



# ***Abolfazl Akbarzadeh***

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## ***Professional Experience***

***Associate Professor of Medicinal chemistry (Nanobiomedicine), Department of Medical Nanotechnology, Faculty of Advanced Medical Sciences, Tabriz University of Medical Sciences, Tabriz, Iran.***

## ***Educational Background***

- ***B.Sc of Applied chemistry, Faculty of Chemistry, Tabriz University, Tabriz, Iran, 1990-1994.***
- ***M.Sc of Pure Chemistry, Faculty of Chemistry, Shahid Beheshty University, Tehran, Iran, 1995-1997.***
- ***Ph.D of Medicinal Chemistry, Tabriz University of Medical Sciences, 2009-2012.***

## **Teaching experiences (Since 2005)**

*Teaching and lecturer in Tabriz University of Medical Sciences (from 2009 – 2014) and Islamic Azad University of Tehran (from 1998 – 2009) consisting:*

- Nanostructure and Nonmaterial
- Nanobiomedicine
- Introduction to Nanotechnology
- Organic Chemistry 2; Organic Chemistry 1 and Different Practical Courses
- Inorganic Chemistry 2; Inorganic Chemistry 1 and Different Practical Courses
- General Chemistry 2; General Chemistry 1 and Different Practical Courses
- Medicinal Chemistry 1; Medicinal Chemistry 2 ; Medicinal Chemistry 3 and Different Practical Courses
- Analytical Chemistry and Different Practical Courses, Instrumental analysis
- Microfluidics

## **Research experiences and fields of interest:**

*Preparation and In-vitro Evaluation of Doxorubicin-Loaded Fe<sub>3</sub>O<sub>4</sub> Magnetic Nanoparticles Modified with Biocompatible Copolymers in Lung Cancer Cells.*

*Regarding my background in designing and preparation of various types of nanoparticles and nanofibers for drug and gene delivery to the different tissues including skin and stem cells, I would like to design novel drug delivery systems possessing the anti-inflammatory, anti-microbial and anti-oxidant properties aiming at rapid skin regeneration. The main drug in these systems will be Propolis (a natural material derived from honey bee). During my project, I will use your 3-D printing system to produce my model skin tissue. In addition to the skin nanobioengineering, I would like to be involved in the projects which aim to engineer bone tissue, as I have undertook a project in which I have found zeolite/hydroxyl apatite nanoparticles are potent bone and tooth palp regenerator nanomaterial.*

## **Other interesting fields are:**

*Microfluidic-based synthesis of nanobiomaterials for designing efficient nanobio-targeting molecules*

## **Research experiences:**

*3DBioprinting*

*Biomaterials*

*Tissue Engineering*

*Biomedical Engineering*

*Bioengineering*

*Nanomaterials*

*Drug Delivery*

## **Current Research:**

*Engineering Hydrogel with tunable properties for soft tissue regeneration.*

*Preparation of Polymeric Micro and Nanoparticles Containing Protein- Peptide and Anti Cancer Drugs.*

**H-index (SCOPUS): 30**

(<http://www.scopus.com/authid/detail.url?origin=resultslist&authorId=36787804000&zone=>)

**H-index (Google Scholar): 33**

(<http://scholar.google.com/citations?user=OjpjaocAAAAJ&hl=en>)

## **Honors and Awards:**

- *Highly Cited Researcher, Thomson Reuters ISI Web of Science, an honor bestowed to the top 1% of scholars worldwide in terms of citations, 2015, and 2016*
- *First ranked researcher in Tabriz University of Medical Sciences in the field of nanobiomedicine (2015 and 2016)*
- *Selected in "First student Olampiad Competition" of Iran.*
- *Selected project in Fourth and Fifth Nokhbegan Foundation in third grade.*
- *2th Researcher Selected in Faculty of Advanced Medical Sciences (2013).*
- *Best oral presentation award in 16th Iranian Pharmacy student seminar 15-17 october, 2011, Tehran, Iran*
- *Selected third university undergraduate PhD student thesis award, Tabriz University of Medical Sciences, Tabriz, Iran, 2012.*

