



**Date Prepared:** Nov 08, 2018  
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### Education

2003	Pharm D	Pharmacy	Isfahan University of Medical Sciences, Isfahan, Iran
2012	PhD	Biomaterial Engineering	Isfahan University of Technology, Isfahan, Iran

### Appointments at Hospitals/Affiliated Institutions

2008	Visiting Student	Biomedical Engineering	Polytechnic University of Milan
2010	Research fellow	Biomedical Engineering	Duke University, USA
2016-	Visiting professor, collaborator	Biomaterial Innovation Research Center	Harvard University, USA

### Other Professional Positions

2015-	Head of Department of Pharmaceutical Sciences	Kermanshah University of Medical sciences
2016-	Head of Department of Pharmaceutical Biomaterials	Kermanshah University of Medical sciences

### Major Administrative Leadership Positions

2014-2016 Head of Teaching Pharmacy Kermanshah University of Medical Sciences

### Committee Service

2015- Development of Applied Biotechnology Kermanshah University of Medical  
in the west of Iran Committee Sciences  
2015 Member

### Professional Societies

2003-present Medical Council, Iran Member  
2005-present Iranian Association of Pharmacists Member  
2012-present Iranian Association of Pharmaceutical Member  
Scientists

### Grant Review Activities

2015-2016 Knowledge-Based Company Iran Technology and  
Review Committee Entrepreneurship Company  
Reviewer  
2017- Reviewer Iran National Sciences  
Foundation

### Editorial Activities

Carbohydrate Polymer  
Plus one  
Materials Science and Engineering C  
International Journal of Nanomedicine  
Journal of Bioactive and Compatible Polymers  
Pharmacognosy Magazine  
Iranian Journal of Pharmaceutical Sciences  
Biomolecular Concepts  
Applied Organometallic Chemistry  
Colloids and Surface A  
International Journal of Polymer Science

### Honors and Prizes

2011 Students award of 2<sup>nd</sup> Nanotoday NanoToday Journal  
conference  
2014 Distinguished researcher Kermanshah University of Medical  
Sciences  
2015 Best oral presentation award 14<sup>th</sup> Iranian Pharmaceutical Sciences  
Conference  
2017 Distinguished researcher Kermanshah University of Medical  
Sciences

## **Report of Funded and Unfunded Projects**

### Funding Information

## Current

- 2013-16 Preparation and Characterization of Tragacanth Microcapsule Containing beta-pancreatic Cells  
KUMS/91424  
PI  
The major goal of the study is cell therapy for the *Diabetes mellitus*
- 2013-16 Producing polymeric micelles using anti-cancer drug-polymer conjugates.  
KUMS/91199, 93452, 93471  
PI  
The major goal of the study is to develop a new generation of polymeric micelles with high drug loading capacity and co-delivery of two or more anticancer drug for combination therapy of cancers.
- 2013-16 Polymeric electro-spun mats for skin regeneration.  
KUMS/92268, 93419,  
PI  
The major goal of the study is to produce biodegradable polymeric mats containing regenerative compounds (consist of herbal and chemical) and antibiotics for regeneration of burnt skin and diabetics wounds.
- 2014-16 Fabrication of mono-dispersed PLGA microparticles using a microfluidic chip for drug delivery  
KUMS/92202, 93303,  
PI  
The major goal of the study is to develop a reproducible system for industrial production of sustained release form of triptorelin, risperidone, etc.
- 2016-

## **Report of Local Teaching and Training**

### **The teaching of Students in Courses**

2012-16	Pharmaceutics II (powders and tablets) 3 <sup>rd</sup> -year pharmacy students	Kermanshah University of medical sciences 3-hr sessions per wk for 15 wks, 1 semester per year
2012-16	Pharmaceutics IV 4 <sup>th</sup> -year pharmacy students	Kermanshah University of medical sciences 2-hr sessions per wk for 15 wks, 1 semester per year
2012-16	Pharmaceutics V (novel drug delivery systems) 5 <sup>th</sup> -year pharmacy students	Kermanshah University of medical sciences 2-hr sessions per wk for 15 wks, 1

2012-16	Polymer in pharmaceutics 5 <sup>th</sup> -year pharmacy students	semester per year Kermanshah University of medical sciences 2-hr sessions per wk for 15 wks, 1 semester per year
2014-16	Biomaterials Msc students of Bioelectric	Kermanshah University of medical sciences, 3-hr sessions per wk for 15 wks, 1 semester per year
2015	Materials and systems in nano-biotechnology Ph.D. students of nano-biotechnology	Razi University, Kermanshah, 3-hr sessions per wk for 15 wks
2017-18	Novel drug delivery systems Ph.D. students of pharmaceutical biomaterials	Kermanshah University of medical sciences. 3-hr sessions per wk for 15 wks, 1 semester per year
2017-18	Biomaterials Ph.D. students of pharmaceutical biomaterials	Kermanshah University of medical sciences. 3-hr sessions per wk for 15 wks, 2 semesters per year

