

Curriculum Vitae



Fatemeh Ahmadi, Pharm D, PhD in Pharmaceutics

Born: September 9th, 1980, Shiraz, Iran

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Education:

1996-2003 Pharm D, School of Pharmacy, Shiraz University of Medical Sciences,
Shiraz, Iran

2003-2010 PhD, Faculty of Pharmacy and Pharmaceutical Sciences, Isfahan
University of Medical Sciences, Isfahan, Iran

2009 February-September

Occupational trainee, School of Chemistry and Molecular Biosciences,
University of Queensland, Brisbane, Australia, Research project consisted
of:

- 1- Development of a lipid core peptide based delivery system as self-
adjuvanting group A streptococcal vaccine.
- 2- Synthesis of a cationic peptide polymeric system for gene delivery.

Membership activities:

- Medical Council of Islamic Republic of Iran, since 2004
- Iranian Pharmacists Association, since 2001

Research interests:

- 1- Targeted drug delivery systems based on prodrugs and polymeric constructs
- 2- Cationic structurally-modified polymers for gene delivery

Teaching Assignments:

- 1) Pharmaceutical dosage forms for Pharm D students (Theory & Practice)
- 2) Pharmacy practice for Pharm D students
- 3) Pharmaceutics I (Introduction to Pharmacy) for Pharm D students
- 4) Pharmaceutics II (Pharmaceutical solids) for Pharm D students (Theory & Practice)
- 5) Pharmaceutics V (Novel drug delivery systems) for Pharm D students (Theory & Practice)
- 6) Physical pharmacy for Pharm D students
- 7) Quality control of Pharmaceuticals for Pharm D students
- 8) Hospital pharmacy (Cleanroom) for Pharm D students
- 9) Polymer sciences and applications for PhD students of Pharmaceutics
- 10) Pelletization techniques and Powder technology (Industrial pharmacy) for PhD students of Pharmaceutics
- 11) Novel drug delivery systems for PhD students of Pharmaceutics
- 12) Industrial pharmacy for PhD students of Biotechnology
- 13) Nanobiotechnology, Tissue engineering and Physical pharmacy for PhD students of Pharmaceutical Nanotechnology

Publications:

- 1- **F. Ahmadi.** *Pharm D thesis*, Determination of suitable paclitaxel oral dose after pretreatment by ibuprofen and effect of P-gp inhibitors on paclitaxel oral absorption. Faculty of Pharmacy, Shiraz University of Medical Sciences, 2003, supervised by:
 - H. Montaseri PhD, Department of Pharmaceutics, Faculty of Pharmacy, Shiraz University of Medical Sciences
 - S. Mohammadi Samani PhD, Department of Pharmaceutics, Faculty of Pharmacy, Shiraz University of Medical Sciences

- 2- **F. Ahmadi.** *PhD thesis in Pharmaceutics*, Preparation and characterization of colon specific drug delivery systems for budesonide using dextran and evaluation of their effects on ulcerative colitis model in rat. Faculty of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, 2010, supervised by:
 - J. Varshosaz PhD, Department of Pharmaceutics, Faculty of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran
 - J. Emami PhD, Department of Pharmaceutics, Faculty of Pharmacy and Pharmaceutical sciences, Isfahan University of Medical Sciences, Isfahan, Iran

- N. Tavakoli PhD, Department of Pharmaceutics, Faculty of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran
- M. Minaiyan PhD, Department of Pharmacology, Faculty of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran
- F. Dorkoosh PhD, Department of Pharmaceutics, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran

PhD thesis was a part of a research project from Astra Zeneca Co.