## **Patents:**

- **Akbarzadeh A**, Davaran S, Maleki V. *Preparation and in-vitro evaluation of doxorubicin-loaded Fe<sub>3</sub>O<sub>4</sub> magnetic nanoparticles modified with biocompatible copolymers*. An Iranian patent numbered 73080 (2012)
- **Akbarzadeh A**. *Synthesis, characterization and in vitro evaluation of novel polymer-coated magnetic nanoparticles for controlled delivery of doxorubicin*. An Iranian patent numbered 78456 (2013)
- **Akbarzadeh A**, Davaran S, Maleki V. *Synthesis, characterization and in vitro studies of doxorubicin-loaded magnetic nanoparticles grafted to smart copolymers on A549 lung cancer cell line*. An Iranian patent numbered 78446 (2013)
- **Akbarzadeh A**, Jahangirs S, Characterization and in vitro studies of MTX-loaded magnetic nanoparticles on A549 lung cancer cell line. An Iranian patent numbered 78446 (2017)

## **Editorial Boards:**

### **Journals**

1. *Artificial Cells, Nanomedicine, and Biotechnology* IF=3.02
2. *Jacobs Journal of Molecular and Translational Medicine* Pubmed
3. *Stem Cell and Translational Investigation* Pubmed
4. *SM Journal of Nanotechnology and Nanomedicine* Pubmed

## **Publications(215Articles)**

1. **Abolfazl Akbarzadeh**, Samiei Mohamad, Soodabeh Davaran . *Magnetic Nanoparticles: Preparation, Physical Properties and Applications in biomedicine, Nanoscale research letters* ,2012, 7:144-157
2. Alireza Valizadeh, Haleh Mikaeili, Mohammad Samiei, Samad Mussa Farkhani, Nosratollah Zarghami, Mohammad kouhi, **Abolfazl Akbarzadeh**, Soodabeh Davaran. *Quantum dots: synthesis, bioapplications, and toxicity. Nanoscale research letters* ,2012, 7:276
3. **Abolfazl Akbarzadeh**,Rogaie Rezaei-Sadabady, Soodabeh Davaran, Sang Woo Joo, Nosratollah.Zarghami, Younes Hanifehpour,Mohammad Samiei, Mohammad kouhi, Kazem Nejati-Koshki, *Liposome: Classification, Preparation, and Applications. Nanoscale Research Letters* 2013, 8:102
4. **Abolfazl Akbarzadeh**,Haleh Mikaeili,Davoud Asgari, Nosratollah Zarghami,Rahmati Mohammad,Soodabeh Davaran,.*Preparation and in-vitro evaluation of doxorubicin-loaded Fe<sub>3</sub>O<sub>4</sub> magnetic nanoparticles modified with biocompatible copolymers* , *International Journal of Nanomedicine*, 2012:7 511–526
5. **Abolfazl Akbarzadeh**,Nosratollah Zarghami,Haleh Mikaeili, Davoud Asgari,Amir Mohammad Goganian,H. Khaksar Khiabani,Soodabeh Davaran. *Synthesis, characterization and in vitro evaluation of novel polymer-coated magnetic nanoparticles for controlled delivery of doxorubicin. International Journal of Nanotechnology, Science, Environment*, 2012:5 13–25

6. Akbarzadeh, A., Samiei, M., Joo, S.W., Anzaby, M., Hanifehpour, Y., Nasrabadi, H.T., Davaran, Synthesis, characterization and in vitro studies of doxorubicin-loaded magnetic nanoparticles grafted to smart copolymers on A549 lung cancer cell line, *Journal of Nanobiotechnology* 2012, 10:46-58

7. Mollazade .M, Nejati-Koshki K, Abolfazl Akbarzadeh, Younes Hanifehpour, Zarghami .N, Sang Woo Joo. PAMAM Dendrimers Argument Inhibitory Effect of Curcumin on Cancer Cell Proliferation: Possible Inhibition of Telomerase . Asian Pac J Cancer Prev, 2013, 14 (11), 6925-6928

8. Kazem Nejati-Koshki, Abolfazl Akbarzadeh, Mohammad pourhasan-Moghadam. San woo joo. Inhibition of Leptin and Leptin Receptor Gene Expression by Silibinin- Curcumin Combination .Asian Pac J Cancer Prev, 2013, 14 (11), 6595-6599

9. Rogiae Rezaei-Sadabady, Nosratollah Zarghami, Abolfazl Barzegar, Akram Eidi, Abolfazl Akbarzadeh, Mustafa Rezaei-Tavirani. Studies of the Relationship between Structure and Antioxidant Activity in Interesting Systems, Including Tyrosol, Hydroxytyrosol Derivatives Indicated by Quantum Chemical Calculations. Soft, 2013, 2, 13-18

