

Curriculum Vitae



Abolfazl Barzegar

Barzegar's Personal Records

Name: Abolfazl Barzegar

Date of Birth: 1 September 1975

Place of Birth: Shabestar, Iran

Marital Status: Married

Appointment: Ph.D

Department Address: Institute of Biochemistry and Biophysics, University of Tehran,
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Education

B.Sc:

From: Razi University, Kermanshah, Iran (1999)

Major: Biology

M.Sc:

From: University of Tarbiat-Modarres, Tehran, Iran (2003)

Major: Biophysics

Thesis: The investigation of insulin aggregation into different concentration and its interaction with membrane models by PGSE-NMR

Ph.D:

Institute of Biochemistry and Biophysics (IBB), University of Tehran, Iran (2008)

Major: Biophysics

Thesis: Study of the Physicochemical Properties and Nanostructural Peptide of Alcohol Dehydrogenase (ADH)

Professional experience:

2009-present Associated Professor of Biophysics, Research Institute for Fundamental Sciences (RIFS), University of Tabriz, Tabriz, Iran

2007-2008 Scientific Visitors, Working on the project name: Development of novel antioxidant drugs. University of Rome La Sapienza, Italy

Award:

Young Scientist Forum (YSF) at OzBio2010, over the period 23 to 26 September 2010. Melbourne, Australia,

This was accompanied by extensive advertising amongst the IUBMB community of scientists (including additional advertising via FAOBMB and FEBS).

Research interests:

- Protein structure, function, and design;
- Computational Biology: In molecular biology, biophysics and biochemistry, Molecular dynamic simulations
- Structural Biology
- Drug Design & Molecular docking
- Bioinformatics
- Nanobiotechnology, Drug-Nanostructure complexes for Nanomedicine
- Biosensors
- Cell culture, Intracellular ROS assay, Cell viability;
- Antioxidant assay, new antioxidant design

Teaching experiences

1. Bioinformatics: PhD Courses, Medi Univ Tabriz (Biochem/Biotech Dep.)
2. Bioinformatics: PhD Courses, Medi Univ Tabriz (Pharmacy Dep.)
3. Medical Informatics: PhD Courses, Medi Univ Tabriz (Pharmacy Dep.)
4. Protein Engineering: PhD Courses, Medi Univ Tabriz (Biotech Dep.)
5. Protein Chemistry, PhD Courses, Medi Univ Tabriz (Pharmacy Dep.)
6. Nanobiotechnology: PhD/ M.Sc. Courses, Medi Univ Tabriz (NanoBiot Dep.)
7. Molecular Biophysics, M.Sc. Courses, University of Tabriz
8. Membrane Biophysics, M.Sc. Courses, University of Tabriz
9. Cellular Biophysics, M.Sc. Courses, University of Tabriz
10. DNA Structure&Replications : M.Sc. Courses , Azerbaijan University
11. Enzymes Kinetics: M.Sc. Courses , Azerbaijan University
12. Medical physics: M.D. Courses , University of Tabriz
13. Biophysics: B.Sc. Courses , University of Tabriz
14. Biophysical Chemistry: B.Sc. Courses , University of Tabriz
15. Advanced Biochemistry: B.Sc. Courses , Azerbaijan University
16. Medical physics : B.Sc. Courses , University of Tabriz

Research & Workshops

Workshops

1. **A. Barzegar**, *Scientific Committee* of Primary bioinformatics, 2016, Medical university of Tabriz.
2. **A. Barzegar**, *Scientific Committee* of The national workshop entitled “Drug Design,” during 11th Iranian Congress of Biochemistry and Molecular Biology, 11-12 Feb 2011, Qazvin University.
3. **A. Barzegar**, *Scientific Committee* of The national workshop entitled “Protein-Protein Interactions”, during the National Proteomics Congress, 28-29 Oct 2010, Shiraz University.
4. **A. Barzegar** as a *Chief of Organizing/Scientific Committee* of First National workshop entitled “Computational Nanobiotechnology and application in Drug Design” 29th Sept-1st Oct 2009, in the University of Tabriz.
5. **A. Barzegar**, as a *Chief of Organizing/Scientific Committee* of Second National workshop entitled “Computational Nanobiotechnology and application in Drug Design” 27th-29th Nov 2009, in the University of Tabriz.

