### Reza ABOOFAZELI, Pharm.D., Ph.D.



Name: Reza ABOOFAZELI

Date of Birth: 30 September 1963

Place of Birth: Tehran, IRAN

Marital Status: Married

Job Title: Professor of Pharmaceutics

Affiliation: Department of Pharmaceutics, School of Pharmacy, Shaheed Beheshti University of Medical

Sciences, Tehran, IRAN.

Work Experience: Employed by School of Pharmacy, Shaheed Beheshti University of Medical Sciences as

Instructor of Pharmacy in 1988,

Assistant Professor of Pharmaceutics in 1994, Associate Professor of Pharmaceutics in 1999,

Professor of Pharmaceutics in 2004.

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Postal address: Vali Asr Avenue, Niayesh Junction, Tehran, POBox: 14155-6153, IRAN,

Post code: 19919 53381

# **EDUCATION AND QUALIFICATIONS**

Pharm. D. (Pharmacy Doctorate)

Tehran University of Medical Sciences, IRAN

Tehran, 1983-1988

Pharm.D. Thesis:

Synthesis of  $\alpha$ -hydroxycarboxylates and 2-hydroxybenzoates

Ph.D., Pharmaceutics

Chelsea Department of Pharmacy, King's College London, UK

London, 1990-1994

Ph.D. Thesis:

The formation and characterization of phospholipid microemulsions.

#### MSc., Medical Education

Tehran, 1997-2000

Shaheed Beheshti University of Medical Sciences, WHO Collaborating Center, Education Development Center (EDC)

#### MSc. Thesis:

Pilot study of Internal Evaluation Questionnaires designed for Faculties and various Departments at the School of Pharmacy, Shaheed Beheshti University of Medical Sciences

# **AREA OF EXPERTISE**

### A) Nanopharmaceuticals

- Nanospheres/Microspheres
- Nanoemulsions/Microemulsions/Polymeric Micelles
- Carbon Nanotubes (CNTs)
- B) Solid Sustained Dosage Forms
- C) Peptide and Protein Drugs (formulation, analysis, delivery)
- D) Particle Size Analysis
- E) Medical and Pharmaceutical Statistics
- F) Physicochemical Principles of Pharmacy (Physical Pharmacy)
- G) Dispersed Systems (Suspensions and Emulsions)

# **MEMBERSHIP IN COMMITTEES AND COUNCILS**

# A) School of Pharmacy, Shaheed Beheshti University of Medical Sciences, TEHRAN, IRAN

| • | Member of Editorial Board, Journal of Research in Medical Sciences    | 2003-2007 |
|---|---|-----------|
| • | Deputy of Administration and Financial Affairs                        | 2000-2002 |
| • | Member of Editorial Board, Iranian Journal of Pharmaceutical Research | 2002-     |
| • | Deputy of Research  | 1995-1999 |
| • | Head of Pharmaceutics Department                                      | 1994-1998 |

## B) Shaheed Beheshti University of Medical Sciences (Senate House), TEHRAN, IRAN

| • | Council of Incubation Center for Pharmaceutical Technology (ICPT)        |            | 2011-     |
|---|--|------------|-----------|
| • | Postgraduate and Complementary Education Council, School of Pharmacy, IF | RAN        | 2011-     |
| • | Supreme Council of Tissue Engineering and Nanotechnology Research Center | ſ          | 2006-     |
| • | Supreme Research Committee   | 1998-1999, | 2005-2007 |
| • | Chairman of Pharmaceutical Sciences Research Center                      |            | 2005-2007 |
| • | Deputy of Administration and Financial Affairs                           |            | 2003-2005 |
| • | Pharmacy Faculties Promotion Committee                                   |            | 1999-2007 |
| • | Educational Program Evaluation Committee of Educational Development Cer  | nter       | 1995-1999 |

### C) Ministry of Health, Treatment and Medical Education, IRAN

| Generic Drugs Review and Approval Committee                             | 2002-2005 |
|---|-----------|
| Iranian National Formulary Committee                                    | 1999-     |
| Exam and Evaluation Committee of Pharmaceutics (Board of Pharmaceutical |           |
| Sciences, Postgraduate Students)  | 1998-2007 |
| Iranian Pharmacopoeial Council  | 2006-209  |
| Exam and Evaluation Committee of Pharmaceutical Biomaterails            |           |
| (Board of Pharmaceutical Sciences, Postgraduate Students)               | 2010-     |
| Pharmacy Curriculum Review Committee                                    | 1997-2000 |
| Commission of Eligibility Approval for Drug Manufacturing and Import    | 2005-2007 |

