Curriculum Vitae

Name: Marzieh Mohammadi
Date of Birth: 9.21.1989
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Professional background

Education

- PhD in Pharmaceutical Nanotechnology, School of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran, 2013- 2018.
- 3 months visiting scholar at Harvard-MIT Division of Health Sciences and Technology, USA under the supervision of Prof. Ali Khademhosseini.
- Pharm.D, School of Pharmacy, Mashhad University of Medical sciences, Mashhad, Iran, 2007-2013.

Academic achievements and awards

-Top student (the first rank) among Ph.D. candidates for Ph.D. program in pharmaceutical nanotechnology in Iran, 2013.
- Top graduated student (first rank) of Mashhad pharmacy school based on overall score (18.37 out of 20), 2013.
- Ranked 4th in National Comprehensive Basic Science Exam, 2009.
- Ranked among top 10 in National medical students Olympiad, 2011.
- Top student (the first rank) among PhD students in school of pharmacy, 2014, 2015, 2016.

Memberships

Member of National Elites Foundation
Member of exceptional talents center at MUMS (2009 – now)
Member of Medical Olympiad team of MUMS (2nd , 3rd , 5th event)
Member of Iranian Association of Pharmacists

Journal publications

1- Alibolandi, M., S. Amel Farzad, **M. Mohammadi**, K. Abnous, S. M. Taghdisi, F. Kalalinia and M. Ramezani (2018). "Tetrac-decorated chitosan-coated PLGA nanoparticles as a new platform for targeted delivery of SN38." Artif Cells Nanomed Biotechnol: 1-12.

2- Alibolandi, M., F. Hoseini, **M. Mohammadi**, P. Ramezani, E. Einafshar, S. M. Taghdisi, M. Ramezani and K. Abnous (2018). "Curcumin-entrapped MUC-1 aptamer targeted dendrimer-gold hybrid nanostructure as a theranostic system for colon adenocarcinoma." Int J Pharm **549**(1-2): 67-75.

3- **Mohammadi, M**., M. Alibolandi, K. Abnous, Z. Salmasi, M. R. Jaafari and M. Ramezani (2018). "Fabrication of hybrid scaffold based on hydroxyapatite-biodegradable nanofibers incorporated with liposomal formulation of BMP-2 peptide for bone tissue engineering." Nanomedicine **14**(7): 1987-1997.

4- **Mohammadi, M.**, S. Taghavi, K. Abnous, S. M. Taghdisi, M. Ramezani and M. Alibolandi (2018). "Hybrid Vesicular Drug Delivery Systems for Cancer Therapeutics." Advanced functional materials **28**(36): 1802136.

5- Alarcin, E., T. Y. Lee, S. Karuthedom, **M. Mohammadi**, M. A. Brennan, D. H. Lee, A. Marrella, J. Zhang, D. Syla, Y. S. Zhang, A. Khademhosseini and H. L. Jang (2018). "Injectable shear-thinning hydrogels for delivering osteogenic and angiogenic cells and growth factors." Biomater Sci **6**(6): 1604-1615.

6- Nejabat, M., **M. Mohammadi**, K. Abnous, S. M. Taghdisi, M. Ramezani and M. Alibolandi (2018). "Fabrication of acetylated carboxymethylcellulose coated hollow mesoporous silica hybrid nanoparticles for nucleolin targeted delivery to colon adenocarcinoma." Carbohydrate Polymers **197**: 157-166.

7- Alibolandi, M., K. Abnous, S. Anvari, **M. Mohammadi**, M. Ramezani and S. M. Taghdisi (2018). "CD133-targeted delivery of self-assembled PEGylated carboxymethylcellulose-SN38 nanoparticles to colorectal cancer." Artif Cells Nanomed Biotechnol: 1-11.

8- Alibolandi, M., **M. Mohammadi**, S. M. Taghdisi, K. Abnous and M. Ramezani (2017). "Synthesis and preparation of biodegradable hybrid dextran hydrogel incorporated with biodegradable curcumin nanomicelles for full thickness wound healing." Int J Pharm **532**(1): 466-477.

9- Einafshar, E., A. H. Asl, A. H. Nia, **M. Mohammadi**, A. Malekzadeh and M. Ramezani (2018). "New cyclodextrin-based nanocarriers for drug delivery and phototherapy using an irinotecan metabolite." Carbohydrate Polymers **194**: 103-110.

