# Dr. HOSSEIN HOSSEINKHANI

### Biomedical Engineer, R&D consultant



#### Associate Professor

Graduate Institute of Biomedical Engineering National Taiwan University of Science and Technology (*TAIWAN TECH*)

#### Adjunct Professor

Department of Biomedical Engineering, National Defense Medical Center, 161 Minchuan E. Rd., Taipei 114,

100 articles in peer-reviewed journals (*published/in press/in preparation*), 2209 citations (*Google Scholar*),  $h_{index}$ : 29, *i10<sub>index</sub>*: 47, 10 highly cited paper in Biomedical Sciences, 20 # of articles with IF > 5, 10 invited review articles, 204 International Lecture/Seminar, 3 books, 12 book chapters, 10 patents, Referee 50 SCI journals, Associate Editor: HERALD JOURNAL OF PHARMACY AND PHARMACOLOGICAL RESEARCH, Editorial Board: The Open Nanomedicine Journal (ISSN 1875-9335), Progress Biomaterials, Journal of Developmental Biology and Tissue Engineering, International Journal of Molecular and Cellular Medicine (IJMCM), World Journal of Stem Cells (WJSC), International Journal of Biomedical Engineering, Guest Editors: The International Journal of Nanotechnology, Scientifica: Biomaterials, Scientifica: Tissue Engineering, Organic Chemistry: Current Research. Scientific Board of Royan International Awards.

## **Research Expertise**

#### Biomaterials, Nanotechnology, Drug Delivery, Tissue Engineering

SEM, TEM, AFM, RT-PCR, micro surgery, cell/tissue culture, immunohistochemical, biochemical assays, Eliza, western blot, DNA fragmentation, extraction RNAs/probe preparation, histology/immunefluorescent

#### Academic Qualification

- 2002, Ph.D- Polymer Chemistry: <u>Kyoto University (JAPAN)</u>: Excellent with Honor (Thesis: Design of non-viral polymer vectors and the ultrasound combination to enhance gene transfection)
- **1998**, **M.Sc- Chemical Engineering**: <u>*Tarbiat Modares University*</u>: First Class, First Rank (Thesis: Controlled release of theophylline from biodegradable poly (D,L-Lactic Acid) microspheres)
- **1996**, **B.Sc-** Chemical Engineering: <u>*Polytechnique University*</u>: National Gold Medalist (Thesis: Pilot plant design of zinc oxide production from zinc concentrated)

#### Professional Experiences

- 2011-present, Associate Professor, Inst. of Biomed. Eng., National Taiwan Univ. of Sci. and Tech., TAIWAN
- <u>2011-present</u>, Adjunct Professor, Dept. of Biomed. Eng., National Defense Medical Center, TAIWAN
- 2011-present, Lecturer, Academia Sinica-National Taiwan Univ., The Taiwan Int. Graduate Program, TAIWAN
- 2011-present, Lecturer, School of Pharmacy, National Defense Medical Center, TAIWAN
- 2009-2011, Associate Professor, Dept. of Biomed. Eng., National Yang-Ming Univ., TAIWAN
- 2009-2011, R&D consultant, Centro Chino, Co., TAIWAN
- 2009-2011, R&D consultant, Asia Pacific Stem Cells Science, Ltd., HONG KONG
- 2007-2009, R&D consultant, Nippi Co. Ltd., Abide, Ibaraki, JAPAN
- <u>2008-2009</u>, **Senior Researcher**, International Research Institute for Integrated Medical Sciences (IREIIMS), Tokyo Women's Medical University, Tokyo, *JAPAN*
- <u>2004-2008</u>, **Research Fellow**, International Center for Young Scientists (ICYS), National Institute for Materials Science (NIMS), Tsukuba, *JAPAN*
- <u>2002-2004</u>, JSPS Postdoctoral Fellow, Institute for Frontier Medical Science, Kyoto Univ., JAPAN
- <u>1998-2002</u>, Research Assistant, Institute for Frontier Medical Science, Kyoto Univ., JAPAN
- 1997-1998, Research Assistant, Dept. of Polymer Chemistry, Kyoto Univ., JAPAN

# Honors and Awards

- <u>ICYS (International Center for Young Scientists) Fellowship</u> (Special Coordination Funds for Promoting of Science and Technology from Ministry of Education, Culture, Sports, Science and Technology of the Japan, *National Institute for Materials Science*, Tsukuba, (Center designed to bring together Japanese and world-class foreign scientists operates entirely in English; *ca.* 40 fellows from around the world with budget of \$ 250,000 over five years for each fellow, *JAPAN* (2004).
- JSPS (Japan Society for the Promotion of Science) Fellowship, Kyoto University, JAPAN (2002).
- Japanese Government Scholarship (Monbukagakusho) for Ph.D course study, JAPAN (1999).
- M.Sc (Chemical Engineering) First Class, First Rank (1997).
- B.Sc (Chemical Engineering) First Class, First Rank (1993).
- <u>1<sup>st</sup> rank in nation-wide</u> entrance examination for M.Sc program in Chemical Engineering (among 12800 applicants) (1993).
- <u>3<sup>rd</sup> rank in nation-wide entrance</u> exam of universities, among 42000 applicants (1988).
- National Gold Medalist, First Rank-High School Diploma (Mathematics & Physic) (1987).

# Course Taught:

## <u>Graduate</u>:

- Introduction to Nanotechnology (The Taiwan International Graduate Program (TIGP), *Academia Sinica-<u>National Taiwan University</u>*, Taiwan)
- **Textural Design of Biomaterials** (Graduate Institute for Biomedical Engineering, <u>National</u> <u>Taiwan University of Science and Technology</u>, Taiwan)
- Cell Culture Technology (Graduate Institute for Biomedical Engineering, <u>National Taiwan</u> <u>University of Science and Technology</u>, Taiwan)
- **Bioengineering of Cells and Tissue** (Department of Biomedical Engineering, <u>National Yang</u> <u>Ming University</u>, Taiwan)
- Biostatistics (Department of Biomedical Engineering, *National Yang Ming University*, Taiwan)
- **Principal of Biomedical Engineering** (Department of Biomedical Engineering, *National Yang* <u>Ming University</u>, Taiwan)
- Nanobiotechnology (Dept. of Pharmaceutical Sci., *National Defense Medical Univ.*, Taiwan)

## <u>Undergraduate</u>:

- Calculus I&II (Department of Biomedical Engineering, <u>National Yang Ming University</u>, Taiwan)
- General Chemistry (Department of Biomedical Engineering, <u>National Yang Ming University</u>, Taiwan)
- General Chemistry Lab. Analysis (Department of Biomedical Engineering, <u>National Yang</u> <u>Ming University</u>, Taiwan)
- Biochemistry (Department of Biomedical Engineering, *National Yang Ming University*, Taiwan)

## Teaching Assistant:

- Spring 1999-2004, <u>*Kyoto University*</u>, Undergraduate course: **Biopolymer** (Mentored of graduate and undergraduate students, Training of students and junior post-docs in cell/tissue culture as well as *in vivo* animal experiments skills).
- Fall 1997-1998, *Polymer Institute of Iran*, Undergraduate course: Principal of Drug Delivery
- Spring 1995-1997, Dept. of Chemical Eng., <u>Tehran Univ.</u>, Graduate course: Advanced Mathematics, Advanced Heat Transfer
- Spring 1991-1995, Dept. of Chemical Eng., *Polytechnic Univ.*, Undergraduate course: Mass Transfer, Transfer Phenomena, Fluids Mechanic

# **Theses Supervised**

# Ph.D Theses

- <u>University of Pisa-Italy:</u> Co-supervisor of <u>Mariya Barsotti</u>, Ph.D student. Project entitled: "self-assembled peptide amphyphile for cardiac tissue engineering", completed (May 2006 –Sept. 2011).
- <u>University of Putra Malaysia</u>: Co-supervisor of <u>Fatemeh Abedini</u>, Ph.D student. Project entitled: "biodegradable nanoparticles of dextran-spermine for siRNA delivery to cancer cells", completed (May 2007 – Sept.2011).
- <u>University of Putra Malaysia</u>: Co-supervisor of <u>Raziyeh Amini</u>, Ph.D student. Project entitled: "PEGylated dextran-spermine nanoparticles for anti-cancer drug delivery systems", completed (May 2007 – Sept.2011).
- <u>University of Tarbiat Modares, Tehran, Iran,</u> Co-supervisor of <u>Mahsa Mohammadtaheri</u>, Ph.D student, Project entitled: "Labeling and Tracking of Stem Cells with Colloidal Nanocarriers Containing Magnetic Iron Oxide Nanoparticles", completed (May 2008 –Sept.2011).
- <u>University of Tarbiat Modares, Tehran, Iran,</u> Co-supervisor of <u>Hossein Shaki</u>, Ph.D student, Project entitled: "Blood to Brain Delivery of Anticancer Drug by Hydrophobized Dextran Nanocarriers", in progress (October 2012 ~)
- <u>University of Tarbiat Modares, Tehran, Iran</u>: Co-supervisor of <u>Maryam Ghadiri</u>, Ph.D student, Project entitled: "Preparation of Magnetic Cationic Dextran Nanoparticles for Targeted Delivery of Rapamycin to Central Nervous System" in progress (October 2012 ~)
- <u>Mashhad University of Medical Sciences, Mashhad, Iran</u>: Co-supervisor of <u>Shirin Toosi</u>, Ph.D student, Project entitled, "Evaluation of tissue-engineered bone formation for nonunion treatment using cryopreserved long bone marrow aspirate", in progress (August 2012 ~).

# Master Theses

- <u>Taiwan Tech-Taiwan</u>: supervisor of <u>Wen-Ji He</u>, Master student. Project entitled, "Magnetic Nanoparticles for MRI Technology", in progress (August 2012 ~).
- <u>National Yang Ming University-Taiwan</u>: supervisor of <u>I-Ru Chen</u>, Master student. Project entitled, "Fabrication of hybrid scaffolds materials for nerve tissue engineering", completed (August 2009 –July 2011).
- <u>University of Tarbiat Modarres, Tehran, Iran</u>: Co-supervisor of <u>Sara Mohajeri</u>, Master student. Project entitled, "Fabrication of chitosan/PVA scaffolds for skin tissue engineering", in progress (April 2013~).
- <u>University of Tarbiat Modarres, Tehran, Iran</u>: Co-supervisor of <u>Sara Mohajeri</u>, Master student. Project entitled, "Fabrication of collagen sponge reinforced with PET/PP fibers scaffolds for tissue engineering", completed (July 2006 – Feb. 2008).