10. S Fallahzadeh, H Bahrami, A Akbarzadeh, M Tayarani. High-isolation dual-frequency operation patch antenna using spiral defected microstrip structure. *Antennas and Wireless Propagation Letters, IEEE* 9, 122-124

11. Zohreh Ebrahimnezhad, Nosratollah Zarghami, Manoutchehr Keyhani, Soumaye Amirsadat, Abolfazl Akbarzadeh, Mohammad Rahmati, Zohreh Mohammad Taheri, Kazem Nejati-Koshki. Inhibition of hTERT Gene Expression by Silibinin-Loaded PLGA-PEG-Fe<sub>3</sub>O<sub>4</sub> in T47D Breast Cancer Cell Line. *BioImpacts*, 2013, 3(2), 67-74

12. Mohammad Pourhassan-Moghaddam, Mohammad Rahmati-Yamchi, Abolfazl Akbarzadeh, Hadis Daraee, Kazem Nejati-Koshki, Younes Hanifehpour and Sang Woo Joo. Protein detection through different platforms of immuno-loop-mediated isothermal amplification. *Nanoscale Research Letters* 2013, 8:485

13. Ahmadi A, Shirazi H, Pourbagher N, Akbarzadeh A, Omidfar K, An electrochemical immunosensor for digoxin using core-shell gold coated magnetic nanoparticles as labels. *Mol Biol Rep.* 2014 *Molecular biology reports* 41 (3), 1659-1668.

14. Soodabeh Davaran, Abolfazl Akbarzadeh, Kazem Nejati-Koshki, Somayeh Alimohammadi, Mahmoud Farajpour Ghamsari, Mahsa Mahmoudi Soghrati, Akbar Rezaei, Amir Ahmad Khandaghi, In vitro studies of NIPAAm-MAA-VP copolymer-coated magnetic nanoparticles for controlled anticancer drug release, *Journal of Encapsulation and Adsorption Sciences*, 2013, 3, 108-115

15. Samaneh Ghasemali, Kazem Nejati-Koshki, **Abolfazl Akbarzadeh**, Elham Tafsiiri , Nosratollah Zarghami , Mohamad Rahmati-Yamchi, Effat Alizadeh, Amin Barkhordari , Majid Tozhi , Shirafkan Kordi, Study of Inhibitory Effect of  $\beta$ -Cyclodextrin-HelenalinComplex on HTERT Gene Expression in T47D Breast Cancer Cell Line by Real TimeQuantitative PCR (q-PCR), Asian Pac J Cancer Prev, 2013, 14 (11), 6949-6953

16. Fatemeh Sadat Tabatabaei Mirakabad, **Abolfazl Akbarzadeh**, Nosratollah Zarghami, Vahideh Zeighamian, Amirbahman Rahimzadeh , Somayeh Alimohammadi, PLGA-Based Nanoparticles As Cancer Drug Delivery Systems, APJCP. Asian Pac J Cancer Prev. 2014, 15 (1), 517-535

17. Soodabeh Davaran, Akbar Rezaei, Somayeh Alimohammadi, Amir Ahmad Khandaghi, Kazem Nejati-Koshki, Hamid Tayefi Nasrabadi, **Abolfazl Akbarzadeh**, Synthesis and Physicochemical Characterization of Biodegradable star-shaped poly lactide-co-glycolide-  $\beta$  -cyclodextrin copolymer Nanoparticles Containing Albumin, Advances in Nanoparticles, 2014, 3, 14-22

18. Mohammad Kouhi, Ali Vahedi, **Abolfazl Akbarzadeh**, Younes Hanifehpour, Sang Woo Joo. Investigation of Quadratic Electro-Optic Effects and Electro Absorption Process in GaN/AlGaN Spherical Quantum Dot. Nanoscale Research Letters 2014, 9:131-136

19. Elham Abbasi, Sedigheh Fekri Aval, **Abolfazl Akbarzadeh**, Morteza Milani, Hamid Tayefi Nasrabadi, Younes Hanifepour, Kazem Nejati-Koshki, Roghiyeh Pashaei-Asl. Dendrimers: synthesis, applications, and properties. Nanoscale Research Letters 2014, 9 (1), 247

