

## Curriculum Vita

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### Education:

2005-2010 Biochemistry (PhD), Tehran University, Tehran, Iran  
2001-2004 Biochemistry (M.Sc.), Tehran University, Tehran, Iran  
1991-1995 Biology (B.Sc.), Shahid Beheshti University, Tehran, Iran

### EXPERIENCE:

1989-1391 Academic staff, Academic Center for Education, Culture & Research (ACECR), Tehran, Iran.  
1391-present Assistant Professor, Department of Chemical Technologies, Iranian Research Organization for Science & Technology (IROST), Tehran, Iran

### Awards and Honors:

1- Outstanding student in PhD, M.Sc. and B.Sc.  
2- Alumni award for ranked 1st PhD in Biochemistry, 2010, Tehran University, Iran

### RESEARCH INTERESTS:

- Nanotechnology
- Biochemical Mechanisms of Cancer
- Enzymology
- Photodynamic therapy

### Papers and presentations:

- Simin Belali, Ali Reza Karimi, **Mahnaz Hadizadeh**. Novel nanostructured smart, photodynamic hydrogels based on poly(N-isopropylacrylamide) bearing porphyrin units in their crosslink chains: A potential sensitizer system in cancer therapy. *Polymer*, 109 (2017) 93e105.
- Ali Reza Karimi, Azam khodadadi, **Mahnaz Hadizadeh**. Nanostructured photosensitizing hydrogel based on chitosan cross-linked by zinc phthalocyanine: An injectable and pH stimuli responsive system for effective cancer therapy. *RSC Advances* 2016, 6, 91445-91452.

- Zahra Zahed, **Mahnaz Haduzadeh\***. Comparison of antibacterial property of chitosan nanoparticles against Escherichia coli and Staphylococcus aureus. JQUMS,2016;19: 21-28.
- S. Samavati, **M. Hadizadeh\***, M. Abedi, M. Kiani Rad. Cytotoxic effects of different solvents and essential oil of eucalyptus on human fibroblast cells. JQUMS, 2015,19; 4-9.
- Tabbodi M, **Hadizadeh M\***, Jahanshiri- Moghadam M. Evaluation of Two Different Light Sources on the Efficiency of Photodynamic Therapy of Breast Cancer:An in vitro Study J Zanjan Univ Med Sci. 2015;23, 1-12.
- Hamidreza Mirzaei, Gholamreza Esmaeeli Djavid, **Mahnaz Hadizadeh**, Maryam Jahanshiri-Moghadam The efficacy of Radachlorin-mediated photodynamic therapy in human hepatocellular carcinoma cells. / Journal of Photochemistry and Photobiology B: 2015; 142; 86–91.
- Amini SM, Kharrazi S, **Hadizadeh M**, Fateh M, Saber R. Effect of gold nanoparticles on photodynamic efficiency of 5-aminolevulinic acid photosensitizer in epidermal carcinoma cell line: an in vitro study. IET Nanobiotechnol. 2013; Dec;7(4):151-6.
- **Mahnaz Hadizadeh**, Mohsen Fateh. Synergistic cytotoxic effect of gold nanoparticles and 5-aminolevulinic acid-mediated photodynamic therapy against skin cancer cells. Iranian journal medical sciences. 2014 Sep;39(5):452-8.
- N. Bakhtiari, K. Hoseini pajouh, **M. Hadizadeh**. Investigate the effect of antisense RNA on two prostate cancer cell lines. The 8th national & 5th ternational Conference of Biology. 4-6 September 2013.
- **M. Hadizadeh**, G. Esmaeeli Javid. Determine the efficiency of PDT in the treatment of Hepatocellular carcinoma. The 17th national & 5th International Conference of Biology. 4-6 September 2012.
- **M. Hadizadeh**, M. Seifipour. Evaluation the thermal stability of alcohol dehydrogenase from Crocus sativus L. The 17th national & 5th International Conference of Biology. 4-6 September 2012.
- **M. Hadizadeh**. Optimizing photosensitizers for photodynamic therapy. Laser in Medicine National Congress. 16-18 Feb 2011. (Oral Presentation)
- R. Rofougaran, **M. Hadizadeh**, M. Houshmand, O. Aryani. Screening of mitochondrial DNA depletion syndrome patients in Iran. 14 the International Symposium on Purine and Pyrimidine Metabolism in Man, PP11. 18-21 Feb 2011, Japan. (Poster Presentation)
- **M. Hadizadeh**, E. Keyhani. Effect of Cu<sup>2+</sup> on the thermal stability bovine milk xanthine oxidase. The 16th National & the 4th International Congress of Biology. Mashhad-Iran, September 2010. (Poster Presentation)