# RESPONSIBILITIES

Board member of BioDarou Company, Iran
 Board member and Managing Director, Iranian Blood Research and Fractionation Holding Company (IBRF), Iran
 Board member, Sobhan Oncology Pharmaceutical Company, Iran
 Board member and Chairman of the Board, Zahravi Pharmaceutical Company, Iran
 Board member, Zahravi Pharmaceutical Company, Iran
 2006-2008
 Board member, Zahravi Pharmaceutical Company, Iran
 2004-2006

# **PUBLISHED BOOKS**

- 1) Physicochemical Principles of Pharmacy and Problem Solving, 2004 (in Farsi).
- 2) Iranian National Formulary (INF), 1<sup>st</sup> (1999); 2<sup>nd</sup> (2001); 3<sup>rd</sup> (2004); 4<sup>th</sup> (2007) and 5<sup>th</sup> (2010) Editions (in Farsi).

# **RESEARCH PROJECTS**

#### **Main Research Projects:**

- **1**) Replacement of specific ligand for pharmaceutical proteins using SELEX method (**2011**-). *co-worker*
- **2)** Design and Development of an oligonucleotide aptamer as a specific ligand to human coagulation factor VIII (**2010**-).

co-worker

**3**) Study on the potential of polymeric micelles for the penetration of a loaded drug through the blood brain barrier (**2011**-).

Project coordinator and supervisor

**4**) Study on the aggregation phenomenon in proteins and evaluation of protective effects of various additives on protein aggregation (**2011**-).

Project coordinator and supervisor

**5**) Optimization of formulation and application of lyophilization technique as approaches to increase the stability and efficacy of Intravesical BCG (**2011**-).

Project coordinator and supervisor

**6**) Use of a nanoemulsion base for increasing the solubility and improvement of anti-proliferative activity of Rapamycin (**2011**-).

Project coordinator and supervisor

**7**) Investigation into the influence of PEGylation in optimizing the solubility and biocompatibility of carbon nanotubes in biological systems (**2009**-).

Project coordinator and supervisor

**8**) Preparation and Evaluation of cyclosporine-loaded carbon nanotubes as a novel IV dosage form with optimized physicochemical properties and increased efficiency (**2010**).

Project coordinator and supervisor

**9**) Establishment of a valid and standard HPLC method for quality control of Somatropin and its pharmaceutical preparations (2005-2008).

Project coordinator and supervisor

**10**) Preparation and characterization of urea-loaded microspheres as an approach to formulate topical moisturizing product (**2001-2005**).

Project coordinator and supervisor

**11**) Preparation, evaluation and optimization of recombinant human growth hormone-loaded biodegradable microspheres as a novel approach for oral protein delivery (**2000-2005**). *Project coordinator and supervisor* 

#### Past:

- Formulation of a transdermal patch containing Ketotifen using Eudragits and evaluation of its drug release kinetics (2005-2006
- Formulation and optimization of Nifedipine-containing microspheres using various Eudragits (2003-2005).
- Preparation of multi-layered colonic tablets containing phenylalanine using cellulose and acrylic acid derivatives and evaluation of its invitro release pattern (2003-2005).
- Design of a push-pull osmotic pump containing Diclofenac sodium and evaluation of its invitro release kinetics (2003-2005).
- Study of release kinetics of Sodium Diclofenac from various polymeric base (1999-2000).
- Preparation of the ophylline sustained release microcapsules using pan coating method and evaluation of its physical properties (1999-2000).
- Formulation and quality control of cefixime sachet (1998-2000).
- Formulation, preparation and quality control of 2.5% ophthalmic drops containing povidone iodine (1996-1998).
- Formulation, preparation and physicochemical quality control of vaginal suppositories containing volatile oils of *Allium sativum* and *Zataria multiflora* and evaluation of its efficiency (1997-2000).
- Evaluation of phospholipid microemulsions as novel drug delivery systems (1996-1997).

