

Curriculum Vitae (C.V.)

First name: Elnaz

Surname: Agi

Sex: Female

Nationality: Iranian

Place of Birth: Tehran, Iran

Date of Birth: 26, May, 1989

Tel: +98 919 444 5991

E-mail: Elnazagi@gmail.com

Address: No.2 - Farahmandpour alley - Seraji alley - Nateqi Street - mojahedin Eslam Street - Tehran, Iran.

Postal Code: 1155644111

Career History:

- Pharmacy Technician at Dr,Pazooki pharmacy (2023-)
- Researcher and Lab supervisor at Blood Diseases Research Center (BDRC), Iranian Comprehensive Hemophilia Care Center (ICHCC), Tehran, Iran (2016-present)
- Researcher at Department of Hepatitis and AIDS, Pasteur Institute of Iran (IPI), Tehran, Iran (2010-2016)

Educational Background:

Diploma in Experimental Sciences, Tehran, Iran. 2007

A.S. degree in Clinical Laboratory Sciences, Tehran Azad Medical University, Tehran, Iran. 2007-2009

B.Sc. degree in Clinical Laboratory Sciences, Tehran University of Medical Sciences, Tehran, Iran. 2013-2015

Key Skills and Strengths:

- Training, coaching and mentorship
- Teaching at workshops
- Dissertation Coach of M.Sc. and Ph.D. students
- Staff management and team development
- Cross-functional collaboration and team working
- Strategic planning and execution
- Analytical thinking, Problem solving
- Change control and project management
- Quality Assurance/ Process Validation
- Quality control Strategies

Language Skills:

Persian: Native language

English: Good (speaking, reading, writing)

French: Basic (speaking, reading, writing)

Experienced in:

- **Molecular biology Technics:**
DNA electrophoresis, Cloning, Gene expression in *E.coli*,
Nucleic acids (DNA and RNA) extraction methods,
Protein Purification in Yeast and *E.coli*,
Nucleic acid amplification by PCR,
Ion –Exchange Chromatography,
DNA and RNA purification,
Gel electrophoresis,
Western Blotting,
SDS-PAGE, etc.
- **Microbiological Technics:**
Bacterial and Yeast culture,
Transformation, etc.
- **Biochemical Technics:**
Diagnostic Biochemistry tests,
Diagnostic Hematology tests,
Diagnostic Parasitology tests,
Diagnostic Mycology tests,
Spectrophotometry,
ELISA.
- **Cellular Technics:**
Cell culture techniques,
MTT and toxicity assay,
Transfection.
- **Immunological Technics:**
Mice immunization,
Evaluation of Immune responses using ELISA.

Achievements

Publications at Congresses:

