Curriculum Vita

Dr. Mahnaz Hadizadeh

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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-MoghadamThe 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-aminolevolenic 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 Cu2+ 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**. Anti-oxidative 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).