- 3- J. Emami, N. Ghassami, **F. Ahmadi**. Development and validation of a new HPLC method for determination of lamotrigine and related compounds in tablet formulations. *J. Pharm. Biomed. Anal.*, 2006, 40(4): 999-1005.
- 4- J. Emami, J. Varshosaz, **F. Ahmadi**. Preparation and evaluation of a liquid sustained-release drug delivery system for theophylline using spray-drying technique. *Res. Pharm. Sci. (RPS)*, 2007, 2: 1-11.
- 5- J. Emami, M. Tajeddin, **F. Ahmadi**. Preparation and in vitro evaluation of sustained-release matrix tablets of flutamide using synthetic and naturally occurring polymers. *Iran. J. Pharm. Res.* 2008, 7(4): 247-257.
- 6- J. Varshosaz, J. Emami, N. Tavakoli, A. Fassihi, M. Minaiyan, **F. Ahmadi**, F. Dorkoosh. Synthesis and evaluation of dextran-budesonide conjugates as colon specific prodrugs for treatment of ulcerative colitis. *Int. J. Pharm.* 2009, 365(1-2): 69-76.
- 7- J. Varshosaz, J. Emami, **F. Ahmadi**, N. Tavakoli, A. Fassihi, M. Minaiyan, P. Mahzouni, F. Dorkoosh. Preparation of budesonide-dextran conjugates using glutarate spacer as a colon targeted drug delivery system: *in vitro/in vivo* evaluation in induced ulcerative colitis. *J. Drug Target.* 2011, 19(2): 140-153.
- 8- J. Varshosaz, J. Emami, N. Tavakoli, A. Fassihi, M. Minaiyan, **F. Ahmadi**, P. Mahzouni, F. Dorkoosh. Effectiveness of budesonide-succinate-dextran conjugate as a novel prodrug of budesonide against acetic acid-induced colitis in rats. *Int. J. Colorectal Dis.* 2010, 25: 1159-1165.
- 9- J. Varshosaz, **F. Ahmadi**, J. Emami, N. Tavakoli, M. Minaiyan, P. Mahzouni, F. Dorkoosh. Colon delivery of budesonide using solid dispersion in dextran for the treatment and secondary prevention of ulcerative colitis in rat. *Int. J. Prevent. Med.* 2010, 1(2): 116-124.

- 10- **F. Ahmadi**, J. Varshosaz, J. Emami, N. Tavakoli, M. Minaiyan, P. Mahzouni, F. Dorkoosh. Preparation and in vitro/in vivo evaluation of dextran matrix tablets of budesonide in experimental ulcerative colitis. *Drug Del.* 2011, 18(2): 122-130.
- 11- J. Varshosaz, **F. Ahmadi**, J. Emami, N. Tavakoli, M. Minaiyan, P. Mahzouni, F. Dorkoosh. Microencapsulation of budesonide with dextran by spray drying technique for colon targeted drug delivery: an in vitro/ in vivo evaluation in induced colitis in rat. *J. Microencapsul.* 2011, 28(1): 62-73.
- 12- J. Varshosaz, J. Emami, N. Tavakoli, M. Minaiyan, N. Rahmani, **F. Ahmadi**, F. Dorkoosh. Development and validation of a rapid HPLC method for simultaneous analysis of budesonide and its novel synthesized hemiesters in colon specific formulations. *Res. Pharm. Sci.* 2011, 6(2): 107-116.
- 13- J. Emami, J. Varshosaz, M. Amirsadri, **F. Ahmadi**. Preparation and evaluation of a sustained-release suspension containing theophylline microcapsules. *Afr. J. Pharm. Pharmacol.* 2012, 6(28): 2091-2099.
- 14- H. Montaseri, S. Mohammadi Samani, Z. Sobhani, B. Zarea, **F. Ahmadi**. Enhanced oral bioavailability of paclitaxel by concomitant use of penetration enhancers and P-glycoprotein inhibitors in rats. *J. Chemother.* 2013, 25(6): 355-361.
- 15- S. Mohammadi Samani, G. Yousefi, F. Mohammadi, **F. Ahmadi**. Meloxicam transdermal delivery: effect of eutectic point on the rate and extent of skin permeation. *Iran. J. Basic Med. Sci.* 2014, 17: 112-118.
- 16- S. Mohammadi Samani, F. Jalali, Sh. Tavakoli, **F. Ahmadi**. Solid lipid microparticles of lamotrigine: an injectable controlled release system for local delivery in nerve injuries. *J. Drug Del. Sci. Tech.* 2014, 24(4): 367-372.
- 17- **F. Ahmadi**, Z. Oveisi, S. Mohammadi Samani, Z. Amoozgar. Chitosan based hydrogels: characteristics and pharmaceutical applications. *Res. Pharm. Sci.* 2015, 10(1): 1-16.
- 18- Sh. Alipour, S. Akbari, **F. Ahmadi**. Development and in vitro evaluation of fast-dissolving oral films of ondansetron hydrochloride. *Trends Pharm. Sci.* 2015, 1(1): 25-30.
- 19- A. Hamedi, H. Rezaei, N. Azarpira, M. Jafarpour, **F. Ahmadi**. Effects of Malva sylvestris and its isolated polysaccharide on experimental ulcerative colitis in rats. *J. Evid. Based Complementary Altern. Med.* 2015, 21(1): 14-22.