- 1) **Cloning, expression and purification of HPV16L1 in prokaryotic expression system.**
Shabnam Javan zad, Fatemeh Doustdari, Mehdi Hashemi, Azam Bolhassani, **Elnaz Agi**.
- 2) **Cloning, expression and purification of the full length HCV core protein in *E. coli* expression system.**
Masumeh Mirnorollahi, Azam Bolhassani, **Elnaz Agi**, Fatemeh Motevalli, Shiva Irani.
- 3) **Development of therapeutic HPV DNA vaccine using MPG as an efficient delivery system**
Saleh T, Bolhassani A, Shojaosadati SA, Aghasadeghi MR, **Agi E**
- 4) **Anti-tumor effects of DNA vaccine expressing HPV E7-NT (gp96) fusion protein combined with saffron and its ingredients as a chemotherapeutic agent**
Khavari A, Bolhassani A, Bathaie SZ, ArbabiBidgoli S, **Agi E**
- 5) **Evaluation of HPV16 L1-L2 fusion protein expression in mammalian cells**
Ali Namvar, Azam Bolhassani, Mehrdad Hashemi and **Elnaz Agi**. *4th International Conference on Vaccines & Vaccination*. 2014.
- 6) **Whole recombinant *Pichia pastoris* expressing HPV16 L1 antigen induces potent L1- specific immune responses**
Bolhassani A , Roohvand F , Motevalli F, **Agi E**, Aghasadeghi MR, Vahabpour R, Shokri M. *12th International Congress of Immunology & Allergy of Iran*. 2014.
- 7) **The roles of MAP2K4, PCGF2 and CTLA4 genes polymorphisms on inhibitor development in Iranian hemophilia A patients**
Niloo far Naderi, Afsaneh Seyedmikaeili, Masoumeh KeshavarzNorouzpour, Ali Namvar, Mohammad Jazebi, Mojgan Mirakholi, Alireza Azizi saraji, **Elnaz Agi**, Azam Bolhassani. *International Congress on Thrombosis and Hemostasis of Iran*. 2017.
- 8) **Molecular techniques in diagnosis of rare bleeding disorders.**
Mohammed Awal Issah, Shaban Alizadeh, Zahra Kashani Khatib, Zahra Alizadeh, **Elnaz Agi**. *International Congress on Thrombosis and Hemostasis of Iran*. 2017.
- 9) **Role of MAP2K4 gene polymorphisms on inhibitor development in Iranian hemophilia A patients**
Niloo far Naderi, Ali Namvar, Nasir Mohajel, Mohammad Jazebi, Seyed Mehdi Sadat, Mojgan Mirakholi, Alireza Azizi saraji, **Elnaz Agi**, Azam Bolhassani. *International Congress on Thrombosis and Hemostasis of Iran*. 2017.
- 10) **Study of MMP-2 methylation status and expression in factor XIII deficient patients with and without ICH**
Zahra Kashani Khatib, Shaban Alizadeh, Akbar Dorgalaleh, Ali Nouruzi Aghideh, **Elnaz Agi**. *International Congress on Thrombosis and Hemostasis of Iran*. 2017.
- 11) **Small heat shock protein 27 as a promising adjuvant for improvement of HIV-1 vaccine**
Alireza Milani, **Elnaz Agi**, Azam Bolhassani. *Third International Conference and the 7th National AIDS Seminar*. 2018.
- 12) **Assessment of ATP1B1 gene expression in nerve growth factor-treated PC12 cells**
Elnaz Agi, Ali Namvar, Soheil Moradifard, Azam Bolhassani. *2nd International Congress on Biomedicine*. 2018.
- 13) **Generation of HCV NS3 protein fused to small heat shock protein 27 as an antigenic candidate**

Sina Alizadeh, Azam Bolhassani, Shiva Irani, Seyed Mehdi Sadat, **Elnaz Agi**. *10th International Congress of Laboratory and Clinic*. 2018.

- 14) **Identification of Long non-coding RNAs in Severe Hemophilia A Patients using Bioinformatics Analysis**
Elnaz Agi, Ali Namvar and Azam Bolhassani. *4th International Student Biotechnology Conference*. 2019.
- 15) **Long non-coding RNA expression analysis of Factor 8 gene in hemophilia A patients of Iran**
Elnaz Agi, Ali Namvar and Azam Bolhassani. *3rd International & 11th National Biotechnology Congress of Islamic Republic of Iran*. 2019.
- 16) **Analysis of two long non-coding RNA expression among hemophilia A patients of Iran**
Elnaz Agi, Ali Namvar and Azam Bolhassani. *5th INTERNATIONAL CONGRESS ON BIOMEDICINE*. 2021.
- 17) **Investigation of Occult Hepatitis C Infection among Iranian Hemophilia Patients.**
Elnaz Agi, Ali Namvar, Azam Bolhassani. *17th National and 8th International Congress of Biochemistry and Molecular Biology*. 2022.
- 18) **Evaluation of four LncRNAs expression levels in hemophilia A patients**
Elnaz Agi, Azam Bolhassani. *13th National and 5th International Biotechnology Congress*. 2023.
- 19) **Investigating correlation of cytokine and inflammatory response genes polymorphism with development of the factor VIII inhibitor in patients with Hemophilia A**
Elnaz Agi, Azam Bolhassani. *6th International and 14th National Biotechnology Congress*. 2025.