# **MEMBERSHIP IN INTERNATIONAL SOCIETIES**

- A) American Association of Pharmaceutical Scientists (AAPS), since 2005
- B) Controlled Release Society (CRS), since 2005

# **PUBLICATIONS**

Investigations into the formation and characterization of phospholipid microemulsions. I. Pseudo-ternary phase diagrams of systems containing water-lecithin-alcohol-isopropyl myristate (1993) International Journal of Pharmaceutics, 93 (1-3), pp. 161-175.

Aboofazeli, R., Lawrence, M.J.

Investigations into the formation and characterization of phospholipid microemulsions. II. Pseudo-ternary phase diagrams of systems containing water-lecithin-isopropyl myristate: Influence of purity of lecithin. (1994) International Journal of Pharmaceutics, 106 (1), pp. 51-61.

Aboofazeli, R., Lawrence, M.J.

Investigations into the formation and characterization of phospholipid microemulsions. III. Pseudoternary phase diagrams containing water-lecithin-isopropyl myristate and either an alkanoic acid, amine, alkanediol, polyethylene glycol alkyl ether or alcohol as cosurfactant.

(1994) International Journal of Pharmaceutics, 111 (1), pp. 63-72.

Aboofazeli, R., Lawrence, C.B., Wicks, S.R., Lawrence, M.J.

Investigations into the formation and characterization of phospholipid microemulsions. IV. Pseudoternary phase diagrams containing water-lecithin-alcohol and oil. The influence of oil.

(1995) International Journal of Pharmaceutics, 125 (1), pp. 107-116.

Aboofazeli, R., Patel, N., Thomas, M., Lawrence, M.J.

# Preparing poly (lactic-co-glycolic acid) (PLGA) microspheres containing lysozyme-zinc precipitate using a modified double emulsion method

(2011) Iranian Journal of Pharmaceutical Research, 10 (2), pp. 203-209.

Nafissi-Varcheh, N., Luginbuehl, V., Aboofazeli, R. Merkle, H.P.

# An approach to the design of a particulate system for oral protein delivery. II. Preparation and stability study of rhGH-loaded microspheres in simulated gastrointestinal fluids.

(2011) Iranian Journal of Pharmaceutical Research, 10 (2), pp. 183-192.

Nafissi-Varcheh, N., Aboofazeli, R.

### Nanometric-scaled emulsions (nanoemulsions).

(2010) *Iranian Journal of Pharmaceutical Research*, 9 (4), pp. 325-326. Document Type: Editorial **Aboofazeli, R.** 

### Carbon nanotubes: A promising approach for drug delivery

(2010) *Iranian Journal of Pharmaceutical Research*, 9 (1), pp. 1-3. Document Type: Editorial **Aboofazeli, R.** 

### Nanotechnology: A new approach in pharmaceutics

(2005) *Iranian Journal of Pharmaceutical Research*, 4, pp. 189-190. Document Type: Editorial **Aboofazeli, R.** 

# Separation of Somatropin and Its Degradation Products by High-Performance Liquid Chromatography Using a Reversed-Phase Polymeric Column

(2004) Iranian Journal of Pharmaceutical Research, 4, pp. 209-213.

Nafissi-Varcheh, N., Shafaati, A., Zarghi, A., Aboofazeli, R.

# An investigation into the effect of various penetration enhancers on percutaneous absorption of piroxicam

(2003) Iranian Journal of Pharmaceutical Research, pp. 135-140.

Mortazavi, S.A., Aboofazeli, R

# Lecithin – stabilized microemulsion – based organogels for topical application of ketorolac tromethamine. II. in vitro release study

(2003) Iranian Journal of Pharmaceutical Research, pp. 117-123.

Attar Nasser, A., **Aboofazeli, R**., Zia, H. and Needham, T. N.

### Invitro release study of sodium salicylate from lecithin based phospholipid microemulsions

(2003) Iranian Journal of Pharmaceutical Research, pp. 95-101.

Aboofazeli, R., Mortazavi, S.A. and Khoshnevis, P.

# Lecithin – stabilized microemulsion – based organogels for topical application of ketorolac tromethamine. I. Phase behavior studies

(2003) Iranian Journal of Pharmaceutical Research, pp. 59-63.

Attar Nasseri, A., Aboofazeli, R., Zia, H. and Needham, T. N.

# An investigation into the optimization of release profile of lithium carbonate from matrix-type tablets containing Carbopols, Pemulen and Eudragits

(2003) Iranian Journal of Pharmaceutical Research, pp. 33-38.