# **Funding**

2013-2014	National Science Council, <b>Taiwan</b> <u>Awarded</u> : <b>850,000 NTS</b> , Role: PI; 3D Hydrogels for Tissue Engineering
2010-2013	National Science Council, <b>Taiwan</b> <u>Awarded</u> : <u><b>3</b>, <b>510,000 NT\$</b></u> , Role: PI; Hydrogels for 3D Tissue Constructs
2010-2011	International Grant, Yang-Ming University, <b>Taiwan</b> <u>Awarded</u> : <u>100,000 NT\$,</u> Role: PI; Fabrication of 3D scaffold for Cardiac Tissue
2009-2010	National Yang Ming University, <b>Taiwan</b> <u>Awarded</u> : <u>1000,000 NT\$</u> , Role: PI; Bioengineering of Stem Cells
2009-2010	Taipei Veteran General Hospital, <b>Taiwan</b> <u>Awarded</u> : <u>1000,000 NT\$</u> , Role: PI; 3D Scaffolds for bone tissue engineering
2008-2009	IRIIMS, Ministry of Science, Technology, Culture and Sports, <b>Japan</b> <u>Awarded</u> : <u><b>250,000 US\$</b></u> , Role: PI; 3D culture systems
2004-2007	ICYS, Ministry of Science, Technology, Culture and Sports, Japan <u>Awarded</u> : 250,000 US\$, Role: PI; Tissue Engineered Nano-Scaffolds
2002-2004	JSPS (Japan Society for the Promotion of Science), <b>Japan</b> <u>Awarded</u> : <b>100,000 USS</b> , Role: PI; Tissue Engineering via gene therapy

# **Publications**

## *Books* [\*: Corresponding author]:

- 1. H. Hosseinkhani\*, "3D in vitro Technology", in press, Springer Publication, (2013).
- 2. **H. Hosseinkhani**\*, "Advanced Biomaterials for Biomedical Engineering", in press, Springer Publication, (2013).
- 3. **H. Hosseinkhani**\*, "Nanotechnology in Advanced Medicine", in press, Springer Publication, (2013).

## **Book Chapters**:

- 1. **H. Hosseinkhani**\*, "Recent Development of Nanotechnology in Medicine", In "Emerging Topics in Nanotechnology", in press, John Wiley & Sons Publication, (2013).
- H. Hosseinkhani\*, "Biodegradable nanoparticles for image technology", In "APPLICATIONS OF NANOMATERIALS IN IMAGING AND DRUG DELIVERY", in press, Springer Publication, (2013).
- 3. **H. Hosseinkhani**\*, A.J. Domb, "Nanotechnology in Tissue Engineering", In "Fundamental of Pharmaceutical Nanoscience", in press, Springer Publication, (2013).
- 4. **H. Hosseinkhani**\*, "3D *in vitro* models for stem cells technology", In "Stem cells and regenerative medicine: A novel therapeutic approach", in press, Springer Publication, (2013).
- 5. **H. Hosseinkhani**\*, "Innovation Technology to Engineer 3D Living Organs as Intelligent Diagnostic Tools", In "Characterization and Development of Biosystems and Biomaterials", in press, Springer Publication, (2012).
- 6. **H. Hosseinkhani\***, "Controlled release systems for bone regeneration", In "Polymeric Biomaterials, Third Edition, Volume II: Medicinal and Pharmaceutical Applications of Polymers and Technology", in press, CRC Press/Taylor and Francis, USA (2012).
- 7. **H. Hosseinkhani\***, M. Hosseinkhani, K. Subramani, "Bone Regeneration using self-assembled nanoparticles-based scaffolds", In "Emerging Nanotechnologies in Dentistry", Elsevier, UK (2011).
- H. Hosseinkhani\*, M. Hosseinkhani, "Tissue Engineered Scaffolds for Stem Cells and Regenerative Medicine", In "Trend in Stem Cells Biology and Technology", HUMANANA Press Inc., USA (2009)
- 9. **H. Hosseinkhani**\*, M. Hosseinkhani, S. Zhang, K. Subramani "Self assembly of nanomaterials for engineering cell microenvironment", In "Micro and Nanoenginernig of the cell microenvironment: Applications and Technologies" Artech House Publishers, USA (2008).
- 10. **H. Hosseinkhani\***, M. Hosseinkhani, A. Khademhosseini, "Emerging Technology of Hydrogels in Drug Discovery", In "Topics in Multifunctional Biomaterials and Devices" London, UK (2007).
- 11. **H. Hosseinkhani**, T. Aoyama, O. Ogawa, Y. Tabata, "Tumor targeting of plasmid DNA by dextran conjugation based on metal coordination", In Key Engineering Materials, Vols. 288-289, pp 109-112, Trans Tech Publications, Switzerland (2005)
- 12. M. Yamamoto, **H. Hosseinkhani**, "Liver targeting of plasmid DNA by polymer-metal conjugation" pp 119-132, Yodosha Tech Publications, Japanese version, Med Tech Publications, JAPAN (2004).

## *Journals Articles* [\*: corresponding author]:

# <u>2013</u>

- H. Hosseinkhani\*, P.D. Hong, D.S. Yu, "Self-assembled Proteins and Peptides for Regenerative Medicine", <u>Chemical Reviews</u>, 113, 4837-4861 (2013) (SCI; JCR 2010 IF = 40.197). cited: 9
- H.C. Han, H.C. Lo, C.J. Huang, A. Ganguly, H.C. Hsu, C.Y. Dong, C.F. Chen, J. Leu, Y.C. Chang, K.H. Chen, P.D. Hong, D.S. Yu, K.L. Ou, L.C. Chen\*, H. Hosseinkhani\*, " Nano-textured fluidic biochip as biological filter for selective survival of cells and biological microorganisms", *Langmuir*, submitted (SCI; JCR 2010 IF = 4.268).
- H. Hosseinkhani\*, Y.R. Chen, W. He, P.D. Hong, D.S. Yu, A.J. Domb, "Engineering of Magnetic DNA Nanoparticles for Tumor-Targeted Therapy", *Journal of Nanoparticle Research*, 15, 1-10 (2013) (SCI; JCR 2010 IF = 3.29). cited: 2
- H. Hosseinkhani\*, Y. Hiraoka, C.H. Li, Y.R. Chen, D.S. Yu, P.D. Hong, K.L. Ou, "Engineering Three-Dimensional Collagen-IKVAV Matrix to Mimic Neural Microenvironment", <u>ACS</u> <u>Chemical Neuroscience</u>, 4,1229-35 (2013) (SCI; JCR 2010 IF = 3.676). cited: 5
- H. Hosseinkhani\*, W.J. He, C.H. Chiang, D.S. Yu, P.D. Hong, A.J. Domb, K.L. Ou "Biodegradable Nanoparticles for Gene Therapy Technology", *Journal of Nanoparticle* <u>Research</u>, 15, 1-15 (2013) (SCI; JCR 2010 IF = 3.29).
- M. Mohammad-Taheri, H. Hosseinkhani\*, E. Vasheghani-Farahani, S.A. Shojaosadati, M. Soleimani, M. Hafizi, S. Soudi, D.T. Yu, P.D. Hong, "Long term tracking of embryonic stem cell with magnetic biodegradable cationized dextran nanoparticles", *Nanomedicine*, submitted (2013) (SCI; JCR 2010 IF = 4.887).
- A. Ghodsizadeh, H. Hosseinkhani, A. Piryaei, B. Pournasr, Y. Hiraoka, H. Baharvand," Galactosylated 3D Collagen Matrix Enhanced In vitro Maturation of Human Embryonic Stem Cell-derived Hepatocyte-like Cells", *Biotechnology Letters*, in press (2013) (SCI; JCR 2012 IF = 1.853).
- R. Mashayekhi, H. Hosseinkhani, A. Khoshnevisan, M. M. Feizabadi, M. Daliri, P.D. Hong, D.S. Yu, "Surface Modification of Silicone Catheter Using Two-step LF-Plasma Treatment Technology for Controlling Bacterial Adhesion", <u>Advances in Polymer Technology</u>, submitted, (2013) (SCI; JCR 2010 IF = 1.096).
- W.Y. Yeo, H. Hosseinkhani, S.A. Rahman, R. Rosli, A.J. Domb, S. Abdullah, "Safety Profile of Dextran-Spermine/DNA nanoparticles for Gene Delivery to the Murine Lung", *Journal of* <u>Bioscience and Bioengineering</u>, under review (SCI; JCR 2010 IF = 2.149).
- A. Khoshnevisan, R. Mashayekhi, H. Hosseinkhani\*, M. M. Feizabadi, M. Daliri, P.D. Hong, D.S. Yu, K.L. Ou, "Prevention of Hydrocephalus Shunt Catheter Colonization by Plasma Irradiation", <u>ACS Applied Materials & Interfaces</u>, submitted (2013) (SCI; JCR 2010 IF = 5.008).
- R. Amini, F. Azizi Jalilian, S. Abdullah, A. Veerakumarasivam, H. Hosseinkhani, A.S. Abdulamir, A.J. Domb, D. Ickowicz, R. Rosli, "Dynamics of PEGylated-Dextran-Spermine Nanoparticles for Gene Delivery to Leukemic Cells", <u>Applied biochemistry and biotechnology</u>, 170, 841-853, (2013) (SCI; JCR 2010 IF = 1.943).

- H. Hosseinkhani\*, P.D. Hong, D.S. Yu, K.L. Ou, "Engineering 3D Biomaterials for Development of Tissue Engineering", *Journal of Biomedical Materials Research Part A*, in preparation (SCI; JCR 2010 IF = 2.625).
- H. Hosseinkhani\*, P.D. Hong, D.S. Yu, K.L. Ou, "Health Risk of Nanotechnology", <u>Chemical</u> <u>Reviews</u>, in preparation (2013) (SCI; JCR 2010 IF = 40.197).
- 14. **H. Hosseinkhani\***, K.L. Ou, "Regenerative Medicine Therapy based on Gene Therapy", *Biomaterials*, in preparation (2013) (SCI; JCR 2010 IF = 7.882).
- H. Hosseinkhani\*, K.L. Ou, "Biodegradable Nanomaterials Delivery Systems for Bioactive Nucleotides", <u>International Journal of Nanomedicine</u>, in preparation (2013) (SCI; JCR 2010 IF = 3.13).
- W. He, H. Hosseinkhani\*, P.D. Hong, D.S. Yu, A.J. Domb, "Magnetic Nanoparticles for MRI Technology", *Journal of Nanoparticle Research*, in preparation (2013) (SCI; JCR 2010 IF = 3.29).
- H. Jahani, F. Azizi Jalilian, H. Hosseinkhani\*, S. Kaviani, M. Soleimani, N. Abassi, C.H. Li, D.S. Yu, P.D. Hong, K.L. Ou, "Engineering polycaprolactone scaffold with controlled surface morphology and hydrophilicity towards differentiation of mesenchymal stem cells into neural cells", <u>ACS Applied Materials & Interfaces</u>, submitted (2013) (SCI; JCR 2010 IF = 5.008).
- H. Hosseinkhani\*, Y. Hiraoka, P.D. Hong, D.S. Yu, K.L. Ou, "Osteogenesis of Mesenchymal Stem Cells by Engineering 3D Collagen Matrix with RGD peptide", *Biomaterials*, in preparation (2013) (SCI; JCR 2010 IF = 7.882).
- H. Hosseinkhani\*, P.D. Hong, D.S. Yu, K.L. Ou, "Angiogenesis by Engineering Micro- and Nano-Scale 3D Collagen Matrix", *<u>Tissue Engineering</u>*, in preparation (2013) (SCI; JCR 2010 IF = 4.636).
- H. Hosseinkhani\*, P.D. Hong, D.S. Yu, K.L. Ou, "Fabrication of 3D Engineered Biodegradable Hydrogels for Tissue Engineering", <u>Advanced Materials</u>, in preparation (2013) (SCI; JCR 2011 IF = 14.276).
- H. Hosseinkhani\*, P.D. Hong, D.S. Yu, K.L. Ou, "Design of cell-biochip to enhance nanoparticles uptake by mesenchymal stem cells", <u>*Tissue Engineering*</u>, in preparation (2013) (SCI; JCR 2010 IF = 4.636).
- W.-J. He, H. Hosseinkhani\*, P.-D. Hong, C.-H. Chiang, D.-S., Yu, "Magnetic Nanoparticles for Imaging Technology ", *International Journal of Nanotechnology*, 10, 930-944 (2013) (SCI; JCR 2010 IF = 1.329).
- C.-H. Chiang, H. Hosseinkhani, W.-S. Cheng, C.-W. Chen, C.-H. Wang, Y.-L. Lo, "Improving drug loading efficiency and delivery performance of micro- and nanoparticle preparations through optimizing formulation variables", *International Journal of Nanotechnology*, 10, 996-1006 (2013) (SCI; JCR 2010 IF = 1.329).
- S.-F. Ou, C.-S. Chen, H. Hosseinkhani, C.-H. Yu, Y.-D. Shen, K.-L. Ou, "Surface properties of nano-structural silicon-doped carbon films for biomedical applications", *<u>International Journal of</u>* <u>Nanotechnology</u>, 10, 945-958 (2013) (SCI; JCR 2010 IF = 1.329).