20. Mohammad Pourhassan-Moghaddam, Nosratollah Zarghami, Afshin Mohsenifar, Mohammad Rahmati-Yamchi, Davud Gholizadeh, **Abolfazl Akbarzadeh**, Miguel de la Guardia, Kazem Nejati-Koshki Watercress-based gold nanoparticles: biosynthesis, mechanism of formation and study of their biocompatibility in vitro. IET Digital Library, 2014, 4, 5

21. E Abbasi, M Milani, S Fekri Aval, M Kouhi, **A Akbarzadeh**, H Tayefi Nasrabadi. Silver nanoparticles: synthesis, properties, bio-applications and limitations. 2014, Crit Rev Microbiol 1

22. Ali Eatemadi, Hadis Daraee, Nosratolah Zarghami, Hassan Melat Yar, Abolfazl Akbarzadeh, Younes Hanifehpour. *Nanofiber; Synthesis and Biomedical Applications. Artificial Cells, Nanomedicine, and Biotechnology, 2014*, *Artificial Cells, Nanomedicine, and Biotechnology*, 1-11.

23. Sara Hosseininasab, Roghiyeh Pashaei-Asl, Amir Ahmad Khandaghi, Hamid Tayefi Nasrabadi, Kazem Nejati-Koshki, Abolfazl Akbarzadeh, Sang Woo Joo, Younes Hanifehpour, Soodabeh Davaran. *Synthesis, characterization, and In vitro studies of PLGA-PEG nanoparticles for oral Insulin delivery. Chemical biology & drug design*. 2014, 84 (3) 307-315.

24. Zahra Davoudi, Abolfazl Akbarzadeh, Mohammad Rahmatiyamchi, Ali Akbar Movassaghpoor, Mohsen Alipour, Kazem Nejati-Koshki, Zohre Sadeghi, Hassan Dariushnejad, Nosratollah Zarghami. *Molecular Target Therapy of AKT and NF- $\kappa$ B Signaling Pathways and Multidrug Resistance by Specific Cell Penetrating Inhibitor Peptides in HL-60 Cells*. *Asian Pacific journal of cancer prevention: APJCP* 15 (10), 4353

25. Mortaza Taheri Anganeh, Fatemeh Sadat Tabatabaei Mirakabad, Mahmoud Izadi, Vahideh Zeighamian, Fariba Badrzadeh, Roya Salehi, Nosratollah Zarghami, Masoud Darabi, Abolfazl Akbarzadeh, Mohammad Rahmati-Yamchi. *The comparison between effects of free curcumin and curcumin loaded PLGA-PEG on telomerase and TRF1 expressions in calu-6 lung cancer cell line* *International Journal of Biosciences*. Vol. 4, No. 10, p. 134-145

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27. Ali Eatemadi, Hadis Daraee, Hamzeh Karimkhanloo , Mohammad Kouhi, Nosratolah Zarghami, Abolfazl Akbarzadeh, Younes Hanifehpour, Sang Woo Joo. *Carbon Nanotubes : Properties, Synthesis, Purification, and Medical Applications*. *Nanoscale Research Letters* 2014, *Nanoscale research letters* 9 (1), 1-13

28. Karnoosh-Yamchi Jalil , Mobasseri Majid, Akbarzadeh Abolfazl, Davaran Soodabeh, Ostad-Rahimi Ali Reza, Hamishehkar Hamed, Salehi Roya, Bahmani Zahra, Nejati-Koshki Kazem ,and Rahmati-Yamchi Mohammad. *Preparation of pH sensitive insulin-loaded Nano hydrogels and evaluation of insulin releasing in different pH conditions*. *Molecular Biology Reports*. 2014, *Molecular biology reports* 41 (10), 6705-6712

29. Effat Alizadeh, Abolfazl Akbarzadeh, Nosratollah Zarghami, Mohamadreza Baghaban Eslaminejad, Shahryar Hashemzadeh, Kazem Nejati-Koshki. *Up-regulation of Liver enriched Transcription Factors (HNF4a and HNF6) and*

*Liver Specific MicroRNA (miR-122) by Inhibition of Let-7b in Mesenchymal Stem Cells. Chemical biology & drug design,2014. 85(5).600-608*