Published articles:

- 1) **HPV16 E7-CT (gp96) fusion protein: Molecular cloning, expression and purification of a recombinant 6xHis-tagged protein in E. coli**
Amin Daemi, Sahar Hosseinzadeh, Sima Rafati, Farnaz Zahedifard, Masoumeh Rajabi Bazl, Fatemeh Doustdari, Mehrdad Hashemi, **Elnaz Agi**, Azam Bolhassani.
Journal of Paramedical Sciences (JPS). 2012, Vol.3, No.2 ISSN 2008-4978
- 2) **Whole recombinant Pichia pastoris expressing HPV16 L1 antigen is superior in inducing protection against tumor growth as compared to killed transgenic Leishmania.**
Bolhassani A, Muller M, Roohvand F, Motevalli F, **Agi E**, Shokri M, Rad MM, Hosseinzadeh S.
Hum Vaccin Immunother. 2014. 10(12):3499-508
- 3) **DNA-Based Vaccine Is More Efficient than Non-Pathogenic Live Vaccine for Prevention of HPV16 E7-Overexpressing Cancers**
Amin Daemi, Sahar Hosseinzadeh, Azam Bolhassani, **Elnaz Agi**
Vaccine Research. 2014. Vol 1, No 1.
- 4) **Chemo-immunotherapy using saffron and its ingredients followed by E7-NT (gp96) DNA vaccine generates different anti-tumor effects against tumors expressing the E7 protein of human papillomavirus.**
Khavari A, Bolhassani A, Alizadeh F, Bathaie SZ, Balaram P, **Agi E**, Vahabpour R.
Arch Virol. 2015. 160(2):499-508
- 5) **VLP production in Leishmania Tarentolae: A novel expression system for purification and assembly of HPV16 L1**
Azam bolhassani, Zeinab shirbaghaee, **Elnaz Agi**, noushin Davoudi

Protein Expression and Purification. 2015. 116:7-11.

- 6) **Prime/ boost immunization with HIV-1 MPER-V3 fusion construct enhances humoral and cellular immune responses**
Azam Bolhassani, Kimia Kardani, Rouhollah Vahabpour, Nourieh Habibzadeh, Mohammad Reza Aghasadeghi, Seyed Mehdi Sadat, **Elnaz Agi**.
Immunology Letters. 2015. 168(2):366-73.
- 7) **Protein vaccination with HPV16 E7/Pep-1 nanoparticles elicits a protective T-helper cell-mediated immune response**
Golnaz Mardani, Azam Bolhassani, **Elnaz Agi**, Sepideh Shahbazi, Seyed Mehdi Sadat.
IUBMB Life. 2016.
- 8) **Different strategies of gene delivery for treatment of cancer and other disorders**
Elnaz Agi, Zahra Mosaferi, Sepideh Khatamsaz, Parisa Cheraghi, Nooshin Samadian, Azam Bolhassani
Journal of Solid Tumors. 2016, Vol. 6, No. 2.
- 9) **Hp91 immunoadjuvant: An HMGB1-derived peptide for development of therapeutic HPV vaccines**
Somayeh Talebi, Azam Bolhassani, Seyed Mehdi Sadat, Rouhollah Vahabpour, **Elnaz Agi**, Sepideh Shahbazi
Biomedicine & Pharmacotherapy. 85 (2017) 148–154
- 10) **Combination of cell penetrating peptides and heterologous DNA prime/protein boost strategy enhances immune responses against HIV-1 Nef antigen in BALB/c mouse model**
Somayeh Kadkhodayan, Behnaz Sadat Jafarzade, Seyed Mehdi Sadat, Fateme Motevalli, **Elnaz Agi**, Azam Bolhassani
Immunology Letters. 2017. (Epub ahead of print).
- 11) **Comparison of HCV Core and CoreE1E2 Virus-Like Particles Generated by Stably Transfected Leishmania tarentolae for the Stimulation of Th1 Immune Responses in Mice.**
Azam Bolhassani*, Noushin Davoudi, Fatemeh Motevalli, **Elnaz Agi**.
Current Drug Delivery. Volume 14, Issue 7, 2017.
- 12) **Modified DCs and MSCs with HPV E7 antigen and small Hsps: Which one is the most potent strategy for eradication of tumors?**
Azam Bolhassania, Sepideh Shahbazi, **Elnaz Agi**, Nooshin Haghighipour, Amin Hadi, Fatemeh Asgari
Molecular Immunology 108 (2019) 102–110.
- 13) **Expression of the Neuron-Related Genes in hNGF- β -Treated PC12 Cells**
E. Agi, A. Namvar, S. Moradi, and A. Bolhassani
Neurophysiology, Vol. 50, No. 6, November, 2018.
- 14) **Heat shock proteins in infection**
Azam Bolhassani, **Elnaz Agi**
Clinica Chimica Acta 498 (2019) 90–100
- 15) **Inflammatory and immune response genes: A genetic analysis of inhibitor development in Iranian hemophilia A patients**
Niloofar Naderi, Hossein Yousefi, Sahar Mollazadeh, Afsaneh Seyed Mikaeili, Masoumeh Keshavarz Norouzpour, Mohammad Jazebi, Seyedeh Somayeh Moazezi Nekooi Asl, Ali Namvar, Alireza Azizi Saraji, **Elnaz Agi** & Azam Bolhassani
Pediatric hematology and oncology. 2019 Mar 9:1-2.
- 16) **Pharmaceutical Approaches for Treatment of Hepatitis C Virus**
Alireza Milani, Parya Basimi, **Elnaz Agi**, Azam Bolhassani
Curr Pharm Des. 2020 May 9

