

**Mohsen Rezaei**  
**Curriculum Vitae**

**Current:**

Department of Toxicology,  
Faculty of Medical Sciences,  
Tarbiat Modares University,  
Tehran, Iran

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**Past Appointments:**

Academic rank: Assistant Professor

2006-2015

Toxicology and Pharmacology Department  
Pharmacy School

JondiShapour University of Medical Sciences,  
Golestan Blv, Ahvaz, Khouzestan, Iran

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School of Pharmacy's Deputy Dean for Education: 2009-2013

University's Continuing Medical Education Supervisor and Manager:  
2007-2009

**Education:**

2000-2006: Ph.D. program, Department Of Toxicology and  
Pharmacology, School Of Pharmacy, Shaheed Beheshti University of  
Medical Sciences, Tehran, Iran.

Thesis: *Cellular and Molecular Mechanisms of Chronic Pain Induced  
Damage on Hepatocytes.*

Supervisor: Dr. A. Ahmadiani, Dr. J. Pourahmad, Dr. H.R. Rasekh

1993-2000: Pharm.D., School Of Pharmacy, Ahvaz University Of Medical Sciences, Ahvaz, Iran.

Dissertation: *The Effect of Oral Administration of L-tyrosine, Folic acid and Pyridoxine on Perphenazine Induced Catatonia in Rat.*

Supervisor: Dr. A. Arzi

### Teaching activities:

- 1-Toxicology (Molecular, Cellular, Chemical Carcinogenicity, environmental ...)
- 2- Pharmacology

### Publications and Abstracts:

**Rezaei M**, Zeidooni L, Hashemitabar M, Razzaz zadeh S, Mahdavi M, Ghasemi K, Gamma-Tocopherol Enhances Apoptotic Effects of Lovastatin in Human Colorectal Carcinoma Cell Line (HT29). Nutrition and Cancer, 66(8). 2014, <http://dx.doi.org/10.1080/01635581.2014.956250>.

Dadashzadeh S, Vali AM, **Rezaei M**. The effect of PEG coating on *in vitro* cytotoxicity and *in vivo* disposition of topotecan loaded liposomes in rats. Intl J Pharm 2008; 353: 251–259.

Amini E, **Rezaei M**, Mohamed Ibrahim N, Golpich M, Ghasemi R, Mohamed Z, Raymond AA, Dargahi L, Ahmadiani A. A Molecular Approach to Epilepsy Management: from Current Therapeutic Methods to Preconditioning Efforts. Mol Neurobiol. 2014 Sep 9.

**Mohsen Rezaei**, Mohammad Javad Khodayar, Enayatollah Seydi MSc, Alboghobeish Soheila, Isa Kazemzadeh Parsi. Acute, but not Chronic, Exposure to Arsenic Provokes Glucose Intolerance in Rats: Possible Roles for Oxidative Stress and the Adrenergic Pathway. Canadian Journal of Diabetes. 2017: 10.1016/j.jcjd.2016.10.008

**Rezaei M**, Salimi A, Taghidust M, et al., A comparison of toxicity mechanisms of dust storm particles collected in the southwest of Iran on lung and skin using isolated mitochondria. Toxicological & Environmental Chemistry 2014; 96 (5), 814-830 <http://dx.doi.org/10.1080/02772248.2014.959317>

M Heidari, **M Rezaei**, R Badri. Tributylhexadecylphosphonium bromide: an efficient reagent system for the one-pot synthesis of 2, 4, 5-trisubstituted. *Heterocyclic Communications*: 2015; 21 (2), 73-76.