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31. Effat Alizadeh, Nosratollah Zarghami, MohamadReza Baghaban Eslaminejad, Abolfazl Akbarzadeh, Abolfazl Barzegar, and Seyed Abolghasem Mohammadi. *The Effect of Dimethyl Sulfoxide (DMSO) on Hepatic Differentiation of Mesenchymal Stem Cells. Artificial Cells, Nanomedicine, and Biotechnology*, 2014,*Artificial cells, nanomedicine, and biotechnology*, 1-8

32. Elham Abbasi, Abolfazl Akbarzadeh , Mohammad Kouhi, Morteza Milani. *Graphene: Synthesis, Bio-Applications, and Properties. Artificial Cells, Nanomedicine, and Biotechnology*, 2014,*Artificial cells, nanomedicine, and biotechnology*, 1-7

33.Eommolbanin Ebrahimi,Elham Abbasi, Abolfazl Akbarzadeh , Amir Ahmad Khandaghi, Soodabeh Davaran. *Novel Drug Delivery System Based on Doxorubicin-Encapsulated Magnetic Nanoparticles modified with PLGA-PEG1000 copolymer . Artificial cells, nanomedicine, and biotechnology*,2014, 1-8

34.Elham Abbasi, Morteza Milani, Sedigheh Fekri Aval, Mohammad Kouhi, Abolfazl Akbarzadeh , Hamid Tayefi Nasrabadi, Parisa Nikasa , San woo joo, Younes Hanifepour , Kazem Nejati-Koshki , Mohammad Samiei. *Silver nanoparticles: Synthesis, properties, bio-applications and limitations. Crit Rev Microbiol*, 2014,*Critical reviews in microbiology*, 1-8

35.Masoud Gandomkar Ghalhar, Abolfazl Akbarzadeh, Mohammad Rahmati, Hassan Mellatyar, Hassan Dariushnejad, Nosratallah Zarghami, Amin Barkhordari.*Comparison of Inhibitory Effects of 17-AAG Nanoparticles and Free 17-AAG on HSP90 Gene Expression in Breast Cancer.**Asian Pacific journal of cancer prevention: APJCP* 2014,15 (17), 7113

36.Hadis Daraee, Ali Eatemadi, Elham Abbasi, Sedigheh Fekri Aval, Mohammad Kouhi, **Abolfazl Akbarzadeh**.Application of gold nanoparticles in biomedical and drug delivery.*Artificial cells, nanomedicine, and biotechnology*, 2014,1-13

37.Fatemeh Sadat Tabatabaei Mirakabad, **Abolfazl Akbarzadeh**, Morteza Milani, Nosratollah Zarghami, Mortaza Taheri-Anganeh, Vahideh Zeighamian, Fariba Badrzadeh, Mohammad Rahmati-Yamchi.A Comparison between the cytotoxic effects of pure curcumin and curcumin-loaded PLGA-PEG nanoparticles on the MCF-7 human breast cancer cell line.*Artificial cells, nanomedicine, and biotechnology*,2014, 1-8

38.H Daraee, A Etemadi, M Kouhi, S Alimirzalu, **A Akbarzadeh**.Application of liposomes in medicine and drug delivery.*Artificial cells, nanomedicine, and biotechnology*, 2014,1-11

39.HT Nasrabadi, E Abbasi, S Davaran, M Kouhi, **A Akbarzadeh**.Bimetallic nanoparticles: Preparation, properties, and biomedical applications.*Artificial cells, nanomedicine, and biotechnology*,2014, 1-5

40.Jin-Hwan Chung, Young Kyung Kim, Kyo-Han Kim, Tae-Yub Kwon, Seyede Ziba Vaezmomeni, Mohammad Samiei, Marzyeh Aghazadeh, Soodabeh Davaran, Mehrdad Mahkam, Ghale Asadi, **Abolfazl Akbarzadeh**.Synthesis, characterization, biocompatibility of hydroxyapatite-natural polymers nanocomposites for dentistry applications.*Artificial cells, nanomedicine, and biotechnology*, 2014,1-8

41.Sedigheh Fekri Aval, **Abolfazl Akbarzadeh**, Mohammad Rahmati Yamchi, Faraz Zarghami, Kazem Nejati-Koshki, Nosratollah Zarghami.Gene silencing effect of SiRNA-magnetic modified with biodegradable copolymer nanoparticles on hTERT gene expression in lung cancer cell line.*Artificial cells, nanomedicine, and biotechnology*,2014, 1-6

42.Zohre S, Kazem NK, **Abolfazl A**, Mohammad RY, Aliakbar M, Effat A, Zahra D, Hassan D, Nosratollah Z.Trichostatin A-induced Apoptosis is Mediated by Kruppel-like Factor 4 in Ovarian and Lung Cancer.*Asian Pac J Cancer Prev.* 2014;15(16):6581-6.

