γ-Secretase Spectrum of Autoinflammatory Skin Phenotypes." J Invest Dermatol. 2016 Jun; 136(6):1283-6. doi: 10.1016/j.jid.2016.02.801. Epub 2016 Mar 9.

23. Akhtarkhavari T, Joghataei MT, **Fattahi Z**, Akbari MR, Larti F, Najmabadi H, Kahrizi

K. “Genetic Investigation of an Iranian Supercentenarian by Whole Exome Sequencing.” Arch Iran Med. 2015 Oct; 18(10):688-97. doi: 0151810/AIM.009.

24. Jazayeri R, Hu H, Fattahi Z, Musante L, Abedini SS, Hosseini M, Wienker TF, Ropers HH, Najmabadi H, Kahrizi K.” Exome Sequencing and Linkage Analysis Identified Novel Candidate Genes in Recessive Intellectual Disability Associated with Ataxia.” Arch Iran Med. 2015 Oct; 18(10):670-82. doi: 0151810/AIM.007.

25. Davarniya B, Hu H, Kahrizi K, Musante L, **Fattahi Z**, Hosseini M, Maqsoud F, Farajollahi R, Wienker TF, Ropers HH, Najmabadi H.” The Role of a Novel TRMT1 Gene Mutation and Rare GRM1 Gene Defect in Intellectual Disability in Two Azeri Families.” PLoS One. 2015 Aug 26;10(8)

26. Iqbal Z, Püttmann L, Musante L, Razzaq A, Zahoor MY, Hu H, Wienker TF, Garshasbi M, **Fattahi Z**, Gilissen C, Vissers LE, de Brouwer AP, Veltman JA, Pfundt R, Najmabadi H, Ropers HH, Riazuddin S, Kahrizi K, van Bokhoven H.” Missense variants in AIMP1 gene are implicated in autosomal recessive intellectual disability without neurodegeneration.” Eur J Hum Genet. 2015 Jul 15.

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31. Larti F, Kahrizi K, Musante L, Hu H, Papari E, **Fattahi Z,** Bazazzadegan N, Liu Z, Banan M, Garshasbi M, Wienker TF, Ropers HH, Galjart N, Najmabadi H” A defect in the CLIP1 gene (CLIP-170) can cause autosomal recessive intellectual disability.” Eur J Hum Genet. 2014 Feb 26.

32. **Fattahi Z,** Najmabadi H.” Prevalence of ACTN3 (the athlete gene) R577X polymorphism in Iranian population.” Iran Red Crescent Med J. 2012 Oct; 14(10):617-22. Epub 2012 Oct 30.

33. Babanejad M, **Fattahi Z,** Bazazzadegan N, Nishimura C, Meyer N, Nikzat N, Sohrabi E, Najmabadi A, Jamali P, Habibi F, Smith RJ, Kahrizi K, Najmabadi H." A comprehensive study to determine heterogeneity of autosomal recessive nonsyndromic hearing loss in Iran." Am J Med Genet A. 2012 Oct; 158A (10):2485-92.

