

CURRICULUM VITAE

PERSONAL DETAILS

Name: Hamid Reza

Surname: MOGHIMI

Date of birth: April, 1962

Nationality: Iranian

Sex: Male

Marital status: Married

Occupation: Academic member of staff (Associate Professor of Pharmaceutics).

Work address: School of Pharmacy, Shaheed Beheshti University of Medical Sciences, Valiasr Ave., Niayesh Junction, PO Box: 14155-6153, Tehran, Iran.

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EDUCATIONAL DETAILS

Visiting Professorship (Jan. 2002-Dec. 2002)

Project: Formulation and characterization of antisense oligodeoxynucleotides-containing cationic immunoliposomes and uptake and cytotoxicity studies on human lymphoma cells.

Place: Department of Pharmacology, School of Medicine and Dentistry, University of Alberta, Edmonton, Canada.

Supervisor: Professor T. M. Allen

PhD in Pharmaceutics (Jan. 1992 – Jul. 1995):

From: The School of Pharmacy, University of Bradford, Bradford, UK.

Thesis title: Modeling the intercellular lamellar lipid structure of human stratum corneum for drug permeation studies.

Supervisors: Professor B. W. Barry and Professor. A. C. Williams

Doctor of Pharmacy (PharmD) (Oct. 1984 - Oct. 1989):

From: School of Pharmacy, Tabriz University of Medical Sciences, Tabriz, Iran.

Average: 18.38 out of 20; my average was the highest in the class.

Thesis title: Studying the effects of vehicle type and thermodynamic activity on percutaneous absorption of nitroglycerin.

Thesis rating: Distinguished (honor)

Thesis supervisor: Professor M. Adrangui

High School Diploma in Natural Sciences (Sept. 1976 - June 1980):

From: Shiraz University High School, Shiraz, Iran; established for granted students.

Average: 19.43 out of 20; my average was the highest in the Fars Province of Iran.

OTHER COMPLEMENTARY COURSES AND CERTIFICATES

- Regression Analysis Workshop, February 5-6, 2008, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
- Assessment of Student Performance Workshop, July 11-12, 2004, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
- The Care and Use of the Laboratory Mouse, January 18, 2002, University of Alberta, Edmonton, Canada.
- The Care and Use of Animals in Research, Teaching and Testing, January 30, 2002, University of Alberta, Edmonton, Canada.
- Radiation Safety Course, February 7-12, 2002, University of Alberta, Edmonton, Canada; completed with a written exam with the final mark of 98%.
- Biosafety Course, June 3-7, 2002, University of Alberta, Edmonton, Canada; completed with a written exam with the final mark of 98%.
- Teaching Methods Workshop, May 14, 1999, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
- Internet and Medline Workshop, May 5-6, 1999, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
- Curriculum Planning Workshop, February 18, 1996, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
- Manuscript Preparation and Publication Workshop, January 17-19, 1996, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
- Research Methodology Workshop, November 15-22, 1990, Shaheed Beheshti University of Medical Sciences, Tehran, Iran.

AWARDS

- Scholarship to continue for a PhD degree, due to acquiring the highest grade amongst all Pharm.D. Graduates in Iran, from the Iranian Ministry of Health and Medical Education, 1991.
- Chosen as the 'Distinguished Academic Member' by undergraduate students of School of Pharmacy, Shaheed Beheshti University of Medical Sciences, academic year of 1990-1991.
- Chosen as the 'Distinguished Academic Member' by Shaheed Beheshti University of Medical Sciences, for the academic year of 1991-1992.
- Studentship from Research Funds, University of Bradford, Bradford, England, 1995.
- Chosen as the 'Distinguished Academic Member' by Shaheed Beheshti University of Medical Sciences, for the academic year of 1996-1997.
- Chosen as the 'Distinguished Scientist' by 'The Hygienic and Cosmetic Magazine', Iran, 1996.
- Chosen as the "Top Researcher of the Year" by Research Council of Shaheed Beheshti University of Medical Sciences, 2004.
- A project performed by me and my colleagues entitled "effects of surfactants on performance of mucoadhesive polymers" was chosen as the one of the best research projects planned and performed in the Shaheed Beheshti University of Medical Sciences, 2004.

- Chosen as the “Top Researcher of the Year” by Research Council of Shaheed Beheshti University of Medical Sciences, 2007.

TECHNICAL ABILITIES

- Modeling permeation of drugs through biological barriers.
- Set-up and performance of release and permeation experiments and interpretation of the results.
- Enhancement and retardation of percutaneous absorption of chemicals.
- Preparation and characterization of lyotropic liquid crystals.
- Formulation and characterization of liposomes and coupling antibodies to these particles.
- Cell culture, uptake and cytotoxicity studies.
- Studying the stoichiometry of molecular complexes.
- Formulation of transdermal therapeutic systems (patches), semisolids and oral solutions.
- Set-up and performance of differential scanning calorimetry and thermogravimetric analysis.
- Set-up and performance of x-ray diffraction studies.
- Interpretation of polarized light microscopy textures.
- Programming in GWBASIC and QBASIC computer languages.

