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ADDRESS (OFFICE)

Proteomics Research Center, Faculty of Paramedical Sciences, Shaihd Beheshti University of Medical Sciences, Tehran, IRAN

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EDUCATION

2002 **Ph.D. of Biophysics**, University of Tehran, IRAN

Thesis title: *Thermodynamic study of human Transferrin (apo and holo) structure in presents and absences of Sodium Dodecyl Sulfate*

1993 **M.S. of Biophysics**, University of Tehran, IRAN

Thesis title: *Biophysical chemistry study of pigeon hemoglobin-several anionic and cationic detergents reciprocal effect*

1989 **B.S. of Biology**, Shahid Chamran University, Ahvaz, IRAN

RESEARCH INTERESTS

Clinical proteomics, Protein protein interaction, Cancer Proteomics

EXPERIENCE

Teaching experience:

- Supervision and monitoring of graduate students during their thesis research
- Biophysics course for none-science majors
- Advanced Biophysics course for graduate students
- Cell culture course for graduate students
- Cellular and Molecular Biology for undergraduate students
- Bioinformatics for graduate students

Academic and administrative experience

- Research manager of Shahid Beheshti University of Medical Sciences (2011 - present)
- Head of Proteomics Research Center of Shahid Beheshti University of Medical Sciences (2011 - present)
- Head of Department of Basic Science of Faculty of Paramedical Sciences of Shahid Beheshti University of Medical Sciences (2009-present).
- Professor of Biophysics (2014- present)

PUBLICATIONS

Books in Persian language

- Biomarker discovery: Liquid chromatography, electrophoresis and microarray
M. Rezaei-Tavirani, H. Hassanzadeh, Z. Fazeli, A. Meyfor, A. Safaei and M. Sohilli-Kashani (2015)
- Fundamental and methods of Biophysics
M. Rezaei-Tavirani, M.Rahmati-Roodsari, SA Mortazavi-Tabatabaei, M Zamanian-Azodi (2012)
- Biophysics
M. Rezaei-Tavirani, S. Hesami-Tacalo (2012)
- Artificial neural networks
Mostafa Rezaei Tavirani, Alireza Zali, Seyed Hasan Moghadamnia, Mohammad hosein Heydari, Behroz Hoseinzade Salavati, Fateme Daneshi mehr (2010)
- Proteomics
M.Rezaei-Tavirani, A.Marashi, F. Ghalanbor, M.Mostafavi (2009)

HONORS AND AWARDS

Shahid Beheshti University of Medical Sciences Outstanding Researcher Award (2011)
Top Faculty member of Shahid Beheshti University of Medical Sciences (2009)
Health Ministry of IRAN Outstanding Researcher Award (2004)
Health Ministry of IRAN Outstanding Researcher Award (2003)
Top National Ph.D. student (2001)

CONFERENCES ATTENDED (SELECTED)

M. Rezaei-Tavirani, Reza Vafaei, Mona Zamanian-Azodi, *Investigation of smart responses of human serum albumin in fever condition: an in vitro approach*, San Francisco, California, USA, February, 2014.

USA (Biophysical Journal Vol.104, No2, page 217a.)

M. Rezaei-Tavirani, R. Tadayon, M. Shahani. *Fine Structural Analysis of Human Serum Albumin*, First International Conference on Biophysical Chemistry, Ardabil University of Medical Sciences, Ardabil, Iran, June 13-15, 2012.

Sadegh Babashah, Masoud Soleimani, Majid Sadeghizadeh, Abbas Hajifathali, **Mostafa Rezaei Tavirani** and Mojtaba Ghadiani. *High-throughput Q-RT-PCR-based detection of microRNAs; a promising novel clinical tool for leukemia diagnosis and therapy* The 5th International & 10th National Congress on Quality Improvement in Clinical Laboratory Tehran, Iran, April 23-26, 2012 (Laboratory & Diagnosis Vol.3, No74, Supplement Issue, page 12)

M Rezaei-Tavirani, H.Zali and S.H. Moghadamnia. *Introducing human Calprotectin as a potent anticancer with minimal side effect*. 10th Iranian Congress of Biochemistry and 3rd International Congress of Biochemistry and Molecular Biology. Tehran, Iran, November 16-19, 2009.

S. Kalantari, S.H. Moghadam-Nia, **M. Rezaei-Tavirani**, A. Shabani and S. Z. Moosavi-Nejad. *Inhibition of Adenosine Deaminase activity by Spermine* 14th National & 2th International Conference of Biology, Tarbiat Modares University, Tehran, Iran, August 29-31, 2006.

S.H. Moghaddamnia, S. Mahdavi, F. Towhidkhah, **M. Rezaei-Tavirani**, Sh. Gharibzadeh and A. Shabani. *Modeling gap junction behavior in myocytes: electrical field versus electrical coupling*, 29th European Peptide Symposium, Gdansk, Poland, September 3-8, 2006 (Journal of Peptide Science Vol.12, Suppl. S, page 189.)