Aboofazeli, R. and Mortazavi, S.A.

### An investigation into the effect of Carbopols on the release of propranolol HCl from tablet matrices

(2003) Iranian Journal of Pharmaceutical Research, pp. 23-27.

Mortazavi, S.A., Aboofazeli, R

### Peptide and protein delivery at a glance

(2003) *Iranian Journal of Pharmaceutical Research*, pp. 1-2. Document Type: Editorial **Aboofazeli, R.** 

## Comparative bioavailability of ranitidine tablets in healthy volunteers

(2002) Iranian Journal of Pharmaceutical Research, pp. 1-6.

Aboofazeli, R. and Shafaati, R.

# Optimization of single-walled carbon nanotube solubility by non-covalent PEGylation using experimental design methods.

(2011) International Journal of Nanomedicine, (6), pp. 737-746.

Hadidi, N., Kobarfard, F., Nafissi-Varcheh, N., Aboofazeli, R.

# Evaluation of the effect of PEGylated single-walled carbon nanotubes on viability and proliferation of Jurkat cells

(2011) Iranian Journal of Pharmaceutical Research. Accepted for publication.

Hadidi, N., Shirazi, SF., Kobarfard, F., Nafissi-Varcheh, N., Aboofazeli, R.

## Transdermal delivery of nicardipine: An approach to in vitro permeation enhancement

(2002) Drug Delivery: Journal of Delivery and Targeting of Therapeutic Agents, 9 (4), pp. 239-247. **Aboofazeli, R.**, Zia, H., Needham, T.

### Prediction of phase behavior in microemulsion systems using artificial neural networks

(1997) Journal of Colloid and Interface Science, 187 (2), pp. 296-303.

Richardson, C.J., Mbanefo, A., Aboofazeli, R., Lawrence, M.J., Barlow, D.J.

# An approach to the design of a particulate system for oral protein delivery. I. In vitro stability of various poly ( $\alpha$ -hydroxy acids)-microspheres in simulated gastrointestinal fluids

(2008) Journal of Microencapsulation, 25 (8), pp. 584-592.

Nafissi-Varcheh, N., Erfan, M., Aboofazeli, R.

# Preparation and characterization of biodegradable urea-loaded microparticles as an approach for transdermal delivery.

(2006) *Journal of Microencapsulation*, 23 (6), pp. 698-712.

Haddadi, A., Farboud, E.S., Erfan, M., Aboofazeli, R.

#### Topical delivery of urea encapsulated in biodegradable PLGA microparticles: O/W and W/O creams.

(2008) *Journal of Microencapsulation*, 25 (6), pp. 379-386.

Haddadi, A., Aboofazeli, R., Erfan, M., Farboud, E.S.

### Preparation and characterization of ibuprofen microspheres.

(2005) Journal of Microencapsulation, 22 (5), pp. 529-538.

Bolourtchian, N., Karimi, K., Aboofazeli, R.

## Particle size analysis of concentrated phospholipid microemulsions I. Total intensity light scattering.

(2000) AAPS PharmSci. 2(2), article 13, pp. 1-13.

Aboofazeli, R., Barlow, D.J., Lawrence, M.J.

### Particle size analysis of concentrated phospholipid microemulsions II. Photon correlation spectroscopy.

(2000) AAPS PharmSci. 2(3), article 19, pp. 1-10.

Aboofazeli, R., Barlow, D.J., Lawrence, M.J.

# Economical impact of plasma fractionation project in Iran on affordability of plasma-derived medicines

(2009) *Transfusion Medicine*, 19 (6), pp. 363-368.

Cheraghali, A.M., Aboofazeli, R.

# Formulation and optimization of microemulsion-based organogels containing propranolol hydrochloride using experimental deign methods

(2009) Daru, 17 (3), pp. 217-224.

Hadidi, N., Nazari, N., Aboofazeli, R.

### Phase diagrams of lecithin-based microemulsions containing sodium salicylate

(2000) Daru, 8 (3&4), pp. 1-7.

Aboofazeli, R., Mortazavi, S.A. Khoshnevis, P.

### Preparation and invitro assessment of various mucoadhesive films for buccal delivery

(2000) Daru, 8 (1&2), pp. 9-18.