- H. Hosseinkhani\*, K.H. Chen "Editorial: Nanotechnology Research in Taiwan", <u>International Journal of Nanotechnology</u>, 10, 837-839 (2013) (SCI; JCR 2010 IF = 1.329).
- N. Baheiraei, M. Azami, H. Hosseinkhani, "Investigation of Magnesium incorporation within gelatin/calcium phosphate nanocomposite scaffold for bone tissue engineering", <u>International Journal of Applied Ceramic Technology</u>, in press (2013) (SCI; JCR 2010 IF = 1.153).
- D. Shi, R. Tatu, Q. Liu, H. Hosseinkhani, "Stem Cells Based Tissue Engineering for Regenerative Medicine ", *Nano LIFE*, in press (2013).
- H. Hosseinkhani\*, W. He, P.D. Hong, D.S. Yu, A.J. Domb, "Differentiation of magnetically labeled cynomolgus monkey embryonic stem cells into cardiomyocytes", <u>Nature</u>, revised submitted (2013) (SCI; JCR 2010 IF = 36.280).
- M. Pachenari, M. Seyedpour, S. Babazadeh Shayan, S. Taranejoo, M. Janmaleki, H. Hosseinkhani, "Mechanical properties of cancer cytoskeleton depend on actin filaments to microtubules content: Investigating different grades of colon cancer cell lines", *Journal of Biomechanics*, in press (2013) (SCI; JCR 2010 IF = 3.031).
- W.-J. He, H. Hosseinkhani\*, P.-D. Hong, C.-H. Chiang, D.-S. Yu, "Polymeric Nanoparticles for Therapy and Imaging", *Polymers*, submitted (2013) (SCI; JCR 2010 IF = 1.687).
- H. Hosseinkhani\*, F. Abedini, M. Ebrahimi, P.D. Hong, K.L. Ou, "An Overview of Nonviral Vectors Based on Biodegradable Polymers for Gene Therapy", *Polymers*, submitted (2013) (SCI; JCR 2010 IF = 1.687).
- 32. M. Shahrezaei, H. Hosseinkhani\*, A. A. Babaluo, A. Hasanzadeh, M. Hghighi, W.-J. He, P.-D. Hong, C.-H. Chiang, D.-S. Yu, "Parametric studies on the synthesis and photocatalytic properties of TiO<sub>2</sub> nanostructures" <u>ACS Applied Materials & Interfaces</u>, in preparation (2013) (SCI; JCR 2010 IF = 5.008).

## <u>2012</u>

- 33. H. Hosseinkhani\*, P.D. Hong, D.S. Yu, Y.R. Chen, I.V. Farber, A.J. Domb, "Development of 3D in vitro platform technology to engineer mesenchymal stem cells", <u>International Journal of Nanomedicine</u>, 7, 3035-3043 (2012) (SCI; JCR 2010 IF = 3.13). cited: 7
- W. Khan, H. Hosseinkhani, D. Ickowicz, P.D. Hong, D.S. Yu, A.J. Domb, "Polysaccharide Gene Transfection Agents", <u>Acta Biomaterialia</u>, 8, 4224-4232 (2012) (SCI; JCR 2010 IF = 4.865). cited: 9
- 35. F. Abedini, Hosseinkhani, M. Ismail, A.J. Domb, A.R. Omar, C. Pei Pei, P.D. Hong, D.S. Yu, I.V. Farber, "Cationized Dextran Nanoparticles-Encapsulated CXCR4-siRNA Enhanced Correlation between CXCR4 Expression and Serum ALP in Colorectal Cancer", *International Journal of Nanomedicine*, 7, 4159-4168 (2012) (SCI; JCR 2010 IF = 3.13). cited: 5
- 36. K. Subramani, S. Pathak, H. Hosseinkhani, "Recent trend in diabetes treatment using nanotechnology", <u>Digest Journal of Nanomaterials and Biostructures</u>, 7, 85-95 (2012) (SCI; JCR 2010 IF = 2.078). cited: 10

- H. Hosseinkhani\*, "3D *in vitro* technology for drug discovery", <u>Current Drug Safety</u>, 7, 37-43 (2012). cited: 6
- M. Mohammad-Taheri, E. Vasheghani-Farahani, H. Hosseinkhani, S.A. Shojaosadati, M. Soleimani, "Fabrication and characterization of a new MRI contrast agent based on a magnetic dextran-spermine nanoparticle system", *<u>Iranian Polymer Journal</u>*, 21, 239-251 (2012) (SCI; JCR 2010 IF = 0.936). cited: 3
- R. Amini, H. Hosseinkhani, A. Jalilian, S. Abdullah, R. Rosli, "Engineered Smart Biomaterials for Gene Delivery ", <u>Gene Therapy and Molecular Biology</u>, 14, 72-86 (2012) (SCI; JCR 2010 IF = 0.724). cited: 3

## <u>2011</u>

- M. Mahmoudi, H. Hosseinkhani, M. Hosseinkhani, S. Boutry, A. Simchi, W. S. Journeay, K. Subramani, S. Laurent, "Magnetic Resonance Imaging Tracking of Stem Cells in Vivo Using Iron Oxide Nanoparticles as a Tool for the Advancement of Clinical Regenerative Medicine", <u>Chemical Reviews</u>, 111, 253-280 (2011) (SCI; JCR 2010 IF = 40.197), cited: 107
- H. Hosseinkhani\*, "Editorial: On Nanomedicine", <u>International Journal of Nanotechnology</u>, 8, 615-617 (2011) (SCI; JCR 2010 IF = 1.329). cited: 1
- H. Hosseinkhani\*, M. Hosseinkhani, Y.R. Chen, K. Subramani, A.J. Domb, "Innovative technology of engineering magnetic DNA nanoparticles for gene therapy", *International Journal of Nanotechnology*, 8, 724-735 (2011) (SCI; JCR 2010 IF = 1.329). cited: 4
- M. Hosseinkhani, H. Hosseinkhani\*, Y.R. Chen, K. Subramani, "In vitro physicochemical evaluation of DNA nanoparticles", <u>International Journal of Nanotechnology</u>, 8, 736-748 (2011) (SCI; JCR 2010 IF = 1.329), cited: 5
- F. Abedini, H. Hosseinkhani, M. Ismail, Y.R. Chen, A.R. Omar, C. Pei Pei, A.J. Domb, "*In vitro* intracellular trafficking of biodegradable nanoparticles of dextran-spermine in cancer cell lines", <u>International Journal of Nanotechnology</u>, 8, 712-723 (2011) (SCI; JCR 2010 IF = 1.329) cited: 9
- 45. R.S. Sarabi, E. Sadeghi, H. Hosseinkhani, M. Mahmoudi, M. Kalantari, M. Adeli, "Polyrotaxane Capped Quantum Dots as New Candidates for Cancer Diagnosis and Therapy", *Journal of Nanostructured Polymers and Nanocomposites*, 7, 18-31 (2011) (SCI; JCR 2010 IF = 3.471). cited: 4
- 46. K. Subramani, R. Mathew, H. Hosseinkhani, M. Hosseinkhani, "Bone regeneration around dental implants as a treatment for peri-implantitis: A review of the literature", <u>Journal of</u> <u>Biomimetics, Biomaterials & Tissue Engineering</u>, 11, 21-33 (2011). cited: 2
- 47. H.R. Kalhor, F. Shahin, M.H. Fouani, H. Hosseinkhani, "Self-Assembly of Tissue Transglutaminase into Amyloid-Like Fibrils Using Physiological Concentration of Ca<sup>2+</sup>", <u>Langmuir</u>, 27, 10766-10784 (2011) (SCI; JCR 2010 IF = 4.268), cited: 3
- F. Abedini, M. Ismail, H. Hosseinkhani, T.I. Azmi, A.R. Omar, C. Pei Pei, M.H. Bejo, A.J. Domb, "Effects of CXCR4 siRNAs/dextran-spermine nanoparticles on CXCR4 expression and serum LDH levels in a mouse model of colorectal cancer metastasis to the liver", <u>Cancer Management and Research</u>, 3, 301-309 (2011), cited: 10

#### <u>2010</u>

- 49. H. Hosseinkhani\*, M. Hosseinkhani, S. Hattori, R. Matsuoka, N. Kawaguchi, "Micro and nanoscale *in vitro* 3D culture system for cardiac stem cells", *Journal of Biomedical Materials* <u>Research Part A</u>, 94, 1-8 (2010) (SCI; JCR 2010 IF = 2.625), cited: 42
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#### <u>2009</u>

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### <u>2008</u>

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## <u>2005</u>

- M. Konishi, Y. Tabata, M. Kariya, H. Hosseinkhani, A. Suzuki, K. Fukuhara, M. Mandai, K. Takakura, S. Fujii, "*In vivo* anti-tumor effect of dual release of cisplatin and adriamycin from biodegradable gelatin hydrogel", *Journal of Controlled Release*, 103, 7-19 (2005) (SCI; JCR 2010 IF = 7.164), cited:81
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## <u>2004</u>

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#### 2002

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#### <u>2001</u>

93. H. Hosseinkhani, T. Aoyama, O. Ogawa, Y. Tabata, "In vitro transfection of plasmid DNA by different-cationized gelatin with or without ultrasound irradiation", <u>Proceedings of Japan Academic</u> Ser. B, 77, 161-166 (2001) (SCI; JCR 2010 IF = 2.77), cited:11