### Clinical Supervisory and Training Responsibilities

2013-16	upervising and practical education of pharmacy students at the educational pharmacy, KUMS	8 sessions per semester
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### Local Invited Presentations

2007	Cell culture techniques and molecular biology for Biomaterial Students/Workshop Medical University of Isfahan
2005	Pharmacology for nurses / Workshop in Fereidunshahr Hospital, Fereidunshahr, Isfahan, Iran
2010	Application of Statistic in Biomaterial Researches/ Workshop Isfahan University of Technology, Isfahan, Iran
2010	The concept of Biocompatibility in Biomaterials / Workshop Isfahan University of Technology
2010	Chemistry of nano-drug delivery / Workshop Payame-Noor University of Isfahan. Isfahan, Iran

## **Report of Regional, National and International Invited Teaching and Presentations**

### **Invited Presentations and Courses**

#### **Regional**

2014-16      Pharmaceutics V (novel drug delivery systems), 2-hr sessions per wk for 15 wks, 1 semester per year, Yazd University of Medical Sciences, Yazd, Iran

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification**

2009-              Iran's Pharmacy License  
present

### **Practice Activities**

2003- 2005	Hospital Pharmacist	Hajar Hospital, Shahrekord, Iran	6 h per day, 6 days/week
2005	Hospital Pharmacist	Hospital of Feridunshahr, Feridunshahr, Isfahan, Iran	6 h per day, 6 days/week
2003- 2007	Pharmacist	Dr. Fattahi Pharmacy, Asgaran, Isfahan, Iran	4 h per day, 6 days/week

## **Report of Technological and Other Scientific Innovations** (تعداد ردیف هادر دو ستون برابر نیست)

The antimicrobial polymeric scaffold of silk/tragacanth for the treatment of bone infection.

Iran patent, 83218, filed March 8, 2014

Nano-fibers of silk/gelatin containing antibiotic for the treatment of infections

One of my MS student and I created an antibacterial silk fibroin/de-esterified tragacanth scaffold  
Iran patent, 83216, filed January 26, 2014

As a part of our research in regenerative mats for skin regeneration, we have produced an antibacterial wound dressing