Mortazavi, S.A., Aboofazeli, R.,

# In-vitro release study of piroxicam from lecithin-stabilized microemulsion-based gels

Aboofazeli, R., Mortazavi, S.A., Nasiri Nasab, M.

(2000) Journal of Pharmacy and Pharmacology, 52 (9 SUPPL.), p. 20.

Document Type: Conference Paper

### In vitro dissolution and comparative bioavailability of two metronidazole tablets

Shafaati, A., Aboofazeli, R., Moosavi, S.M.

(2000) Journal of Pharmacy and Pharmacology, 52 (9 SUPPL.), p. 91.

Document Type: Conference Paper

### The effect of collagen solutions on drug release rate from liposomes

Tabandeh, H., Aboofazeli, R., Ghasemi, Z.

(1998) Journal of Pharmacy and Pharmacology, 50 (SUPPL. 9), p. 182.

Document Type: Conference Paper

### The phase behaviour of quaternary systems containing lecithin

Aboofazeli, R., Lawrence, M.J.

(1991) Journal of Pharmacy and Pharmacology, Supplement, 43, p. 44.

Document Type: Conference Paper

# SUPERVISED THESES

### 1) Postgraduate (Ph.D. Pharmacy Students)

- i. Study on the aggregation of Interferon alpha in various conditions and evaluation of the influence of selective excipients for the prevention of aggregation. **2011**
- **ii.** Preparation and characterization of polymeric micelles containing Nimodipine and evaluation of their penetration capability into Blood Brain Barrier. **2011**
- **iii.** Preparation and Characterization of Rapamycin-Containing Nanoemulsions and Evaluation of its Anti-Proliferative Activities in Cellular Medium. **2011**
- iv. Study on the biocatalytic activity and stability of laccase in water-in-oil microemulsion systems. 2011
- **v.** Optimization of formulation and application of lyophilization technique as approaches to increase the stability and efficacy of Intravesical BCG, manufactured by Pasteur Institute in Iran. **2010**
- vi. Design and Development of an oligonucleotide aptamer as a specific ligand to human coagulation factor VIII", 2010 (Research Advisor)
- **vii.** Preparation and evaluation of cyclosporine-loaded carbon nanotubes with optimized physicochemical properties and increased efficiency. **2009**
- **viii.** Preparation and characterization of biodegradable microspheres containing recombinant human growth hormone (rhGH) as an approach to design an oral protein delivery system. **2005**
- **IX.** Preparation and characterization of urea loaded microspheres and Rapamycin loaded nanospheres as an approach in treatment of skin diseases. **2005**

### 2) Undergraduate (Pharm.D. Pharmacy Students)

- Formulation and optimization of Nifedipine containing microspheres using Eudragit RL 100 and RS 100. 2006
- ii. Design of a push-pull diclofenac osmotic pump and the evaluation of its invitro release pattern. 2005
- **iii.** Preparation of phenylalanine-containing colonic coated tablets using cellulose and acrylic derivatives and invitro evaluation of their release pattern. **2005**
- iv. Preparation and invitro release evaluation of Ketoprofen transdermal patch. 2005
- v. Formulation of Topical oil-in-water analgesic cream containing aqueous extract of Russia n olive fruit.2005
- vi. Formulation and physicochemical assessment of a protectant and moisturizing oil-in-water baby cream. 2003
- **vii.** Formulation of a controlled release transdermal patch containing Scopolamine and evaluation of its release pattern. **2002**.
- viii. Preparation of phenylalanine-containing liposomes and study of their loading and release properties. **2001**
- ix. Preparation of Ibuprofen microspeheres and study of their physical properties. 2000
- **x.** Formulation, preparation and physicochemical quality control of suppositories containing the volatile oils of Allium sativum and Zataria multiflora. **2000**
- xi. Formulation and release study of piroxicam0loaded microemulsion-based gels. 2000
- xii. Preparation and release study of theophylline slow release microparticles. 2000
- xiii. Study of release kinetic of sodium Diclofenac from different polymeric based matrices. 2000
- **xiv.** Formulation, preparation and physicochemical quality control of a topical product containing essential oil of Matricaria chamomilla. **1999**
- xv. Evaluation of mucoadhesive buccal patches as novel drug delivery systems. 1999