# **Proceeding Articles**

- 1. H. Hosseinkhani\*, M. Hosseinkhani, A. Khademhosseini, "A new injectable tissue engineered scaffold induces angiogenesis", *Proceedings of the AIChE Annual Meeting* (2007).
- M. Hosseinkhani, H. Hosseinkhani, "Post-translational modification of GATA-4 involved in the differentiation of monkey ES cell into cardiac myocytes", <u>Circulation</u>, 116 (16), 202-203 (2007), cited:3
- M. Hosseinkhani, H. Hosseinkhani, "Bone morphogenetic protein-4 enhances cardiomyocyte differentiation of cynomolgus monkey ES cells in Knockout Serum Replacement medium", <u>EUROPEAN HEART JOURNAL</u>, 28, 230-231 (2007), cited:2
- H. Hosseinkhani, H Kobayashi, Y Tabata, "Design of a nano-vessel-like network for controlled proliferation and differentiation of mesenchymal stem cells for regenerative medicine", <u>Tissue</u> <u>Engineering</u>, 12 (4), 993-994 (2006).
- H. Hosseinkhani\*, M. Hosseinkhani, A. Khademhosseini, "A new injectable tissue engineered scaffold for regenerative medicine", <u>Proceedings of the of International Conference on</u> <u>Microtechnologies in Medicine and Biology</u>, 4281294: 10-11 (2006).
- H. Hosseinkhani\* "Selective differentiation cardiomyocyte cells by using peptide-amphiphile nanofibers", <u>Proceedings of the 42<sup>nd</sup> Japanese Peptide Symposium</u>, 30: 25-30 (2005).
- H. Hosseinkhani\* "Design of tissue-engineered nano-scaffold using peptide-amphiphile for regenerative medicine", <u>Proceedings of the 42<sup>nd</sup> Japanese Peptide Symposium</u>, 30: 21-34 (2005).
- H. Hosseinkhani, Y. Tabata, "PEGylation enhances tumor targeting of plasmid DNA by an artificial cationized protein with repeated RGD sequences, Pronectin<sup>®</sup> cationized", <u>Proceedings</u> <u>7th World Biomaterials Congress</u> (2004).
- H. Hosseinkhani, Y. Tabata, "Tumor targeting of plasmid DNA by spermine derivative of dextran combined with ultrasound", *Polymer Preprints*, 53 (2), 2PE179 (2004).
- 10. **H. Hosseinkhani**, Y. Tabata, "Ultrasound enhances expression level of plasmid DNA by PEGylation of cationized dextran in tumor", Journal Code: X0225A 19 (3), 299 (2004).
- 11. **H Hosseinkhani**, T. Aoyama, O. Ogawa, Y. Tabata, "Tumor targeting of plasmid DNA by dextran conjugation based on metal coordination", *Drug Delivery*, 17 (3), 260 (2002).
- E. Vasheghani, H. Hosseinkhani, M. Nekomanesh, "Effect of preparation conditions on theophylline release from biodegradable poly (DL-lactic acid) microspheres", <u>Proceedings of the</u> <u>JCR Symposium</u>, <u>J. Controlled Release</u>, 72, 287-291 (2001), cited:3

## Patent/ Technology disclosures

- 1. **H. Hosseinkhani,** H. Kobayahsi, "A method for cardiac tissue regeneration" filed to Japan Patent office (May 2007).
- 2. **H. Hosseinkhani,** H. Kobayahsi, "Technology of fabrication of peptides" filed to Japan Patent office (April 2006).
- 3. **H. Hosseinkhani,** H. Kobayahsi, "3D biodegradable scaffolds peptide nanofibers" filed to Japan Patent office (Sept. 2007).
- 4. **H. Hosseinkhani,** H. Kobayahsi, "3D technology of fabrication of nanofiber" filed to Japan Patent office (Jan. 2008).
- 5. **H. Hosseinkhani**, H. Kobayahsi, "Fabrication of 3D collagen sponge" filed to Japan Patent office (Dec. 2008).
- H. Hosseinkhani, H. Kobayahsi, "Design of self-assembled peptide 3D nanofibers" filed to Japan Patent office (Feb. 2008).
- 7. **H. Hosseinkhani,** H. Kobayahsi, "Design of aligned nanofibers" filed to Japan Patent office (March 2008).
- 8. **H. Hosseinkhani**, H. Kobayahsi, "Technology of 3D nanofibers peptide" filed to Japan Patent office (May 2007).
- 9. **H. Hosseinkhani**, Y. Kuo, M. Lian, "Rapid High-throughput PCR Device" patent pending, US Patent office (Nov. 2013).
- Y. Kuo, M. Lian, H. Hosseinkhani, "Real-time PCR Device" patent pending, US Patent office (Nov. 2013).

## **Invited Lecture (57)**

## <u>USA (12)</u>

- Tufts University, Center of Cancer Systems Biology, Caritas St. Elizabeth's Medical Center, School of Medicine, <u>Prof. L. Hlatky</u>, May 2008, Boston, USA.
- Harvard University, Harvard-MIT, Division of Health Science and Technology, Harvard Medical School, <u>Prof. A. Khademhossieni</u>, March 2007, Boston, USA.
- 3. University of South Carolina, Department of Chemical Engineering, <u>Prof. E. Jabbari</u>, May 2007, Columbia, USA.
- Massachusetts Institute of Technology (MIT), Department of Chemical Engineering, <u>Prof.</u> <u>R. Langer</u>, July 2005, Boston, USA.
- 5. University of California at Merced, School of Engineering, Prof. V. Leppert, September 2005, Merced, USA.
- 6. University of Illinois at Urbana-Champaign, Department of Materials Science and Engineering, <u>Prof. R. Jamison</u>, September 2005, Urbana, USA.
- Harvard University, Harvard-MIT, Division of Health Science and Technology, Harvard Medical School, <u>Prof. A. Khademhossieni</u>, March 2005, Boston, USA.
- Massachusetts Institute of Technology (MIT), Center for Biomedical Engineering, <u>Prof. S.</u> <u>Zhang</u>, Sept. 2005, Boston, USA.
- 9. University of Illinois at Chicago, School of Medicine, <u>Prof. L. Hong</u>, September 2005, Chicago, USA.
- 10. Harvard University, School of Medicine, Prof. J. Bonventre, May 2005, Boston, USA.
- Massachusetts Institute of Technology (MIT), Center for Biomedical Engineering, <u>Prof. S.</u> <u>Zhang</u>, Sept. 2006, Boston, USA.
- 12. Harvard University, Brigham and Women's Hospital, Prof. J. Bonventre, May 2006, Boston, USA.

### Europe (9)

- University of Pisa, Department of Cardiovascular Medicine, <u>Prof. R. Stefano</u>, June 2009, Pisa, Italy.
- University of Yeditepe, Department of Biomedical Engineering, <u>Prof. A. Cuneyt Tas</u>, June 2009, Istanbul, Turkey.
- University of Helsinki, Institute of Molecular Medicine, <u>Prof. Olli Kallioniemi</u>, Feb. 2009, Helsinki, Finland.
- University of Pisa, Department of Cardiovascular Medicine, <u>Prof. R. Stefano</u>, March 2007, Pisa, Italy.
- 17. Institute for Inhalation and Biology, GSF-National Research Center for Environment and Health, <u>Prof. H. Schulz</u>, Jan. 2007, Munich, Germany.
- 18. University of Hull, Department of Chemistry, Prof. N. Pamme, Nov. 19, 2006, Hull, UK.
- Imperial College London, Department of Materials Engineering, <u>Prof. C Minnelli</u>, Nov. 2006, London, UK.
- King's College London, Department of Molecular Medicine, <u>Prof. F Farzaneh</u>, November 2006, London, UK.
- Imperial College London, Department of Surgery, <u>Prof. N. Habib</u>, November 2006, London, UK.

### Asia and Africa (35)

22. National Taiwan University, Dept. of Chemical Engineering, <u>Prof. H.S. Liu</u>, Feb. 2011, Taipei, Taiwan.

- Taipei Veterans General Hospital, Department of Neural Regeneration, <u>Prof. H. Cheng</u>, Nov. 2010, Taipei, Taiwan.
- National Yang Ming University, Department of Orthopedic Surgery, <u>Prof. YP. Sung</u>, Oct. 2009, Taipei, Taiwan.
- 25. Academia Sinica, Research Center for Applied Science, Dr. P. Chen, Feb. 2010, Taipei, Taiwan.
- 26. National Taiwan University, Dept. of Bio-industrial Mechatronics Engineering, <u>Prof. C.Y.</u> <u>Chou</u>, March 2010, Taipei, Taiwan.
- Tokyo Women's Medical University, International Research Medical Institute, <u>Prof. N.</u> <u>Kawaguchi</u>, July 2008, Tokyo, Japan.
- 28. National Yang Ming University, Institute for Biomedical Engineering, Prof. S. Yang, Nov. 2008, Taipei, Taiwan.
- 29. Nippi Co. Ltd, R&D Center of Biomaterials, Dr. S. Hattori, Sept. 2008, Tokyo, Japan.
- 30. University of Tehran, Institute for Biophysics and Biochemistry, Prof. A. Sarboloki, Nov. 2008, Tehran, Iran.
- 31. University of Tehran, Center for Nanoscience and Technology, Workshop of Nanobiotechnology, Dr. A. Bakhshandeh, Nov. 2008, Tehran, Iran.
- 32. University of Tehran, Workshop of Nanobiotechnology, Center for Nanoscience and Technology, Dr. A. Bakhshandeh, Nov. 2008, Tehran University, Tehran, Iran.
- 33. Institute of Genetic Research, Department of Cells Biology, Prof. G. Ahanaghari, Nov. 2008, Tehran, Iran.
- National Institute for Materials Science (NIMS), Workshop of International Center for Young Scientists, <u>Prof. Y. Bando</u>, March 2006, Mishima, Japan.
- 35. **Kyoto University,** Institute for Frontier Medical Sciences, **Prof, Y. Tabata**, March 2006, Kyoto, Japan.
- University of Putra Malaysia (UPM), Institute of Biostudies, <u>Prof. M. Ismail</u>, July 2007, Kuala Lumpur, Malaysia.
- University of Putra Malaysia (UPM), Institute of Biostudies, <u>Prof. M. Ismail</u>, July 2007, Kuala Lumpur, Malaysia.
- 38. Royan Stem Cells Research Center, Prof. H. Baharvand, Feb. 2006, Tehran, Iran.
- 39. Kyoto University, Institute for Frontier Medical Sciences, Prof, Y. Tabata, March 2006, Kyoto, Japan.
- 40. Tarbiat Modarres University, School of Engineering, Prof. A. Shojaosdati, Feb. 2006, Tehran, Iran.
- National Institute for Materials Science (NIMS), International Center for Young Scientists (ICYS), <u>Prof. Y. Bando</u>, January 2006, Tsukuba, Japan.
- Tokyo Women's Medical University, International Research Medical Institute, <u>Prof. N.</u> <u>Kawaguchi</u>, September 2006, Tokyo, Japan.
- 43. Royan Stem Cells Research Center, Prof. H. Baharvand, Jan. 2007, Tehran, Iran.
- National Institute for Materials Science (NIMS), International Center for Young Scientists (ICYS), <u>Prof. Y. Bando</u>, Jan. 2005, Tsukuba, Japan.
- Sahand University of Technology, School of Engineering, <u>Prof. M. Rezaei</u>, Nov. 2005, Tabriz, Iran.
- AmirKabir University of Technology, Department of Biomedical Engineering, <u>Prof. M.</u> <u>Orangh</u>, 2005, Tehran, Iran.
- Biomaterials Center, National Institute for Materials Science (NIMS), <u>Prof. H. Kobayashi</u>, Nov. 2005, Tsukuba, Japan.
- 48. Institute of Genetic Research, Department of Cells Biology, Prof. G. Ahanaghari, May 2005, Tehran, Iran.
- Institute of Polymer and Petrochemical Research, Department of Biomaterials, Prof. H. Mirzadeh, March 2004, Tehran, Iran.
- 50. Kyoto University, Institute for Frontier Medical Sciences, Prof, Y. Tabata, Feb. 2006, Kyoto, Japan.
- 51. Kyoto University, Institute for Frontier Medical Sciences, Prof, Y. Tabata, March 2005, Kyoto, Japan.