Elham Keshtzar, Mohammad Javad Khodayar, Mansoureh Javadipour, Mohammad Ali Ghaffari, David L. Bolduc, **Mohsen Rezaei**. Ellagic acid protects against arsenic toxicity in isolated rat mitochondria possibly through the maintaining of complex II. *Human and Experimental Toxicology*: 1-13 **2015**, DOI: 10.1177/0960327115618247

Mehrnoosh Moosavi, **Mohsen Rezaei**, Heibatullah Kalantari, Abdolazim Behfar & Golnaz Varnaseri (**2016**): l-carnitine protects rat hepatocytes from oxidative stress induced by T-2 toxin, *Drug and Chemical Toxicology*: <http://dx.doi.org/10.3109/01480545.2016.1141423>

Khodayar MJ, Javadipour M, Keshtzar E, **Rezaei M**. Role of berberine against arsenic induced oxidative damage in isolated rat liver mitochondria. *J Environ Biol*. 2016 Mar; 37(2): 285-90.

Pourahmad J. Rezvani N. **Rezaei M**. and Ahmadiani A. Influx and efflux of glutathione during continuous pain induction in rat hepatocytes and glial cells. *Intl J Pharmacol* 2006; 2:15-19.

Pourahmad J. **Rezaei M**. Rezvani N and Ahmadiani A. Impact of duration and severity of persistent pain on programmed cell death. *IJPR* 2006; 3:203-208.

**Rezaei M**. Rasekh HR. Ahmadiani A. Pourahmad J. Subcellular-Organelle Involvement in Inflammatory Pain Induced Oxidative Stress and Apoptosis in the Rat Hepatocytes. *Arch Iranian Med* 2008,11(4):407-417.

Rezaei M, H.R. Galedari, H. Kalantari, Y. Arast., Programmed cell death induced by lovastatin and tocopherol in human colorectal carcinoma cell line HT29. *Toxicology Letters* 196S (2010) S37–S35.

Akram Ahangarpour, Ali Akbar Oroojan, Mohsen Rezaei, Mohammad Javad Khodayar, Soheila Alboghobeish, Marzieh Zeinvand. Effects of butyric acid and arsenic on isolated liver mitochondria and pancreatic islets of male mouse. *Gastroenterology and Hepatology from bed to bench*. Vol 10, No 1 (2017).

Negin Daneshgar; Mohsen Rezaei; Mehdi Goudarzi; Niloofar Babadi; and Mohammad Javad Khodayar. The Ameliorative Effect of Naringenin

on Paraquat-Induced Toxicity in Mitochondria Isolated from Rats. Jundishapur Journal of Natural Pharmaceutical Products. 2016, 11(2): e32968 , DOI: 10.17795/jjnpp-32968.

Hadi Darvishi, Mohsen Rezaei, Mohammad Javad Khodayar, Hamid Reza Zargar, Mohammad Amin Dehghani, Hossein Rajabi Vardanjani, and Sahebeh Ghanbari. Differential Effects of Meloxicam on Pentylenetetrazole- and Maximal Electroschock-Induced Convulsions in Mice. Jundishapur J Nat Pharm Prod. 2016. doi: 10.17795/jjnpp-36412.

Arast Y, Galedari H, Solgui R, Kalantari H, Rezaei M,. The effect of  $\alpha$ -tocopherol and lovastatin on apoptosis induction in human colorectal carcinoma cell line. Arak Medical University Journal (AMUJ) 2010; 13(2): 9-16.

Arast Y, Rezaei M, Sabet Birjandi S,. Serum zinc level in third trimester of pregnant women. Hormozgan Medical Journal, 2010, 14(2): 87-90.

M. Rezaei, M.J. Khodayar, E. Seydi, et al. Effect of n-acetylcysteine, carvedilol and propranolol on arsenic induced hyperglycemia in rat. Toxicology Letters 205S1 (2011) S185.

M. Rezaei, H. Kalantari, M HashemiTabar, M Jafari, et al,. Determination of cell death induced by lovastatin on human colon cell line HT29 using comet assay. Toxicology Letters 205S1 (2011) S116-S117.

Zeidooni L, Rezaei M, Hashemitabar M,. Gamma tocopherol and lovastatin additively induced apoptosis in human colorectal carcinoma cell line (HT29). JundiShapur Journal of Natural Pharmaceutical Products. 2012, 7(4): in press.

