

Selected Curriculum Vitae

Name and surname :

Dr Farhad Zaker

Academic title:

Professor

Qualifications:

PhD in "Haematology" in 1997 from University of Wales, College of medicine, Cardiff-UK.

Teaching:

Teaching of Haematology, Immunohaematology, cell culture, molecular medicine to medical and paramedical students and medical lab (theoretical and practical) in different levels (undergraduate and post graduate students) at Tehran university of medical sciences (TUMS), Iran University of Medical Sciences (IUMS), and other universities for several years.

Academic Responsibility:

-Assistant head dept of hematology of faculty of school of Allied medical sciences, 2000 up now

-Deputy of research council of faculty of school of Allied medical sciences, 2008-2009

-Member of Faculty research committee, 2005 up now

-Member of haematology board in Ministry of Health and Medical education of Iran (Revision of MSc haematology course , exams for MSc and PhD, etc) from 2008 up now.

-Referee, representative and supervisor for articles, Research proposals, Thesis etc.

-Invited guest or representative to different educational or research committee

Membership:

- 1) Member of scientific committee of Cellular and Molecular Research Center (CMRC) at university since 2002 up now
- 2) Member of scientific committee of Oncopathology research Center at university since 2008
- 3) Member of Molecular Medicine department at university from 2009
- 4) Member of scientific committee of several journals such as:
 - 4-1-Payavarde of Salamat, faculty of paramedical, from 2008
 - 4-2- Olum of Azmayeshgahi, faculty of medicine , Golestan medical sciences university, from 2007
- 5) Member of some Scientific society, transfusion society of iran , lab sciences of iran and abroad such as (EHA, ISH, ISEH , IACSIT etc).
- 6) member of Modern Technology Faculty –regenerative medicine and cell therapy

Research activities:

A-Involvement in several student project, Thesis and research projects

- Supervisor on phd thesis, farhadi e, 2014,-the effect of inhibitory mir101 on expression of JAK2 and BCR-ABL in CML cell line, 2014 on going
- Supervisor on project, farhadi e, 2014, effect of inhibitory mir101 on expression of JAK2 and BCR-ABL in CML cell line, 2014 ongoing
- Study of MTHFR and GGH polymorphisms on serum levels and related cytotoxicity in ALL children under treatment. Supervisor on project of CMRC,....., 2014 on going.
- epigenetics and selected genes on MDS. Supervisor on phd thesis, nasiri n, 2013, ongoing
- epigenetics and selected genes on MDS. Supervisor on project , 2013, ongoing

-epigenetics and selected genes on MDS. Supervisor on project , INSF, 2013, ongoing

-study of protomix of surface proteins of NB4 cell. Co-supervisor, msc thesis, 2013 on going.

-study of protomix of surface proteins of HL60 cell. Co-supervisor, msc thesis, 2013 on going.

-Study of MTHFR polymorphisms on serum levels and related cytotoxicity in ALL children under treatment. Supervisor, MSc thesis, varmaghani,....., 2013 ongoing.

-Study of expansion of umbilical cord blood CD34+ hematopoietic stem cells in presence of BM mesenchymal stem cells with inhibition of Si RNA TGF-B1 receptor II .supervisor on research project of CMRC, 2012-2014, p 14573-117-03-90.

-Study of expansion of umbilical cord blood CD34+ hematopoietic stem cells in presence of BM mesenchymal stem cells with inhibition of Si RNA TGF-B1 receptor II . supervisor ,MSc thesis, sohrabi s, 2012-2014.

- polymorphisms of selected genes of factor V deficiency in south east of iran. Supervisor, MSc thesis, tabibian , , 2013-2014.

-Study of serum levels and related cytotoxicity in correlation with GGH polymorphism in ALL children under treatment. Supervisor, MSc thesis, kelantari 2012-2013 August.

-The effect of inhibitory of Aurora kinase B on cell cycle in APL Cells. First Supervisor, MSC thesis. Ghanizadeh s, 2012-August 2013.