National Conference

1. Saeed Jafarirad, Farahanaz Behzad, **Abolfazl Barzegar**, Azam Samadi, Biosynthesis of iron-Reduced Graphene Oxide nanocomposite with using Rosa canina plant extract, **1395**, دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی
2. Solmaz Zakhireh, Saeed Jafarirad, Roya Panahi, **Abolfazl Bazegar**, Biosynthesis of Fe doped ZnO nanoparticles using Berberis thunbergii extract, **1395**, دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی
3. **A. Barzegar**, *The Main challenges in protein-protein interactions, The National Proteomics Congress, Shiraz University, 28-29 Oct 2010 (Oral Peresentation)*

4. **A. Barzegar**, *Diversity and evolution of human immunodeficiency viruses (HIV-1 and HIV-2)*, *The National Proteomics Congress, Shiraz University, 28-29 Oct 2010 (Poater Peresentation)*
5. **A. Barzegar**, *Role of Peptides in Nanbiotechnology as a nanomachine*, 1st Iranian Student Nanotechnology Congress, *Yazd-Iran, May,1-2, 2008 (Oral Peresentation)*
6. **A. Barzegar**, *Role of Peptides in Nanbiotechnology as a nanomachine*, 1st Iranian Student Nanotechnology Congress, *Yazd-Iran, May,1-2, 2008 (Oral Peresentation)*
7. **A. Barzegar**, A.A. Moosavi-Movahedi, M.R. Ganjali, P. Norouzi, A.A. Sabouri and S. Sobhanian, *Monitoring horse liver alcohol dehydrogenase aggregation during thermal unfolding by dynode voltage in circular dichroism spectroscopy*, 7th Iranian Biophysical Chemistry Conference, 18-19 July, 2006, *University of Tabriz, Tabriz, Iran, (Oral Presentation), I was as a member of organizing committee.*
8. **A. Barzegar**, A.A. Moosavi-Movahedi, *Ligand binding affinity and structural stability of HSA upon interaction with glucose*, 8th Iranian physical chemistry seminar, *Ferdowsi university of Mashhad, Mashhad-Iran, 21-24 November, 2005, (Oral Presentation).*
9. **A. Barzegar**, H. Naderi-Manesh, M. Erfani, *Study of the effect of EDTANa⁺ as an enhancer absorbance compound on the partition coefficient of insulin into micelles by NMR spectroscopy*, 16th Iranian Congress of Physiology & Pharmacology, *Tehran-Iran, May 9-13, 2003 (Poster Peresentation).*
10. **A. Barzegar**, H. Naderi-Manesh, M. Erfani, *Survey of interaction insulin with two organic components as model for peptide transition into membrane by pulsed field gradient-NMR spectroscopy*, 1st National Congress of Molecular Cell Biology, *Chamran University of Ahvaz, 25-26 Feb, 2003, (Oral Peresentation).*
11. **A. Barzegar**, A. Asadi, *NMR Spectroscopy and its new applications in the Biology*, 1st Iranian Student Chemical Congress, *Tehran-Iran, Feb 16-17, 2003 (Oral Peresentation)*
12. A. Asadi, **A. Barzegar**, *Chemical and Biological Sensors*, 1st Iranian Student Chemical Congress, *Tehran-Iran, Feb 16-17, 2003 (Oral Peresentation)*

13. A. **Barzegar** and Ali A. Moosavi-Movahedi, Alcohol Biosensor Based on Self-Assembled Monolayer of Nanostructural Cysteine Induced amplification of Electrocatalytic NADH Oxidation, *First regional symposium on Bioelectrochemistry*, IBB, University of Tehran, Tehran, Iran, *Oct 13-15, 2008 (Poster Presentation)*.