TEACHING ACTIVITIES

I have taught following subjects to undergraduate and postgraduate pharmacy students:

- **Physical pharmacy:** diffusion, solubility, liquid crystals and drug delivery system design
- **Industrial pharmacy:** semisolids, cosmetics, suppositories, emulsions, liposomes, preformulation, mixing, milling, filtration and drying.
- **Biopharmacy and drug delivery:** biological barriers and their models, absorption phenomena and transdermal, nasal, pulmonary and controlled-release drug delivery.

OTHER EXPERIENCES, POSITIONS OR OPPORTUNITIES

- Member of Editorial Board, *Irn. J. Pharm. Res.*, Iran (In English).
- Member of Editorial Board, *Pharm. Sci.* Iran (In Persian).
- Member of Editorial Board, *Jundishapur J. Nat. Pharm. Prod.*, Iran (In English).
- Member of Editorial Board, *Irn. Nanomed. J.*, Iran.
- Collaboration as reviewer with different pharmaceutical journals including *International Journal of Pharmaceutics* (Elsevier) and *Biomaterials* (Elsevier).
- Member of National Board of Pharmaceutics, Iran.
- Member of National Board of Nanotechnology, Iran.
- Managing Director (Sobhan Darou Pharmaceutical Company, Iran).

- Head of Pharmaceutical Sciences Research Center, Shaheed Beheshti University of Medical Sciences, Tehran, Iran (2002-2005).
- Formulation consultant to different pharmaceutical companies in Iran.
- Invited by School of Pharmacy, University of Bradford (UK) (1995) for fellowship in transdermal drug delivery. I did not attend because I was not able to get permission to leave from Shaheed Beheshti University of Medical Sciences (Iran).
- Invited by UCSF (School of Medicine) for participation in a transdermal drug delivery project (2001). Unfortunately I could not attend.
- Invited by University of Rhode Island for participation in a transdermal drug delivery project (2001). Unfortunately I could not attend.

RESEARCH INTERESTS AND ACTIVITIES

A- Main areas of research:

- Transdermal drug delivery (especially studying its mechanisms using models)
- Barrier performance of burned and diseased skin
- Modeling permeation through biological barriers
- Structure Permeability Relationship Studies
- Liposomal drug delivery
- Gene delivery in cancer
- Lyotropic liquid crystals

B- Theses performed under my supervision:

1. Effects of geometrical parameters on the release of medicament from semisolid bases.
2. Application of iontophoresis in the percutaneous absorption of amphoteric material.
3. Effect of charge type on the iontophoretic percutaneous permeation of amphoteric chemicals.
4. Effect of vehicle type and thermodynamic activity on the percutaneous absorption of indomethacin.
5. Studying the effects of interacting chemicals on the nitroglycerin assay methods.
6. Enhancement of iontophoretic absorption of diclofenac sodium through snake skin by chemical enhancers.
7. Comparison of physicochemical properties of beta-blocker tablets found in the Iranian drug market.
8. Formulation of acetaminophen and acetaminophen-vitamin C effervescent tablets.
9. Comparison between percutaneous absorption of diclofenac sodium and diclofenac diethyl ammonium from hydro-alcoholic solutions and emulgels.

10. Formulation of honey gel and studying its efficacy in the treatment of third-degree burned patients.
11. Formulation of a nicotine transdermal therapeutic system (patch) and optimization of its release and transdermal absorption.
12. Formulation of a nitroglycerin transdermal therapeutic system (patch) and optimization of its release and transdermal absorption.
13. Formulation of a nitroglycerin metered-dose sublingual spray.
14. Improving the solubility of piroxicam in water by co-solvents.
15. Formulation of metronidazole topical gel and optimization of its percutaneous absorption.
16. Studying the antifungal activity of Cinnamon aqueous extract, optimization of the extraction method by co-solvents and preparation of a mouthwash formulation from the extract.
17. Formulation of dimenhydrinate syrup and studying its stability.
18. Formulation of ranitidine HCl syrup and studying its stability.
19. Formulation of sodium valproate syrup and studying its stability.
20. Retardation of percutaneous absorption of toxic chemicals by polyalcohols.
21. Enhancement of iontophoretic percutaneous absorption of non-ionic materials through ionic carriers.
22. Enhancement of absorption of antimicrobials through third degree burn eschar.
23. Formulation of liposomes containing moisturizing agents and studying their release behavior.
24. Formulation of sodium fluoride chewing gum and its evaluation through release studies.
25. Evaluation of the agreement between pharmaceutical education (in Iran) and industrial pharmacy needs.
26. Studying stereoselectivity in percutaneous absorption: comparison between percutaneous absorption of tretinoin and iso-tretinoin.
27. Evaluation and enhancement of percutaneous absorption of curcumin and curcuma (turmeric) extracts.
28. Formulation of a scopolamine transdermal therapeutic system (patch).
29. Stabilizing Aloe vera jelly and preparation of a dermatological formulation from the jelly.
30. Preparation of an essential oils containing cream and evaluation of its antifungal activity in-vivo.
31. Studying the effects of surfactants on the bioadhesion strength of bioadhesive gels.