- **M. Hadizadeh**, R Rofougran , M Houshmand , O Aryan. Biochemical diagnosis of the mitochondrial respiratory chain deficiencies in Iranian Patients. 4th Annual Iranian Neurogenetics Congress Advances In Neurogenetics, 24-26 November 2010. (Poster Presentation)
- **Mahnaz Hadizadeh**, Ezzatollah Keyhani, Jacqueline Keyhani and Cyrus Khodadadi. (2009) Functional and structural alterations induced by copper in xanthine oxidase. *Acta biochimica et biophysica Sinica*. 41(7): 603-617.
- **M. Hadizadeh**, C. khodadadi, E. Keyhani and J, Keyhani. Kinetics and spectrophotometric studies of the effect of copper on xanthine oxidase. 33rd FEBS Congress & 11th IUBMB conference Biochemistry of cell regulation. Athens, Greece. 28 June-3 July 2008.
- **M Hadizadeh**, C Khodadadi, E Keyhani. (2008) Kinetics and spectrophotometric studies of the effect of copper on xanthine oxidase. *FEBS J*. 275:219.
- Attar, E. Keyhani, J. Keyhani and **M. Hadizadeh**. Transition metal-induced stimulation of lignin peroxidase activity in *Crocus sativus* L. corms. The 9th Iranian Congress of Biochemistry & the 2nd International Congress of Biochemistry and Molecular Biology. Shiraz-Iran, Oct. 29-Nov. 1, 2007. (Poster Presentation)
- **Mahnaz Hadizadeh** and Ezzatollah Keyhani. (2007) Toxic Effect of Cadmium on Catalase Activity in *Crocus sativus* L. corm. *Acta Horticulturae*. 739: 443-449.
- Jacqueline Keyhani, Ezzatollah Keyhani, Farnoosh Attar and **Mahnaz Hadizadeh**. Antioxidative stress enzymes in *Pleurotus ostreatus*. (2007) *Current Research Topics in Applied Microbiology and Microbial Biotechnology*. 3-7.
- **M. Hadizadeh**, E. Keyhani, F. Attar and J, Keyhani. Superoxide dismutase activity in *Crocus sativus* L. corms exposed to cadmium. The 9th Iranian Congress of Biochemistry & the 2nd International Congress of Biochemistry and Molecular Biology. Shiraz-Iran, Oct. 29-Nov. 1, 2007. (Poster Presentation)
- Ezzatollah Keyhani, Lila Ghamsari, Jacqueline Keyhani, **Mahnaz Hadizadeh**. (2006) Antioxidant enzymes during hypoxia-anoxia signaling events in *Crocus sativus* L. corm. *Annals of the New York Academy of Sciences*. 1091: 65–75.
- **Mahnaz Hadizadeh** and Ezzatollah Keyhani. (2004) Detection and kinetic properties of alcohol dehydrogenase in dormant corms of *Crocus sativus* L. *Acta Horticulturae*. 650:127-139.
- Ezzatollah Keyhani, Jacqueline Keyhani, **Mahnaz Hadizadeh**, Lila Ghamsari, and Farnoosh Attar. (2004) Cultivation techniques, morphology and enzymatic properties of *Crocus sativus* L. *Acta Horticulturae*. 650: 227-246.

- **M Hadizadeh.** Kinetic properties of alcohol dehydrogenase in dormant corms of *Crocus sativus* L. corm. The first international symposium on saffron biology and biotechnology. Albacete, Spain, 22nd\_25th October, 2003.

## Completed Projects

- 2009-2011** Synthesis of gold nanoparticles and their effects on the efficiency of photodynamic therapy for skin cancer
- 2011-2012** Evaluation of Radachlorin-based- photodynamic therapy in the treatment Hepatocellular carcinoma
- 2012-2013** Effect of light stimulation on the migration of stem cells derived from adipose tissue in the simulated electric field of open skin wounds in vitro
- 2014-2016** Study of potency of primaquine loaded chitosan nanoparticles for the malaria treatment

## Projects in progress

- 2016- present** Design and optimization of polymeric nanocarriers for intracellular delivery of beta-lactam antibiotics
- 2017- present** Study of the influence of different biotic and abiotic elicitors on the production of alkaloids in microalgae *Spirulina*

## Courses Taught at Universities:

- General Biochemistry I & II (Undergraduate Courses).
- Enzymology in nanobiotechnology (M.Sc. Course).
- Nanomaterials: Introduction, Synthesis, Characterization and Applications (M.Sc. Course).
- Microbial Biotechnology(PhD Course)
- Applications Nanotechnology in medicine (M.SC. Course).
- General Biochemistry Lab. I & II (Undergraduate Courses).
- Eukaryotic cell(PhD Course)
- Structure and function of macromolecules (M.SC. Course).