International Conferences

1. **Abolfazl Barzegar**, *Quantum-chemical calculations of the antioxidant properties of polyphenolicflavonoid compounds, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
2. **Abolfazl Barzegar**, *Quantitative structure–activity relationship in drug designing against HIV-1, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
3. **Abolfazl Barzegar**, Leila Rezakhani, Alireza Tarinejad, *The role of lipid-II for interacting lantibiotic Nisin Z into POPC membrane, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
4. **Abolfazl Barzegar**, Sahar Andarzi Gargari, Alireza Tarinejad, *The mechanism of plant flavonoidmyricetinas anti-fibrillation effects for Alzheimer's peptides, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
5. Roya Panahi, Saeed Jafarirad, **Abolfazl Barzegar**, Azam Samadi, Farahnaz behzad, *Biosynthesis of Fe@ZnO nanocomposite using Berberis thunbergii extract and investigation in interaction of nanocomposite and human serum albumin, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
6. Farahnaz behzad, Saeed Jafarirad, **Abolfazl Barzegar**, Azam Samadi, Roya Panahi, *Biosynthesis of Fe@rGOnanocomposite using Rosa canina extract and investigation of interaction between Fe@rGOnanocomposite and human serum albumin, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
7. **Abolfazl Barzegar**, NafisehAsl-Azarnejad, HadiValizadeh, *The synthesis of different antimicrobial peptides based on the solid phase peptide synthesis method, 19th National and 7th International Congress of Biology, 30 Aug-1Sep 2016, University of Tabriz, Iran.*
8. **A. Barzegar**, A.A. Moosavi-Movahedi, *Mechanistic perspective for polymerization of adh and role of α -cyclodextrin as an artificial chaperone for*

solubilization of larger amorphous nanoaggregates, OzBio2010-Melbourne Australia, September 26-October 1, 2010.

9. **A. Barzegar**, A.A. Moosavi-Movahedi, Antioxidant activity of dipyridamole against extracellular/intracellular free-radical scavenging, (*3rd International Congress of Biochemistry and Molecular Biology, 16-19 November 2009, poster Presentation*). *J. Iran. Chem. Soc., Vol. 6, Suppl., November 2009, pp. S144-S150.*
10. **A. Barzegar**, A.A. Moosavi-Movahedi, Loop/coil conformations responsible for higher thermostability of alcohol dehydrogenases, (*3rd International Congress of Biochemistry and Molecular Biology, 16-19 November 2009, poster Presentation*). *J. Iran. Chem. Soc., Vol. 6, Suppl., November 2009, pp. S238-S241.*
11. R. Yousefi, **A. Barzegar**, T. Haertle, J.M. Chobert, A.A. Moosavi-Movahedi, A.A. Saboury, Analysis of reversible interaction between beta-casein
12. chaperone and partially unfolded state of target protein (ADH), (*3rd International Congress of Biochemistry and Molecular Biology, 16-19 November 2009, poster Presentation*). *J. Iran. Chem. Soc., Vol. 6, Suppl., November 2009, pp. S203-S229.*
13. **A. Barzegar**, A.A. Moosavi-Movahedi, The mechanism of oligomeric alcohol dehydrogenases polymerization into nanoaggregates, *The VIII European Symposium of The Protein Society* takes place at the Congress Center in Zurich, Switzerland from June 14th -18th 2009 (*poster Presentation*).
14. **A. Barzegar**, Jens Z. Pedersen and A.A. Moosavi-Movahedi, *The mechanism of radical scavenging activity of new vitamin E analogue*, 6th Aegean Analytical Chemistry Days (AACD), Denizli, Turkey, Oct 09-12, 2008, (*Oral Presentation*).
15. **A. Barzegar**, A.A. Moosavi-Movahedi, K. Mahnam, H. Bahrami, A.A. Saboury, D. Ntentopoulou, M.R. Ganjali. Experimental and Computational Docking Study of Alcohol Dehydrogenase Stabilization by α -CyD, 52nd Annual Meeting of the Biophysical Society and 16th IUPAB, California, Feb 2-6, 2008, (*poster Presentation*).
16. **A. Barzegar**, K. Mahnam, H. Bahrami and A.A. Moosavi-Movahedi "Molecular dynamics simulations of intermolecular chaperone peptide[40-60] alcohol dehydrogenase and role of pro mutants" 2nd International Congress on

Biochemistry and Molecular Biology, October 29-Nov 1, 2007, Shiraz, Iran. It is also published at Archives of Iranian Medicine Vol 10, November, 120, 2007.

