Curriculum Vitae

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Education:

1989-1996: M.D Degree, Tehran University of Medical Sciences, Tehran, Iran.
1998-2004: PhD candidate of Medical Biotechnology, Pasteur Institute of Iran, Tehran, Iran.
PhD Thesis Title: Genotyping and haplotype analysis of F9 gene in Iranian Hemophilia B Patients.
2003: Fellowship on gene correction of hemophilia B, Department of Haematology, University College London, UK (under supervision of Dr AC Nathwani).
2005-Present: Assistant Professor, Molecular Medicine Dept., Biotechnology Research Center, Pasteur Institute of Iran, Tehran, Iran.

Awards:

Katharine Dormandy Trust (KDT) Fellowship Grant on gene correction of hemophilia B, UK, London, 2003.

Membership:

1. A member of scientific committee on prenatal diagnosis and genetic testing, prevention of genetic disorders office, Center for Disease Control, Iran Ministry of Health.
2. Member of Iran Genetics Society
3. Member of Iran Biotechnology Society

COURSES:

In addition to MD courses, I have passed Genetic Engineering, Advanced Biochemistry, Quality Control and Quality Assurance (GMP, GLP), Drug Biotechnology, Molecular Genetic, Cell Biology and Immunology courses.

Teaching Experiences:

1. Genetic engineering for MSc and PhD students from 2003 till present, Pasteur Institute of Iran, Tehran university Biotechnology Dept,
2. Bioinformatics (Genome Informatics) for MSc and PhD students from 2004 till present: Pasteur Institute of Iran and Tehran university
3. Medical molecular genetics for MSc and PhD students
4. Ethics in genetic and biotechnology for MSc students, Iran Medical Sciences University, 2006
5. Bioinformatics (Genome Informatics) for PhD students (medical genetics). Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran, 2008.
6. Bioinformatics (Genome Informatics) for PhD students (hematology).Allied Medicine Faculty, Iran Medical Sciences University, Tehran, Iran, 2008.
7. Medical Genetics for PhD students, Azad University, Tehran, Iran, 2008.
8. Bioinformatics for MSc (Medical Biotechnology) students, Zanjan Medical Sciences University, 2009.
9. Advanced molecular genetics for MSc students, Azad University, Tehran, Iran, 2009.
10. Molecular Diagnostic Methods in Medical Biotechnology for PhD students, Pasteur Institute of Iran, Tehran, Iran, 2009.

Experiences and Activities:

a)I have some experiences on molecular biology techniques like electrophoresis techniques, PCR and its different kinds (like RT-PCR, Real-time PCR, ARMS PCR, gap PCR and so on), , RFLP, Mutation Detection techniques such as SSCP, HA, CSGE etc. , Fingerprinting and DNA typing, cell culture. In addition I have been involved in establishing some diagnostic techniques like RT-PCR for bcr-abl and pml-rar translocations in leukemia, multiplex gap PCR for α -thalassemia deletions, PND for thalassemia, hemophilia, Duchene Muscular Dystrophy (DMD) and some other monogenic disorders.

b)After graduating I have been working in medical molecular genetics laboratory, contributing and managing carrier testing and prenatal diagnosis of genetic disorders (mainly thalassemia and hemoglobinopathies, hemophilia) and other less common genetic disorders for 10 years.

b) I have also good experiences in cell culture, production and purification of Adeno-Associated Viral (AAV) vectors (AAV2, 5, 8) for gene therapy purposes.

c) In bioinformatics application field I have good experiences in genome informatics, primer design, sequence analysis, different alignment tools, genes and diseases related databases, sequencing analysis and teaching bioinformatics application in genomics for MSc and PhD students and also holding some bioinformatics workshops supported by Iranian Molecular Medicine Network for researchers working in affiliating centers of the Network.

d) Genetic counseling of thalassemia carrier couples in the context of National Prevention Program of Beta-Thalassemia Major at Pasteur Institute of Iran. In addition, I have been involved in training of lab technicians for technology transfer of prenatal diagnosis of thalassemia and hemoglobinopathies, according the guidelines of Iran ministry of health.

e) two weeks training in molecular preimplantation genetic diagnosis(PGD)field at Guy's Hospital, London, Febraury 2011(under supervision of Dr Pamella Renwick).

Human Molecular Genetics Diagnostic Experiences:

I have good experiences in the field of designing, performing and analysis of different molecular methods for diagnosis of human genetics disorders.

Research Areas:

Fetal Hemoglobin induction in thalassemia and sickle cell anemia

Application of bioinformatics tools in genes and genome analysis

Tumor markers in cancer diagnosis and prognosis

Projects:

1. Genotyping and haplotype analysis of F9 gene in Iranian hemophilia B patients (completed).
2. Molecular analysis of thalassemia intermedia in Iran, phase I in Tehran(completed).
3. Molecular and functional analysis of regulatory elements of gamma genes as target for HbF induction(completed).
4. Evaluation of cucurbitacin compounds on induction of HbF in K562 cell line(completed).
5. Determination of prognostic value of the urokinase-type plasminogen activator (uPA) and its inhibitors (PAI-1 and PAI-2) in breast cancer patients referred to Iranian Center for Breast Cancer (ICBC) (in progress).
6. Expression *analysis* of mir-34,mir-126,mir-210,mir-15/16,mir-21,mir-128 and their effect in resistance to Platinum-based therapy in advanced NSCLC among Iranian population (in progress).