- 20- A. Jokar, T. Davari, N. Asadi, **F. Ahmadi**, S. Foruhari. Comparison of the hyaluronic acid vaginal cream and conjugated estrogen used in treatment of vaginal atrophy of menopause women: a randomized controlled clinical trial. *Int. J. Comm. Based Nurs. Midwife*. 2016, 4(1): 69-78.
- 21- **F. Ahmadi**, E. Parhizkar. Polymeric prodrugs: Anti-cancer drug targeting. *Encyclopedia of Biomedical Polymers and Polymeric Biomaterials*. 2016. DOI: 10.1081/E-EBPP-120049991: 267-280.
- 22- E. Parhizkar, M. Ghazali, **F. Ahmadi**, A. Sakhteman. PLS-LS-SVM based modeling of ATR-IR as a robust method in detection and qualification of alprazolam. *Spectroc. Acta Pt. A-Molec. Biomolec. Spectr.* 2017, 173: 87-92.
- 23- A. Hamedi, A. Sakhteman, **F. Ahmadi**, M. Sohrabpour, MM. Zarshenas. Authentication and quality control of some polyherbal oils used in Persian Traditional Medicine (PTM). *Res. J. Pharmacog.* 2017, 4(1): 9-22.
- 24- S. Mohammadi Samani, N. Zolfaghari, E. Parhizkar, **F. Ahmadi**. Orally fast disintegrating tablets of sumatriptan loaded Eudragit E microparticles: a promising choice for taste masking. *Int. J. Pharm. Sci. Res.* 2017, 8(5): 2003-2012.
- 25- S. Alipour, E. Parhizkar, H. Farrahi, **F. Ahmadi**. Formulation and in vitro evaluation of taste-masked fast disintegrating tablets of prednisolone. *Lat. Am. J. Pharm.* 2017, 36(5):980-6.
- 26- **F. Ahmadi**, R. Giti, S. Mohammadi Samani, F. Mohammadi. Biodegradable scaffolds for cartilage tissue engineering. *Galen Med. Journal.* 2017, 6(2):70-80.
- 27- H. Afrooz, **F. Ahmadi**, F. Fallahzadeh, S. H. Mousavi-Fard, S. Alipour. Design and characterization of paclitaxel-verapamil co-encapsulated PLGA nanoparticles: Potential system for overcoming P-glycoprotein mediated MDR. *J. Drug Del. Sci. Tech.* 2017, 41: 174-181.
- 28- **F. Ahmadi**, S. Rezaee, S. Alipour. Formulation and evaluation of an Aloe vera-Licorice combination topical gel: a potential choice for wound healing. *Trends Pharm. Sci.* 2017, 3(2): 105-112.
- 29- E. Alemzadeh, K. Izadpanah, **F. Ahmadi**. Generation of recombinant protein shells of Johnson grass chlorotic stripe mosaic virus in tobacco plants and their use as drug carrier. *J. Virol. Method.* 2017, 248: 148-153.