Rezaei M, Zeidooni L,. Role of statins in programmed cell death. Razi, 2012, 23(4), 286-299 (Persian)

Kalantari H, Rezaei M, Mahdavinia M, et al. Determination of the mutagenicity potential of Supermint<sup>®</sup> herbal medicine by single cell gel electrophoresis in rat hepatocytes. Advanced Pharmaceutical Bulletin, 2012, 2(2), 245-248.

Kalantari H, Rezaei M, Mahdavinia M, et al. Determination of the mutagenicity potential of Sankol<sup>®</sup> herbal medicine by single cell gel electrophoresis in rat hepatocytes in comparison with H<sub>2</sub>O<sub>2</sub>. JundiShapur J Nat Pharm Prod, 2012, 7(3): 123-126.

Jafari M, Rezaei M, Kalantari H and Hashemitabar M. Determination of Cell Death Induced by Lovastatin on Human Colon Cell Line HT29 Using the Comet Assay. JundiShapur J Nat Pharm Prod, 2013, 8(4): 187-91.

Kalantari H, Rezaei M, Salehchah M, Moosavi M and Varnaseri G. Determination of the mutagenicity potential of Dillsun<sup>®</sup> herbal medicine by single cell gel electrophoresis in rat hepatocytes. JundiShapur J Nat Pharm Prod, 2013, 8(2): 55-9.

Arzi A, Najafzadeh H, Sistani N, Rezaei M, Troponin t and caspase 3 changes induced by theophylline and quercetin in heart tissue of rat embryo. Research J of biological sciences, 8 (5): 161-165, 2013

K Eslami, M Khezrian, M Rezaei, L Kouti, Offering Clinical Pharmacy Clerkship in Hospital for Pharmacy Student: A Successful Cooperation between Medical and Pharmacy Schools, Journal of Pharmaceutical Care 2 (1), 32-36, 2014

H. Najafzadeh, M. Rezaei, A. Ashrafi, A. Samimi, Apoptosis following Conventional and Nano-Particles of Sodium Arsenite Treatment in Hepatocytes of Rat. J Babol Univ Med Sci; 2014, 16(8); Aug 2014; pp: 39-45.

Neda Sistani Karampour; Ardeshir Arzi; Hossein Najafzadeh Varzi; Babak Mohammadian; **Mohsen Rezaei**, Quercetin Preventive Effects on Theophylline-Induced Anomalies in Rat Embryo. Jundishapur J Nat Pharm Prod. 2014 9(3): e17834.

Azadbakht Y, Siahpoosh A, Rezaei M, et al. Protective effect of date seed (Phoenix dactylifera) extract against carbon tetrachloride toxicity in freshly isolated rat hepatocytes. Research in Pharmaceutical Sciences. 2012; 7(5): S165.

Mohammad Heidari, Rashid Badri, **Mohsen Rezaei**, Mohammad Reza Shushizadeh, Ali Reza Kiasat. Mitochondrial Protection against Arsenic Toxicity by a Novel Gamma Tocopherol Analogue in Rat. Bull. Env. Pharmacol. Life Sci., Vol 4 February 2015; 43-55

**M Rezaei**, F Khodaei, MS Bargard, M Abasinia. Long-Term Methadone Intake and Genotoxicity in Addicted Patients. Jundishapur journal of

natural pharmaceutical products 2015; 10 (1).

Mohammad Javad Khodayar, Elham Keshtzar, Mansoureh Javadipour Morteza Hosseini, Mahmoud Hashemitabar, Shahin Ahmadi, **Mohsen Rezaei**. Sea cucumber enhances apoptotic activity of lovastatin. International Journal of Experimental Pharmacology. 1, 2015; 37-41.