- National Institute for Materials Science (NIMS), International Center for Young Scientists (ICYS), <u>Prof. Y. Bando</u>, Feb. 2005, Tsukuba, Japan.
- 53. National Institute for Materials Science (NIMS), International Center for Young Scientists (ICYS), <u>Prof. Y. Bando</u>, January 2006, Tsukuba, Japan.
- 54. Tehran University, School of Medicine, Prof. A. Semnanian, Nov. 2004, Tehran, Iran
- 55. Kyoto University, Institute for Frontier Medical Sciences, Prof, Y. Tabata, Dec. 2004, Kyoto, Japan.
- 56. Tarbiat Modarres University, School of Engineering, Prof. A. Shojaosdati, Feb. 2004, Tehran, Iran.
- 57. National Institute for Materials Science (NIMS), International Center for Young Scientists (ICYS), <u>Prof. Y. Bando</u>, Nov. 2004, Tsukuba, Japan.

## **International Conference Contributions (140)**

Organizer (co) (1), Plenary Lecture (20), Invited (20), Oral (61), Session Chair (11), Poster (24)

## <u>2014</u>

- 58. **H. Hosseinkhani (Invited talk)**, "3D *in vitro* living systems for drug discovery applications ", <u>2<sup>nd</sup> Asian Clinical Congress (ACC2)</u>, April 2014, Kyoto, Japan.
- 59. **H. Hosseinkhani)**, "Innovation Technology to Engineering 3D *in vitro* intelligent living systems for biological application", *The 2014 Tissue Engineering Congress*, June 2014, London, UK.
- 60. **H. Hosseinkhani),** "Drug Delivery Technology for Tissue Engineering", <u>5<sup>th</sup> International</u> <u>Congress on Stem Cells and Tissue Formation</u>, July 2014, Dresden, Germany.
- 61. H. Hosseinkhani), "Microfluidic biochip as biological filter for selective filtration of microorganisms", *BioNano TechConnect World*, June 2014, Washington, USA.

## <u>2013</u>

- 62. **H. Hosseinkhani**, "3D Biodegradable Hydrogels for Tissue Engineering", <u>12<sup>th</sup> International</u> <u>Conference Polymer Advanced Technologies</u>, Oct. 2013, Berlin, Germany.
- 63. **H. Hosseinkhani**, "Three dimensional systems for drug discovery applications, "<u>2<sup>nd</sup></u> <u>International Conference on Medicinal Chemistry & Computer Aided Drug Designing</u> (<u>MedChem & CADD-2013</u>), Oct. 2013, Las Vegas, USA.
- 64. H. Hosseinkhani, (Invited talk), "Towards Engineering of Living Organs", <u>6th Annual</u> <u>Congress of Regenerative Medicine & Stem Cell</u>, Oct. 2013, Dalian, China.
- H. Hosseinkhani (Invited talk), "Engineering 3D Technology for Biomedical Engineering", <u>2013 Taiwan-Japan joint Workshop on Biomedicine & Biomaterials</u>, July. 2013, Taichung, Taiwan.
- 66. **H. Hosseinkhani**, "Engineering 3D collagen to mimic microorganism environments for biological applications ", <u>14th Tetrahedron Symposium Asia Edition</u>, Oct. 2013, Seoul, Korea.
- H. Hosseinkhani) (Invited talk), "Innovation Technology of 3D in vitro microorganism for Bio-Energy applications", <u>NRES Workshop, Nanotechnology, Renewable Energy &</u> <u>Sustainability</u>, Sept. 2013, Xian, China.
- H. Hosseinkhani) (Invited talk), "Innovation Technology to Engineering 3D in vitro intelligent living systems for biological application", <u>The 6<sup>th</sup> International Bioengineering Congress</u> (BEC2013), Nov. 2013, Izmir, Turkey.

### <u>2012</u>

- H. Hosseinkhani (Invited talk), "Health risk of nanotechnology- Expanding the horizon of toxicity testing and need for more *in vitro* models", <u>99<sup>th</sup> India Science Congress</u>, Jan. 2012, Bhubaneswar, India.
- 70. H. Hosseinkhani (Invited talk), "Fabrication of 3D in vitro living systems", <u>International</u> <u>Congress on alternative animals</u>, Jan. 2012, Chennai, India
- H. Hosseinkhani (Invited talk), "Next Generation of Nano-Devices as Intelligent Diagnostic Tools", <u>4<sup>th</sup> International Conference on Nanostructure</u>, March 2012, Kish Island.
- H. Hosseinkhani (Invited talk), "Biomatrix-based micro-channel 3-D culture systems for toxicity evaluation", <u>International Conference for Early</u> <u>Toxicity Screening (ETS 2012)</u>, June 2012, Seattle, Washington, USA.

## <u>2011</u>

- H. Hosseinkhani (Invited talk), "Engineering of Peptide Amphiphile Nanofibers for Regenerative Medicine", <u>4<sup>th</sup> Annual Meeting Protein and Peptide Conference (PepCon 2011)</u>, March 2011, Beijing, China.
- 74. H. Hosseinkhani (Invited talk), "Health risk of nanotechnology- Expanding the horizon of toxicity testing and need for more in vitro model", <u>Third World Academy of Sciences</u> (TWAS-UNESCO) International Conference on Ecosystem Conservation and Sustainable <u>Development</u>, Feb. 2011, Ambo, Ethiopia.
- 75. **H. Hosseinkhani (Plenary Lecture)**, "Commercialization of Tissue Engineered Products for Regenerative Medicine Therapy", <u>The First International Student Congress on Cell and</u> <u>Molecular Medicine</u>, Feb. 2011, Shiraz, Iran.
- H. Hosseinkhani (Invited talk), "Innovation technology to create 3D living as intelligent biological tools ", <u>7th International Conference on Diffusion in Solids and Liquids (DLS 2011)</u>, June 2011, Algarve, Portugal.
- 77. **H. Hosseinkhani (Plenary Lecture)**, "Towards Engineering of Living Organ based on Micro and Nano-scale Technology", *The First International* meeting on Cellular and Molecular Advances in Non Contagious Diseases, May 2011, Mahmoud Abad, Iran.
- H. Hosseinkhani (Plenary Lecture), "Innovative Technology to engineer 3D living organs", <u>Japan-Taiwan Joint Workshop on Nano Biomedical Engineering and Biosensing</u>, July 2011, Taichung, Taiwan.
- H. Hosseinkhani (Invited talk), "Innovation Technology to Engineer 3D Living Organs as Intelligent Diagnostic Tools", <u>BIT's 4th Annual Congress and Exposition of Molecular</u> <u>Diagnostics (CEMD-2011)</u>, Sept. 2011, Beijing, China.
- H. Hosseinkhani (Invited talk), "Human Organs-on-Chip: 3D Human Tissue Engineering as a Technological Innovation, an Intelligent Replacement Alternative to Animal Testing", <u>8th World</u> <u>Congress on Alternatives and Animal Use in the Life Sciences</u>, August 2011, Montreal, Canada.
- 81. **H. Hosseinkhani**, "Innovative Technology to engineer 3D living organs as intelligent diagnostic tools", The 5<sup>th</sup> WACBE *World Congress on Bioengineering*, August 2011, Tainan, Taiwan.

### <u>2010</u>

- 82. **H. Hosseinkhani (Plenary Lecture)**, "Towards Engineering of Living Organ", <u>3<sup>rd</sup> International</u> <u>Conference on Nanoscience and Nanotechnology</u>, Nov. 2010, Shiraz, Iran.
- H. Hosseinkhani (Invited talk), "Innovation technology to engineer 3D super intelligent diagnostic tools", <u>2010 Australia-Taiwan Workshop on Bilateral Cooperation in</u> <u>Gerontechnolog</u>, Oct. 2009, Taipei, Taiwan.
- 84. **H. Hosseinkhani (Invited talk)**, "3D tissue engineered biomaterials for stem cells therapy", 2010 Regenerative Medicine, From Stem Cells to Disease Models, Sept. 2009, Taipei, Taiwan.
- 85. **H. Hosseinkhani (Plenary Lecture)**, "Engineering of Living Organs", <u>3<sup>rd</sup> International</u> <u>Conference on Nanostructure</u>, March 2010, Kish Island.

- H. Hosseinkhani (Invited talk), "A New Approach on Protein Drug Delivery System and Nanotechnologies for stem cells technology", <u>3<sup>rd</sup> Annual Meeting Protein and Peptide</u> <u>Conference (PepCon)</u>, Beijing, China.
- H. Hosseinkhani (Plenary Lecture), "Towards Engineering of Complex Organ: Micro and nano-scale *in vitro* 3D culture system for cardiac stem cells", <u>12th National Congress on</u> <u>Cardiovascular Update</u>, June 2010, Tehran, Iran.
- H. Hosseinkhani (Plenary Lecture), "Engineering of living organ based on micro and nano-scale *in vitro* 3D culture system for biological application", <u>Workshop of Taiwan Society of</u> <u>Cardiology</u>, June 2010, Taipei, Taiwan.

## <u>2009</u>

- H. Hosseinkhani (Invited talk), "Self-Assembly of Proteins and Peptides and Their Applications in Bioengineering", <u>2<sup>nd</sup> Annual Meeting Protein and Peptide Conference (PepCon)</u>, April 2009, Seoul, South Korea.
- 90. H. Hosseinkhani (Plenary Lecture), "Angiogenesis in tissue engineering", <u>11th National</u> <u>Congress on Cardiovascular Update</u>, June 2009, Tehran, Iran.
- H. Hosseinkhani, "Towards development of Advanced Nanomedicine by New Biomaterials", <u>11<sup>th</sup> International Conference on Advanced Materials</u>, Sept. 2009, Rio De Janeiro, Brazil.
- H. Hosseinkhani, "Design of 3D culture systems to enhance *in vitro* gene expression of mesenchymal stem", <u>12<sup>th</sup> Annual Meeting of American Society of Gene Therapy</u>, May 2009, San Diego, USA.

#### <u>2008</u>

- 93. **H. Hosseinkhani (Invited talk)**, "DNA nanoparticles for the next generation of nano-medicine", *Second International Nanotechnology Congress*, March 2008, Kish Island.
- 94. H. Hosseinkhani (Plenary Lecture), "Long Term tracking of stem cells for biological applications", <u>10th National Congress on Cardiovascular Update</u>, June 2008, Tehran, Iran.
- 95. H. Hosseinkhani (Invited talk), "Biodegradable nanoparticles for long Term tracking of stem cells for biological applications", <u>Royan International Twin Congress, 9th Congress on Reproductive Biomedicine, 4th Congress on Stem Cell Biology & Technology</u>, Aug. 2008, Tehran, Iran.
- 96. H. Hosseinkhani (Invite talk), "Towards on development of advanced medicine by use of Nanotechnology", <u>Royan International Twin Congress, 9th Congress on Reproductive</u> <u>Biomedicine, 4th Congress on Stem Cell Biology & Technology</u>, August 2008, Tehran, Iran.
- 97. H. Hosseinkhani (Plenary Lecture, Session chair), "Towards on bone tissue engineering: clinical trail", <u>2<sup>nd</sup> International student conferences on biotechnology</u>, Nov. 2008, Tehran, Iran.
- 98. **H. Hosseinkhani (Plenary Lecture, Session chair)**, "Health risk of nanotechnology", <u>2<sup>nd</sup></u> <u>International student conferences on biotechnology</u>, Nov. 2008, Tehran, Iran.