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Conferences

1. **Z. Fattahi**, M. Babanejad, F. Peymani, M. Beheshtian, F. Larti, K. Kahrizi, H. Najmabadi "The benefits of whole exome sequencing data reanalysis in Intellectual disability" **accepted for poster presentation** at European Conference of Human Genetics June 15–18, 2019, Gothenburg, Sweden
2. Z. Mehrjoo, **Z. Fattahi**, M. Beheshtian, M. Mohseni, H. Poustchi, F. Ardalani, K. Jalalvand, S. Arzhangi, Z. Mohammadi, S. Khoshbakht, F. Najafi, P. Nikuei, M. Haddadi, E. Zohrehvand, M. Oladnabi, A. Mohammadzadeh, M. Hadi Jafari, T. Akhtarkhavari, E. Shamsi Gooshki, A. Haghdoost, L. Niestroj, B. Helwing, Y. Gossmann, M. Toliat, R. Malekzadeh, P. Nürnberg, K. Kahrizi, H. Najmabadi, M. Nothnagel. "Distinct genetic diversity and heterogeneity of the Iranian population" **accepted for poster presentation** at European Conference of Human Genetics June 15–18, 2019, Gothenburg, Sweden
3. M. Fadaee, **Z. Fattahi**, R. Vazehan, F. Ahangari, A. Abolhassani, Z. Kalhor, S. Dehdahsi, E. Parsimehr, M. Faraji Zonooz, M. Beheshtian, A. Kariminejad, H. Najmabadi" Identification of CAPN3 gene novel variations in Iranian LGMD patients" **accepted for poster presentation** at European Conference of Human Genetics June 15–18, 2019, Gothenburg, Sweden
4. **Z. Fattahi**, T. Sheikh, K. Kahrizi, R. Harripaul, F. Larti, N. Bazazzadegan, M. Haddadi, M. Ansar, H.H. Ropers, J.B. Vincent, H. Najmabadi "Attempts to elucidate role of ZBTB11 gene as a novel candidate gene in intellectual disability" **accepted for poster presentation** at American Society of Human Genetics 67thAnnual Meeting October 17-21, 2017 Orlando
5. **Z. Fattahi**, T. Sheikh, K. Kahrizi, R. Harripaul, F. Larti, N. Bazazzadegan, M. Haddadi, M. Ansar, H.H. Ropers, J.B. Vincent, H. Najmabadi "Attempts to elucidate role of ZBTB11 gene in intellectual disability" **accepted for poster presentation** at American Society of Human Genetics 67thAnnual Meeting October 17-21, 2017 Orlando
6. K. Kahrizi; T. Akhtarkhavari; **Z. Fattahi**; M. Hosseini; S. Abedini; M. Mohseni; H. Hu; L. Mutsant; T. Wienker; H. Najmabadi; H.H. Ropers "Refining genotype-phenotype correlations in Iranian patients with AP4 deficiency syndrome" **accepted for poster presentation** at American Society of Human Genetics 66thAnnual Meeting October 18-22, 2016 Vancouver, Canada.
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Translation

- Book translation (English to Persian): printed
  - Schaum's Outline of Genetics by Susan Elrod, William Stansfield

Certificates, Awards, Fellowships

- Fellowship for candidates from a restricted number of Non-European countries at the ESHG Conference in Gothenburg, Sweden, June 15–18, 2019
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- Fellowship for candidates from a restricted number of Non-European countries at the ESHG Conference in Copenhagen, Denmark, May 27 - 30, 2017
- Certificate of attendance and poster presentation in European Conference of Human Genetics 2017, May 27 - 30, Copenhagen, Denmark.
- The first prize in Academy of Medical Sciences Islamic republic of Iran for the paper published in 2011 entitled “Deep sequencing reveals 50 novel genes for recessive cognitive disorders. “Nature. 2011 Sep 21;478(7367):57-63”
- Certificate of completion the basic gene mapping course. November7-11, 2011. Max Delbruck Center for Molecular Medicine, Berlin, Germany.

- Certificate of attendance and poster presentation in European Conference of Human Genetics 2011, May 28 - 31, 2011, Amsterdam, the Netherlands.

- Certificate of attendance and poster presentation in 11th Iranian Genetic Congress, May 22-24, 2010, Tehran, Iran.

- Certificate of attendance and oral presentation in 4th Annual Neurogenetics Congress, Nov 24-26, 2010, Tehran, Iran.

- Attendance certificate as an speaker in 7th annual middle east update in Otolaryngology conference & exhibition ,UAE, Dubai , Feb 14-16, 2010

- CME certificate: Attendance certificate for non-physician participants (16.5 credits)

- Certificate of Appreciation for the support toward making 1st International Congress on Health Genomics and Biotechnology and 4th Iranian Congress of Genetic disorders & disabilities a success, Summit meeting Conference hall, Tehran, Iran. 24-26 Nov 2007

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