17. **A. Barzegar and A.A. Moosavi-Movahedi** "Prevention of thermal aggregation of yeast alcohol dehydrogenase by arginine and alpha-cyclodextrin *The FEBS Journal*, vol 273, Supplement 1, page 51-51 (2006). This paper was **presented orally** at 31th FEBS Congress, Istanbul, Turkey, 24-29 June 2006.
18. **A. Barzegar and A.A. Moosavi-Movahedi**, Multiple unfolded states of yeast and horse liver alcohol dehydrogenase by heat treatment, 20th IUBMM International Congress of Biochemistry and Molecular Biology and 11th FAOBMB Congress, June 18-23, 2006, Kyoto Japan, (**poster Presentation**).
19. **A. Barzegar and A.A. Moosavi-Movahedi** "Aggregation aspects of insulin upon interaction with glucose: Spectroscopic Study" 18th Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB) Symposium, Lahore, Pakistan, Nov 20-23, 2005, (**Poster Presentation**).
20. **A. Barzegar, A.A. Moosavi-Movahedi, M.A. Hosseinpoor-Faizi, M. Aminbakhsh and P. Azrfam** "The conformational change of glycated insulin: Spectroscopic studies" *First International Congress on Biochemistry and Molecular Biology*, September 11-15, 2005, Tehran, Iran (**Poster Presentation**).

Published Full papers

1. H. Mohammadzadeh-Aghdash, J Ezzati Nazhad Dolatabadi, P Dehghan, V Panahi-Azar, **A Barzegar**, Multi-spectroscopic and molecular modeling studies of bovine serum albumin interaction with sodium acetate food additive, *Food Chemistry*, **2017**, 228, 265-269.
2. **A Barzegar**, E Naghizadeh, M Zakariazadeh, J. Azamat, Molecular Dynamics Simulation Study of the HIV-1 Protease Inhibition Using Fullerene and New Fullerene Derivatives of Carbon Nanostructures, *Mini-Reviews in Medicinal Chemistry*, **2017**, 17, 633-647.
3. B Akbari, S Farajnia, N Zarghami, N Mahdieh, M Rahmati, S A Khosroshahi, **A Barzegar**, L Rahbarnia, Construction, expression, and activity of a novel immunotoxin comprising a humanized antiepidermal growth factor receptor scFv and modified *Pseudomonas aeruginosa* exotoxin A. *Anti-Cancer Drugs*, **2017**, 28 (3), 263-270.
4. **A Barzegar**, S Moosavi, Tetraplex Structural Stability of Guanine-Rich 15-mer DNA Nanomotor Based on the Formation of Higher-order G-Quadruplex by Consistent Hoogsteen H-bonds, *Current Nanoscience*, **2017**, 13 (1), 79-83
5. BB Shotorbani, E Alizadeh, R Salehi, **A Barzegar**, Adhesion of mesenchymal stem cells to biomimetic polymers: A review, *Materials Science and Engineering*: **2017**, C 71, 1192-1200.
6. EM Aghdam, M Sinn, V Tarhriz, **A Barzegar**, JS Hartig, MS Hejazi, TPP riboswitch characterization in *Alishewanella tabrizica* and *Alishewanella aestuarii* and comparison with other TPP riboswitches, *Microbiological research*, **2017**, 195, 71-80.
7. EM Aghdam, MS Hejazi, A Barzegar, Riboswitches: From living biosensors to novel targets of antibiotics, *Gene* **2016**, 592 (2), 244-259.
8. S Mahmoodi, N Nezafat, **A Barzegar**, M Negahdaripour, A R Nikanfar, N Zarghami, Y Ghasemi, Harnessing Bioinformatics for Designing a Novel Multiepitope Peptide Vaccine Against Breast Cancer, *Current Pharmaceutical Biotechnology*, **2016**, 17 (12), 1100-1114.