32. A mechanistic study of the importance of the stratum corneum intercellular structure in percutaneous absorption enhancement of drugs by iontophoresis, sonophoresis and terpenes using a model lamellar lipid matrix.
33. Mechanistic study of permeation of drugs through 3rd –degree burn eschar; effects of charge, molecular weight and penetration enhancers.
34. Formulation of an injectable implant for peptide delivery and mechanistic study of the effect of polymer molecular weight, non-solvents and complexation on its release behavior
35. Improving liposomal uptake of antisense oligonucleotides by bilayer fluidizing agents, a model approach
36. Investigating the possibility of transdermal delivery of Delphinium active compounds in anti-epileptic level in mice.
37. Studying the effects of microwave on percutaneous absorption of drugs
38. Anti-inflammatory effects of total extract of curcuma amada in rheumatoid arthritis rat model
39. Retardation of percutaneous absorption of a nitrogen containing chemicals by a new class of molecules
40. Drug delivery systems and excipients in Iranian Traditional Medicine
41. Improvement of depilatory efficiency of thioglycolates by chemical penetration enhancers
42. Prevention of percutaneous absorption of chemicals by dendrimers
43. Study of the knowledge of pharmacists regarding cosmetic products and its possible covariates in Tehran, Iran
44. Formulation of a flavoring mouth spray containing sodium fluoride and chlorhexidine
45. Formulation and in-vitro evaluation of metoclopramide mucoadhesive buccal tablets
46. Evaluation of the effect of pH and presence of hydroxylated compounds on the strength and duration of mucoadhesion of mucoadhesive polymers
47. Comparison of percutaneous absorption of diclofenac sodium and diclofenac diethylammonium from hydroalcoholic solutions and emulgels
48. Preparation of an artificial saliva pump spray
49. Modeling the B. Tuberculosis cell wall by lamellar liquid crystalline structures (In Progress)
50. Application of sonophoresis and combination of sonophoresis with iontophoresis, chemical penetration enhancers and liposomes for enhancement of permeation of drugs through third-degree burn eschar (In progress).
51. An investigation into the possibility of gene delivery improvement in cancer cells using combination of liposomal and dendritic carriers (In progress).

52. Improvement of paromomycin delivery to cutaneous leishmanial wounds by liposomes (In progress).
53. Improving liposomal gene delivery in animal models by chemical penetration enhancers (In progress).

C- Research grants from official agencies (NGO and pharmaceutical companies' grants are not included)

1. Effects of geometric parameters on release of medicaments from semisolid bases. Shaheed Beheshti Medical University, Iran (SBMU), 1992-1994.
2. Effect of pH and current direction on iontophoretic permeation of L-tryptophan through rat skin. SBMU, 1995-1997.
3. Prevention of percutaneous absorption of toxic chemicals. Iranian Ministry of Health and Medical Education (MOH), 1997-2000.
4. Preparation of sublingual nitroglycerin metered-dose aerosol. MOH, 1997-1998.
5. Enhancement of iontophoretic permeation of sodium diclofenac through snake skin by chemical penetration enhancers. SBMU, 1998-1999.
6. Stereoselective permeation of tretinoin and isotretinoin. SBMU, 2001-2003.
7. Mechanistic study of the importance of stratum corneum intercellular lipid structure in iontophoretic and sonophoretic permeation of drugs using a lamellar liquid crystalline model. SBMU, 2001-2004.
8. Studying the effects of surfactants on the adhesion strength and duration of mucoadhesive polymers. SBMU, 2002-2004.
9. Preparation of in-situ gel-forming formulation of leuprolide acetate (LHRH analogue) using PLGA biodegradable polymers. MOH, 2003-2007.
10. Studying the effects of some bilayer-destabilizing agents on release of oligonucleotides from cationic liposomes in the presence of model bilayer membranes. Pharmaceutical Sciences Research Center (PSRC)-SBMU, 2004-2007.
11. Treatment of cutaneous leishmaniasis using a novel transdermal liposomal delivery of paramomycin: A prospective multicentral Trial. WHO, 2007-2009.
12. Preparation of paramomycin nano-particulate liposomal formulations for optimization of leishmanial lesion drug delivery. Skin Research Center-SBMU, 2008- (in progress).
13. An investigation into the possibility of gene delivery improvement in cancer cells using combination of liposomal and dendritic vectors. PSRC-SBMU, 2009- (in progress).