M. S. Atri, **M. Rezaei-Tavirani**, M. H. Sanati, A. A. Saboury and A. A. Moosavi-Movahedi. *Structural study of human growth hormone: A thermodynamic and spectroscopic approach*, 49th Annual Meeting of Biophysical Society, Long Beach, California, USA, 12-16, 2005 (Biophysical Journal Vol.88, No2, page 212a.)

S.H. Moghaddamnia, **M. Rezaei-Tavirani**, B. Ranjbar, S. Z. Moosavi-Nejad and S. Hesami-Tackallou. *Thermal pre-denaturation (conformational change) of human adenosine deaminase (ADA)*, 3rd Annual World Congress of HUPO, Beijing, China, October 25-27, 2004 (Molecular & Cellular Proteomics Vol.3, No10, page 241s.)

M. Rezaei-Tavirani, and A.A. Moosavi-Movahedi. *Apo transferring domain analysis by sodium n-dodecyl sulphate as a probe*, 46th Annual Meeting of Biophysical Society, San Francisco, California, USA, , 2002 (Biophysical Journal Vol.82, No1, page 458a.)

S. Z. Moosavi-Nejad, **M. Rezaei-Tavirani**, A.A. Moosavi-Movahedi, G. Floris and A. Padiglia, *The effect of proline and erythritol on the structural aspects of lentil seedling amino oxidase*, Fourth European symposium of the Protein Society, Institute Pasteur, Paris, France, 18-22 April, 2001 (Protein Science Vol.10, Suppl.1, page 60)

M.J. Morvarid and **M. Rezaei-Tavirani**. *Study of conformation changes in hemoglobin a using cationic and anionic surfactants*, 18th International Congress of Biochemistry and Molecular Biology, Birmingham, UK, July 16–20, 2000.

M. Rezaei-Tavirani, B. Ranjbar and A.A. Moosavi-Movahedi. *Time dependency of thermal denaturation for human apotransferrin*, Third European symposium of the Protein Society, Garmisch-Partenkirchen, Germany, 19-22 September, 1999 (Protein Science Vol.8, Suppl.2, page 60)

A.A. Moosavi-Movahedi, **M. Rezaei-Tavirani** and Z. Zaidi. *A novel and simple spectroscopic method for determination of protein transition states*, 38th Annual Meeting of Biophysical Society, New Orleans, Louisiana, USA, 6-10, 1994 (Biophysical Journal Vol.66, No2, page 394a.)

SELECTED ARTICLES

Amine oxidase from lentil seedlings: energetic domains and effect of temperature on activity
SZ Moosavi-Nejad, **M Rezaei-Tavirani**, A Padiglia, G Floris, AA Moosavi-Movahedi
Journal of protein chemistry 2001, 20 (5), 405-411

Thermodynamic domain analysis of fresh and incubated human apotransferrin
M Rezaei-Tavirani, AA Moosavi-Movahedi, AA Saboury, GH Hakimelahi, B Ranjbar ...
Thermochimica acta 2002, 383 (1), 103-108

Design, synthesis, and biological evaluation of a cephalosporin–monohydroguaiaretic acid prodrug activated by a monoclonal antibody– β -lactamase conjugate

GH Hakimelahi, KS Shia, M Pasdar, S Hakimelahi, A Khalafi-Nezhad, MN Soltani, **M Rezaei-Tavirani**...
Bioorganic & medicinal chemistry 2002,10 (9), 2927-2932

Thermodynamic studies on the interaction of nickel with human serum albumin

A A. SABOURY, FH KISHANI, **M R-Tavirani**, B Ranjbar
Prog. Biochem. Biophys. 2003, 30 (005), 732-737

Domain analysis of human apotransferrin upon interaction with sodium< i> n</i>-dodecyl sulphate: differential scanning calorimetry and circular dichroism approaches

M Rezaei-Tavirani, AA Moosavi-Movahedi, SZ Moosavi-Nejad, J Chamani, D Ajloo
Thermochimica acta 2003, 408 (1), 9-16

Calorimetric, spectrophotometric and circular dichroism studies on the impact of sodium dodecyl sulfate on the mushroom tyrosinase structure

F Karbassi, K Haghbeen, AA Saboury, **M Rezaei-Tavirani**, B Ranjbar
Biologia 2004, 59 (3), 319-326

Binding properties and conformational change of human growth hormone upon interaction with Fe< sup> 3+</sup>

MS Atri, AA Saboury, **M Rezaei-Tavirani**, MH Sanati, AA Moosavi-Movahedi, M ...
Thermochimica acta 2005, 438 (1), 178-183