9. **Barzegar A**, Antioxidant activity of polyphenolic myricetin in vitro cell-free and cell-based systems, *Molecular Biology Research Communications*, 2016, 5 (2), 87-95.
10. A Ameghi, Y Pilehvar-Soltanahmadi, B Baradaran, **A Barzegar**, M Taghizadeh, N Zarghami, K Aghaiypour, Protective Immunity Against Homologous and Heterologous Influenza Virus Lethal Challenge by Immunization with New Recombinant Chimeric HA2-M2e Fusion Protein in BALB/C Mice. *Viral immunology* **2016**, 29 (4), 228-234.
11. **Barzegar A**, Mansouri A, Azamat J, Molecular dynamics simulation of non-covalent single-walled carbon nanotube functionalization with surfactant peptides, *Journal of Molecular Graphics and Modelling*, 2016 Jan 14;64, 75-84.
12. Rezaei-Sadabady R, Eidi A, Zarghami N, **Barzegar A**, Intracellular ROS protection efficiency and free radical-scavenging activity of quercetin and quercetin-encapsulated liposomes, *Artificial cells, nanomedicine, and biotechnology*, 2016 Feb;44(1):128-34.
13. Alizadeh E, Zarghami N, Eslaminejad MB, Akbarzadeh A, **Barzegar A**, Mohammadi SA, The effect of dimethyl sulfoxide on hepatic differentiation of mesenchymal stem cells, *Artificial cells, nanomedicine, and biotechnology*, 2016 Feb;44(1):157-64.
14. Ameghi A, Baradaran B, Aghaiypour K, **Barzegar A**, Pilehvar-Soltanahmadi Y, Moghadampour M, Taghizadeh M, Zarghami N., Generation of New M2e-HA2 Fusion Chimeric Peptide to Development of a Recombinant Fusion Protein Vaccine, *Advanced Pharmaceutical Bulletin*, 2015 Dec;5:673-81.

15. Zakariazadeh M, **Barzegar A**, Soltani S, Aryapour H, Developing 2D-QSAR models for naphthyridine derivatives against HIV-1 integrase activity, *Medicinal Chemistry Research*, June 2015, Volume 24, Issue 6, pp 2485-2504,
16. Alizadeh E, Akbarzadeh A, Eslaminejad MB, **Barzegar A**, Hashemzadeh S, Nejati-Koshki K, Zarghami N. Up Regulation of Liver-enriched Transcription Factors HNF4a and HNF6 and Liver-Specific MicroRNA (miR-122) by Inhibition of Let-7b in Mesenchymal Stem Cells, *Chemical biology & drug design*, 2015 Mar;85(3):268-79,
17. R Jahangiri, S Soltani, **A Barzegar**, A review of QSAR studies to predict activity of ACE peptide inhibitors, *Pharmaceutical Sciences*, 2014 20 (3), 122.
18. Ghojaie M, **Barzegar A**, Asadzadeh R, Evaluating the function of IRFI005 on removing intra and extracellular free radicals, *Scientific Journal of Ilam University of Medical Scienc.* 2014; 22(2): 158-166.
19. Abhari A, Zarghami N, Shahnazi V, **Barzegar A**, Farzadi L, Karami H, Zununi Vahed S, Nouri M, Significance of microRNA targeted estrogen receptor in male fertility, *Iranian journal of basic medical sciences*, 2014 Feb;17(2):81-6.
20. Mehdizadeh Aghdam E, **Barzegar A**, Hejazi MS, Evolutionary Origin and Conserved Structural Building Blocks of Riboswitches and Ribosomal RNAs: Riboswitches as Probable Target Sites for Aminoglycosides Interaction, *Advanced pharmaceutical bulletin*, 2014;4(3):225-35