10- Alibolandi, M., K. Abnous, M. Mohammadi, F. Hadizadeh, F. Sadeghi, S. Taghavi, M. R. Jaafari and M. Ramezani (2017). "Extensive preclinical investigation of polymersomal formulation of doxorubicin versus Doxil-mimic formulation." Journal of Controlled Release **264**: 228-236.

11- **Mohammadi, M**., S. A. Mousavi Shaegh, M. Alibolandi, M. H. Ebrahimzadeh, A. Tamayol, M. R. Jaafari and M. Ramezani (2018). "Micro and nanotechnologies for bone regeneration: Recent advances and emerging designs." Journal of Controlled Release **274**: 35-55.

12- Bagheri, M., **M. Mohammadi**, T. W. Steele and M. Ramezani (2016). "Nanomaterial coatings applied on stent surfaces." Nanomedicine (Lond) **11**(10): 1309-1326.

13- **Mohammadi, M.**, M. Ramezani, K. Abnous and M. Alibolandi (2017). "Biocompatible polymersomes-based cancer theranostics: Towards multifunctional nanomedicine." Int J Pharm **519**(1-2): 287-303.

14- Alibolandi, M., K. Abnous, F. Hadizadeh, S. M. Taghdisi, F. Alabdollah, **M. Mohammadi**, H. Nassirli and M. Ramezani (2016). "Dextran-poly lactide-co-glycolide polymersomes decorated with folate-antennae for targeted delivery of docetaxel to breast adenocarcinima in vitro and in vivo." Journal of Controlled Release **241**: 45-56.

15- Alibolandi, M., **M. Mohammadi**, S. M. Taghdisi, M. Ramezani and K. Abnous (2017). "Fabrication of aptamer decorated dextran coated nano-graphene oxide for targeted drug delivery." Carbohydrate Polymers **155**: 218-229.

16- Alibolandi, M., F. Alabdollah, F. Sadeghi, **M. Mohammadi**, K. Abnous, M. Ramezani and F. Hadizadeh (2016). "Dextran-b-poly(lactide-co-glycolide) polymersome for oral delivery of insulin: In vitro and in vivo evaluation." J Control Release **227**: 58-70.

17- **Mohammadi, M.,** Z. Salmasi, M. Hashemi, F. Mosaffa, K. Abnous and M. Ramezani (2015). "Single-walled carbon nanotubes functionalized with aptamer and piperazine-polyethylenimine derivative for targeted siRNA delivery into breast cancer cells." Int J Pharm **485**(1-2): 50-60.

18- Yang, H., Li, Y., Wei, W., Shahriyari, F., **Mohammadi, M.,** Zhang, J., Chawla, A., Khademhosseini, A., and Jang, H. “Hydroxyapatite and Whitlockite bone nanocrystallite cocktails for delivering therapeutic ions to improve osteogenesis. “ Submitted to the journal of Nanoscale.

Published books

1- Nanomedicine: Advanced nanoparticles and their application in pharmacy and medicine. Ahad Mokhtarzadeh, javad Akhtari, Zahra Salmasi, Sahar Taghavi, Behzad Behnam, Morteza Ghandadi, Jaafar Ezzatinejhad, Zohreh rezvani, Sara ayatollahi, Marzieh Mohammadi, Hamideh Parhiz, August 2017.

2- handbook of psychiatric drug therapy, Hosein Hosseinzadeh, Fatemeh Dusti, Marzieh Mohammadi, Ghazal Alipour talesh, 2015.

Abstracts

1- Mona Alibolandi, Marzieh Mohammadi, Mohammad Ramezani, A novel biodegradable dextran based hydrogel containing curcumin nanomicelles as a potential dressing for wound healing, 7 th international conference on nanostructures (2018), Tehran, Iran.

2- Marzieh Mohammadi, Mohammad Ramezani, Mahmoud Reza Jaafari, Sustained release liposomal formulation of bone morphogenetic peptide -2 for bone regeneration, The 2 nd festival and international congress on stem cell and regenerative medicine (2017), Tehran, Iran.

3- Marzieh Mohammadi; Khalil Abnous; Mohammad Ramezani; Zahra Salmasi; A novel nanocarrier with great potency in gene delivery, 5 th International Conference on Nanostructures (ICNS5), March 6-9, 2014, Sharif University of Technology, Kish, Iran.

