



# Akram Mahna

**Assistant Professor of Medical Physics**

## Adress

Medical Physics Department, Faculty of Medicine,  
Tabriz University of Medical Sciences, Daneshgah St., Tabriz, Iran  
**Tel:** +98 (0) 41 33364660 (office)  
**Fax:** +98 (0) 41 33364660  
**Email:** [mahna@tbzmed.ac.ir](mailto:mahna@tbzmed.ac.ir),  
[akram.mahna@gmail.com](mailto:akram.mahna@gmail.com)

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## Education:

**2016**

### **Ph.D., In Medical Physics**

Department of Medical physics, Faculty of Medicine, Tarbiat Modares university,  
Tehran, Iran.

**2011**

### **M.Sc., In Medical Physics**

Department of Medical physics, Faculty of Medicine, Tarbiat Modares university,  
Tehran, Iran.

**2007**

### **B.Sc., In Physics**

Department of Physics, Faculty of Basic Sciences, Azarbaijan Shahid Madani  
University, Tabriz, Iran.

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## MSc thesis:

Application of Extremely Low Frequency Magnetic Field at 50 Hz after Low Voltage  
Electrochemotherapy at 5 KHz for treatment of invasive ductal carcinoma tumor in  
Balb/c mice (supervisor: Dr Seyed Mohammad Firoozabadi)

## Ph.D thesis:

Evaluation of effect of chronic and acute exposure of 50 and 217 Hz magnetic fields  
on endothelial cells and Balb/c mice tumor angiogenesis (Supervisor: Dr. Seyed  
Mohammad Firoozabadi; Advisor: Dr. Amir Atashi)

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**Research interests:**

Effects of ELF magnetic and electric fields on biology (in vitro & in vivo);

Protective studies on environmental EMFs;

Non-ionizing EMFs and their biological applications.

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**Published papers:**

1. **Akram Mahna**, S. Mohammad Firoozabadi, Zeinab Shankayi. The Effect Of Time-Varying Low Intensity ELF Magnetic Field On Growth Rate Of Invasive Ductal Carcinoma On Balb/C Mice, *Zahedan Journal of Research in Medical Sciences*, Volume 14, Issue 3 (5-2012).
  2. **A. Mahna**, S. M. P. Firoozabadi, Z. Shankayi. The Effect of ELF Magnetic Field on Tumor Growth after Electrochemotherapy, *Journal of membrane biology*, Volume 247, Issue 1, pp 9–15, 2014.
  3. Zeinab Shankayi, S. Mohammad P. Firoozabadi, Mahsa Mansourian & **Akram Mahna**. The effects of pulsed magnetic field exposure on the permeability of leukemia cancer cells, *Electromagnetic Biology and Medicine*, Volume 33, Issue 2, 2014.
  4. **Akram Mahna**; Seyed Mohamad Firoozabadi. Environmental 50Hz Magnetic Fields Can Increase Viability of Human Umbilical Vein Endothelial Cells (HUVEC), *Iranian Journal of Medical Physics*, volume 13, Issue 2, 2016.
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**Presentations:**

1. **A. Mahna**, SMP. Firoozabadi, Z. Shankayi. Effect of low frequency and low intensity magnetic field on tumor of Balb\C mice. 2011, **1<sup>th</sup> national conference of Bioelectromagnetics**, Qazvin University of Medical Science, Presentation.
  2. Z. Shankayi, SMP. Firoozabadi, M. Mansourian, **A. Mahna**. Effect of Pulsed magnetic field on permeability of k562 cancer cells, 2011, **1<sup>th</sup> national conference of Bioelectromagnetics**, Qazvin University of Medical Science, Presentation.
  3. A. Mahna, SMP. Firoozabadi, A. Atashi. The assessment of environmental 50Hz magnetic fields on angiogenesis in vitro and in vivo, 2016, **3<sup>rd</sup> Iranian conference of Bioelectromagnetics**, Khatam university of Tehran, Poster.
  4. Akram Mahna, Seyed Mohammad Firoozabadi and Amir Atashi.. Assessment of the effect of pulsed 217Hz magnetic field of cell phone on angiogenesis in vitro, 2018, **4<sup>th</sup> Iranian conference of Bioelectromagnetics**, Tarbiat modares university of Tehran, Poster. **Elected as the top poster.**
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**Research Projects:**

1. Zeinab Shankayi, S. Mohammad P. Firoozabadi, Mahsa Mansourian & **Akram Mahna**. Evaluation of the effect of TMS<sup>o</sup> on viability and permeability of suspension k562

Erythroleokemia cells and Normal lymphocyte cells. 2010, Student Research Committee of faculty of Medicine of Tarbiat modares university.

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**Memberships:**

**January 2014-Present.**Member of Iranian Assosiation of Medical Physics, Tehran, Iran.

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**Language skills:**

**Fluent in:** Persian and Turkish and **Good in:** English.

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**Teaching Experiences:**

Medical Physics for Bioengineering in Seraj University of Tabriz, Iran.

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**Abilities:**

Cell culture

Work with laboratory animals (mice)

Microsoft office, SPSS, Endnote, Solid work, AutoCAD