- 17) **Impact of Blood Transfusion on the Prevalence of HHpgV-1, HPgV-1, and B19V Among Iranian HCV-infected Patients With Hemophilia**
Elnaz Agi, Samira Hojjatipour, Ali Namvar, Azam Bolhassani
J Pediatr Hematol Oncol. 2020 May; 42(4):e213-e218.
- 18) **Development of multiepitope therapeutic vaccines against the most prevalent high-risk human papillomaviruses**
Heidar Ali Panahi, Azam Bolhassani, Gholamreza Javadi, Zahra Noormohammadi, Elnaz Agi
Immunotherapy. 2020 May; 12(7):459-479.
- 19) **Development of HPV 16,18,31,45 E5 and E7 peptides-based vaccines predicted by immunoinformatics tools**
Ali Namvar, Heidar Ali Panahi, Elnaz Agi, Azam Bolhassani
Biotechnol Lett. 2020 Mar; 42(3):403-418
- 20) **Molecular Study of Occult Hepatitis C Infection among Iranian Hemophilia Patients Treated with Direct-acting Antiviral Agents.**
Elnaz Agi, Saber Asghari, Ali Namvar, Niloofar Khairkhah, Niloofar Naderi, Ali Anvar, Alireza Azizi Saraji, Azam Bolhassani
JOMMID 2020
- 21) **Detection of Anti-IgGs against Heat Shock Proteins 27 and 20, HP91 Peptide, and HIV-1 Polypeptides in HIV-Positive and Negative Patients**
Alireza Milani, Kazem Baesi, Elnaz Agi, Azam Bolhassani
July 2020. Journal of Medical Microbiology and Infectious Diseases 8(3):113-104
- 22) **B1 protein: a novel cell penetrating protein for in vitro and in vivo delivery of HIV-1 multi-epitope DNA constructs**
Kimia Kardani, Azam Bolhassani, Elnaz Agi, Atieh Hashemi
Biotechnol Lett. 2020.
- 23) **HIV-1 Accessory Proteins: Which one is Potentially Effective in Diagnosis and Vaccine Development?**
Alireza Milani, Kazem Baesi, Elnaz Agi, Ghazal Marouf, Maryam Ahmadi, Azam Bolhassani
December 2021. Protein and Peptide Letters 28
- 24) **Correlation of SARS-CoV-2 Infection with Hepatitis and Liver Disorders**
Kimia Kardani, Azam Bolhassani, Mona Kardani, Elnaz Agi.
Journal of Medical Microbiology and Infectious Diseases. 2021.
- 25) **Genotypes and phenotypes characterization of 17 Iranian patients with inherited factor X deficiency: identification of a novel mutation: Leu487Phe**
Aysan Fallah, Mahmood Shams, Elnaz Agi, Mohammad Jazebi, MohammadR Baghaipoor, Tohid Naderi, Mohammad R Rezvani
Blood Coagul Fibrinolysis. 2022 Mar 1; 33(2):75-82
- 26) **Immunological investigation of a multiepitope peptide vaccine candidate based on main proteins of SARS-CoV-2 pathogen**
Khairkhah N, Bolhassani A, Agi E, Namvar A, Nikyar A (2022).
PLoS ONE 17(6): e026825