- 30- E. Parhizkar, S. Daneshamouz, S. Mohammadi Samani, A. Sakhteman, G. Parhizgar, **F. Ahmadi**. Synthesis and in vitro assessment of novel water-soluble dextran-docetaxel conjugates as potential pH sensitive system for tumor-targeted delivery. *J. Appl. Pol. Sci.* 2017, 134(43): 45457.
- 31- E. Parhizkar, S. Daneshamouz, S. Mohammadi Samani, A. Sakhteman, G. Parhizgar, M. Omidi, **F. Ahmadi**. Synthesis and characterization of water-soluble conjugates of cabazitaxel hemiesters-dextran. *Anti-Cancer Agents Med Chem.* 2017, 17(11): 1555-1562.
- 32- S. Alipour, A. Mohammadi, **F. Ahmadi**. Captopril fast disintegrating tablets for children: formulation and quality control by HPLC. *Trends Pharm. Sci.* 2017, 3(3): 161-8.
- 33- Z. Sobhani, H. Montaseri, S. Mohammadi Samani, **F. Ahmadi**. Assessment of intestinal permeability of paclitaxel in the presence of NSAIDs and P-glycoprotein inhibitors. *Trends Pharm. Sci.* 2017, 3(4): 267-74.
- 34- E. Alemzadeh, A. Dehshahri, K. Izadpanah, **F. Ahmadi**. Plant virus nanoparticles: Novel and robust nanocarriers for drug delivery and imaging. *Colloids. Surf. B.* 2018, 167: 20-27.
- 35- F. Mohammadi, S. Mohammadi Samani, N. Tanideh, **F. Ahmadi**. Hybrid scaffolds of hyaluronic acid and collagen loaded with prednisolone: an interesting system for osteoarthritis. *Adv. Pharm. Bull.* 2018, 8: 11-19.
- 36- S. Alipour, M. Asef, **F. Ahmadi**. Simple and rapid HPLC method for simultaneous quantification of levodopa and carbidopa in a fast disintegrating tablet formulation. *Int. J. Appl. Pharmaceu.* 2019, 11(3): 200-205.
- 37- **F. Ahmadi**, M. Bahmyari, A. Akbarizadeh, S. Alipour. Doxorubicin-verapamil dual loaded PLGA nanoparticles for overcoming P-glycoprotein mediated resistance in cancer: Effect of verapamil concentration. *J. Drug Del. Sci. Tech.* 2019, 53: 101206.
- 38- F. Mohammadi, N. Tanideh, S. Mohammadi Samani, **F. Ahmadi**. Efficacy of a hybrid system of hyaluronic acid and collagen loaded with prednisolone and TGF- β 3 for cartilage regeneration in rats. *J. Drug Del. Sci. Tech.* 2019, 51: 55-62.
- 39- E. Alemzadeh, A. Dehshahri, A.R Dehghanian, A. Afsharifar, A. Behjatnia, K. Izadpanah, **F. Ahmadi**. Enhanced anti-tumor efficacy and reduced cardiotoxicity of doxorubicin delivered in a novel plant virus nanoparticle. *Colloids. Surf. B.* 2019, 174: 80-86.