#### <u>2007</u>

- 99. **H. Hosseinkhani (Plenary Lecture)**, "Long term tracking of stem cells using magnetic nanoparticles", *The first International Biomaterials Congress, University of Tehran*, Nov. 2007, Tehran, Iran.
- 100. **H. Hosseinkhani**, "A New Injectable Tissue Engineered Scaffold Induces Angiogenesis", <u>AIChE</u> <u>Annual Meeting</u>, Nov. 2007, Salt Lake City, Utah, USA.
- 101.H. Hosseinkhani (Plenary Lecture), "Tissue engineering based on release technology of growth factors", <u>The first International Iranian Congress of Pediatric Urology, University of</u> <u>Tehran</u>, May 2007, Tehran, Iran.
- 102. H. Hosseinkhani (Plenary Lecture), "Biochips: a new generation of tissue engineered scaffolds", <u>The first International Biomaterials Congress, University of Tehran</u>, Nov. 2007, Tehran, Iran.

<u>2006</u>

- 103. H. Hosseinkhani (Plenary Lecture), "Proliferation and differentiation of mesenchymal stem cells on self-assembled peptide amphiphile nanofibers", <u>Heart & New Technology Meeting</u>, Feb. 2006, Ramsar, Iran.
- 104. H. Hosseinkhani (Invited talk), "Bone regeneration on porous scaffolds materials", <u>IX</u> <u>International Conference on Laser Technologies</u>, Oct. 006, Smolyan, Bulgaria.
- 105. **H. Hosseinkhani**, "Nanotechnlogy in Tissue Engineering", <u>4<sup>th</sup> International Symposium on</u> <u>Bioscience and Nano technology</u>, Nov.2006, Okinawa, Japan.
- 106. H. Hosseinkhani (Invited talk, Session chair), "Towards mycordial infarction therapy: a new inducible angiogenesis carrier for cardiomyocytes transplantation", <u>Tissue Engineering Today</u>, <u>not tomorrow</u>, Nov. 2006, London, England.
- 107.**H. Hosseinkhani (Plenary Lecture, Session chair),** "Tissue Engineered nanoscaffolds", <u>11<sup>th</sup></u> <u>Iranian Chemical Engineering Conferences</u>, Nov. 2006, Tehran, Iran.
- 108. H. Hosseinkhani (Plenary Lecture, Session chair), "Towards myocardial infarction therapy: A new inducible angiogenesis carrier for cradiomyocytes transplantation", <u>Heart & New</u> <u>Technology Meeting</u>, Feb. 2006, Ramsar, Iran.
- 109. H. Hosseinkhani, "Towards myocardial infarction therapy: A new inducible angiogenesis carrier for cradiomyocytes transplantation", <u>The 25<sup>th</sup> annual meeting of the Canadian Biomaterials</u> <u>Society</u>, May 2006, Calgary, Canada.
- 110. H. Hosseinkhani, "Osteogenic differentiation of mesenchymal s tem cells in self-assembled peptide-amphiphile nanofibers", <u>The 25<sup>th</sup> annual meeting of the Canadian Biomaterials Society</u>, May 2006, Calgary, Canada.
- 111. H. Hosseinkhani, "Gene therapy for bone tissue engineering using a combination of 3-D tissue engineered scaffold and non-viral gene carrier", <u>The 25<sup>th</sup> annual meeting of the Canadian Biomaterials Society</u>, May 2006, Calgary, Canada.
- 112. **H. Hosseinkhani**, "A new injectable tissue engineered scaffold induces angiogenesis through controlled release of basic fibroblast growth factor", *The 25<sup>th</sup> annual meeting of the Canadian Biomaterials Society*, May 2006, Calgary, Canada.
- 113.**H. Hosseinkhani**, "Design of a nano-vessel-like network for controlled proliferation and differentiation of cardiomyocyte cells for regenerative medicine", *<u>The 25<sup>th</sup> annual meeting of the</u> Canadian Biomaterials Society*, May 26-28, 2006, Calgary, Canada.
- 114.**H. Hosseinkhani**, "Selective differentiation of cardiyomyocytes using self-assembled peptide amphiphile", *The 22<sup>nd</sup> annual meeting of DDS Japan*, July 2006, Tokyo, Japan.
- 115. H. Hosseinkhani, "Osteogenic differentiation of mesenchymal stem cells in self-assembled peptide-amphiphile nanofibers", <u>20<sup>th</sup> European Conference on Biomaterials</u>, Sept. 2006, Nantes, France.

### <u>2005</u>

- 116. **H. Hosseinkhani**, "Design of a nano-vessel-like network for controlled proliferation and differentiation of Stem Cells towards the regeneration of complex tissues and organs for regenerative medicine", *The First ICYS workshop*, March 2005, Mishima, Japan.
- 117.**H. Hosseinkhani,** "Gene therapy for bone tissue engineering using cationized dextran", <u>The</u> <u>First ICYS workshop</u>, March 2005, Mishima, Japan.
- 118.**H. Hosseinkhani** "A New Tissue-Engineered Nano-Scaffold for Infraction Therapy", <u>3<sup>rd</sup></u> <u>International Symposium on Bioscience and Nanotechnology</u>, Nov.2005, Miyazaki, Japan.

### <u>2004</u>

119.**H. Hosseinkhani (Plenary Lecture, Session chair),** "DNA nanoparticles for gene delivery to cells and tissue", *The First International Congress of Biochemistry & Molecular Biology*,

Sept.2005, Tehran, Iran.

- 120.H. Hosseinkhani (Invited talk, Session chair), "DNA nanoparticles for gene delivery to cells and tissue", <u>The First NIMS/ICYS-U Penn (University of Pennsylvania) Materials Workshop</u>, April 2005, Tsukuba, Japan.
- 121.H. Hosseinkhani (Plenary Lecture, Session chair), "Design of a nano-vessel-like network for controlled proliferation and differentiation of Mesenchymal Stem Cells (MSC) regenerative medicine", <u>4<sup>th</sup> ISPST (International Seminar on Polymer Science and Technology)</u>, Sept. 2005, Tehran, Iran.
- 122. H. Hosseinkhani (Invited talk), "Design of tissue-engineered nano-scaffold using peptide-amphiphile for regenerative medicine", <u>The 42nd Japanese Peptide Symposium</u>, Oct. 2005, Osaka, Japan.
- 123.H. Hosseinkhani (Invited talk, Session chair), "Selective differentiation cardiomyocyte cells by using peptide-amphiphile nanofibers", <u>The 42nd Japanese Peptide Symposium</u>, Oct. 2005, Osaka, Japan.
- 124.H. Hosseinkhani (Plenary Lecture, Session chair, conference co-organizer), "Importance of Nanotechnology in Tissue Engineering", <u>The 12th Biomedical Engineering Conference</u>, Nov. 2005, Tabriz, Iran.
- 125. H. Hosseinkhani, "Perfusion culture enhances the osteogenic differentiation of mesenchymal stem cells in collagen sponge reinforced with poly (glycolic acid) fiber", <u>7<sup>th</sup> Tissue Engineering</u> <u>meeting Japan</u>, July 2004, Tokyo, Japan.
- 126. **H. Hosseinkhani**, "Ultrasound enhances the level of gene expression in tumor by PEGylation of cationized dextran", <u>20<sup>th</sup> annual meeting of DDS Japan</u>, July 2004, Tokyo, Japan.
- 127.H. Hosseinkhani (Invited talk, Session chair), "Tumor targeting of plasmid DNA by dextran conjugation based on metal coordination", <u>6<sup>th</sup> Asian Symposium on Biomedical Materials</u>, July 2004, China.
- 128.H. Hosseinkhani, "Tumor targeting of plasmid DNA by spermine derivative of dextran combined with ultrasound", <u>53<sup>rd</sup> SPSJ Symposium on Macromolecules</u>, Sept. 2004, Sapporo, Japan.
- 129. H. Hosseinkhani (Session chair), "Combination of scaffold incorporating plasmid DNA and perfusion culture enhances in vitro DNA expression of mesenchymal stem cells", <u>2<sup>nd</sup></u> <u>International Symposium on Fusion of Nano and Bio Technologies and 4<sup>th</sup> Asian International</u> <u>Symposium on Biomaterials</u>, Nov. 2004, Tsukuba, Japan.
- 130. H. Hosseinkhani, "Combination of scaffold incorporating plasmid DNA and perfusion culture enhances *in vitro* DNA expression of mesenchymal stem cells", *The joint meeting of the Tissue* <u>Engineering Society International and the European Tissue Engineering Society</u>, Oct. 2004, Lausanne, Switzerland.
- 131.H. Hosseinkhani, "Tumor targeting of plasmid DNA by dextran based on metal coordination", <u>Proceedings of the 6<sup>th</sup> Asian Symposium on Biomedical Materials (ASBM6)</u>, Jack CY Cheng and Y Leng Eds. China, (2004).

## <u>2003</u>

- 132. **H. Hosseinkhani**, "Liver targeting of Hepatocyte Growth factor genes prevents the onset of fulminant hepatic failure in mouse, "*International Symposium on Fusion of Nano and Bio <u>Technologies</u>, March 2003, Tsukuba, Japan.*
- 133.**H. Hosseinkhani**, "*In vitro* gene expression by cationized derivatives of an artificial protein with repeated RGD sequences, Pronectin<sup>®</sup>", *First International Symposium on Fusion of Nano and Bio Technologies*, March 2003, Tsukuba, Japan.
- 134. H. Hosseinkhani, "Liver targeting of Hepatocyte Growth factor genes prevents the onset of chemically induced hepatic diseases in rodents", <u>First International Congress on</u> <u>Bio-Nanointerface</u>, May 2003, Tokyo, Japan.
- 135.H. Hosseinkhani, "Dextran-Spermine Polycation: An Efficient Non-Viral Vector for In Vivo Gene Transfection", <u>30<sup>th</sup> International Symposium on Controlled Release of Bioactive Materials</u>, July 2003, Glasgow, Scotland.

- 136.H. Hosseinkhani, Yasuhiko Tabata, Abraham J. Domb, Dextran-Spermine Polycation: "Polymer complexes with DNA for gene therapy", <u>4<sup>th</sup> International Symposium on Pharmaceutical</u> <u>Chemistry</u>, Sept. 2003, Istanbul, Turkey.
- 137. **H. Hosseinkhani**, "*In vitro* gene expression by cationized derivatives of an artificial protein with repeated RGD sequences, Pronectin<sup>®</sup> ", *The 19<sup>th</sup> annual meeting of DDS Japan*, June 2003, Kyoto, Japan.

## <u>2002</u>

- 138.**H. Hosseinkhani**, "Liver targeting of plasmid DNA by pullulan conjugation based on metal coordination", *The First Regeneration Medicine Meeting*, April 2002, Kyoto, Japan.
- 139.**H. Hosseinkhani**, "Tumor targeting of plasmid DNA by dextran conjugation based on metal coordination", *The 18<sup>th</sup> annual meeting of DDS Japan*, June 2002, Sapporo, Japan.
- 140.**H. Hosseinkhani**, "Tumor targeting of plasmid DNA by dextran conjugation based on metal coordination", *KIPS symposium*, Sept. 2002, Kyoto, Japan.
- 141.H. Hosseinkhani, "In vitro gene expression by cationized derivatives of an artificial protein with repeated RGD sequences, Pronectin<sup>®</sup> ", <u>24<sup>th</sup> Annual Biomaterial meeting of Japan</u>, Nov. 2002, Tokyo, Japan.
- 142. H. Hosseinkhani, "Liver targeting of plasmid DNA by pullulan conjugation based on metal coordination", <u>IUPAC Polymer Conference on the Mission and Challenges of Polymer Science</u> <u>and Technology (IUPAC-PC2002)</u>, Dec. Kyoto, 2002, Japan.
- 143. H. Hosseinkhani, "Ultrasound enhancement of gene expression of plasmid DNA complexed with cationized gelatin derivatives", <u>Proceedings of the 3<sup>rd</sup> International Symposium on</u> <u>Biomaterials and Drug Delivery Systems</u>, Biomaterials and Controlled Release Society, Inc., 28: 487-490, 2002, Taiwan.