PUBLICATIONS**A: Full Papers**

1. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1993). A matrix model for stratum corneum lipids. *Pharm. Res. Bull. (Univ. Bradford, UK)*, **1**:65-68.
2. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1994). Modeling the stratum corneum intercellular lipids: thermal analysis and diffusion of oestradiol. *Pharm. Res. Bull. (Univ. Bradford, UK)*, **2**:41-44.
3. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1996). A lamellar matrix model for stratum corneum intercellular lipids. I. Characterization and comparison with stratum corneum intercellular structure. *Int. J. Pharm.*, **131**:103-115.
4. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1996). A lamellar matrix model for stratum corneum intercellular lipids. II. Effect of geometry of the stratum corneum on permeation of model drugs 5-fluorouracil and oestradiol. *Int. J. Pharm.*, **131**:117-129.
5. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1996). A lamellar matrix model for stratum corneum intercellular lipids. III. Effects of terpene penetration enhancers on the release of 5-fluorouracil and oestradiol from the matrix. *Int. J. Pharm.*, **145**:37-47.
6. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1996). A lamellar matrix model for stratum corneum intercellular lipids. IV. Effects of terpene penetration enhancers on the permeation of 5-fluorouracil and oestradiol through the matrix. *Int. J. Pharm.*, **145**:49-59.
7. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1997). A lamellar matrix model for stratum corneum intercellular lipids. V. Effects of terpene penetration enhancers on the structure and thermal behavior of the matrix. *Int. J. Pharm.*, **146**:41-54.
8. Moghimi, H. R. and Adrangui, M. (1997). Effects of vehicle on the percutaneous absorption of chemicals. *Hyg. Cosm. J. (Iran)*, **30**:123-129.
9. Moghimi, H. R., Williams, A. C. and Barry, B. W. (1998). Enhancement by terpenes of 5-fluorouracil permeation through the stratum corneum: model solvent approach. *J. Pharm. Pharmacol.*, **50**:955-964.
10. Moghimi, H. R., Piraei, M. and Adrangui, M. (1999). Studying the effects of pH and charge on passive and iontophoretic permeation of L-tryptophan through rat skin. *Pejouhandeh*, **14**: 179-185.
11. Moghimi, H. R., Talaie, F. and Adarangi, M. (2000). Studying the effects of pH and molecular charge on the passive and iontophoretic permeation of L-phenylalanine through cellulose acetate membrane. *Physiol. Pharmacol. (Iran)*, **3**: 153-161.
12. Mortazavi, S. A. and Moghimi, H. R. (2001). An in vitro efficacy assessment of a formulated sublingual nitroglycerin spray and its comparison with a similar foreign brand. *Hakim (Iran)*, **4**: 126-134.
13. Moghimi, H. (2003). Moving toward application-oriented research system. *Ir. J. Pharm Res.*, **2**: 189-190.

14. Mortazavi, S. A. and Moghimi, H. R. (2003). Effect of surfactant type and concentration on the duration of mucoadhesion of Carbopol 934 and HPMC solid compacts. *Ir. J. Pharm Res.*, **2**: 191-199.
15. Moghimi, H., Zarghi, A. and Noorani, N. (2003). Stereoselective permeation of tretinoin and isotretinoin through enhancer-treated rat skin. I. Effect of ethanol and sodium dodecyl sulfate. *Ir. J. Pharm Res.*, **2**: 127-133.
16. Mortazavi, S. A. and Moghimi, H. R. (2004). The effect of hydroxyl containing tablet excipients on the adhesive duration of some mucoadhesive polymers. *Daru*, **12**: 11-17.
17. Moghimi, H., Noorani, N. and Zarghi, A. (2004). Stereoselective permeation of tretinoin and isotretinoin through enhancer-treated rat skin. II. Effects lipophilic penetration enhancers. *Ir. J. Pharm Res.*, **3**: 17-22.
18. Mortazavi, S. A. and Moghimi, H. R. (2004). Effect of surfactants on the mucoadhesion properties of polycarbophyl solid compacts. *Pharm. Sci.* (Journal of Faculty of Pharmacy, Tabriz, Iran).
19. Avadi, M. R., Ghasemi, A. H., Mir Mohammad Sadeghi, A., Erfan, M., Akbarzadeh, A., Moghimi, H. R. and Rafiee-Tehrani, M. (2004). Preparation and characterization of theophylline-chitosan beads as an approach to colon delivery. *Ir. J. Pharm Res.*, **3**: 73-80.
20. Moghimi, H. R. and Momajjad, A. (2005). An in-vitro iontophoretic permeation study of nicotine through rat skin. *Ir. J. Pharm Res.*, **4**: 213-219.
21. Astaneh, R. Moghimi, H. R., Erfan, M. and Mobedi, H. (2006). Formulation of an injectable implant for peptide delivery and mechanistic study of the effect of polymer molecular weight on its release behavior. *Daru*, **14** (2): 65-70.
22. Sharif Makhmal Zadeh, B. and Moghimi, H. R. (2006). Effect of hydration on barrier performance of third-degree burn eschar. *Ir. J. Pharm Res.* **5** (3): 155-161.
23. Tamaddon, A. M., Shirazi, F. and Moghimi, H. R. (2007). Modeling cytoplasmic release of encapsulated oligonucleotides from cationic liposomes. *Int. J. Pharm.* **336**: 174-182
24. Tamaddon, A. M., Shirazi, F. and Moghimi, H. R. (2007). Preparation of oligonucleotides encapsulated cationic liposomes and release study with models of cellular membranes. *Daru*, **15**: 61-70.
25. Ghaffari, A., Avadi, M. R., Moghimi, H. R., Oskoui, M., Bayati, K. and Rafiee-Tehrani, M. (2008). Mechanistic analysis of drug release from theophylline pellets coated by film containing pectin, chitosan and Euderagit[®] RS. *Drug Dev. Ind. Pharm.* **34**: 390-402.
26. Manafi, A., Hashemlou, A., Momeni, P. and Moghimi, H. R. (2008). Enhancing drugs absorption through third-degree burn wound eschar. *Burns* **34**: 698-702.
27. Astaneh, R., Erfan, M., Barzin, J., Mobedi, H., Moghimi, H. R. (2008). Effects of ethyl benzoate on performance, morphology, and erosion of PLGA implants formed in situ. *Adv. Polym. Technol.* **27**: 17-26.
28. Makhmal Zadeh, B. S., Moghimi, H. R., Santos, P., Hadgraft, J. and Lane, M. E. (2008). A comparative study of the in vitro permeation characteristic of silver sulfadiazine across synthetic membranes and eschar tissue. *Int. Wound J.* **5**: 633-638.