## **Report of Education of Patients and Service to the Community**

### **Activities**

## **Report of Scholarship**

### **Publications**

1. Sadeghi Aliabadi H, Ghasemi N, **Fattahi A**. Cytotoxic effects of Iranian mistletoe extract on a panel of cancer cells. *Iranian J.Pharm. Sci.* 2006; 2(3):157-162.
2. **Fattahi A\***, Golozar MA, Varshosaz J, Sadeghi HM, Fathi M. Preparation and characterization of micelles of oligomeric chitosan linked to all-trans retinoic acid. *Carb. Pol.* 2011; 78(2):1176-1184.
3. Sadeghi-Aliabadi H, Aliasgharluo M, **Fattahi A**, Ghanadian M. In vitro cytotoxic evaluation of some synthesized COX-2 inhibitor derivatives against a panel of human cancer cell lines. *RPS.* 2013; 8(4):299-304.
4. **Fattahi A\***, Petrini P, Munarin F, Shokoohinia Y, Golozar MA, Varshosaz J, Tanzi MC. Polysaccharides derived from tragacanth as biocompatible polymers and gels. *J. Appl. Polym. Sci.* 2013; 129(4):2092–2102.
5. **Fattahi A\***, Sadrjavadi K, Golozar MA, Varshosaz J, Fathi MH, Mirmohammad-Sadeghi H. Synthesis and characterization of novel chitosan oligomer-water soluble tragacanth nanoparticles as gene carrier. *Carb. Pol.* 2013; 97:277–283.
6. Chakraborty S, Christoforou N, **Fattahi A**, Herzog RW, Leong KW. A robust strategy for negative selection of Cre-LoxP recombination-based excision of transgenes in induced Pluripotent Stem Cells. *Plos One.* 2013; 8(5):e64342.
7. **Fattahi A\***, Golozar M-A, Varshosaz J. Retinoic Acid-Oligomeric Chitosan Micelles as Novel Gene Delivery Carrier; in Vitro Transfection Study. *Journal of Reports in Pharmaceutical Sciences (JRPS).* 2013; 2(2):36-41.
8. Mohammadi Gh, Hemati V, Mirzaee Sh, **Fattahi A**, Adibkia Kh. In vitro and In vivo evaluation of Clarithromycin-Urea solid dispersions prepared by solvent evaporation, electrospraying and freeze drying. *Powder technology.* 2014; 257:168-174.
9. Shokoohinia Y, Sajjadi SE, Gholamzadeh S, **Fattahi A**, Behbahani M. Antiviral and cytotoxic evaluation of coumarins from Prangos ferulacea. *Pharm. Biol.* 2014; 52(12):1543-9.
10. Tajani B, Tahvilian R, Khazaei S, Javadi KS, **Fattahi A\***. Preparation and Characterization of Camptothecin Grafted Chitosan Oligosaccharide Nanomicelles. *Journal of Reports in Pharmaceutical Sciences (JRPS).* 2015; 4(1):1-11.
11. **Fattahi A**, Asgarshamsi M, Hasanzadeh F, Varshosaz J, Rostami M, Mirian M, et al. Methotrexate-grafted-oligochitosan micelles as drug carriers: synthesis and biological evaluations. *Journal of Materials Science: Materials in Medicine.* 2015; 26(2):1-10.
12. Nayeri H, **Fattahi A**, Iranpoor-Mobarakeh M, Nori P. Stabilization of lactoperoxidase by tragacanth-chitosan nano biopolymer. *International Journal of Biosciences (IJB).* 2015; 6(2):418-26.
13. Sajjadi SE, Jamali M, Shahbazi B, **Fattahi A**, Shokoohinia Y. Antiproliferative Evaluation of Terpenoids and Terpenoid Coumarins from Ferulago macrocarpa (Fenzl) Boiss. *Pharmacognosy Research.* 2015; 7(4):322-28.
14. Shahbazi B, Taghipour M, Rahmani H, Sadr-javadi K, **Fattahi A\***. Preparation and Characterization of Silk Fibroin/Oligochitosan Nanoparticles for siRNA Delivery. *Colloids and Surfaces B: Biointerfaces.* 2015; 136:867-77.
15. Maghsoudi S, Ghorbani F, Ashrafi-Kooshk MR, **Fattahi A**, Khodarahmi R. Isolation and comparative characterization of  $\alpha$ -amylase inhibitor from white kidney bean (*Phaseolus Vulgaris*): A serious in vitro assessment of the commercial product. *Journal of Reports in Pharmaceutical Sciences (JRPS).* 2015;4(2):167-76.
16. Haghghi Pak Z, Abbaspour H, Karimi N, **Fattahi A**. Eco-Friendly Synthesis and Antimicrobial Activity of Silver Nanoparticles Using *Dracocephalum moldavica* Seed Extract. *Applied Sciences.* 2016;6(3):69-78.
17. Safdari M, Shakiba E, Kiaie SH, **Fattahi A\***. Preparation and characterization of Ceftazidime loaded electrospun silk fibroin/gelatin mat for wound dressing. *Fibers and Polymers.* 2016;17(5):744-50.
18. Abdolmaleki S, Ghadermazi M, **Fattahi A**, Sheshmani S. Synthesis, characterization, spectral studies and cytotoxic effects of mixed-ligand mono and binuclear copper (II) complexes and their amide ligands. 2016; 443:284-98.
19. Tahvilian R, Tajani B, Sadrjavadi K, **Fattahi A\***. Preparation and characterization of pH-sensitive camptothecin-cis-aconityl grafted chitosan oligosaccharide nanomicelles. *International Journal of Biological Macromolecules.* 2016; 92:795-802.
20. **Fattahi A**, Niyazi F, Shahbazi B, Farzaei MH, Bahrami G. *Journal of Evidence-Based Complementary & Alternative Medicine.* 2017; 22(1):127-33.