Dissertations:

- ✓ The prevalence of F8 gene Intron and Intron 22 inversion among severe hemophilia A patients of Esfahan province in Iran **. N Roozafza, MSc student of biochemistry, Azad University, Tehran, Iran.**
- ✓ **Evaluation of cucurbitacin compounds on HbF induction in K562 cell line.** Ida Arab, MSc student of Azad University,
- ✓ **Molecular analysis of T129C and T1236C SNPs in MDR1 gene among drug-resistant and drug-responsive epilepsy patients**. Mehri Maleki, MSc student of Tarbiar Modarres University, Tehran, Iran 2009.
- ✓ **Molecular analysis of F9 gene in hemophilia B patients of northeast of Iran.** Narges Karimi, MSc student of Genetics, Azad University 2009.
- ✓ **Generation and selection of single chain monoclonal antibody against vascular endothelial growth factor receptor 2(VEGFR2) by phage display.** Mehdi Behdani, PhD candidate of Medical Biotechnology, Pasteur Institute of Iran.
- ✓ **Design and construction of mammalian expression cassette to characterize the gamma-globin gene regulatory elements.** Mohammad Hamid, PhD candidate of Melecular Genetics, NIGEB.
- ✓ **Designing and construction a gene construct containing β-globin expression cassette aiming for transferring to erythroid cell line.** Fatemeh Jamshidi, MSc student of Payam Nour University, Isfahan, Iran 2006.
- ✓ **Molecular analysis of α- and β-globin genes in 30 β-thalassemia intermedia patients in Tehran.** Ali Rajabi, MSc student of Tarbiat Modares University, Tehran, Iran 2007.
- ✓ **Genotype analysis of Iranian Hemophilia B patients, Kashan.** Leila Kokabee, MSc student of Khatam University, Tehran, Iran 2007.
- ✓ **Molecular analysis of factor IX gene in hemophilia B patients, Esfahan.** Esmat Kamali, MSc student of Blood Transfusion Organization, Tehran, Iran 2005.

Congresses:

More than 50 abstracts as oral presentation and poster in national and international congresses has been presented.

GenBank Insertions:

DQ431774-DQ431840 (67 entries)
AY226143, AY222071, AY269425, DQ094178, DQ115887, DQ115888

Publications:(indexed in PubMed)

1. Development of a robust, low cost stem-loop real-time quantification PCR technique for miRNA expression analysis. Mohammadi-Yeganeh S, Paryan M, Mirab Samiee S, Soleimani M, Arefian E, Azadmanesh K, Mostafavi E, Mahdian R, **Karimipoor M**.Mol Biol Rep. 2013 Jan 10. [Epub ahead of print].
2. Expression, purification, and characterization of a diabody against the most important angiogenesis cell receptor: Vascular endothelial growth factor receptor 2. Behdani M, Zeinali S, **Karimipour M**, Khanahmad H, Asadzadeh N, Azadmanesh K, Seyed N, Baniahmad SF, Anbouhi MH. Adv Biomed Res. 2012;1: 34.
3. Mahin Hashemipour, Fahimeh Soheilipour, Sakineh Karimizare, Hossein Khanahmad, **Morteza Karimipour**, Sepideh Aminzadeh, Leila Kokabee, Amini Masoud, Silva Hovsepian and Rezvaneh Hadian. Low Prevalence of Thyroid Peroxidase Gene Mutation in Dyshormonogenetic Congenitally Hypothyroid Children in Isfahan- Iran,". Int J Endocrinol. 2012;2012:717283

4. Behdani M, Zeinali S, Khanahmad H, **Karimipour M**, Asadzadeh N, Azadmanesh K, Khabiri A, Schoonooghe S, Habibi Anbouhi M, Hassanzadeh-Ghassabeh G, Muyldermans S. Generation and characterization of a functional Nanobody against the vascular endothelial growth factor receptor-2; angiogenesis cell receptor.
Mol Immunol. 2012 Feb;50(1-2):35-41.

5. Jamali M, Ebrahimi MA, **Karimipour M**, Shams-Ghahfarokhi M, Dinparast-Djadid N, Kalantari S, Pilehvar-Soltanahmadi Y, Amani A, Razzaghi-Abyaneh M.
An insight into the distribution, genetic diversity, and mycotoxin production of Aspergillus section Flavi in soils of pistachio orchards.
Folia Microbiol (Praha). 2012 Jan;57(1):27-36.

6. Moosavi SF, Amirian A, Zarbakhsh B, Kordafshari A, Mirzahoseini H, Zeinali S, **Karimipoor M**. The Carrier Frequency of α-Globin Gene Triplication in an Iranian Population with Normal or Borderline Hematological Parameters. Hemoglobin. 2011;35(4):323-30.
7. Hamid M, Mahjoubi F, Akbari MT, Khanahmad H, Jamshidi F, Zeinali S, **Karimipoor M**. Transient Expression Assay of AGamma-588 (A/G) Mutations in the K562 Cell Line. Iran Biomed J. 2011 Jan-Apr;15(1-2):15-21.