29. Astaneh, R., Erfan, M., Moghimi, H. R. and Mobedi, H. (2009). Changes in morphology of in situ forming PLGA implant prepared by different polymer molecular weight and its effect on release behavior. *J. Pharm. Sci.* **98**: 135-145.
30. Moghimi, H. R. and Manafi, A. (2009). The necessity for enhancing of drugs absorption through burn eschar. *Burns* (In Press). Available on line; *doi:10.1016/j.burns.2008.09.010*.
31. Moghimi, H. R., Makhmalzadeh, B. S. and Manafi, A. (2009). Enhancement effect of terpenes on silver sulphadiazine permeation through third-degree burn eschar. *Burns* (In Press). Available on line; *doi:10.1016/j.burns.2009.02.006*.
32. Mehravaran, N., Moghimi, H. R. and Mortazavi, S. A. (2009). The influence of various mucoadhesive polymers on in vitro performance of the resulting artificial saliva pump spray formulations. *Ir. J. Pharm Res.* **8 (1)**: 3-13.
33. Moghimi, H. R., Shirazi, F. H., Abolmaali, S. S. and Tamaddon, A. M. (2009). Urea-enhanced membrane destabilization, cellular internalization and activity of liposomal antisense oligonucleotides. *Eur. J. Pharm. Biopharm.* (Submitted).

B: Books

1. Moghimi, H. R., Barry, B. W. and Williams, A. C. (1999). Stratum corneum and barrier performance; a model lamellar structural approach. In: "Percutaneous Absorption (Bronaugh, R. L. and Maibach, H. I., Eds.), 3rd Edn., Marcel Dekker, Inc., New York, 515-553.

COMMUNICATIONS (CONFERENCES)

1. Adrangui, M. and Moghimi, H. R. (Dec. 1989). Effect of vehicles on the percutaneous absorption of nitroglycerin. 1st Iranian Seminar of Industrial Pharmacy, Tehran, Iran. **Oral presentation.**
2. Barry, B. W., Moghimi, H. R. and Williams, A. C. (Nov. 1993). Kinetics of 5-fluorouracil release from enhancer-modified matrix model of stratum corneum lipids. 8th Annual Conference of American Association of Pharmaceutical Scientists, Orlando, USA. **Poster presentation.**
3. Moghimi, H. R., Williams, A. C. and Barry, B. W. (Sept. 1993). A matrix model for stratum corneum lipids and its evaluation in drug release studies. 130th British Pharmaceutical Conference, Reading, UK. **Oral presentation.**
4. Moghimi, H. R., Williams, A. C. and Barry, B. W. (Nov. 1994). Effect of 1,8-cineole on 5-fluorouracil release from a model lamellar matrix for stratum corneum intercellular lipids. 9th Annual Conference of American Association of Pharmaceutical Scientists, San Diego, USA. **Poster presentation.**
5. Pirae, M., Moghimi, H. R. and Adrangui, M. (Sept. 1994). Application of iontophoresis in percutaneous absorption of amphoteric compounds. 1st International Student Congress of Medical Sciences, Izmir, Turkey. **Oral presentation.**

6. Adrangui, M., Moghimi, H. R. and Fotouhi Gavgani, M. (Nov. 1995). Effects of geometric parameters on the medicament release from semisolid bases. 2nd Iranian Congress of Physiology and Pharmacology, Tehran, Iran. **Poster presentation.**
7. Moghimi, H. R., Williams, A. C. and Barry, B. W. (Aug. 1997). Effects of terpene penetration enhancers on the release of fluorouracil and oestradiol from a model for the stratum corneum lipids. 5th Iranian Conference of Pharmaceutical Sciences, Tehran, Iran. **Oral presentation.**
8. Moghimi, H. R., Talaii, F. and Adrangui, M. (Aug. 1997). Effects of pH on passive and iontophoretic permeation of phenylalanine through cellulose acetate membrane. 5th Iranian Conference of Pharmaceutical Sciences, Tehran, Iran. **Poster presentation.**
9. Adrangui, M., Moghimi, H. R. and Fotouhi, M. (Aug. 1997). Effects of diffusion cell dimensions on the medicament release from semisolid bases. 5th Iranian Conference of Pharmaceutical Sciences, Tehran, Iran. **Poster presentation.**
10. Moghimi, H. R., Bagherpour, F. and Adrangui, M. (Aug. 1997). Effects of vehicles on the percutaneous absorption of indomethacin. 5th Iranian Conference of Pharmaceutical Sciences, Tehran, Iran. **Poster presentation.**
11. Mortazavi, S. A. and Moghimi, H. R. (Aug. 1997). In-vitro comparison of beta-blocker tablets in the country's [Iranian] drug market. 5th Iranian Conference of Pharmaceutical Sciences, Tehran, Iran. **Poster presentation.**
12. Moghimi, H. R., Piraei, M. and Shahrabi, A. (Aug. 1997). Optimization of iontophoretic absorption of sodium diclofenac through snake skin using chemical enhancers. 5th Iranian Conference of Pharmaceutical Sciences, Tehran, Iran. **Oral presentation.**
13. Moghimi, H. R., Williams, A. C. and Barry, B. W. (Sept. 1997). Effect of sodium lauryl sulphate and dimethyl sulphoxide on the permeation of 5-fluorouracil through a stratum corneum intercellular model. 134th British Pharmaceutical Conference, Scarborough, UK. **Poster presentation.**
14. Moghimi, H. R., Williams, A. C. and Barry, B. W. (Sept. 1997). Effects of terpenes on the solubility of 5-fluorouracil in lipid bilayers; correlation with skin penetration enhancement. 134th British Pharmaceutical Conference, Scarborough, UK. **Poster presentation.**
15. Moghimi, H. R. and Adrangui, M. (Oct. 1997). Effects of vehicles on the percutaneous absorption of chemicals. 3rd International Seminar on Hygienic and Cosmetic Industries, Tehran, Iran. **Oral presentation.**
16. Moghimi, H. R. and Shakerinejad, A. (Sept. 1998). Retardation effects of β -cyclodextrin and polyethylene glycol 1540 on percutaneous absorption of nitroglycerin. 6th International Conference of Perspectives in Percutaneous Penetration, Leiden, The Netherlands. **Poster presentation.**
17. Moghimi, H. R., Manafi, A. and Hashemlou, A. (Sept. 1998). Effects of water and other enhancers on the permeation of drugs through burn eschar. 6th International Conference of Perspectives in Percutaneous Penetration, Leiden, The Netherlands. **Poster presentation.**
18. Moghimi, H. R. and Shahrabi, A. (Dec. 1998). Increasing the iontophoretic permeation of drugs through stratum corneum intercellular lipids by chemical enhancers. 50th Indian