-Detection of BCR/ABL gene mutations in CML patients treated with Imatinib Mesylate, supervisor, phd thesis,2010-jan 2012, P1004.

-The effect of co-culture of cord blood CD34 stem cell with mesenchymal stromal cells and epigenic changes in expression of CDKi p21 and p57 genes, PhD thesis cosupervisor, 2010-nov 2012.

-Study of polymorphism of A80G of RFC-1 gene on Methotrexate toxicity and serum concentration in children with Acute Lymphoblastic Leukemia treated . INSF (Iranian national science foundation) as supervisor, project, ,2011-2012.

- Evaluation of effect HESA-A agent on NB4 cells., second co-supervisor, MSc thesis, 2011-april 2012.

-Evaluation of induction of apoptosis in NB4 cells treated with combination of As₂O₃ and AZT by quantitative analysis of expression of BCL2 and C-MYC, second supervisor, MSc thesis, 2011-june 2012.

-3D study of capillary network derived from human cord mesenchymal endothelial stem cells have differentiated into endothelial cells with VEGFR2 protein expression, Research project, as advisor, 2009-2012. P850

-Study of polymorphism of A80G of SLC19A1 gene on Methotrexate toxicity and serum concentration in children with Acute Lymphoblastic Leukemia treated in Aliasghar hospital., supervisor, msc thesis, 2010-2011, p952.

-Evaluation of effect of AS₂O₃ and Telomerase inhibitors in apoptosis of leukemic cells. , PhD thesis as supervisor , 2008-2011, p606,

-The study of polymorphisms of glutathione transferase, co-supervisor, MSc thesis, 2010-2011.

-Study of expansion of umbilical cord blood CD34+ hematopoietic stem cells in presence of BM mesenchymal stem cells and Cu chelator. supervisor, msc thesis, 2010-2011. 5/7/89 up to 5/5/90, p 951.

-Study of ABCC2 polymorphisms (24C/T, 1249G/A, 3972C/T) on methotrexate serum levels and toxicity in ALL childrens under treatment. supervisor, msc thesis, 2010-2011. 25/7/89 up to 25/4/90, p955.

-Polymorphisms of C609T , C465T of NQO1 and polymorphism of CYP1A1 in AML. Supervisor , MSc thesis, 2009-2010.

-Polymorphisms of C609T , C465T of NQO1 in AML. Supervisor , research project , 2010.1/12/88 up to 1/8/89, mt 385.

-Detection of signal transduction of cAMP , P53 on apoptosis of leukemic cells, advisor, Research project, as advisor , 2010-2011. Mt 366.

-Dissecting effect of CAMP induced increasing agents on apoptosis induced by Doxorubicin in pre ALL., PhD thesis as advisor , 2008-2011.

- Frequency Polymorphisms of cyp1A1 and MTHFR in CML. 2009, supervisor of research project. 13/12/87 up to 13/8/88, mt 300.
- Detection of quantitative of bcr-abl gene expression in CML patients treated with Indian Imatinib. 2009, MSc thesis as supervisor. 1/5/87 up to 1/3/88, p509.
- The methyl tetrahydrofolate reductase polymorphisms and susceptibility to childhood ALL. 2009, MSc thesis as supervisor. 1/3/87 up to 1/1/88, p517.
- Diagnosis of NPM1 exon 12 mutations in patients of AML. 2009, MSc thesis as supervisor. 1/3/87 up to 1/3/88, p516.
- A study of flt3 mutations in children with acute leukaemia. 2007-2008, MSc thesis as supervisor.
- Effect of TGFβ on lymphoma B cells. 2009, Advisor on research project. 19/7/85 up to 19/6/86, mt629,
- Mutations of c-kit in acute myeloid leukaemia patients. 2007, supervisor of research project. 15/12/84 up to 15/1/86, p604.
- Evaluation of mutations of exons of 8 and 17 of c-kit in CBF leukaemia patients. Summer 2007, MSc thesis as supervisor. 87 up to 12/6/86, p308.
- Evaluation of mutations of internal tandem duplication and D835 in flt3 gene in 101 AML patients. 2005-2006, MSc thesis as supervisor. p309
- Evaluation of apoptosis induced by Arsenic Trioxide through Fas pathway in APL patients with T (9-22). Summer 2003, MSc thesis as supervisor.
- The evaluation of synergic effect of ATRA and G-CSF on proliferation and differentiation of HL60 with herbal and cytotoxic agents. Spring 2003, supervisor of Research project. P 402
- Evaluation of cytotoxic, apoptosis and differentiation of viscum Album lectin extract on HL60 alone and in combination with ATRA and D3. Spring 2003, MSc thesis as supervisor.