Conformational study of human serum albumin in pre-denaturation temperatures by differential scanning calorimetry, circular dichroism and UV spectroscopy

M Rezaei-Tavirani, SH Moghaddamnia, B Ranjbar, M Amani, S Marashi
Journal of biochemistry and molecular biology 2006, 39 (5), 530

Binding properties and structural changes of human growth hormone upon interaction with cobalt ion

AA Saboury, H Ghourchaei, MH Sanati, MS Atri, **M Rezaei-Tavirani**, GH Hakimelahi
Journal of Thermal Analysis and Calorimetry 2007, 89 (3), 921-927

Mitochondrial DNA might be influenced in calprotectin-induced cell death

SA Marashi, **M Rezaei-Tavirani**, MA Shokrgozar, H Zali
EXCLI Journal 2008, 7, 163-168

Human Calprotectin, a Potent Anticancer with Minimal Side Effect

M Rezaei-Tavirani, H Zali, S Nasiri, MA Shokrgozar
Iranian journal of cancer prevention 2009, 2 (4), 183-188

Aberrant microRNA expression and its implications in the pathogenesis of leukemias

S Babashah, M Sadeghizadeh, **M Rezaei-Tavirani**, S Farivar, M Soleimani
Cellular Oncology 2012, 35 (5), 317-334

Evaluation of unrestricted somatic stem cells as a feeder layer to support undifferentiated embryonic stem cells

SH Keshel, M Soleimani, **M Rezaei-Tavirani**, M. Ebrahimi, R. Raeisossadati, H. Yasaei, D. Afsharzadeh, M. Jabbarvand Behroz, A. Atashi, S. Amanpour, A. Khoshzaban, R. Roozafzoon, G. R. Behrouzi
Molecular Reproduction and Development 2012, 79 (10) 709-718

Bone formation in calvarial defects by injectable nanoparticulate scaffold loaded with stem cells

E Biazar, S Heidari Keshel, M Rezaei Tavirani and R Jahandideh
Expert Opin. Biol. Ther., 2013, 1744-7682.

Targeting of the signal transducer Smo links microRNA-326 to the oncogenic Hedgehog pathway in CD34+ CML stem/progenitor cells

S Babashah, M Sadeghizadeh, A Hajifathali, **M Rezaei-Tavirani**, MS Zomorod, M. Ghadiani, M. Soleimani
International Journal of Cancer, 2013, 133 (3) 579-589

Exploring biological processes involved in embryonic stem cell differentiation by analyzing proteomics data

M Jafari, M Mirzaie, M Sadeghi, SA Marashi, **M Rezaei-Tavirani**
Biochimica et Biophysica Acta (BBA)-Proteins and Proteomics, 2013, 1834 (6) 1063-1069

Evolutionarily conserved motifs and modules in mitochondrial protein–protein interaction networks

M Jafari, M Sadeghi, M Mirzaie, SA Marashi, **M Rezaei-Tavirani**
Mitochondrion, 2013, 13 (6) 668-675

Assessment of gene set analysis methods based on microarray data

H Alavi-Majd, S Khodakarim, F Zayeri, **M Rezaei-Tavirani**, S M Tabatabaei, M H Meymeh
Gene, 2014, 534 (2) 383-389.

Regeneration of Full-Thickness Skin Defects Using Umbilical Cord Blood Stem Cells Loaded into Modified Porous Scaffolds

R Zeinali, E Biazar, SH Keshel, **M Rezaei-Tavirani**, K Asadipour
ASAIO Journal, 2014, 60 (1) 106-114

Bone reconstruction in rat calvarial defects by chitosan/hydroxyapatite nanoparticles scaffold loaded with unrestricted somatic stem cells

E Biazar, S Heidari Keshel, **M Rezaei-Tavirani**, R Jahandideh
Artificial Cells, Nanomedicine, and Biotechnology, 2015, 43 (2), 112-116

The metabolomics of airway diseases, including COPD, asthma and cystic fibrosis

BF Nobakht M. Gh, R Aliannejad, **M Rezaei-Tavirani**, S Taheri, ...
Biomarkers, 2015, 20 (1), 5-16

Protein Clustering and Interactome Analysis in Parkinson and Alzheimer's Diseases.

M Rezaei-Tavirani, M Zamanian-Azodi, S Rajabi, A Masoudi-Nejad, ...
Archives of Iranian Medicine (AIM), 2016, 19 (2), 101-109

WORKS IN PROGRESS

- 1- Proteomic and Metabolomic evaluation of Obsessive Compulsive Disorder
- 2- Skin regeneration with deleting stem cell and use of biological products.

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

- a) Secretary of Iranian Medical Proteomics Society.
- b) U.S. Biophysical Society member.

Google Scholar profile

<https://scholar.google.com/citations?user=AqWrNJ8AAAAJ>