- 27) **Immunopotential by linking Hsp70 T-cell epitopes to Gag-Pol-Env-Nef-Rev multiepitope construct and increased IFN-gamma secretion in infected lymphocytes**
Akbari, Elahe, Soheila Ajdary, Esmat Mirabzadeh Ardakani, **Elnaz Agi**, Alireza Milani, Masoud Seyedinkhorasani, Vahid Khalaj, and Azam Bolhassani.
Pathogens and Disease (2022).
- 28) **Different dendritic cells-based vaccine constructs influence HIV-1 antigen-specific immunological responses and cytokine generation in virion-exposed splenocytes**
Milani, A., **Agi, E.**, Hassan Pouriayevali, M., Motevalli, F., Bolhassani, A.
International Immunopharmacologythis link is disabled, 2022, 113, 109406
- 29) **LL-37 antimicrobial peptide and heterologous prime-boost vaccination regimen significantly induce HIV-1 Nef-Vpr antigen- and virion-specific immune responses in mice**
Nikyar, A., Bolhassani, A., **Agi, E.**
Biotechnology Lettersthis link is disabled, 2023, 45(1), pp. 33–45
- 30) **Evaluation of MALAT-1 and HOTAIR LncRNAs Expression Levels in Incidence of Hemophilia**
Agi, E., Namvar, A., Bolhassani, A.
Journal of Mazandaran University of Medical Sciences, 2023, 32(218), pp. 1–12
- 31) **Comparison of Adjuvant Effects of Montanide ISA-720 and Heat Shock Protein 27 in Increasing Immunostimulatory Properties of HIV-1 Nef-Vif Fusion Protein Construct.**
Khairkhan N, Shahhosseini F, **Agi E**, Milani A, Bolhassani.
Protein and Peptide Letters. 2023; 30(5):401-410
- 32) **Successful Expression of DNA-Based Vaccine Construct Encoding Human Papillomavirus Type 16 E7 Fused to Heat Shock Protein B1 in Eukaryotic Cells**
Reyhane Najafi, Azam Bolhassani, Maryam Montazeri, **Elnaz Agi**
J Med Microbiol Infect Dis, 2023; 11 (3): 123-137.
- 33) **Engineered ClearColi™-derived outer membrane vesicles as functional carriers for development of HIV-1 therapeutic vaccine candidate**
Leila Sadeghi, Azam Bolhassani, Elham Mohit, Kazem Baesi, Mohammad Reza Aghasadeghi, Alireza Milani, **Elnaz Agi**
Microbial Pathogenesis 193 (2024) 106749
- 34) **Inhibition of HPV18 E6/E7 Protein-Expressing HeLa Cell Proliferation Using Optimized De Novo CRISPR/Cas9 Constructs Delivered by the LL-37 Peptide.**
Khairkhan, N., Bolhassani, A., Najafipour, R., Namvar, A., Milani, A., **Agi, E.**, ... & Khosravy, M. S. (2024).
Journal of Medical Microbiology and Infectious Diseases, 12(4), 278-291.
- 35) **Differential Immunostimulatory Effects of EGFP and+ 36 GFP on Immune Cells**
Moradi Pordanjani, Parisa, Azam Bolhassani, and **Elnaz Agi**.
Journal of Medical Microbiology and Infectious Diseases 12, no. 3 (2024): 201-207.
- 36) **Antitumor Effects of HPV E7 and L1-E7 Multiepitope DNA Constructs Delivered by Synthetic and Arginine-Rich Cell Penetrating Peptides.**
N Fathi, A Hojaji, A Bolhassani, **E Agi**
Int J Pept Res Ther 31, 18 (2025).
- 37) **Immunoinformatics Analysis of Potent Therapeutic Formulations for the Development of HIV-1 Nefmut-Carrying Engineered Exosomes**

Parisa Moradi Pordanjani, Azam Bolhassani, Fatemeh Heidarnejad and **Elnaz Agi**
Current HIV Research (2025).

38) Effective Plant-Derived Proteins and Peptides in Leukemia Treatment

Zahra Moghaddasi, Azam Bolhassani, and **Elnaz Agi**
Protein and Peptide Letters. In Press. Available online September 10, 2025

39) Investigation of synergistic effects of β -defensin, vesatolimod and resiquimod in increasing the potency of a therapeutic HIV-1 vaccine candidate

Seyedeh Somayeh Hosseini Alarzi, Azam Bolhassani, **Elnaz Agi**, Reza Nekouian
Journal of Pharmaceutical Sciences 115 (2026) 104019

Books:

HPV Infections: Diagnosis, Prevention and Treatment. 2018.

DOI: 10.2174/97816810861701180101

eISBN: 978-1-68108-617-0, 2018

ISBN: 978-1-68108-618-7.