- 40- E. Parhizkar, H. Saeedzadeh, **F. Ahmadi**, M. Ghazali, A. Sakhteman. Partial least squares-least squares-support vector machine modeling of ATR-IR as a spectrophotometric method for detection and determination of iron in pharmaceutical formulations. *Iran. J. Pharm. Res.* 2019, 18(1): 72-79.
- 41- S. Alipour, A. Shirooe, **F. Ahmadi**. Porogen effects on aerosolization properties of fluconazole loaded pglg large porous particles. *Int. J. Appl. Pharmaceu.* 2020, 12(4): 258-263.
- 42- S. Alipour, V. Moazami, **F. Ahmadi**. Physicochemical stability and in-vitro efficacy of aloe vera and clobetasol mouthwash. *J. Mazandaran Uni. Med. Sci.* 2020, 30(185): 143-148.
- 43- F. Mohammadi, A. Vosough, N. Tanideh, S. Mohammadi Samani, **F. Ahmadi**. Hyaluronic acid scaffolds and injectable gels for healing of induced arthritis in rat knee: Effect of prednisolone revisited. *Reg. Eng. Transl. Med.* 2020.
- 44- H. Ghaemi, SM. Masoompour, S. Afsharypuor, M. Mosaffa Jahromi, M. Pasalar, **F. Ahmadi**, H. Niknahad. The effectiveness of a traditional Persian medicine preparation in the treatment of chronic cough: A randomized, double-blinded, placebo-controlled clinical trial. *Compl. Ther. Med.* 2020, 49: 102324.

Conference Presentations and Attendance:

- 1- Ebrahimian G., Dirin M., **Ahmadi F.**, Artificial enzymes. Poster presentation, 6th *Iranian Pharmaceutical Students Seminar*, March 2000, Abadan, Iran
- 2- Montaseri H., **Ahmadi F.**, Sobhani Z., Assessment of intestinal permeability of paclitaxel by ⁵¹Cr-EDTA technique in the presence of HPβCD and nicotinamide. Poster presentation, 8th *Iranian Congress of Pharmaceutical Sciences*, August 2002, Shiraz, Iran
- 3- Montaseri H., Mohammadi Samani S., **Ahmadi F.**, In vivo study for evaluation of paclitaxel oral bioavailability. Poster presentation, 9th *Iranian Pharmaceutical Students Seminar*, May 2003, Tabriz, Iran
- 4- Emami J., Ghassami N., **Ahmadi F.**, Development and validation of a HPLC method for determination of Lamotrigine and its impurities in pharmaceutical dosage forms. Poster presentation, 9th *Iranian Congress of Pharmaceutical Sciences*, August 2004, Tabriz, Iran

- 5- Montaseri H., Mohammadi Samani S., **Ahmadi F.**, Sobhani Z., The effect of piroxicam, mefenamic acid and ibuprofen on oral bioavailability of paclitaxel. Poster presentation, *15th World Congress of Pharmacology (IUPHAR)* July 2006, Beijing, China
- 6- **Ahmadi F.**, Varshosaz J., Fassihi A., Synthesis of budesonide-dextran ester as potential prodrug for colon specific delivery. Poster presentation, *10th Iranian Congress of Pharmaceutical Sciences*, August 2006, Tehran, Iran
- 7- Montaseri, H., Mohammadi-Samani S. Sobhani Z., **Ahmadi F.**, Comparing the effect of NSAIDs and P-glycoprotein inhibitors on intestinal permeability of paclitaxel. Poster presentation, *10th Iranian Congress of Pharmaceutical Sciences*, August 2006, Tehran, Iran
- 8- **Ahmadi F.**, Varshosaz J., Fassihi A., Dorkoosh F., Rahmani N. Synthesis of budesonide-dextran esters as potential prodrugs for colon specific delivery. Poster presentation, *3rd Pharmaceutical Sciences World Congress*, April 2007, Amsterdam, The Netherlands
- 9- Rahmani N., Varshosaz J., Emami J., Dorkoosh F., **Ahmadi F.** Development and validation of Reversed phase HPLC method for determination of budesonide in dissolution media and pharmaceuticals, Poster presentation, *3rd Pharmaceutical Sciences World Congress*, April 2007, Amsterdam, The Netherlands
- 10- Referee of 11th Iranian Pharmaceutical Students Seminar, November 2005, Shiraz, Iran
- 11- Referee of 12th Iranian Pharmaceutical Students Seminar, November 2006, Sari, Iran
- 12- Simerska P., Zhong W., **Ahmadi F.**, Skwarczynski M., Moyle P., Toth I. Use of lipids and sugars in standard and microwave-assisted solid phase peptide synthesis. Poster presentation, *8th Australian Peptide Symposium*, October 2009, Gold coast, Australia
- 13- **Ahmadi F.**, Varshosaz J., Emami J., Tavakoli N, Minaiyan M, Dorkoosh F. Preparation of dextran matrix tablets of budesonide and in vitro/in vivo evaluation in experimental ulcerative colitis. *Oral and Poster presentation, 70th FIP World Congress of Pharmacy/Pharmaceutical Sciences*, August-September 2010, Lisbon, Portugal
- 14- Mohammad Samani S., **Ahmadi F.**, Jalali F. Lamotrigine loaded solid lipid microparticles: preparation, formulation and in vitro characterization. *Poster*