-Evaluation of effect of cytotoxicity, antiproliferative and differentiation of plant alkaloid on HL60 cell treated with ATRA and D3. Autumn 2002, MSc thesis as supervisor.

-Evaluation of cytotoxicity and apoptosis effect of chemotherapeutic drugs and ATRA on HL60 cell combined with GM-CSF. Spring 2002, MSc thesis as Co-supervisor.

-The evaluation of synergistic effect of ATRA, gamma-INF and D3 on differentiation of HL60 cell line treated with cytotoxic drugs. Summer 2001, MSc thesis as supervisor.

-The study of synergic effect of gamma INF and EPO on differentiation of K562 cell treated with cytotoxic drugs. Autumn 2000, MSc thesis as Co-supervisor.

B-Books:

-Zaker F and Ghanizadeh S. transcription factors in normal haematopoiesis and leukaemia. Khosravi press, 2013.

-Zaker F and sharifi MJ. Review of haematology and diseases, Farda press, 2011.

-Zaker F and Niazipour M. Principle of hemostasis and disease. Kamal Danesh press, 2006.

-Zaker F. Platelet: structure, function and disease. Qazvin Medical University press. 1993.

C-Paper Publications:

-National and International

-Naderi M, , Alizadeh S, kazemi A, Tabibian S, zaker f, Bamedi T, Kashani Khatib Z, , Dorgalaleh. Central nervous system bleeding in pediatric patients with factor XIII def. A study on 23 new cases Hematology ., accepted.

- Naderi M, Tabibian S, Dorgalaleh A, Alizadeh S, Zaker F (correspond), Bamedi T. Congenital factor V def, comparison the severity of clinical presentations among patients with rare bleeding disorders. *Int J of Clinic and Exp Medicine* , accepted.
- Kelantari A, Zaker F(correspond), Ansari S,. Association of GGH gene polymorphisms with Methotrexate serum levels and toxic side effects in children with acute lymphoblastic leukaemia, .*Payavard Salamat*, accepted
- Ghanizadeh S, Shirali S zaker f,(correspond) et al. Simvastatin synergistical potentiates antitumor effects of arsenic trioxide on human promyelocytic leukemic NB4 cells . 2014, *Blood research j*, 11 (3):116-125.
- Nasiri N,Shieghi M, Zaker F (correspond), Hosseini S, Moosavi S A, Marjani A .Diagnosis and biological characteristic of FLT3 mutations in AML. *AIM*, 2014, 17 (4), 258-261.
- Ostadebrahimi H, Jamali Z, Nazari M, Bahri M, Farahmandnia Z, Khandany BK, Taheri M, Khorramdelazad H, Hakimizadeh E, Zaker F, Rezaeian M, Hassanshahi G. CXC chemokines CXCL1, CXCL9, CXCL10 and CXCL12 are variably expressed in patients with sickle cell disease and carriers: are they predictive tools for disease complication. *Clin Lab*. 2014;60(1):99-104.
- Amirizadeh N, Zaker f, Nasiri N,. Evaluation of umbilical cord blood CD34⁺ hematopoietic stem cells expansion in co-culture with BM mesenchymal stem cells in the presence of Cu chelator TEPA .*blood research journal*, 2014, 10 (4), 353-363.
- Sharifi MJ, Bahosh G, Zaker F(correspond), Ansari S, Arjmandi Rafsanjani K and Sharafi H. Association of 24 CT, 1249GA, and 3972 CT gene polymorphisms with Methotrexate serum levels and toxic side effects in children with acute lymphoblastic leukaemia, .*Pediatric Hematology Oncology*, 2014, . 31 (2), 169-177
- Rahnemoon AR, Zaker F, Izadyar M, Ansari S, Poopak B, Tadavosyan Y. Prevalence of ETV6/RUNX1 Fusion Gene in Pediatric Patients with Acute Lymphoblastic Leukemia in Iran. *Int J Ped*, 2013 Dec;23(6):681-6