21. Ezzati Nazhad Dolatabadi J, Panahi-Azar V, **Barzegar A**, Jamali AA, Kheirdoosh F, Kashanian S, Omid Y, Spectroscopic and molecular modeling studies of human serum albumin interaction with propyl gallate, RSC Advances, 2014,4, 64559-64564,
22. Mehdizadeh Aghdam E, Hejazi ME, Hejazi MS, **Barzegar A**, Riboswitches as Potential Targets for Aminoglycosides Compared with rRNA Molecules: In Silico Study, Journal of Microbial & Biochemical Technology, 2014, S2-S9
23. Zarei Jaliani H, Farajnia S, Safdari Y, Mohammadi SA, **Barzegar A**, Talebi S, Optimized condition for enhanced soluble-expression of recombinant mutant *Anabaena variabilis* phenylalanine ammonia lyase, Advanced pharmaceutical bulletin, 2014;4(3):261-6.
24. در سن به وابسته رنگدانهای تغییرات, برزگر دولتی, ابوالفضل شفايي, ميشم پور رحيم چاپارزاده, لادن نادر. *Rosa hybrida* برگهای مجله پژوهشهای گیاهی (مجله زیست شناسی ایران), جلد ۲۶ شماره ۳, سال ۱۳۹۲
25. Rezaei-Sadabady R, Zarghami N, **Barzegar A**, Eidi A, Akbarzadeh A, Rezaei-Tavirani M., Studies of the Relationship between Structure and Antioxidant Activity in Interesting Systems, Including Tyrosol, Hydroxytyrosol Derivatives Indicated by Quantum Chemical Calculations, Soft, Vol.2 No.3(2013), Article ID:36611, PP. 13-18,
26. Jaliani HZ, Farajnia S, Mohammadi SA, **Barzegar A**, Talebi S., Engineering and kinetic stabilization of the therapeutic enzyme *Anabaena*

- variabilis phenylalanine ammonia lyase, *Applied biochemistry and biotechnology*, 2013 Dec;171(7):1805-18.
27. M Rafiei, A. **Barzegar**, A Asadi, Comparative study of the antioxidant activities of water-soluble vitamin E analogues: Trolox and IRFI, *Asian J. Chem.*, 2013, Vol. 25 Issue 11, p6064-6070..
28. A. **Barzegar**, Proton-coupled electron-transfer mechanism for the radical scavenging activity of cardiovascular drug dipyridamole, *Plos One*, 2012;7(6):e39660.
29. A. **Barzegar**, The role of electron-transfer and H-Atom donation on the superb antioxidant activity and free radical reaction of curcumin, *Food Chemistry*, **2012**, 135, 1369–1376.
30. P Soleimani, A **Barzegar**, A. Movafeghi, Phylogenetic study of SIVcpz MT145 virus based on proteome and genome analysis, *J Biomol. Struct. Dyn.*, **2012**, 30, 328-337.
31. A. **Barzegar**, Intracellular ROS protection efficiency and free radical-scavenging activity of curcumin, *Plos One*, **2011**, 6, e26012.
32. A. **Barzegar**, M. Davari, N. Chaparzadeh, N. Zarghami, J. Z. Pedersen, S. Incerpi, L. Saso, A.A., Theoretical and Experimental Studies on the Structure-Antioxidant Activity Relationship of Synthetic 4-Methylcoumarins. *JICS*, **2011**, 8, 973-982.
33. A. **Barzegar**, J.Z. Pedersen, S. Incerpi, A.A., L. Saso, The mechanism of antioxidant activity of IRFI005 as a synthetic hydrophilic analogue of vitamin E, **Biochimie**, **2011**, 93, 1880-1888.
34. H. Rajabzadeh, D. Nourouzian, H. Hadi Alijanvand, A. Divsalar, J. Badraghi, A. **Barzegar**, M. Monajjemi, K. Zare, N. Sheibani, A.A. Saboury and A.A.

- Moosavi-Movahedi, Kinetic Stabilization of Lysozyme upon Interactions with β -Cyclodextrin through Partial Unfolding, *JICS*, **2011**, 8, 553-561.
- 35.** A. *Barzegar*, A.A. *Moosavi-Movahedi*, Chaperone-like activity of α -cyclodextrin via hydrophobic nanocavity to protect native structure of ADH. *Carbohydr. Res.* **2010**, 345, 243–249.
- 36.** A. *Barzegar*, A.A. *Moosavi-Movahedi*, *Mehran Miroliaei*, *Jens Z. Pedersen*, Thermostability analysis of mesophilic and thermophilic alcohol dehydrogenases regarding proline residues and loop/coil conformations, *Enzyme Microb. Technol.* **2009**, 45, 73-79.
- 37.** A. *Barzegar*, A.A. *Moosavi-Movahedi*, A. *Kyani*, *Bahram Goliaei*, New Model for Polymerization of Oligomeric Alcohol Dehydrogenases into Nanoaggregates, *Appl Biochem Biotech* **2010**, 160, 1188-1205..
- 38.** A. *Barzegar*, A.A. *Moosavi-Movahedi* and M.R. *Ganjali*, Amplification of electrocatalytic oxidation of NADH based on cysteine nanolayers, *J Appl Electrochem*, **2009**, 39, 1111-1116.
- 39.** A. *Barzegar*, A.A. *Moosavi-Movahedi*, K. *Mahnam*, H. *Bahrani*, N. *Sheibani*, Molecular Dynamic Simulations of Nanomechanic Chaperone Peptide and Effects of in silico His Mutations on Nanostructured Function, *J. Peptide Sci.*, **2008**, 14, 1173-1182.
- 40.** S. *Rezaei-Zarchi*, A.A. *Saboury*, A. *Javed*, A. *Barzegar*, S. *Ahmadian*, A. *Bayandori-Moghaddam*, Nano-composition of riboflavin-nafi on functional film and its application in biosensing, *J. Biosci.* **2008**, 33, 279-287.
- 41.** M. *Hassanisadi*, A. *Barzegar*, R. *Yousefi*, M. *Dalgalarrrondo*, *Jean-Marc Chobert*, T. *Haertlé*, A. *Saboury*, and A. A. *Moosavi-Movahedi*, Chemometric study of the