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- 144. H. Hosseinkhani (Session chair), "Enhancement transfection efficiency of plasmid DNA by ultrasound", <u>Symposium on Tissue Engineering, National Taiwan University & Kyoto University</u>, Jan. 2001, Kyoto, Japan.
- 145. H. Hosseinkhani, "Ultrasound enhancement of transfection efficiency of plasmid DNA complexed with cationized gelatin", <u>The 17<sup>th</sup> annual meeting of DDS Japan</u>, July 2001, Osaka, Japan.
- 146. H. Hosseinkhani, "Qualitative and Quantitative of Intracellular Trafficking, Endosome-Desruptive and Endocytosis Pathway for Design of a New Non-Viral Vector for Gene Therapy", <u>The 3rd seminar on Tissue Engineering</u>, Sept. 2001, Tehran, Iran.
- 147. **H. Hosseinkhani**, "Liver targeting of plasmid DNA by pullulan conjugation based on metal coordination", <u>23<sup>rd</sup> Annual Biomaterial meeting of Japan</u>, Oct. 2001, Kyoto, Japan.
- H. Hosseinkhani, "Targeting of plasmid DNA to the liver through pullulan conjugation based on metal coordination", <u>5<sup>th</sup> Asian Symposium on Biomedical Materials</u>, Dec. 2001, Hong Kong.
- 149. Hossein Hosseinkhani, "Targeting of plasmid DNA to the liver through pullulan conjugation based on metal coordination", <u>Proceedings of the 5<sup>th</sup> Asian Symposium on Biomedical Materials</u> (ASBM5), Jack CY Cheng and Y Leng Eds. 323-328, 2001, Hong Kong, 2001.

#### <u>2000</u>

- 150. **H. Hosseinkhani**, "Enhancement of *in vitro* gene transfection by ultrasound", <u>29<sup>th</sup> Biopolymer</u> <u>Symposium</u>, July 2000, Tokyo, Japan.
- 151. **H. Hosseinkhani**, "polymeric metal conjugates for gene delivery", <u>Institute for Frontier</u> <u>Medical Sciences, Kyoto University</u>, Dec. 2000, Kyoto, Japan.
- 152. **H. Hosseinkhani**, "non-viral gene delivery systems", *Institute for Frontier Medical Sciences,* <u>Kyoto University</u>, Nov. 1999, Kyoto, Japan.
- 153. H. Hosseinkhani, "Enhancement of in vivo gene transfection by ultrasound", The 16th annual

meeting of DDS Japan, July 2000, Akita, Japan.

154. **H. Hosseinkhani**, "Ultrasound in medicine", *Institute for Frontier Medical Sciences, Kyoto University*, Nov. 2000, Kyoto, Japan.

#### <u> 1999</u>

- 155. H. Hosseinkhani, "Design and use of biodegradable polymers in new drug delivery system", <u>The 4<sup>th</sup> Anuual meeting of Research Center for Biomedical Engineering, Kyoto University</u>, Oct. 1999, Kyoto, Japan.
- 156. **H. Hosseinkhani**, "Biodegradable polymers for drug delivery systems", <u>Institute for Frontier</u> <u>Medical Sciences, Kyoto University</u>, Jan. 1999, Kyoto, Japan.
- 157. **H. Hosseinkhani**, "Microspheres for drug and gene delivery", *Institute for Frontier Medical* Sciences, Kyoto University, Dec. 1999, Kyoto, Japan.
- 158. **H. Hosseinkhani**, "Ultrasound in medicine", *Institute for Frontier Medical Sciences, Kyoto University*, Nov. 1999, Kyoto, Japan.
- 159. **H. Hosseinkhani**, "Virus in gene delivery systems", *Institute for Frontier Medical Sciences*, *Kyoto University*, June 1999, Kyoto, Japan.
- H. Hosseinkhani, "Effect of preparation condition on theophylline release from poly lactic acid microspheres", <u>Institute for Frontier Medical Sciences, Kyoto University</u>, Oct. 1999, Kyoto, Japan.

#### <u>1998</u>

- 161. H. Hosseinkhani, "Enhanced microencapsulation efficiency of water soluble theopylline in biodegradable poly (D,L-lactic acid) microspheres", <u>The Second National Seminar on Chemical</u> <u>Engineering</u>, Dec. 1997, Tehran, Iran.
- H. Hosseinkhani, "Effect of molecular weight of poly (D, L-lactic acid) on release profile of theopylline" <u>The First National Seminar on DDS</u>, April 1998, Tehran, Iran.
- 163. H. Hosseinkhani, "Effect of particle size and particle size distribution of filler on the physical properties of dental composite material", <u>The First Seminar on Dental Composite Material</u>, Polymer Research Center of Iran, Sept. 1998, Tehran, Iran.
- 164. **H. Hosseinkhani**, "Biodegradable natural polymers in drug and gene delivery", *Institute for Frontier Medical Sciences, Kyoto University*, Oct. 1998, Kyoto, Japan.
- H. Hosseinkhani, "Combinational technology of ultrasound and non-viral gene vectors for gene delivery", <u>Institute for Frontier Medical Sciences, Kyoto University</u>, Dec. 1998, Kyoto, Japan.
- 166. **H. Hosseinkhani**, "Polymeric materials for drug delivery systems", <u>Institute for Frontier</u> <u>Medical Sciences, Kyoto University</u>, May 1998, Kyoto, Japan.
- 167. **H. Hosseinkhani**, "Comparison of viral and no-viral vectors in gene delivery", <u>Institute for</u> <u>Frontier Medical Sciences, Kyoto University</u>, Sept. 1998, Kyoto, Japan.
- 168. **H. Hosseinkhani**, "Physical methods in gene delivery systems", *Institute for Frontier Medical* <u>Sciences, Kyoto University</u>, Nov. 1998, Kyoto, Japan.
- 169. **H. Hosseinkhani**, "Effect of ultrasound wave in enhancement of gene delivery", *Institute for Frontier Medical Sciences, Kyoto University*, April 1998, Kyoto, Japan.
- 170. **H. Hosseinkhani**, "Drug delivery for tissue engineering", <u>Institute for Frontier Medical</u> <u>Sciences, Kyoto University</u>, Oct. 1999, Kyoto, Japan.

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- 171. **H. Hosseinkhani**, "Design and use of biodegradable polymers in new drug delivery system", <u>The First Seminar on Biomedical Engineering</u>, Oct. 1996, Tehran, Iran.
- 172. **H. Hosseinkhani**," Controlled release of Theophylline from poly (D,L-lactic Acid) microspheres ", *The Second International and The 4<sup>th</sup> National Seminar on Polymer Science and Technology*, Nov. 1997, Tehran, Iran.

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- 173. H. Hosseinkhani, M. Hosseinkhani, "Towards Engineering of Living Organs", <u>Regenerative Medicine 2010: From Stem Cell to Disease Models</u>, Sept. 2010, Taipei, TAIWAN.
- 174. H. Hosseinkhani, M. Hosseinkhani, S. Hattori, R. Matsuoka, N. Kawaguchi, "Development of 3D culture method for cardiac stem cells by combinational technology of tissue engineered scaffold and perfusion bioreactor", <u>7<sup>th</sup> Annual Meeting of International Society for</u> <u>Stem Cell Research (ISSCR)</u>, July 2009, Barcelona, Spain.
- 175. H. Hosseinkhani, M. Hosseinkhani, "3D culture tissue engineered scaffold and perfusion bioreactor for tissue engineering application", <u>Stem Cell and Regenerative Medicine Conference</u>, Oct. 2009, Taipei, TAIWAN.
- 176. H. Hosseinkhani, M. Hosseinkhani, I.Y. Farber, A.J. Domb, "Bone Tissue Engineering by DNA Nanoparticles and Tissue Engineered Nano-scaffold", <u>11th Annual Meeting of the</u> <u>American Society of Gene Therapy</u>, May 2008, Boston, USA.
- 177. E. Simonetti, M. C. Barsotti, A. Magera, H. Hosseinkhani, S. Soubini, D. Dinucci, F. Chiellini, R. Solaro, R. Di Stefano, A. Balbarini, "A biological self-assembleing peptide suitable for cell delivery in ischemic tissue", *<u>The XV Italian Society of Cardiovascular</u> <u>Research Conference</u>, Oct. 2008, Imola, Italy.*
- 178. M. Hosseinkhani, H. Hosseinkhani, A. Khademhosseini, "Post-translational Modification of GATA-4 Involved in the Differentiation of Monkey ES Cell into Cardiac Myocytes", <u>American Heart Association Scientific Session 2007</u>, November 2007, Florida, USA.
- 179. H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, U. Demirci, H. Kobayashi, T. Azzam, A. Domb, "A Trail to Enhance Osteogenic Differentiation of Mesenchymal Stem Cells by Combinational Technology of Gene Therapy and Microfluidic System", <u>Society for Biomaterials</u> <u>2007 annual meeting</u>, April 2007, Chicago, USA.
- 180. H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, T. Azzam, A. Domb, "Gene Therapy for Bone Tissue Engineering Using a Combination of 3-D Tissue Engineered Scaffold and Non-Viral Gene Carrier", <u>10<sup>th</sup> annual meeting American Society of Gene Therapy</u>, May 2007, Seattle, Washington, USA.
- 181. H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, U. Demirci, H. Kobayashi, T. Azzam, A. Domb, "Ectopic Bone Formation by Combinational Technology of Gene Therapy and Tissue Engineering ", <u>Society for Biomaterials 2007 annual meeting</u>, April 2007, Chicago, USA.
- 182. H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, F. Tian, H. Kobayashi, "An Investigation on Surface Topographies of Materials on Biological Behaviors of Cells", <u>Society</u> <u>for Biomaterials 2007 annual meeting</u>, April 2007, Chicago, USA.
- 183. H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, H. Kobayashi, "Rapid Improvement in Myocardial Infarction Therapy by Application of an Injectable Tissue Engineered Nanoscaffold", *Society for Biomaterials 2007 annual meeting*, April 2007, Chicago, USA.
- 184. H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, H. Kobayashi, "A New Injectable Hydrogel Induces Angiogenesis through Controlled Release of Basic Fibroblast Growth Factor", <u>Society for Biomaterials 2007 annual meeting</u>, April 2007, Chicago, USA.
- 185. A. Iles, **Hossein Hosseinkhani**, M. Hosseinkhani, H. Lindstrom, "Nannoporous titania films for the promotion of stem cell proliferation", *<u>The 11th international conference on miniaturized</u> <i>systems for chemistry and life sciences (MicroTAS 2007)*, Oct. 2007, Paris, France.
- 186. F. Tian, H. Hosseinkhani, Y. Yokoyama, G. G. Estrada, H. Kobayashi, "The effect of electrospun PGA scaffold for biological behavior of human umbilical vein endothelial cells", <u>Proceedings of the 7<sup>th</sup> Asian Symposium on Biomedical Materials (ASBM6)</u>, Key Engineering Materials Eds. South Korea, Oct 2006.
- 187. **H. Hosseinkhani** "Nanotechnology in Tissue Engineering", <u>The second ICYS workshop on</u> <u>nanotechnology</u>, Feb. 2006, Mishima, Japan.
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- 190. **H. Hosseinkhani**, M. Hosseinkhani, H. Kobayashi, "A new injectable tissue engineered scaffold for regenerative medicine", *International Conferences on Microtechnologies in Medicine and Biology*, May 2006, Okinawa, Japan.
- 191. H. Hosseinkhani, M. Hosseinkhani, "Gene therapy for bone tissue engineering using cationized dextran", <u>9<sup>th</sup> Japanese Tissue Engineering annual meeting</u>, Sept. 2006, Kyoto, Japan.
- 192. H. Kobayashi, H. Hosseinkhani, T. Furong "Human Umbilical Vein Endothelial cells behaviors on the nanostructured fibers", <u>20<sup>th</sup> European Conference on Biomaterials</u>, Sept. 2006, Nantes, France.
- 193. T. Furong, H. Hosseinkhani, H. Kobayashi, "Quantitative method for the analysis of cell attachment using the aligned scaffold structure", <u>International Conference on Nanoscience and</u> <u>Technology ICN&T</u>, July 2006, Basel, Switzerland.
- 194. H. Hosseinkhani, H. Kobayashi, Y. Tabata, "Design of a nano-vessel-like network for controlled proliferation and differentiation of Mesenchymal Stem Cells (MSC)", <u>8<sup>th</sup> Tissue Engineering Society International (TESI) annual meeting</u>, Oct. 2005, Shanghai, China.
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- 196. **H. Hosseinkhani**, H. Kobayashi, Y. Tabata, "Selective differentiation of mesenchymal stem cells by using self-assembled peptide-amphiphile nanofibers", <u>The 8th US-Japan on Drug</u> <u>Delivery Systems</u>, Dec. 2005, Maui, Hawaii, USA.
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- 199. E. Vasheghani, **H. Hosseinkhani**, M.Nekomanesh, "Effect of preparation conditions on theophylline release from biodegradable poly (DL-lactic acid) microspheres", *Sixth European Symposium on Controlled Drug Delivery*, April 2000, The Netherlands.
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- 202. T. Azzam, H. Hosseinkhani, Y. Tabata, A.J. Domb, "Dextran-Spermine Polycation: An Efficient Non-Viral Vector for *In Vivo* Gene Transfection", *Proceedings of 30<sup>th</sup> International Symposium* <u>on Controlled Release of Bioactive Materials</u>, Controlled Release Society, Inc. 30: 1234-1235, 2003, Scotland.
- 203. R. Di Stefano, A. Magera, M. Barsotti, F. Felise, H. Hosseinkhani, A. Balbarini, "Endothelial Progenitor Cells Differentiation and Paracrine Activity on Self Assembly Peptide Amphihile Nanofibers", <u>Tissue Engineering and Regenerative Medicine International Society-EU</u> (<u>TERMIS-EU 2010</u>), June 2010, Galway, Ireland.
- 204. E. Vasheghani Farahani, M. Mohammad-Taheri, **H. Hosseinkhani**, S.A. Shojaosadati, "Preparation of magnetic cationic dextran nanocarriers for biomedical applications", <u>International Conference on Cellular & Molecular Bioengineering</u>, August 2010, Singapore.
- 205. H. Hosseinkhani, "Effect of polymer molecular weight on theophylline release from biodegradable poly (DL-lactic acid) microspheres", <u>Sixth European Symposium on Controlled</u> <u>Drug Delivery</u>, April 2000, The Netherlands.