-Tahmasbi MH, Joghataei MT, Soleimani M, Moosavi SA, Yazdanparast SA, Zaker F. 3D study of capillary network derived from human cord mesenchymal endothelial stem cells have differentiated into endothelial cells with VEGFR2 protein expression. *Res Mol Med*, 2013, 1(2), 17-21.

-Hassani S., Zaker F., Zekri A., Zaghal A., Alimoghaddam A., Ghavamzadeh A., Ghaffari S.H. Apoptotic effect of arsenic trioxide plus Azidothymidine on APL cell line (NB4) through P21 expression and cell cycle distribution changes. *Blood research journal*, 2013, 10 (2), 128-138.

-Ghanizadeh S, zaker f, et al. cytotoxic effects of selective inhibitors of urokinase B on viability and metabolic features in human promyelocytic leukemic cells. *Payavad Salamat*, 2013, 7 (3), 197-206.

-Bashash D, Ghafari SH, Zaker f et al. BIBR 1532 increases arsenic trioxide – mediated apoptosis in acute promyelocytic leukaemia cells: therapeutic potential for APL. *Anticancer Agents Med Chem*, 2013 , 13 (7), 1115-1125 .

-Hassani s, Ghafari SH, Zaker f , zekri a, alimoghaddam k, qhavamzadeh a, zaghl a, azidothymidine hinders arsenic trioxide induced apoptosis in apl cells via interaction of p21 and attenuation of G2/M arrest. *Ann Hem*, 2013, 92 (9), 1207-1220.

- Chahardouli B , Mousavi SA, Zaker F , Saffari Z, Ostadi M, Nadali F, Ghadimi H, Rostami S, Alimoghaddam K, Ghavamzadeh A. detection of bcr-abl kinase domain mutations in patients with cml on imatinib . *Haematology*, 2013, 18 (6):328-333.

-Chahardouli B, zaker f, mousavi sa, kazemi A, ostadi m, rostami s, ghavamzadeh a. evaluation of T315I mutation frequency in CML patients after Imatinib resistance., *haematology*, 2013 (18 (3)). 158-162.

-Zaker f, Nasiri N, Amirizadeh N, Oodi A. Evaluation of umbilical cord blood CD34⁺ hematopoietic stem cells expansion in co-culture with BM mesenchymal stem cells in the presence of Cu chelator TEPA . *Haematology*, 2013, 18 (1), 39-45.

-Soltanpour MS, Amirizadeh N, Zaker F, Oodi A, Nikougoftar M. , Kazemi A. mRNA expression and promoter DNA methylation status of CDKi p21 and p57 genes in ex vivo expanded CD 34 cells following co-

culture with mesenchymal stromal cells and promoter growth factors. *Haematology*, 2013, 18(1), 30-38.

-Safaei A and Zaker F. Influence of genetic abnormality on the risk of ALL. *Iranian J Blood and Cancer*. 2012, 4(4), 169-178.

-Ghasemi m, nadeali f, ostad sn, Zaker F, rostami s, dargahi h (oct-nov 2012) A study of HESA-A on proliferation and apoptosis of chronic myeloid leukaemia cells K562. *Payavard Salamat*, 6 (4), 282-292.