- xvi. Comparative Bioavailability study of two Metronidazole tablet brans. 1999.
- **xvii.** Investigation into the invitro antifungal effects of camphor and comparison of clinical effects of its topical preparation with clotrimazole. **1999**.
- xviii. Formulation of a nicotine patch and optimization of its release and transdermal absorption. 1999
- **xix.** Formulation and physicochemical quality control of cefixime for oral suspension in single-dose sachet and multi-dose forms. **1999**
- xx. Formulation, preparation and quality control of a 2.5% Povidone-iodine ophthalmic solution. 1998
- **xxi.** Preparation of different types of liposomes and evaluation of drug release from liposomal formulations. **1998**.
- xxii. Benzoyl peroxide and Erythromycin gel formulation for the treatment of acne. 1998
- xxiii. Preparation of artificial saliva and evaluation of its effect in the treatment of xerostomia. 1998
- **xxiv.** Formulation, preparation and physicochemical quality control of topical solution containing cucumber extracts. **1997**
- xxv. Invitro evaluation of skin penetration enhancers on semi-solid drug delivery systems. 1997
- xxvi. Investigation into the phospholipid microemulsions as a novel sustained release drug delivery system.

  1997
- xxvii. Formulation of matrix-based, enteric coat, sustained release lithium carbonate tablets. 1997
- xxviii. Formulation of matrix-based sustained release propranolol tablets. 1997
- xxix. Formulation and characterization of cimetidine suspension. 1997
- **xxx.** Computer-aided determination of optimized conditions for controlled flocculation by using electrolytes in suspensions. **1995**.

# JUDGE OF THE WORK OF OTHERS

- 1) Peer Review of articles prior to publication:
  - IJPR, Daru and Journal of Microencapsulation.
- 2) External Examiner of Ph. D. theses in Pharmaceutical Sciences.

# **TEACHING RESPONSIBILITIES**

### 1) Undergraduate Pharmacy Students

- Physical Pharmacy, course 1. I will be lecturing the following subjects:
  - i. <u>States of Matter, Thermodynamics, Non-electrolyte, Electrolyte Solutions</u>, <u>Ionic Equilibria, Buffered and Isotonic Solutions</u>
- Physical Pharmacy, course 2:
  - i. Chemical Kinetics and Stability, Interfacial Phenomenon, Colloidal Dispersions, Coarse Dispersions
- Statistics (Pharmaceutical & Medical Statistics):

Describing, exploring and comparing the data; probability; probability distribution; Binomial and normal probability distribution; sampling distribution; estimation for single and two populations; sample sizes; hypothesis testing with one and two samples; linear correlation and regression; analysis of variance; goodness of fit and contingency tables; experimental design methods.

In practical course, students will learn the application of **GraphPad Prism Software**.

#### • Pharmaceutics, course 3:

Classification, particle size; surface properties; rheological properties; measurement of rheological properties; solubilized systems; surfactant classification and properties; suspensions (advantages and disadvantages, physical stability, sedimentation, crystal growth, evaluation and quality control, preparation methods); emulsions (applications, factors affecting the stability and formulation, evaluation and quality control, preparation methods).

#### 2) Postgraduate Pharmacy Students

### Advanced Physical Pharmacy:

Adsorption from solutions; adsorption processes; adsorption isotherms; ; Langmuir isotherm; Freundlich isotherm; BET isotherm; competitive adsorption; factors affecting adsorption (nature of the adsorbent, nature of the adsorbate, pH, temperature); liquid—liquid systems (emulsions); liquid—liquid interfacial tension; adsorption of surfactants at interfaces; surfactants and theory of emulsification; type of emulsion and HLB system; instability of emulsions; micellization and solubilization; microemulsions; solid—liquid systems (suspensions); wetting and wetting agents; surfactants; electrical double layer and stabilization of colloidal particles; the stabilization and destabilization of colloid systems; sedimentation of dilute suspensions; prevention of cake formation.

### Advance Pharmaceutics, Protein and Peptide drug delivery systems:

Pharmaceutical biotechnology and advances in production of recombinant proteins; structure and analysis of therapeutic peptides and proteins; stability of therapeutic peptides and proteins; preformulation and formulation of therapeutic peptides and proteins; lyophilization of peptides and proteins products; oral and parenteral peptide and protein drug delivery systems.

