Curriculum Vitae

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https://scholar.google.com/citations?user=wOWEX08AAAAJ&hl=en

H-index: 16

PERSONAL INFORMATION

Place of Birth: Hamedan, Iran.
Language: English, Persian (Mother Tongue)

EDUCATION BACKGROUND

2005 BSc, Medical Laboratory Science, Iran University of Medical sciences, Iran

2008 MSc, Medical Biotechnology, Tabriz University of Medical sciences, Iran

2012 Visiting Researcher, Wellman Center for Photomedicine at Massachusetts General Hospital, Harvard Medical School, Boston USA

2013 PhD, Nanobiotechnology, Tarbiat Modares University, Iran

Thesis

M.Sc. thesis: “Identification and cloning of ECM33 homologue gene of Aspergillus Niger and preparation of a gene construct for its functional disruption”, (2003-2007)

PhD thesis: “gene therapy of prostate cancer by chitosan nanoparticle containing ODNs of Anti sense EGFR and Anti sense Bcl-2”, (2008-2013)

Honors and Grants

03/2011 IRANIAN NANOTECHNOLOGY INITIATIVE COUNCIL Research Prize due to research on gene delivery systems

09/2016, Ranked 34th among all faculty members in Iran, by Iran Science Elites Federation (ISEF), IRAN in 2016

2016, Granted by Iran Science Elites Federation (ISEF), as a distinguished researcher with high-impact published papers

2015-2016, Grant for taking two POSTDOCs, from Iran Science Elites Federation (ISEF)

2015-2016, Grants (Several times), from IRANIAN NANOTECHNOLOGY INITIATIVE COUNCIL, as research prizes for high-impact published papers.

2016 Our article "Smart micro/nanoparticles in stimulus-responsive drug/gene delivery systems" selected as the Best article of Iran University of Medical Sciences in 2016.

2017 Our article “Smart nanostructures for cargo delivery: Uncaging and activating by light”, JACS, selected as distinguished article by Iran Science Elites Federation (ISEF)

2016 Our article: "pH-Sensitive stimulus-responsive nanocarriers for targeted delivery of therapeutic agents" selected among 10 hot-papers of Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology in 2016

2017 Our article “Smart nanostructures for cargo delivery: Uncaging and activating by light”, distinguished to be among the "Spot Lights" of JACS journal.

Faculty Academic Appointments

05/2003-05/2005 Chair of student research committee, Iran University of Medical Science (Committee Service)

09/2008-09/2011 Lecturer Biological Department, **I.A.U.V.** (Islamic Azad University- Varamin-Pishva Branch)

05/2012-12/2012 Visiting Researcher Wellman center at **MGH** and **Harvard Medical School**, Boston

01/2014- Present Assistant Professor Medical Nanotechnology Department **IUMS** (Iran University of Medical Science)

Report of Local Teaching and Training

Teaching of Students in Courses:

08/2009-05/2011, Biotechnology, Lecturer, I.A.U.V. , BSc students /years, (Islamic Azad University-Varamin- Pishva Branch), (100 Hours /year)

01/2014- Present, Nanobiotechnology, Nanotoxicology, IUMS, MSc students (Iran University of Medical Science)

01/2014- Present, Introduction to nanotechnology, Nanomaterial, IUMS, students, (Iran University of Medical Science)

Laboratory and Other Research Supervisory and Training Responsibilities:

2013-Present, Supervisor and Advisor of MSc students and PhD students

RESEARCH & REVIEW ARTICLES (In-print or other)

1. Nasseri B, Soleimani N, Rabiee N, Kalbasi A, Karimi M, Hamblin MR. Point-of-care microfluidic devices for pathogen detection. Biosensors and Bioelectronics. 2018.
2. Malekzad H, Zangabad PS, Mohammadi H, Sadroddini M, Jafari Z, Mahlooji N, et al. Noble metal nanostructures in optical biosensors: basics, and their introduction to anti-doping detection. TrAC Trends in Analytical Chemistry. 2018.
3. Malekzad H, Mirshekari H, Sahandi Zangabad P, Moosavi Basri S, Baniasadi F, Sharifi Aghdam M, et al. Plant protein-based hydrophobic fine and ultrafine carrier particles in drug delivery systems. Critical reviews in biotechnology. 2018;38(1):47-67.
4. Jahromi MAM, Zangabad PS, Basri SMM, Zangabad KS, Ghamarypour A, Aref AR, et al. Nanomedicine and advanced technologies for burns: Preventing infection and facilitating wound healing. Advanced drug delivery reviews. 2018;123:33-64.
5. Ghasemi A, Rabiee N, Ahmadi S, Lolasi F, Borzogomid M, Kalbasi A, et al. Optical Assays Based on Colloidal Inorganic Nanoparticles. Analyst. 2018.
6. Farjadian F, Moghoofei M, Mirkiani S, Ghasemi A, Rabiee N, Hadifar S, et al. Bacterial components as naturally inspired nano-carriers for drug/gene delivery and immunization: Set the bugs to work? Biotechnology advances. 2018.
7. Avci P, Karimi M, Sadasivam M, Antunes-Melo WC, Carrasco E, Hamblin MR. In-vivo monitoring of infectious diseases in living animals using bioluminescence imaging. Virulence. 2018;9(1):28-63.
8. Zangabad PS, Mirkiani S, Shahsavari S, Masoudi B, Masroor M, Hamed H, et al. Stimulus-responsive liposomes as smart nanoplatforms for drug delivery applications. Nanotechnology Reviews. 2017.