- Pharmaceutical Congress and 17th Asian Congress of Pharmaceutical Sciences, Mumbai, India. **Poster presentation.**
19. Moghimi, H. R., Radfar, M. and Vatanpour, H. (Sept. 1999). Comparison of permeation of sodium and diethylammonium diclofenac salts through rat skin from different vehicles. 136th British Pharmaceutical Conference, Cardiff, UK. **Poster presentation.**
 20. Moghimi, H. R. and Hajimehdipour, H. (Sept. 1999). Enhancement of iontophoretic percutaneous absorption of uncharged drugs by charged micelles. 136th British Pharmaceutical Conference, Cardiff, UK. **Poster presentation.**
 21. Aboofazeli, R., Moghimi, H. R. and Naeili, R. (Dec. 1999). In vitro release studying of an amino acid containing liposomal formulation. 4th International Conference of Liposome Advances, London, UK. **Poster presentation.**
 22. Moghimi, H. R., Manafi, A. and Ghoraishi, S. A. (Dec. 1999). Comparison of the effects of honey and silver sulfadiazine in the treatment of rat third-degree burn wound. 51st Indian Pharmaceutical Congress, Indore, India. **Poster presentation.**
 23. Moghimi, H. R. and Shakerinejad, A. (April 2000). Retardation effects of β -cyclodextrin and polyethylene glycols on percutaneous absorption of nicotine. 7th International Conference of Perspectives in Percutaneous Penetration, La Grande Motte, France. **Poster presentation.**
 24. Moghimi, H. R. (Nov. 2000). Application and mechanism of action of terpenes as skin penetration enhancers. 1st International Congress on Traditional Medicine and Materia Medica, Tehran, Iran. **Invited oral presentation, key lecture.**
 25. Sharifi, H., Farahvash, M. J., Moghimi, H. R., Akbari, H., Darabi, M. and Kashanian, M. (Nov. 2000). Study of the effect of an ointment prepared from the essence of Myrtle and Geranium on the symptoms of hemorrhoid and comparing the results with other antihemorrhoid ointments available in the market. 1st International Congress on Traditional Medicine and Materia Medica, Tehran, Iran. **Poster presentation.**
 26. Moghimi, H. R., Zarghi, A. and Shahmir, B. (Nov. 2000). Studying the percutaneous absorption of curcumin through rat skin. 1st International Congress on Traditional Medicine and Materia Medica, Tehran, Iran. **Poster presentation.**
 27. Jesmani, F., Moghimi, H. R. and Vahidi, H. (Nov. 2000). Studying the antifungal activity of Cinnamon aqueous extract and optimization of the extraction method by co-solvents. 1st International Congress on Traditional Medicine and Materia Medica, Tehran, Iran. **Poster presentation, Prizewinner poster.**
 28. Moghimi, H. R. (Nov. 2000). Formulation of medicinal plants and natural products. 1st International Congress on Traditional Medicine and Materia Medica, Tehran, Iran. **Invited oral presentation, key lecture.**
 29. Moghimi, H. (Feb. 26-27, 2003). Transdermal delivery of peptides, proteins and nucleotides. 1st National Conference on Novel Drug Delivery Systems, Tehran, Iran. **Invited oral presentation, key lecture.**
 30. Moghimi, H., Vandertol-Vanier, H and Allen, T. M. (Feb. 26-27, 2003). Delivery of c-myc antisense oligodeoxynucleotide to human B-cell lymphoma via CD19-targeted