Azadeh Nakisa, Zahra Nazari Khorasgani<sup>1</sup>, **Mohsen Rezaei**, Nima Imani, Saeid Rezaee. Determination of the Most Toxic Polychlorodibenzofurans in Fresh Milk from Southwest Iran. Food and Nutrition Sciences, 2015, 6, 955-963. doi:10.4236/fns.2015.611099

**Rezaei M**, Khorasgani ZN, Nakisa A, Imani N, Rezaee S, et al. (2015) Determination of Polychlorinated Dibenzo Dioxin Levels in Fresh Milk from the Dairy Factories of Southwest Iran. J Environ Anal Toxicol 5:5 301. doi:10.4172/2161-0525.1000301

Mojtaba Kalantar; **Mohsen Rezaei**; Eskandar Moghimipour; Neda Bavarsad; Heibatallah Kalantari; Golnaz Varnaseri; Arash Forouzan. Evaluation of Apoptosis Induced by Celecoxib Loaded Liposomes in Isolated Rat Hepatocytes. Jundishapur J Nat Pharm Prod. **2015** August; 10(3): e25421. DOI: 10.17795/jjnpp-25421.

Arzi A. Rezaei M,. The Effect of Oral Administration of L-tyrosine, Folic acid and Pyridoxine on Perphenazine Induced Catatonia in Rat. 2003, Iranian Journal of Pharmaceutical Research (IJPR), 2(3): 167-171.

Arzi A, Rezaei M, Aghel N, Nazari Z, Noori Mombeyni S,. Effect of white mulberry leaves hydro-alcoholic extract on carrageenan-induced inflammation in male rat's hind paw. Scientific Medical Journal, 2009, 8(2): 148-156.

Solgi R, Rezaei M, Kalantari H, Arast Y, Galedari H, Seifi MR,. CO-ADMINISTERING TOCOPHEROL AND CELECOXIB TO INDUCE PROGRAMMED CELL DEATH IN HUMAN COLORECTAL CARCINOMA CELL LINE HT29. J Qom Univer Med Sci 2010, 4(1):3-9.

Mohsen Rezaei; Hossein Rajabi Vardanjani; Marzieh Pashmforoosh; Davood Alipour; Ali Nesari; Zahra Mansourzade; and Mohammad Javad Khodayar. Involvement of Spinal CB1 Cannabinoid Receptors on the Antinociceptive Effect of Celecoxib in Rat Formalin Test. Jundishapur Journal of Natural Pharmaceutical Products. (in press): e33433 , DOI:

10.17795/jjnpp-33433.

Mohsen Rezaei, Forouzan Khodaei. Conference Paper: The anticancer effects of methanol extract of Capparis Spinosa, 13th Iranian international Toxicology congress; 01/2015

Mohsen Rezaei, Masoud Mahdavi. Conference Paper: The Interrupted Glycolysis Pathway does not maintain  $\gamma$ -Tocopherol Induced Cytotoxicity in the HT-29 Colorectal Cancer Cell Line. 13th Iranian international Toxicology congress; 01/2015

Mohsen Rezaei, Elham Keshtzar, Mansoureh Javadipour. Conference Paper: Ellagic acid counteracts arsenic toxicity on isolated rat mitochondria: An implication for arsenic associated disorder prevention. 13th Iranian international Toxicology congress; 01/2015

Mohsen Rezaei, Elham Keshtzar, Mansoureh Javadipour. Conference Paper: Berberine counteracts arsenic induced mitochondrial damage: potential implication for diabetes treatment. 13th Iranian international Toxicology congress; 01/2015

Mohsen Rezaei, MH Pipelzadeh, F Khodaei. Conference Paper: The cellular mechanism of toxicity induced by Hemiscorpius lepturus scorpion venom. 13th Iranian international Toxicology congress; 01/2015

Siahpoosh A, Rezaei M, Azadbakht Y. Study of date seed extract (Phoenix dactylifera) variete: Deiri Abadan. Liver protective effect against carbon tetrachloride toxicity in male rats. Research in Pharmaceutical Sciences, 2012; 7(5): S172.

Abbasi nia M, Rezaei M, Sayyah M. Mutagenicity evaluation of methadone in addicted patients. Research in Pharmaceutical Sciences. 2012; 7(5): S161.

Samimi A, Najafzadeh Varzi H, Rezaei M, et al. Arsenic nanoparticles induced apoptosis more than usual in rat hepatocytes. Research in Pharmaceutical Sciences. 2012; 7(5): S125.