9. Zangabad PS, Karimi M, Mehdizadeh F, Malekzad H, Ghasemi A, Bahrami S, et al. Nanocaged platforms: modification, drug delivery and nanotoxicity. Opening synthetic cages to release the tiger. Nanoscale. 2017;9(4):1356-92.
10. Mobasseri R, Karimi M, Tian L, Naderi-Manesh H, Ramakrishna S. Hydrophobic lapatinib encapsulated dextran-chitosan nanoparticles using a toxic solvent free method: fabrication, release property & in vitro anti-cancer activity. Materials Science and Engineering: C. 2017;74:413-21.
11. Malekzad H, Zangabad PS, Mirshekari H, Karimi M, Hamblin MR. Noble metal nanoparticles in biosensors: recent studies and applications. Nanotechnology reviews. 2017;6(3):301-29.
12. Karimi M, Sahandi Zangabad P, Baghaee-Ravari S, Ghazadeh M, Mirshekari H, Hamblin MR. Smart nanostructures for cargo delivery: uncaging and activating by light. Journal of the American Chemical Society. 2017;139(13):4584-610.
13. Ghasemi A, Amiri H, Zare H, Masroor M, Hasanzadeh A, Beyzavi A, et al. Carbon nanotubes in microfluidic lab-on-a-chip technology: current trends and future perspectives. Microfluidics and Nanofluidics. 2017;21(9):151.
14. Karimi M, Zare H, Bakhshian Nik A, Yazdani N, Hamrang M, Mohamed E, et al. Nanotechnology in diagnosis and treatment of coronary artery disease. Nanomedicine. 2016;11(5):513-30.
15. Karimi M, Sahandi Zangabad P, Ghasemi A, Amiri M, Bahrami M, Malekzad H, et al. Temperature-responsive smart nanocarriers for delivery of therapeutic agents: applications and recent advances. ACS applied materials & interfaces. 2016;8(33):21107-33.
16. Karimi M, Mirshekari H, Basri SMM, Bahrami S, Moghoofei M, Hamblin MR. Bacteriophages and phage-inspired nanocarriers for targeted delivery of therapeutic cargos. Advanced drug delivery reviews. 2016;106:45-62.
17. Karimi M, Mirshekari H, Aliakbari M, Sahandi-Zangabad P, Hamblin MR. Smart mesoporous silica nanoparticles for controlled-release drug delivery. Nanotechnology Reviews. 2016;5(2):195-207.
18. Karimi M, M Moosavi Basri S, Vossoughi M, S Pakchin P, Mirshekari H, R Hamblin M. Redox-sensitive smart nanosystems for drug and gene delivery. Current Organic Chemistry. 2016;20(28):2949-59.
19. Karimi M, Ghasemi A, Zangabad PS, Rahighi R, Basri SMM, Mirshekari H, et al. Smart micro/nanoparticles in stimulus-responsive drug/gene delivery systems. Chemical Society Reviews. 2016;45(5):1457-501.
20. Karimi M, Eslami M, Sahandi-Zangabad P, Mirab F, Farajisafiloo N, Shafaei Z, et al. pH-Sensitive stimulus-responsive nanocarriers for targeted delivery of therapeutic agents. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology. 2016;8(5):696-716.
21. Karimi M, Bahrami S, Ravari SB, Zangabad PS, Mirshekari H, Bozorgomid M, et al. Albumin nanostructures as advanced drug delivery systems. Expert opinion on drug delivery. 2016;13(11):1609-23.
22. Karimi M, Bahrami S, Mirshekari H, Basri SMM, Nik AB, Aref AR, et al. Microfluidic systems for stem cell-based neural tissue engineering. Lab on a Chip. 2016;16(14):2551-71.
23. Karimi M, Solati N, Ghasemi A, Estiar MA, Hashemkhani M, Kiani P, et al. Carbon nanotubes part II: a remarkable carrier for drug and gene delivery. Expert opinion on drug delivery. 2015;12(7):1089-105.
24. Karimi M, Solati N, Amiri M, Mirshekari H, Mohamed E, Taheri M, et al. Carbon nanotubes part I: preparation of a novel and versatile drug-delivery vehicle. Expert opinion on drug delivery. 2015;12(7):1071-87.
25. Hamblin MR, Chiang LY, Lakshmanan S, Huang Y-Y, Garcia-Diaz M, Karimi M, et al. Nanotechnology for photodynamic therapy: a perspective from the Laboratory of Dr. Michael R.