21. Jafarifar E, Hajjalyani M, Akbari M, Rahimi M, Shokoohinia Y, **Fattahi A**\*. Preparation of a reproducible long-acting formulation of risperidone-loaded PLGA microspheres using microfluidic method. *Pharmaceutical Development and Technology*. 2017; 22(6):836-43.
22. Mohammadi Gh, Shakeri A, **Fattahi A**, Mohammadi P, Mikaeili A, Aliabadi A, Adibkia Kh. Preparation, Physicochemical Characterization and Anti-fungal Evaluation of Nystatin-Loaded PLGA-Glucosamine Nanoparticles. *Pharmaceutical Research*. 2017; 34(2):301-309.
23. Abdolmaleki S, Ghadermazi M, **Fattahi A**, Shokraii S, Alimoradi M, Shahbazi B, Judy Azar AR. Synthesis, crystallographic and spectroscopic studies, evaluation as antimicrobial and anticancer agents of a novel mixed-ligand nickel(II) complex. *Journal of Coordination Chemistry*. 2017; 70(8):1406-23.
24. Akbari M, Rahimi M, **Fattahi A**, Evaluation of microparticles formation by external gelation in a microfluidic system. *Journal of Chemical Engineering and Processing: Process Intensification*. 2017; 117:171-78.
25. **Fattahi A**, Sakvand T, Hajjalyani M, Shahbazi B, Shakiba M, Tajmiri A, Shakiba E. preparation and characterization of Pistacia Khinjuk Gum nanoparticles using response surface method: evaluation of its antibacterial performance and cytotoxicity. *Advanced pharmaceutical bulletin*. 2017; 7(1):159-64.
- 26.
27. Shakiba E, Khazae S, Hajjalyani M, Astinchap B, **Fattahi A**\*. Preparation and Characterization of Retinoic Acid Loaded Poly ( $\epsilon$ -Caprolactone)-Poly (Ethylene glycol)-Poly ( $\epsilon$ -Caprolactone) Micelles; an In Vitro Study. *Research in Pharmaceutical Sciences*. 2017; 7(1):159.
28. Chahardoli A, Karimi N, **Fattahi A**\*. Biosynthesis, Characterization, Antimicrobial and Cytotoxic Effects of Silver Nanoparticles Using Nigella arvensis Seed Extract. *Iranian Journal of Pharmaceutics*. 2017; 16(3): 1167.
29. Ebrahimi A, Sadrjavadi K, Hajjalyani M, Shokoohinia Y, **Fattahi A**\*. Preparation and characterization of silk fibroin hydrogel as injectable implants for sustained release of Risperidone. *Drug development and industrial pharmacy*. 2018; 44 (2), 199-205.
30. Aziz S, Sabzi M, **Fattahi A**, Arkan E. Electrospun silk fibroin/PAN double-layer nanofibrous membranes containing polyaniline/TiO<sub>2</sub> nanoparticles for anionic dye removal. *Journal of Polymer Research*. 2017; 24 (9), 140.
31. Feyzmand S, Shahbazi B, Marami M, Bahrami Gh, **Fattahi A**\*, Shokoohinia Y. Mechanistic In vitro Evaluation of Prosopis farcta roots potential as an antidiabetic folk medicinal plant. *Pharmacognosy Magazine*. 2018; 13 (52), 852.
32. Hosseinkhani Z, Sadeghalvad M, Norooznejhad F, Khodarahmi R, Fazilati M, Mahnam A, **Fattahi A**, Mansouri K. The effect of CYP2C9\* 2, CYP2C9\* 3, and VKORC1-1639 G> A polymorphism in patients under warfarin therapy in city of Kermanshah. *Research in Pharmaceutical Sciences*. 2018; 13 (4), 377.
33. Chahardoli A, Karimi N, **Fattahi A**\*. Nigella arvensis leaf extract mediated green synthesis of silver nanoparticles: Their characteristic properties and biological efficacy. *Advanced Powder Technology*. 2018; 29 (1), 202-210.
34. **Fattahi A**, Shahbazi B, Hosseinzadeh L, Mohammadi G. Optimization of Lipofectamine-2000/siRNA Lipoplex Loaded PLGA Nanoparticles for Efficient EGFR Gene Silencing: An in Vitro Study. *JRPS*; 2018 7 (1), 64-78.
35. Chahardoli A, Karimi N, Sadeghi F, **Fattahi A**\*. Green approach for synthesis of gold nanoparticles from Nigella arvensis leaf extract and evaluation of their antibacterial, antioxidant, cytotoxicity and catalytic activities. *Artificial Cells, Nanomedicine, and Biotechnology*. 2018; 46(3): 579-588.
36. Ahmadi E, Sadrjavadi K, Mohammadi Gh, **Fattahi A**\*. De-esterified tragacanth microspheres loaded into Eudragit S-100 coated capsules for colon-targeted delivery. *Iranian Journal of Pharmaceutical Research*. 2018; 17(2): 470.
37. **Fattahi A**\*, Karimi N, Rahmati F, Shokoohinia Y, Sadrjavadi K. Preparation and physicochemical characterization of camptothecin conjugated poly amino ester–methyl ether poly ethylene glycol copolymer. *RSC Advanced*. 2018; 8 (23), 12951-12959.
38. Alvandimanesh A, Sadrjavadi K, Akbari M, **Fattahi A**\*. Optimization of de-esterified tragacanth microcapsules by computational fluid dynamic and the Taguchi design with the purpose of the cell encapsulation. *International Journal of Biological Macromolecules*. 2018; 29(1): 202-210.
39. Jafari S, Derakhshankhah H, Alaei L, **Fattahi A**, Shiri-Varnamkhasti B, Saboury A. Mesoporous silica nanoparticles for therapeutic/diagnostic applications. *Biomedicine & Pharmacotherapy*. 2019; 109: 1100-1111.