Rezaei M, Hashemitabar M, Zaydooni L. Role of Gamma-tocopherol and lovastatin in programmed cell death induction in human colorectal carcinoma cell line (HT29). Accepted for presentation at the International Cell Death Society (ICDS) 2012 meeting in Singapore.

Rezaei M, Hooshmand N, Hashemitabar M. Apoptotic effect of Methanolic date seed extract on colon carcinoma cell line. The 2<sup>nd</sup> National Congress on Medicinal Plants, Shaheed Beheshti university of medical sciences, Iran, May 15-16, 2013

Rezaei M, Jahangir nejad R. Mechanism of arsenic nano particles induced damage in isolated rat hepatocytes. 12<sup>th</sup> Iranian congress of toxicology, Iran, Sari, 15-17<sup>th</sup> May 2013.

Rezaei M, Kalantari H, Jafari M, Hashemitabar M, Nejad dehbashi A., Determination of cell death induction by lovastatin using comet assay in HT29 cell line. The 16<sup>th</sup> national and 4<sup>th</sup> international conference of biology. Ferdowsi university of Mashhad, Iran, Sep 14-16, 2010.

Rezaei M. et al,: Coadministering tocopherol and celecoxib to induce programmed cell death in human colorectal carcinoma cell line HT29. 10<sup>th</sup> Iranian congress of toxicology and poisoning. May 18-20, 2009, Tehran.

Rezaei M. et al,., Diabetogenic effect of arsenic: is it relevant? 11<sup>th</sup> Iranian Pharmaceutical Sciences Conference, 23 to 26 August 2008, Kerman, Iran

2006-2008: Continuing medical education presentations (JundiShapour University of medical sciences, Ahvaz

): "*Food Toxicology*", "*Drug abuse in sport*", "*Biotechnology*", "*Natural products*", "*Use of drugs in pregnancy and lactation*", "*Pharmacy ethics*", "*Off-label drug uses*", "*Drug induced hematologic disorders*".

Rezaei M. et al,: *Impact of duration and severity of persistent pain on programmed cell death. First international symposium on molecular technology: cell cycle and cell death.* July 30, 2005, Tehran.

Rezaei M. et al,: *Cellular and molecular aspects of chronic pain induced cell damage.* 8<sup>th</sup> Iranian congress of toxicology and poisoning, Dec 6-8, 2004, Tehran.

Rezaei M. et al,: *Cellular and Molecular View of Memory.* School of Pharmacy, Shaheed Beheshti University of Medical Sciences 2002, Tehran.

## **Books:**



1-The role of mitochondria in drug toxicity. Iran (Persian) (2014)

2- Chapter 4: Ellagic Acid and Mitochondria Associated Disorders. In: Ellagic Acid: Food Sources, Potential Role in Human Health and Antioxidant Effects .Editor: Edmund Brewer. Food Science and Technology. Nova Science Pub Inc. U.S. (August 30, 2016)  
English ISBN-10: 1634856589 ISBN-13: 978-1634856584

### **Thesis supervision and research projects:**

#### ***Ongoing:***

- 1- Cellular and molecular effects of  $\gamma$ -tocopherol, Dichloroacetate (DCA) and 3-bromo pyruvate (3-BrPA) on mitochondrial stability and toxicity in human colorectal carcinoma cell line (HT29) (PhD thesis).
- 2- Hydroalcoholic extract of *Capparis Spinosa* and *Teucrium polium* on mitochondrial stability and Sirt3 activity (2 MSc theses)
- 3- Cytotoxicity of some tocopherol derivatives on colon carcinoma cell line (MSc thesis).
- 4- Study the role of specific nutraceuticals on memory impairment induced by proteasome inhibition in rat hippocampal mitochondria (MSc thesis).
- 5- Design and characterization of a new biosensor for detection of Aflatoxin (PhD thesis).
- 6- Mitochondrial protection in diabetes and neurodegenerative diseases (PhD thesis).