Hamblin in the Wellman Center for Photomedicine at Massachusetts General Hospital and Harvard Medical School. Nanotechnology reviews. 2015;4(4):359-72.
26. Jahromi MAM, Karimi M, Azadmanesh K, Manesh HN, Hassan ZM, Moazzeni SM. The effect of chitosan-tripolyphosphate nanoparticles on maturation and function of dendritic cells. Comparative Clinical Pathology. 2014;23(5):1421-7.
27. Vatansever F, de Melo WC, Avci P, Vecchio D, Sadasivam M, Gupta A, et al. Antimicrobial strategies centered around reactive oxygen species–bactericidal antibiotics, photodynamic therapy, and beyond. FEMS microbiology reviews. 2013;37(6):955-89.
28. Karimi M, Avci P, Mobasseri R, Hamblin MR, Naderi-Manesh H. The novel albumin–chitosan core–shell nanoparticles for gene delivery: preparation, optimization and cell uptake investigation. Journal of nanoparticle research. 2013;15(5):1651.
29. Karimi M, Avci P, Ahi M, Gazori T, Hamblin MR, Naderi-Manesh H. Evaluation of chitosan-tripolyphosphate nanoparticles as a p-shRNA delivery vector: formulation, optimization and cellular uptake study. Journal of nanopharmaceutics and drug delivery. 2013;1(3):266-78.
30. Karimi M. Smart internal stimulus-responsive nanocarriers for drug and gene delivery.

Books

M. Karimi*, P. Sahandi Zangabad*, A. Ghasemi*, M.R. Hamblin, "Smart external stimulus responsive nanocarriers for drug and gene delivery", (Morgan & Claypool Publishers - IOP Concise Physics), Autumn 2015.
ISBN 978-1-6817-4202-1 (ebook)
ISBN 978-1-6817-4138-3 (print)
DOI 10.1088/978-1-6817-4202-1
http://iopscience.iop.org/book/978-1-6817-4202-1

M. Karimi*, P. Sahandi Zangabad*, A. Ghasemi*, M.R. Hamblin, "Smart internal stimulus responsive nanocarriers for drug and gene delivery ", (Morgan & Claypool Publishers - IOP Concise Physics),
ISBN 978-1-6817-4257-1 (ebook)
ISBN 978-1-6817-4256-4 (print)
DOI 10.1088/978-1-6817-4257-1
http://iopscience.iop.org/book/978-1-6817-4257-1

Mahdi Karimi, Amir Ghasemi, M. R. Hamblin, Carbon Nanotubes in Drug and Gene Delivery, (Morgan & Claypool Publishers - IOP Concise Physics, 2017)
http://iopscience.iop.org/book/978-1-6817-4261-8

Conferences And Presentations

1. Mofazzal Jahromi MA, Moazzeni SM, Naderi-Manesh H, **Mahdi Karimi**, The effect of nanoparticles on maturation of Dendritic cells, 11th International Congress of Immunology and Allergy of Iran, April 2012

2. Rezvan Mobasseri, **Mahdi Karimi**, HosseinNaderi-Manesh. Optimization of preparation of Chitosan-Dextran based-nanoparticles as drug carriers, The 17th national and 5th International Iranian Biology conference, September 2012

3. **Mahdi Karimi**, Yazdanparast A , Aref A, Beyzavi A. Microfluidic as a useful tool in cell biology and technology. 3rd Iranian Congress on Medical Mycology, April 2014.

Narrative Report

My main research interests are broadly in the area of nanobiotechnology. This area concentrates on gene and drug delivery via smart and targeted nanoparticles to cancer cells or stem cells. At present time, I have focused on designing smart and targeted polymeric nanoparticles for ODNs as well as gene delivery systems to target cancer cells, especially, prostate and breast cancer cells. As well, the combinated approaches of microfluidic technology, nanotechnology and tissue engineering is of my high interest.