- immunoliposomes. 1st National Conference on Novel Drug Delivery Systems, Tehran, Iran. **Oral presentation.**
31. Mortazavi, S. A., Moghimi, H. R. and Yasari, M. (Feb. 26-27, 2003). An investigation into the effect of various surfactants on the adhesive strength of the mucoadhesive polymer Carbopol 934. 1st National Conference on Novel Drug Delivery Systems, Tehran, Iran. **Poster presentation.**
 32. Mortazavi, S. A., Moghimi, H. R. and Hakimi, M. (Feb. 26-27, 2003). A study on the effect of some hydroxyl group containing solvents used in pharmaceutical formulations on the adhesive strength of the mucoadhesive polymer sodium carboxymethyl cellulose. 1st National Conference on Novel Drug Delivery Systems, Tehran, Iran. **Poster presentation.**
 33. Tamaddon, A. M., Sharif-Makhmal Zadeh, B. and Moghimi, H. R. (Sept. 29-Oct. 1, 2003). 1st EUFEPS Conference on Optimizing Drug Delivery and Formulation: New Challenges in Drug Delivery, Versailles, France. **Poster presentation.**
 34. Moghimi, H., Zarghi, A. and Noorani, N. (March 15-18, 2004). Stereoselective permeation of tretinoin and isotretinoin through enhancer-treated rat skin. International Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Nuremberg, Germany. **Poster presentation.**
 35. Mortazavi, S. A. and Moghimi, H. R. (March 15-18, 2004). Effect of poloxamer 407, SLS and cetyl pyridinium chloride on the in vitro mucosa-adhesion of some cellulose-based polymers. International Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Nuremberg, Germany. **Poster presentation.**
 36. Moghimi, H. (Aug. 23-26, 2004). Novel molecular and bulk transdermal drug delivery: microneedles, high velocity systems, iontophoresis and sonophoresis. 9th Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran. **Invited oral presentation, key lecture.**
 37. Moghimi, H. and Hajimehdipour H. (Aug. 23-26, 2004). Enhancement of iontophoretic permeation of nitroglycerin (model uncharged drug) through cellulose acetate membrane by charged micelles. 9th Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran. **Oral presentation.**
 38. Tamaddon A. M., Hoseini-Shirazi, F., and Moghimi, H. R. (Aug. 23-26, 2004). Optimizing transfection of A549 cell line (lung cancer) antisense oligonucleotide-containing cationic liposomes. 9th Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran. **Oral presentation.**
 39. Tamaddon A. M., Moghimi, H. R., Hoseini-Shirazi, F., and Kobarfard, F. (Aug. 23-26, 2004). Ion pairing-reversed phase HPLC method validation for separation and quantification of an antisense oligonucleotide. 9th Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran. **Oral presentation.**
 40. Farahmand, S. and Moghimi, H. (Aug. 23-26, 2004). Novel cosmetic delivery systems. 9th Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran. **Poster presentation.**
 41. Astaneh, R., Erfan, M., Mobedi, H. and Moghimi, H. (Aug. 23-26, 2004). Formulation of an injectable implant for peptide delivery and studying the effect of polymer molecular weight on its release behaviour. 9th Iranian Seminar of Pharmaceutical Sciences, Tabriz, Iran. **Poster presentation.**

42. Moghimi, H., Shahmir, B. and Zarghi, A. (Sept. 27-29, 2004). Permeation of curcumin (turmeric pigment) through enhancer-treated rat skin. British Pharmaceutical Conference, Manchester, UK. **Poster presentation.**
43. Moghimi, H., Shahmir, B. and Zarghi, A. (Oct. 4-7, 2004). Enhancement of percutaneous absorption of curcumin (turmeric pigment) by ethanol. 2nd International Congress on Traditional Medicine and Materia Medica, Tehran, Iran. **Oral presentation.**
44. Astaneh, R., Erfan, M., Mobedi, H. and Moghimi, H. R. (May 30-June 2, 2005). Preparation of an injectable implant for peptide delivery: effect of polymer molecular weight on its release behavior. 8th Annual Symposium of Canadian Society of Pharmaceutical Sciences, Toronto, Canada. **Poster Presentation.**
45. Tamaddon, A. M., Hoseini Shirazi, F. and Moghimi, H. R. (June 20-22, 2005). DODAP liposomal delivery of antisense oligonucleotide to tumor cells. 4th Eurengethy International Conference, Paris, France. **Poster Presentation.**
46. Astaneh, R., Moghimi, H. R., Erfan, M. and Mobedi, H. and (July 22-26, 2006). Formulation of an injectable implant for peptide delivery: effect of polymer molecular weight on release, erosion and morphology behavior. 33rd Annual Meeting of the Controlled Release Society, Vienna, Austria. **Poster presentation.**
47. Tamaddon, A. M., Shirazi, F. and Moghimi, H. R. (Aug. 21-24, 2006). Preparation and characterization of antisense oligonucleotide encapsulated in a pH-sensitive Stealth liposome. 10th Iranian Pharmaceutical Sciences Conference, Tehran, Iran. **Oral presentation.**
48. Mehravaran, N, Moghimi, H. R. and Mortazavi, S. A. (Aug. 21-24, 2006). Formulation and evaluation of extent of mucoadhesion of a formulated artificial saliva spray. 10th Iranian Pharmaceutical Sciences Conference, Tehran, Iran. **Poster presentation.**
49. Moghimi, H. R., Erfan, M. and Haeri, A. (Aug. 21-24, 2006). Prevention of percutaneous absorption of nicotine by interacting polymers. 10th Iranian Pharmaceutical Sciences Conference, Tehran, Iran. **Poster presentation.**
50. Mortazavi, S. A. and Moghimi, H. R. (Aug. 21-24, 2006). The influence of various pharmaceutical solvents on the adhesive strength of well-known mucoadhesive polymers. 10th Iranian Pharmaceutical Sciences Conference, Tehran, Iran. **Poster presentation.**
51. Moghimi, H. R., Erfan, M., Haeri, A. and Alinaghi, A. (Aug. 21-24, 2006). Studying permeation of nitrofurazone through rat skin. 10th Iranian Pharmaceutical Sciences Conference, Tehran, Iran. **Poster presentation.**
52. Moghimi, H. R., Alinaghy, A. and Erfan, M (2006). Microwave, a novel percutaneous absorption enhancement method. British Pharmaceutical Conference, Manchester, UK. **Accepted for oral presentation.**
53. Moghimi, H. R., Haeri, A. and Erfan, M (2006). Prevention of percutaneous absorption of nicotine by an interacting polymer British Pharmaceutical Conference, Manchester, UK. **Accepted for poster presentation.**
54. Mehravaran, N, Mortazavi, S. A. and Moghimi, H. R. (Dec. 2006). Formulation and evaluation of physicochemical and mucoadhesive properties of artificial saliva containing polymers. The 12th Seminar of Iranian Pharmacy Students, Sari, Iran. **Poster presentation.**