- presentation, 13th Iranian Congress of Pharmaceutical Sciences, September 2012, Isfahan, Iran*
- 15- Alipour S., Mohammadebrahimi S., **Ahmadi F.**, Daneshamouz S. Taste-masked fast disintegrating tablets of prednisolone for oral delivery. *Poster presentation, 13th Iranian Congress of Pharmaceutical Sciences, September 2012, Isfahan, Iran*
- 16- **Ahmadi F.**, Mehrvarz S., Zargari Samadnejad A., Alipour S. Polymeric magnetic nanoparticles for co-administration of paclitaxel and verapamil to cancer cells. *Poster presentation, 13th Iranian Congress of Pharmaceutical Sciences, September 2012, Isfahan, Iran*
- 17- **Ahmadi F.**, Alipour S., Zargari A., Mehrvarz S. Polymeric magnetic nanoparticles for co-administration of paclitaxel and verapamil to cancer cells. *Oral presentation, 2nd Annual Symposium of Drug Delivery Systems, November 2012, Nanjing, China*
- 18- **Ahmadi F.**, Mohammadi Samani S., Sobhani Z., Karimaddini S. Preparation and evaluation of oral mucoadhesive gel of nystatin loaded alginate microparticles. *Poster presentation, 1st Middle East and the 6th Iranian Controlled Release Conference, February 2014, Tehran, Iran*
- 19- Jokar A., Davari T., Asadi N., **Ahmadi F.**, Foruhari S. Comparing the hyaluronic acid vaginal cream and conjugated estrogen in treatment of vaginal atrophy of menopause women: A randomized controlled clinical trial. *Poster presentation, 5th Iranian International Conference on Women's Health, May 2016, Shiraz, Iran*
- 20- Alemzadeh E., Izadpanah K., **Ahmadi F.** Generation of Johnson grass chlorotic stripe mosaic virus empty particles in vivo. *Oral presentation, 22nd Iranian Plant Protection Congress, August 2016, Karaj, Iran*
- 21- Alemzadeh E., Izadpanah K., **Ahmadi F.** Reversible gating and drug loading by Johnson grass chlorotic stripe mosaic virus empty particles in vivo. *Oral presentation, 22nd Iranian Plant Protection Congress, August 2016, Karaj, Iran*
- 22- **Ahmadi F.**, Alemzadeh E., Izadpanah K., Dehshahri A. Johnsongrass chlorotic stripe mosaic virus as a nanocarrier for delivery of doxorubicin. *Poster presentation, RiminiPeptides 2018, June 2018, Rimini, Italy*
- 23- **Ahmadi F.**, Rafieipour P., Parhizkar E., Dehshahri A., Alemzadeh E., Izadpanah K. Synthesis and cytotoxicity evaluation of gemcitabine-tobacco mosaic virus conjugates. *Oral presentation, 16th Iranian Pharmaceutical Sciences Congress, November 2019, Kermanshah, Iran*