# International Conference/Symposium Chair and Organizer

- 2014 Nanomedicine workshop, cape-town, South Africa (will be announced)
- 2007 Annual Meeting of the Society for Biomaterials, Chair in the session "Biomaterials and Microscale Technologies for Biomedical Applications III", Chicago, USA
- 2005 Scientific advisory council, 12<sup>th</sup> Biomedical Engineering conference, Tabriz, Iran
- 2004 5<sup>th</sup> Drug Delivery annual meeting Track Chair in the session "Drug Delivery and Gene Therapy", Tehran, Iran
- 2004 2<sup>nd</sup> International Symposium on Fusion of Nano and Bio Technologies; Track Chair in the session "Biomaterials", Tsukuba, Japan.
- 2001 Symposium on Tissue Engineering, National Taiwan University & Kyoto University; Track Chair in the session "Gene Therapy", Kyoto, Japan.

## 10 most cited papers for the last 6 years (2006~)

- Citation: 137 H. Hosseinkhani, M. Hosseinkhani, F. Tian, H. Kobayashi, Y. Tabata, "Osteogenic differentiation of mesenchymal stem cells in self assembled-peptide amphiphile nanofibers", *Biomaterials*, 27, 4079-4086 (2006).
- Citation: 114 M. Mahmoudi, H. Hosseinkhani, M. Hosseinkhani, S. Boutry, A. Simchi, W. S. Journeay, K. Subramani, S. Laurent, "Magnetic Resonance Imaging Tracking of Stem Cells in Vivo Using Iron Oxide Nanoparticles as a Tool for the Advancement of Clinical Regenerative Medicine", <u>Chemical Reviews</u>, 111, 253-280 (2011).
- Citation: 110 H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, H. Kobayashi, Y. Tabata, "Enhanced angiogenesis through controlled release of basic fibroblast growth factor from peptide amphiphile for tissue regeneration", *Biomaterials*, 27, 5836-5844 (2006).
- Citation: 103 H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, H. Kobayashi, "Bone regeneration through controlled release of bone morphogenetic protein-2 from 3-D tissue engineered nano-scaffold", *Journal of Controlled Release*, 117, 380-386 (2007).
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- 6. Citation: 75 H. Hosseinkhani, M. Hosseinkhani, A. Khademhosseini, N. P. Gabrielson, D.W. Pack, H. Kobayashi, "DNA nanoparticles encapsulated in 3-D tissue engineered scaffold enhance osteogenic differentiation of mesenchymal stem cells", *Journal of Biomedical Materials Research Part A*, 85, 47-60 (2008).
- Citation: 70 H. Hosseinkhani, M. Yamamoto, Y. Inatsugu, Y. Hiraoka, S. Inoue, H. Shimokawa, Y. Tabata, "Enhanced ectopic bone formation using combination of impregnation of plasmid DNA into 3-D scaffold and bioreactor perfusion culture", *Biomaterials*, 27, 1387-1398 (2006).
- Citation: 65 H. Hosseinkhani\*, M. Hosseinkhani, H. Kobayashi, "Design of tissue engineered nanoscaffold through self assembly of peptide amphiphile", *Journal of Bioactive and* <u>Compatible Polymers</u>, 21, 277-296 (2006).
- Citation: 55 H. Hosseinkhani, M. Hosseinkhani, F. Tian, H. Kobayashi, Y. Tabata, "Bone regeneration on a collagen sponge-self assembled peptide-amphiphile nanofibers hybrid scaffold", *Tissue Engineering*, 13, 1-9 (2007).

 Citation: 57 H. Hosseinkhani, T. Azzam, H. Kobayashi, Y. Hiraoka, H. Shimokawa, A.J. Domb, Y. Tabata, "Combination of 3-D tissue engineered scaffold and non-viral gene carrier enhance *in vitro* DNA expression of mesenchymal stem cells", *Biomaterials*, 27, 4269 -4278 (2006).

# **International Collaborations**

Prof. Esmaiel Jabbari, Department of Chemical Engineering, University of South Carolina, USA (on biodegradable nanoparticles) http://www.che.sc.edu/

Prof. Daniel W. Pack, Department of Chemical Engineering, University of Illinois at Urbana-Champaign, USA (on gene delivery) <u>http://chbe.illinois.edu/</u>

Prof. Nicole Pamme, Department of Chemistry, The University of Hull, **UK** (on DNA microarray) <u>http://www.hull.ac.uk/chemistry/</u>

Prof. Abraham J. Domb, Department of Medicinal Chemistry and Natural, The Hebrew University-Hadassah Medical School, **Israel** (on siRNA therapy) <u>http://pharmacy.huji.ac.il/eng/</u>

Prof. Rossella Di Stefano, Department of Cardiovascular Surgery, University of Pisa, **Italy** (on cardiac tissue engineering) <u>http://www.unipi.it/english/university/index.htm</u>

Prof. Aziz Ghahary, Burn and Wound Healing Laboratory, The University of British Columbia, **Canada** (on controoled release of growth factors) <u>http://www.iirc.ca/</u>

Prof. Maznah Ismaeil, Institute for Biostudies, The University of Putra Malaysia, **Malaysia** (on gene therapy) <u>http://www.upm.edu.my/</u>

Prof. Nanako Kawaghuchi, International Research Institute for Integrated Medical Sciences (IREIIMS) Tokyo Women's Medical Univ., **Japan** (on 3D bioreactor) <u>http://www.twmu.ac.jp/IREIIMS/index.html</u>

Dr. Lionel Vayssiers, International Center for Renewable Energy National Xi'an Jiaotong University, **China** (on magnetic nanoparticles) http://ircre.xjtu.edu.cn/index.html

Dr. Shunji Hattori, R&D Center of Biomaterials Nippi Co Ltd., **Japan** (on natural scaffolds) <u>http://www.nippi-inc.co.jp/eng/index.html</u>

Dr. Hossein Bahrvand, Royan Stem Cells Research Center Royan Institute, **Iran** (on hepatocyte differentiation) <u>http://royaninstitute.org/cmsen/index.php</u>

# **Reviewer for Journal**

- Analytical Chemistry
- Biomacromolecules
- Biotechnology and Bioengineering
- Biotechnology Progress
- Journal of Biomaterials Science: Polymer Edition
- Journal of Biomedical Materials Research: Part A
- International Journal of Nanotechnology
- Journal of Nanoscience and Nanotechnology
- Journal of Controlled Release
- Langmuir
- Tissue Engineering
- Biomaterials
- Gene Therapy
- Molecular Therapy
- Cancer Gene Therapy
- Iranian Polymer Journal
- Stem Cells
- Chemistry Today
- Biomedical Materials
- Journal of Gastroenterology and Hepatology
- Journal of Clinical Rehabilitative Tissue Engineering Research
- Acta Biomaterialia
- Cancer Chemotherapy and Pharmacology
- Advanced Drug Delivery Review
- Nano Letters
- Advanced Materials
- Nanotechnology
- Journal American Chemical Society
- Journal of Bioactive and Compatible Polymers
- Journal of Nanomedicine
- Cytotherapy
- Journal of Nanoparticles Research
- Recent Patents on Drug Delivery and Development
- Food and Chemical Toxicology

# **Professional Affiliation**

- Chemical Engineering Society of France
- Chemical Engineers Society of Japan
- Japanese Biomaterials Society
- Japanese Drug Delivery System Society
- Tissue Engineering International Society
- Biomaterials Society
- American Gene Therapy
- The American Chemical Society (ACS)
- The International Union of Pure & Applied Chemistry (IUPAC)

# Languages & Personality

- English: Fluent; Japanese: Fluent; Italian: Fluent, Arabic: Fluent; Turkish: Fluent, Farsi: Fluent, Chinese: basic
- Innovative, highly active, energetic individual, empathy, and enthusiasm; highly motivated outstanding individual, wide range of research knowledge and interests; leadership/project management; conference and symposium organization.

# **References**

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