4- Mona alibolandi, Marzieh Mohammadi, Mohammad Ramezani, Khalil abnous, Farzin hadizadeh, AS1411 aptamer-decorated biodegradable PEG-PLGA nanopolymersomes for the targeted delivery of gemcitabine to non-small cell lung cancer in vitro, , 6 th International Conference on Nanostructures (ICNS6), March 7-10, 2016, Sharif University of Technology, Kish, Iran.

5- Marzieh Mohammadi, Mona Alibolandi, Seyed mohammad taghdisi, Mohammad Ramezani, Khalil Abnous, Aptamer-functionalized dextran coated nano-graphene oxide for targeted drug delivery to breast cancer cells, Nastaran symposium 2016, Mashhad University of Medical sciences, Mashhad, Iran.

6- Mona alibolandi, Marzieh Mohammadi, Mohammad Ramezani, Khalil abnous, Farzin hadizadeh, AS1411 aptamer-decorated biodegradable PEG-PLGA nanopolymersomes for the targeted delivery of gemcitabine to non-small cell lung cancer in vitro, , 6 th International Conference on Nanostructures (ICNS6), March 7-10, 2016, Sharif University of Technology, Kish, Iran.

7- Marzieh Mohammadi, Mona Alibolandi, Seyed mohammad taghdisi, Mohammad Ramezani, Khalil Abnous, Aptamer-functionalized dextran coated nano-graphene oxide for targeted drug delivery to breast cancer cells, Nastaran symposium 2016, Mashhad University of Medical sciences, Mashhad, Iran.

8- Marzieh Mohammadi; Zahra Salmasi; Maryam Hashemi; Fatemeh Mosaffa; Khalil Abnous; Mohammad Ramezani, Aptamer mediated siRNA delivery to breast cancer cells using a novel nanocarrier composed of single-walled carbon nanotubes and polyethyleneimine, The 3 rd International congress on nanoscience and nanotechnology (ICNT2015), July 2-3, Istanbul, Turkey.

Contribution to workshop and seminars

1- Stem cell Technology Research Center Summer school on Stem cells, miRNA and Tissue engineering, August 20-24, 2014.

2- 5 th Royan International Summer school on Stem cells and Developmental Biology for Regenerative medicine August 2-7, 2014.

3- 5 th international controlled release conference of Iran, 2011, Mashhad, Iran (ICRC2011).

4- The first international student congress on cell and molecular medicine,2011, Shiraz, Iran (ISCCMM 2011).

5- 12 th Iranian congress of biochemistry & 4 th international congress of biochemistry &molecular biology-2011, Mashhad, Iran.

6- 1 st Middle East Controlled Release Conference (MECR2014) & 6 th Iranian Controlled Release Society Conference (ICRC2014), February 25-27, 2014, Tehran, Iran.

7- 5 th International Conference on Nanostructures (ICNS5), March 6-9, 2014, Sharif University of Technology, Kish, Iran.

8- 7 th Annual Research congress of eastern medical sciences students, 2011, Mashhad, Iran (ARCEMSS 2011).

9- Patent workshop in 1 st Middle East Controlled Release Conference (MECR2014) & 6 th Iranian Controlled Release Society Conference (ICRC2014), February 25-27, 2014, Tehran, Iran.

10- Business planning workshop in 1 st Middle East Controlled Release Conference (MECR2014) & 6 th Iranian Controlled Release Society Conference (ICRC2014), February 2527, 2014, Tehran, Iran.

Technical Skills

1- Mesenchymal stem cell isolation

2- Bone tissue engineering

3- Electrospun scaffolds fabrication

4- bioprinting scaffolds

5- Gene delivery

6- Wound healing studies

7- Aptamer targeted gene delivery

8- Targeted drug delivery

9- Immunoblotting assays and ELISA 10-Nanoliposomal drug carrier preparations

11- Graphene based materials

12- Polymersomal drug carrier preparations

13- Silica-based drug carrier preprations

14- MTT assay

15- Cell transfection studies

16- Eukaryotic cell culture

17- Flowcytometric analysis

18- Polymerase chain reaction (PCR) studies

References

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- Ali khademhosseini, California Nanosystems Institute, UCLA, USA

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