43.Alireza Valizadeh, Mohsen Bakhtiary, **Abolfazl Akbarzadeh**, Roya Salehi, Samad Mussa Frakhani, Ommolbanin Ebrahimi, Mohammad Rahmati-yamchi & Soodabeh Davaran.Preparation and characterization of novel electrospun poly(e-caprolactone)-based nanofibrous scaffolds.*Artificial Cells, Nanomedicine, and Biotechnology*, 2014; Early Online: 1-6.

44.Hassan Mellatyar, **Abolfazl Akbarzadeh**, Mohammad Rahmati, Masoud Gandomkar Ghalhar, Ali Etemadi, Kazem Nejati-Koshki1, Nosratollah Zarghami1, Amin Barkhordari. Comparison of Inhibitory Effect of 17-DMAG Nanoparticles and Free 17-DMAG in HSP90 Gene Expression in Lung Cancer. *Asian Pac J Cancer Prev.* APJCP.2014.15.20.8693-8698.

45.Kianoosh Dadashzadeh, Morteza Milani, Mohammad Rahmati, **Abolfazl Akbarzadeh**, Real-Time PCR Detection of 16S rRNA Novel Mutations Associated with *Helicobacter pylori* Tetracycline Resistance in Iran, *Asian Pac J Cancer Prev.* APJCP.2014.15.20.8883-8886.

46.Amirbahman Rahimzadeh, Fatemeh Sadat Tabatabaei Mirakabad , Aliakbar Movassaghpoour , Karim Shamsasenjan , Saber Kariminekoo , Mehdi Talebi , Abolfazl Shekari , Vahideh Zeighamian Masoud Gandomkar Ghalhar 7 &**Abolfazl Akbarzadeh**, Biotechnological and biomedical applications of mesenchymal stem cells as a therapeutic system, *Artificial Cells, Nanomedicine, and Biotechnology*, 2014; Early Online: 1–12

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49.Roya Herizchi , Elham Abbasi , Morteza Milani &**Abolfazl Akbarzadeh**. Current methods for synthesis of gold nanoparticles. *Artificial Cells, Nanomedicine, and Biotechnology*, 2014; Early Online: 1–7

50.Taiebeh Kafshdooz , Leila Kafshdooz , **Abolfazl Akbarzadeh**, Younes Hanifehpour & Sang Woo Joo. Applications of nanoparticle systems in gene delivery and gene therapy. *Artificial Cells, Nanomedicine, and Biotechnology*, 2014; Early Online: 1–7

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55.Kordi Shirafkan, Zarghami Nosratolah, Rahmati Yamchi Mohammad, Ghasemali Somaye ,Tozhi Majid, Nejati-Koshki Kazem, **Akbarzadeh Abolfazl**.*The Comparison of inhibitory effect of nanocapsolated Helenalin and free Helenalin on Telomerase gene expression in breast cancer cell line by Real-time PCR.**Molecular Biology Reports.*2014. *Artificial Cells, Nanomedicine, and Biotechnology*, 2014; Early Online: 1–17

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## **Presentations**

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2. **Abolfazl Akbarzadeh**, Davoud Asgari, Soodabeh Davaran. Preparation and in-vitro evaluation of doxorubicin-loaded  $Fe_3O_4$  magnetic nanoparticles modified with biocompatible copolymers. **The 5<sup>th</sup> Iranian controlled Release conference of Iran, Masshad 4-6 October, 2011( ICRC 2011)**
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6. **Abolfazl Akbarzadeh**, Nosratollah Zarghami,Davoud Asgari,Amir Mohammad Goganian,H. Khaksar Khiabani,Soodabeh Davaran. Synthesis, characterization and in vitro evaluation of novel polymer-coated magnetic nanoparticles for controlled delivery of doxorubicin. **The 2<sup>th</sup> Iranian Nanodrug conference of Iran, Ahwaz 6-9March, 2012**
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