40. Sadrjavadi K, Shahbazi B, **Fattahi A\***. De-esterified tragacanth-chitosan nano-hydrogel for methotrexate delivery; optimization of the formulation by Taguchi design. *Artificial Cells, Nanomedicine, and Biotechnology*. (accepted)
41. Chahardoly A, Karimi N, **Fattahi A**, Salimikia I. Biological applications of Photosynthesized gold nanoparticles using leaf extract of *Dracocephalum kotschyi*. *Journal of Biomedical Materials Research: Part A*. (accepted)

### Non-peer reviewed scientific or medical publications/materials in print or other media

#### **Book chapter**

1. **Fattahi A.**, Varshosaz J. What are the limitations of chitosan use in non-viral gene delivery and how to overcome them? In: Wang SF, editor. *Biocompatible Nanomaterials: Synthesis, Characterization, and application*. NOVA publisher; 2010.

#### Thesis

Fattahi A. 2012. Modification of chitosan mediated gene delivery system with retinoic acid and pectin. Ph.D. Thesis, Isfahan University of Technology

### Abstracts, Poster Presentations, and Exhibits Presented at Professional Meetings

1. Alvandimanesh, Davari E, Sadrjavadi K, and **Fattahi A**. Preparation and characterization of water-soluble tragacanth microcapsules by extrusion method for encapsulation of beta pancreatic cells. CRSI, Tehran, Iran, 2014.
2. Jafarifar E, Nikray S, Shokoohinia P, Sadrjavadi K, Soleimani M, and **Fattahi A**. Effect of Microfluidic Chip Geometry on Morphology and Size of PLGA Microparticles. CRSI, Tehran, Iran, 2014.
3. Shokoohinia P, Jafari-Far E, Nikray S, Rahimi M., Mohammadi G, and Fattahi A. The Effect of Concentration of Polymer and Surfactant on the size and Size Distribution of PLGA Nano-Particles Prepared by Microfluidic Method. CRSI, Tehran, Iran, 2014.
4. Mohammadi Gh, Hemati V, Mirzaee Sh, **Fattahi A**, Adibkia Kh. In vitro and In vivo evaluation of Clarithromycin-Urea solid dispersions prepared by solvent evaporation, electrospraying and freeze drying. CRSI, Tehran, Iran, 2014.
5. **Fattahi A**, Fakhri S, Hosseinzadeh L, Sadrjavadi K. Preparation and characterization of porous chitosan/tragacanthic acid hybrid scaffold with the freeze-gelation method. IPSC, Isfahan, Iran, 2012.
6. Gholamzadeh S, Behbahani M, **Fattahi A**, Sajjadi SE, Shokoohinia Y. Antiviral evaluation of coumarins from *Prangos ferulacea* L.(Lindl). IPSC, Isfahan, Iran, 2012.
7. **Fattahi A**, Golozar MA, Varshosaz J, Fathi MH, Sadeghi HM. Preparation and characterization of the novel All-Trans Retinoic Acid grafted chitosan oligosaccharide micelles. 2<sup>nd</sup> Nanotoday conference, Hawaii, USA, 2011.
8. **Fattahi A.**, Pezzoli D., Varshosaz j., Golozar M.A., Mohammad-Sadeghi H.M., Petrini P., Tanzi M.C., Candiani G., Characterization of pectin-coated polyethyleneimine polyplexes as effective gene delivery systems. 23<sup>th</sup> ESB (European Society of Biomaterials), Tampere, Finland, 2010.
9. **Fattahi A.**, Petrini P., Munarin F., Golozar M.A., Varshosaz J., Fathi M.A., Tanzi M.C., UV Evaluation of Polyplex/Pectin Micro- and Nano-particles for Gene Therapy. 23<sup>th</sup> ESB (European Society of Biomaterials), Tampere, Finland, 2010.
10. Sadeghi-Aliabadi H, Ghasemi N, **Fattahi A**. Cytotoxic evaluation of Iranian mistletoe extract on a panel of cancer cells. 4<sup>th</sup> World Congress of cellular and molecular biology, Poitiers, France, October 2005.

### Narrative Report