-Zaker F(correspond), Safaei A, Nasir N, Abdollahzadeh M and Pazhakh V (2012). The association of NADPH : quinone reductase gene polymorphisms with pediatric ALL . *LabMedicine*, 43, 256-261.

-Bakhshayesh M, Zaker F ,Hashemi M ,Katebi M, Solaimani M ,(2012). TGF-B1 mediated Apoptosis is associated to SMAD dependent Mitochondrial Bcl-2 expression. *Clinical lymphoma leukemia*. 12 (2), 138-143.

-Shirafkan A, Marjani A and Zaker F. (2012) Serum lipid profiles in acute myocardial infarction patients in Gorgan. *Biomedical Research*, 23 (1), 119-124.

-Bashash D, Ghafari SH, Zaker f et al. (2012) Direct short-term cytotoxic effects of BIBR 1532 on acute promyelocytic leukaemia cells through induction of p21 coupled with downregulation of c-myc and htert transcription. *Cancer Investigation*.30 (1), 57-64.

-Zaker F(correspond), Safaei A Hashemi M and Pazhakh V (2011). The frequency and association of C609T and C465T Polymorphisms of NADPH : quinone reductase gene with adult AML. *LabMedicine*, 42 (11), 674-677.

- Safaei A, Zaker F, Sharafi H, Hashemi M, Yaghmaei P and Abdollahzadeh M (2011). The correlation of C609T and C465T Polymorphisms of NQO1 gene with AML. *Blood research j*, 8, (3), 158-164.
- Safa M , Kazemi A, Zaker F et al. (2011). Cyclic AMP induced p53 destabilisation is dependent of EPAC in pre B ALL in vitro. *Journal of receptors and signal transductions*. 31 (3), 256-263.
- Atashrazm F and Zaker F (correspond) et al. (2011) Polymorphisms of MTHFR and susceptibility to ALL in children. *LabMedicine*, 42(5), 275-279.
- Razmkha F, Pazhakh V, Zaker F (correspond), Atashrazm F and Sheikhi M (2011). Frequency of Cyp1A1*2C in patients with leukemia in the Iranian population. *Lab medicine*, 42 (4), 220-223.
- Pazhakh V , Zaker F (correspond) et al (2011). detection of nucleophosmin and fms-like tyrosine kinase 3 gene mutations in AML patients. *Ann Saudi Med*, 31(1),45-50.
- Razmkhah f, Razavi m, , zaker f, et al (2010): hematologic and molecular responses to generic imatinib in patients with CML. *LabMedicine*, 41 (9), 547-550.
- Pazhakh V, Razmkhah F, Zaker F(correspond) et al (2010). MTHFR and risk of myeloid leukaemia. *LabMedicine*, 41 (8), 490-494.
- Safa M, Kazemi A, Zand H, Azarkeivan A, Zaker F Hayat P (2010) Inhibitory role of cAMP on doxorubicin-induced apoptosis in pre B ALL cell through dephosphorylation of p53 serine residues. *Apoptosis*. 15 (2), 196-203.
- Shaikhi M, Zaker F(correspond) et al . Detection of FLT3 mutations in pediatric acute leukaemia. *Medical sciences Journal of Islamic azad university* .2010, 19 (4), 230-235.
- Zaker F (correspond) et al. Detection of kit and flt3 mutation in AML with different subtypes. *Archives of Iranian Medicine*.2010 13 (1),21-25.
- Atashrazm F and Zaker F(correspond) . Polymorphisms of MTHFR and pediatric ALL. *Blood. Research J* 2010, 6 (4) 266-275.