- aggregation of alcohol dehydrogenase and its suppression by β -caseins: a mechanistic perspective”, *Analytica Chimica Acta* 613,40-47 (2008).
42. A. **Barzegar**, R. Yousefi, A. Sharifzadeh, M. Dalgalarrrondo, Jean-Marc Chobert, M. R. Ganjali, P. Norouzi , M. R. Ehsani, A. Niasari-Naslaji, A. A. Saboury, T. Haertlé and A. A. Moosavi-Movahedi, Chaperone activities of bovine and camel β -caseins: Importance of their surface hydrophobicity in protection against alcohol dehydrogenase aggregation" *Int. J. Biol.Macromol.* 42, 392-399 (2008).
43. A. **Barzegar**, Ali A. Moosavi-Movahedi, Saeed Rezaei-Zarchi, Ali A. Saboury, Mohammad Reza Ganjali, Parviz Norouzi, Gholam H. Hakimelahi and Fu-Yuan Tsai, The Aggregation and Stability Mechanistic Studies on Alcohol Dehydrogenase by α -CyD, *Biotechnology and Applied Biochemistry*, 49(3), 203-211 (2008).
44. S. Rezaei-Zarchi, A. A. Saboury1, P. Norouzi, Jun Hong, A. **Barzegar**, M.R. Ganjali, H. Ghourchian, A. A. Moosavi-Movahedi and A. Javed, A.A. Rostami, Electrochemical Recognition of Metalloproteins by Bromide-modified Silver Electrode: A New Method”, *International J. of Molecular Sciences*, 8, 723-735 (2007)
45. S. Rezaei-Zarchi , A.A. Saboury , H. Ghourchian , J. Hong , A **Barzegar** , P. Norouzi , A.A. Moosavi-Movahedi, M.R. Ganjali , A. Javed, Electrochemical investigation of the effect of some organic phosphates on haemoglobin, *J. Biosc.*, 2007, 32, 271-278.
46. A. **Barzegar**, A.A. Moosavi-Movahedi, N. Sattarahmady, M.A. Hosseinpour-Faizi2, M. Aminbakhsh, F. Ahmad, A.A. Saboury, M.R. Ganjali and P. Norouzi, Spectroscopic Studies of the Effects of Glycation of Human Serum Albumin on L-Trp Binding, *Protein & Peptide Letters*, 2007, 14, 13-18

47. A. Barzegar, M. Aminbakhsh, M.A. Hosseinpour faizi, Y. Panahi, P. Azarfam, N. Pouladi, N. Chaparzadeh and A.A. Moosavi-Movahedi, Reduction in Aggregation of Insulin Through Conformational Stabilization by Glucose, *Asian Journal of Chemistry*, Vol. 19, No. 3 (2007), 1749-1756.

BOOKs

Effat Alizadeh, Behnaz Banimohamad-Shotorbani, Roya Salehi, Abolfazl Barzegar, *تکنولوژی شیت سلولی در پزشکی بازساختی* Jan 2016 Tabriz University of Medical Science, Pezhvak Alborz.