8. Sayyah M, Kamgarpour F, Maleki M, **Karimipoor M**, Gharagozli K, Shamshiri AR. Association analysis of intractable epilepsy with C3435T and G2677T/A ABCB1 gene polymorphisms in Iranian patients. Epileptic Disord. 2011 Jun;13(2):155-65.
9. Taghavi Basmanj M, **Karimipoor M**, Amirian A, Jafarinejad M, Katouzian L, Valaei A, Bayat F, Kordafshari A, Zeinali S. Arch Iran Med. 2011 Jan;14(1):61-3.Co-inheritance of hemoglobin D and β-thalassemia traits in three Iranian families: clinical relevance.
10. Amirian A, **Karimipoor M**, Jafarinejad M, Taghavi M, Kordafshari A, Fathi Azar S, Mohammadi MS, Zeinali S. First report on the co-inheritance of beta-globin IVS-I-5 (G-->C) thalassemia with delta globin CD12 {Asn-->Lys (AAT-->AAA)}HbA_2-NYU in Iran. Arch Iran Med. 2011 Jan;14(1):8-11.
11. Arab A, **Karimipoor M**, Rajabi A, Hamid M, Arjmandi S, Zeinali S. Molecular characterization of β-thalassemia intermedia: a report from Iran. Mol Biol Rep. 2010 Dec 1.
12. Maleki M, Sayyah M, Kamgarpour F, **Karimipoor M**, Arab A, Rajabi A, Gharagozli K, Shamshiri AR, Shahsavand Ananloo E. Association between ABCB1-T1236C polymorphism and drug-resistant epilepsy in Iranian female patients. Iran Biomed J. 2010 Jul;14(3):89-96.
13. Amirian A, Jafarinejad M, Kordafshari AR, Mosayyebzadeh M, **Karimipoor M**, Zeinali S. Identification of a novel δ-globin gene mutation in an Iranian family. Hemoglobin. 2010;34(6):594-8.
14. Hamid M, Karimipoor M, Chaleshtori MH, Akbari MTA . Novel 355-357delGAG mutation and frequency of connexin-26 (GJB2) mutations in Iranian patients. J Genet. 2009 Dec;88(3):359-62.

15. Valaei A; Bayat F; Kordafshari A; Zeinali S; **Karimipoor M.** A novel polymorphism causes a different restriction pattern by RsaI in the β-globin gene cluster: application in prenatal diagnosis. Hemoglobin. 2009; 33(6):417-2.

16. Hamid M, Mahjoubi F, Akbari MT, Arab A, Zeinali S, **Karimipoor M**. Molecular Analysis of γ-globin promoters, HS-111 and 3'HS1 in β-thalassemia intermedia patients associated with high levels of Hb F. Hemoglobin. 2009; 33(6):428-38.
17. Fallah MS, Zadeh-Vakili A, Aleyasin SA, Mahdian R, **Karimipour M**, Raeisi M, Jamali S, Ebrahimi A, Fooladi P, Naderi M, Baysal E, Zeinali S. Molecular characterization of thalassemia intermedia, due to co-inheritance of homozygous alpha triplication and IVSI-5 beta-thalassemia. Blood Cells Mol Dis. 2009; 43(2):158-60.

18. Hamid M, Mahjoubi F, Akbari MT, Zeinali S, **Karimipoor M**. The Cretan type of nondeletional hereditary persistence of fetal hemoglobin in an Iranian family. Ann Hematol. 2009 Dec; 88(12):1267-8.
19. **Karimipoor M,** Kokabee L, Kamali E, Zare SK, Zeinali S. Molecular analysis of factor IX gene in a severe Iranian hemophilia B female. Acta Haematologica. 2008 Apr 24;119(3):151-153

20. **Karimipoor M**, Zeinali S, Nafissi N, Tuddenham EGD, Safaee R, Lak M. (2007).Identification of factor IX mutations in Iranian haemophilia B patients by SSCP and sequencing. Thrombosis Research 120; 1: 135-9.
21. Davidoff AM, Ng CYC, Sleep S, Gray J, Selina A, Zhao Y, McIntosh JH, **Karimipoor M**, Nathwani AC. (2004). Purification of recombinant adeno-associated virus type 8 vectors by ion exchange chromatography generates clinical grade vector. Journal of Virological Methods 121: 209-15.

22. **Karimipoor M**, Zeinali S, Safaee R, Lak, M, Nafissi N. (2004) Carrier determination in a hemophilia B family using SSCP and sequencing. Iranian Journal of Biotechnology 2: 132-5.
23. **Karimipoor M**, Zeinali S, Lak M, Safaee R (2003). Carrier testing and prenatal diagnosis of haemophilia B by SSCP in an Iranian family. Haemophilia 9: 116-8.

References:

1. Professor Edward G.D. Tuddenham
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