- Pazhakh V , Zaker F (correspond) et al .(2009) Diagnosis of NPM1 and flt3 in patients with AML. *Blood.research J* 2009. 6, (3) ,199-207.
- Zaker F (correspond), Mohammadi M et al .Diagnosis of FLT3 mutations including ITD and D835 point mutations in AML. (2008) *IUMS J* . 15(60-61) 73-89.
- Zaker F (correspond), Mohammadzadeh M , Aghaeepour M and Rastegar Lari GH .Study of mutations in c-kit exons 8 and 17 in Iranian patients with AML. (2008) *IUMS J* . 15(59) 73-79.
- Zaker F (correspond), Oody A and Arjmand AR (2007) A study on the antitumoral and differentiation effects of peganum harmala derivatives in combination with ATRA on leukemic cells. *Arch Pharm Res.* 30 (7), 844-849
- Mohsenifar A, Lotfi A S, Ranjbar B, Allameh A , Zaker F et al . (2007). A study of the oxidation induced conformational and functional changes in neuroserpin. *Iranian Biomedical J.* 11(1), 41-46.
- Ardjmand AR, Zaker F(correspond), Alimoghadam K and Moezzi L (2006). Arsenic Trioxide selectively induces apoptosis within the leukemic cells of APL patients. *Int.J.Pharm* 2(4): 459-462.
- Zaker F (correspond), Salehian Omran J and Soleimani M (2006)The synergistic effect of cytokins and vitamin D3 on differentiation of leukemic cells treated with cytotoxic agents. *Kosar Medical journal* 11(2). 16-27.
- Zaker F (correspond), Aghileh S , Pourfathllah A A and Soleimani M (2006).The effects of cytotoxicity , differentiation and apoptosis of viscum album extract on HL60 cells individually and in combination with ATRA. *IUMS Journal* 13(52),107-114.
- Saadatian R, Pourfathllah A A , Zaker F and Soleimani M (2005). Evaluation of apoptosis and cytotoxicity effect of chemotherapy drugs and ATRA on HL60 cell line. *The J Urmia University of Medical Sciences* 16 (3), 165-171.

- Arjmand AR, Zaker F (correspond) , Alimoghadam K, Ghavamzadeh A (2005). Evaluation of apoptosis induced by ATO through fas pathway in acute promyelocyte leukaemia patients with T15-17. IUMS Journal 11(43) 687-695.
- Tafazoli M, Noormohamadi I, Zaker F and Kheradmand S .(2005). Mutation of Beta globin gene in beta Thalassemia patients in qazvin. Medical j of Semnan, 6(4), 255-258.
- Ardjmand AR, , Alimoghadam K , Zaker F and Ghavamzadeh A, Jahani M (2004). Arsenic Trioxide selectively induces apoptosis within the leukemic cells of APL patients with T(15-17) possibly through the FAS pathway. IJHOBMT 1(2):20-24 .
- Zaker F (correspond) (2004) Antitumoral and differentiation effect of Alkaloids of Harmine and Harmaline on leukaemic cells treated with ATRA and G-CSF. IUMS journal 10(38) 869-875.
- Zaker F (correspond), Oodi A et al .(2004) The effect of Peganum Harmala and its alkaloid derivatives on APL cells. Zanzan Medical University Journal 45, 7-13.
- Zaker F (correspond), May A and Burnett A K (2002) Key regulatory gene expression in erythroleukaemia differentiation. Iranian Biomedical journal 6 (4), 97-103.
- Mahmoodzadeh, Pourfathollah A A and Zaker F (2001). The synergistic effect of EPO and gamma INF in differentiation of k562 treated with cytotoxic drugs. Journal of Physiology and Pharmacology 5 (2),171-177.
- Zaker F (correspond) (1999) Application of molecular biology in blood malignancies. A selection of medical novels 3 (5), 6-9.
- Zaker F, Darley R L, Al-Sabah A I and Burnett A K (1997) Oncogenic ras genes impair erythroid differentiation of erythroleukaemia cells. Leukaemia Research 21 (7), 635-640.

D-Presentation (oral and poster):

Over 50 participation on national and international conferences and congress mostly with papers and abstract.

Patent:

-Documentation of Kit mutations in Gene Bank including FJ189474 and FJ177639

- Documentation of bcr-abl mutations in Gene Bank jx565024 and jx565025