55. Astaneh, R., Erfan, M. and Moghimi, H. R. (Feb. 2-4, 2007). Alternative choice for reduction of hysterectomy in uterine fibroids. Women Malignancies Congress, Cancer Research Center, Shaheed Beheshti Medical University, Tehran, Iran.
56. Tamaddon, A. M., Shirazi, F., Malvy, C. and Moghimi, H. R. (2007). Enhancement of intracellular delivery and antisense efficiency of cationic liposome entrapped oligodeoxynucleotide by lipid bilayer-stabilizing agents. 3rd Iranian Conference of Novel Drug Delivery Systems, 21-22 June, Tehran, Iran. **Oral Presentation.**
57. Tamaddon, A. M., Golkar, G. and Moghimi, H. R. (2007). Mathematical modeling of cellular pharmacokinetic of antisense oligodeoxynucleotide loaded cationic liposomes. 3rd Iranian Conference of Novel Drug Delivery Systems, 21-22 June, Tehran, Iran. **Oral Presentation.**
58. Mortazavi, S. A., Moghimi, H. R. and Mehravaran, N. (2007). The influence of various mucoadhesive polymers on invitro performance of the resulting artificial saliva spray. 3rd Iranian Conference of Novel Drug Delivery Systems, 21-22 June, Tehran, Iran. **Poster Presentation.**
59. Nazari, P., Abolhassani, F. S., Haeri, A., Rabiei, S. and Moghimi, H. R. (2007). Dermal and transdermal oligonucleotide delivery. 3rd Iranian Conference of Novel Drug Delivery Systems, 21-22 June, Tehran, Iran. **Poster Presentation.**
60. Golkar, N., Tamaddon, A. M., Moghimi H. R. and Shirazi F. (2008). Factorial-design optimization of chromatographic conditions for analysis of antisense drug. The 11th Iranian Pharmaceutical Sciences Conference, 18-21 August, Kerman, Iran. **Poster Presentation.**
61. Jamali, B., Moghimi, H. R. and Farahmand, S. (2008). Improving depilatory efficiency of thioglycolate-containing cream by hydration and thermal energy. The 11th Iranian Pharmaceutical Sciences Conference, 18-21 August, Kerman, Iran. **Poster Presentation.**
62. Tabandeh, H., Moghimi H. R. and Hafez Aghili, M. (2008). Formulation and stability control of dimenhydrinate syrup. The 11th Iranian Pharmaceutical Sciences Conference, 18-21 August, Kerman, Iran. **Poster Presentation.**
63. Sharif Makhmalzadeh, B. and Moghimi H. R. (2008) The enhancement effect of oleic acid on the penetration of lipophilic and hydrophilic drugs across 3rd-degree burn eschar. The 11th Iranian Pharmaceutical Sciences Conference, 18-21 August, Kerman, Iran. **Poster Presentation.**
64. Khoshakhlagh, P., Golshahi, A. and Moghimi, H. R. (2008). Effect of polymorphism on physicochemical properties of sertraline hydrochloride tablets. The 11th Iranian Pharmaceutical Sciences Conference, 18-21 August, Kerman, Iran. **Poster Presentation.**
65. Tamaddon, A. M., Shirazi, F.-H. and Moghimi H. R. (2008). Endosomal membrane-modeling vesicles simulates nucleic acid release from encapsulating cationic liposomes. 14th International Pharmaceutical Technology Symposium, 6-10 September, Antalya, Turkey. **Poster Presentation.**

REFEREES

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2. Professor Adrian C. Williams, The School of Pharmacy, University of Reading, PO Box 224, Whiteknights, Reading, RG6 6AD, England. Tel: (+) 44-118-378-6169; E-mail: a.c.williams@reading.ac.uk