# ABSTRACTS PRESENTED IN CONFERENCES

- Presentation at 3<sup>rd</sup> International NanoBio Conference 2010, ETH Zurich, Switzerland "Optimization of carbon nanotubes PEGylation by Response Surface Methodology.
- Presentation at 11<sup>th</sup> Iranian Pharmaceutical Sciences Conference, Kerman, 2008 "Formulation and optimization of propranolol loaded topical organogels using a modified simplex and central composite design" and "A study on the capability of DSC method to evaluate the stability of various polyestersmade microspheres in GI tract".
- Presentation at 3<sup>rd</sup> Iranian Conference of Novel Drug Delivery Systems, 2007, Tehran, Iran " A comparison between the efficacy of two different freezing-based methods of micronization for incorporation of protein microparticles into biodegradable microspheres".
- Presentation at 33<sup>rd</sup> Annual Meeting and Exposition of the Controlled Release Society, 2006, Vienna, Austria " *Preparation and characterization of rhGH loaded biodegradable microspheres as an approach for oral protein delivery*".
- Presentation at 26<sup>th</sup> Annual Conference of the Academy of Pharmaceutical Sciences of South Africa, 2005, Port Elizabeth, South Africa "An investigation into the stability of microspheres made by various PLGA polymers in simulated GI fluids".
- Presentation at 63<sup>rd</sup> International Congress of FIP, 2003, Sydney, Australia " *An investigation into the optimization of release profile of lithium carbonate from matrix-based tablets containing Carbopols, Pemulen and Eudragits*".

- Presentation at 11<sup>th</sup> International Pharmaceutical Technology Symposium (IPTS), 2002, Hotel Dedeman, Istanbul, Turkey "Central Composite design to visualize simplex optimization process for percutaneous absorption of sodium salicylate from phospholipid microemulsions".
- Presentation at 50<sup>th</sup> Annual Congress of Society for Medicinal Plant Research, 2002, Barcelona, Spain "Formulation, preparation and physicochemical quality control of vaginal suppositories containing volatile oils of Allium sativum and Zataria multiflora and evaluation of its efficiency".
- Presentation at 19<sup>th</sup> FAPA Congress, 2002, Seoul, South Korea "Investigation into the preparation and release kinetics of phenylalanine-containing liposomes".
- Presentation at 6<sup>th</sup> International Congress of Endocrinology, 2001, Razi Conference Centers, Tehran, Iran "Peptides and protein drugs in third millennium" and "Clinical and pharmaceutical aspects of recombinant human growth hormone formulations".
- Presentation at AAPS Annual Meeting, 2001, USA "Transdermal delivery of Nicardipine hydrochloride" and "Lecithin-organogel-based system for transdermal delivery of Ketorolac tromethamine".
- Presentation at 137<sup>th</sup> British Pharmaceutical Conference, 2000, Birmingham, UK "Invitro release study of piroxicam from lecithin-stabilized microemulsion-based gels" and "I Invitro dissolution and comparative bioavailability of two metronidazole tablets".
- Presentation at 60<sup>th</sup> International Congress of FIP, 2000, Vienna, Austria "Studies on the release kinetics of propranolol HCl controlled release matrix-based formulations".
- Presentation at 4<sup>th</sup> International Conference on Liposome Advances, 1999, UK "Invitro Release study of an amino-acid-containing liposomal formulation".
- Presentation at 50<sup>th</sup> Indian Pharmaceutical Congress and 17<sub>th</sub> Asian Congress of Pharmaceutical Sciences, Mumbai, 1998" Influence of various penetration enhancers on the invitro penetration of piroxicam, sodium salicylate and phenytoin sodium across the skin ".
- Presentation at 134<sup>th</sup> British Pharmaceutical Conference, 1997, Scarborough, UK "Invitro release of sodium salicylate from water-in-oil phospholipid microemulsions".
- Presentation at 132<sup>nd</sup> British Pharmaceutical Conference, 1995, Warwick, UK "Light scattering studies on lecithin-based water-in-oil microemulsion".
- Presentation at 135<sup>th</sup> British Pharmaceutical Conference, 1995, Eastbourne, UK "The effect of collagen solutions on drug release rate from liposomes".
- Presentation at 141<sup>st</sup> British Pharmaceutical Conference, 1995, Manchester, UK "Computer aided DLVO-based optimization of controlled flocculation in suspensions".