#### ***Completed:***

- 1- Study of celecoxib and tocopherol induced apoptosis in human colorectal carcinoma cell line (2008).
- 2- Study of lovastatin and tocopherol induced apoptosis in human colorectal carcinoma cell line (2008).
- 3- Diabetogenic effect of long-term arsenic intoxication in rat (2008).
- 4- Effect of white mulberry leaves hydroalcoholic extract on carrageenan-induced inflammation in male rat's hind paw (2009).
- 5- Effects of intrathecal administration of celecoxib and cannabinoid antagonist on pain induced by formalin in rats paw (2009).
- 6- Serum zinc level at third trimester in normal unipara pregnant women (2009).
- 7- Effect of acetylcysteine, carvedilol and propranolol on arsenic induced hyperglycemia in rat (2010).
- 8- Determination of cell death induced by lovastatin on human colorectal carcinoma cell line using comet patterns (2010).
- 9- Genotoxicity evaluation of "Dillsun" oral drop on fresh hepatocytes of

rat using comet assay (2010).

10- Genotoxicity evaluation of sour cherry on fresh hepatocytes of rat using comet assay (2010).

11- Mutagenicity evaluation of methadone in addicted patient's referred to Imam Khomani hospital of Ahvaz (2011).

12- Mechanism of cell death induced by lovastatin and Gamma-tocopherol in combination (mitochondrial  $\Delta\psi$ , cytochrome c release, caspase3 activation) on human colorectal carcinoma cell line (2 Pharm D and MSc theses) (2011-2012).

13- Apoptotic effect evaluation of sea cucumber extract on human colorectal carcinoma cell line (HT29) using comet patterns (2012).

14- A search for protective effect of date seed extract against carbon tetrachloride toxicity in freshly isolated rat hepatocytes (2012).

15- Apoptosis induction by sodium arsenite nanoparticles and celecoxib nanoparticles in colon carcinoma cell line and freshly isolated rat hepatocytes (2 MSc theses)

16- Determination of Dioxins and Furans (PCBs) levels in cow's milk in Khuzestan province by HPLC and GC Mass (2 Pharm D theses)

17- Apoptotic effect of date seed extract on human colorectal carcinoma cell line (HT29) (Pharm D theses).

18- Isolation of Langerhans islets from rat pancreas and evaluating the effect of arsenic and some mitochondrial protectants (MSc thesis)

19- T2 toxin determination in corn and evaluation of its cytotoxicity in freshly isolated rat hepatocytes (PhD thesis).

### **Experience:**

2015-now: Tarbiat Modares University (Education and research)

2006-2015: Assistant Professor in JundiShapour University of Medical Sciences (Research and Education)

2002-2004: Teaching Pharmacy Practice and Pharmacology in Shaheed Beheshti Pharmacy School

1999- 2005: Pharmacy Practice in Private Pharmacy

### **Memberships:**

2007 International cell death society

2003 Iranian Society of Toxicology

2001 Iranian Society of Pharmacists

### **Research Skills:**

- Rat handling and cannulation (portal, jugular and intrathecal)
- Two steps collagenase perfusion of liver and hepatocyte preparation in

## Rat

- Brain and liver mitochondrial isolation
- Drugs and toxicants interactions (Mitochondria related)
- Evaluation of toxicity in cellular and organelles including mitochondria and lysosomes
- Genotoxicity
- Oxidative stress (Mitochondria related)
- Apoptosis evaluations
- Formalin test and related evaluations
- Inflammatory rat paw edema and related evaluations

## **Research Interests:**

- Cellular and molecular mechanisms of cell injury and programmed cell death (Mitochondria related)
- Subcellular organelle evaluations in programmed cell death
- Excitotoxicity and Neuroprotection
- Cellular and molecular aspects of Diabetes (Mitochondria related)
- Genotoxicity and Carcinogenicity
- Chemoprevention and Cancer treatment (Mitochondria related)
- Novel derivatives of natural and nutraceuticals for dealing with chronic diseases (Mitochondria related)