

# **CURRICULUM VITAE**

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## Education:

- 2016- PhD in Shahid Beheshti University of Medical Sciences
- 2008-2011. MSc in Medical Biotechnology, Tehran University of Medical Sciences
- 2004-2008. BSc in Medical Laboratory Sciences, Shahid Beheshti University of Medical Sciences and Isfahan University of Medical Sciences

## Editor and Reviewer for the Journals:

- Tissue engineering (Impact Factor: 4.4)
- Advanced functional materials (Impact Factor: 15.6)
- Artificial Organs (Impact Factor: 2.3)
- Burn (Impact Factor: 2.3)
- Cytotechnology, Springer (Impact factor: 1.752)
- Journal of Microbial & Biochemical Technology (Impact factor: 2.5)
- Journal of Cellular Physiology (Impact factor: 4.55)
- ACS advanced materials and interfaces (Impact Factor: 7.1)
- Journal of Hazardous Materials (Impact factor: 7.65)
- Small (Impact factor: 13.28)

- ACS Nano (Impact factor: 15.88)
- Materials Today Chemistry (Impact factor: 8.01)
- Material Science and Engineering C (Impact factor: 7.3)

### **Title of MSc Thesis**

Fabrication and *In vivo* Evaluation of an Osteoblast-Conditioned Nano hydroxyapatite/gelatin Composite Scaffold for Bone Tissue

*Supervisor:* Dr. Ali Samadikuchaksaraei

### **Title of PhD Thesis**

Novel decellularized human amniotic membrane/electrospun silk fibroin skin substitute for Guided Full-thickness Burn Wound Healing.

*Supervisors:* Dr. Hossein Ghanbarian and Dr. Ali Samadikuchaksaraei

### ***Research Papers (\* as Corresponding author):***

- Aliakbar Ahovan, Z., A. Hashemi, L. M. De Plano, M. Gholipourmalekabadi and A. Seifalian (2020). "Bacteriophage Based Biosensors: Trends, Outcomes and Challenges." Nanomaterials **10**(3): 501.
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- Diba, M., M. Kharaziha, M. Fathi, M. Gholipourmalekabadi and A. Samadikuchaksaraei (2012). "Preparation and characterization of polycaprolactone/forsterite nanocomposite porous scaffolds designed for bone tissue regeneration." *Composites Science and Technology* **72**(6): 716-723.
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- Chitosan/Silk Fibroin Electrospun Nanofiber Loaded with a Cationic Peptide for Wound-dressing Application."
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Yazdanpanah, A., Z. Rezvani, A. Ramedani, M. Gholipourmalekabadi, N. P. S. Chauhan, S. Moztarzadeh, A. Urbanska and M. Mozafari (2016). Nanobiomaterials set to revolutionize drug-delivery systems for the treatment of diabetes: state-of-the-art. Nanobiomaterials in drug delivery, Elsevier: 487-514.

Zarebkohan, A., R. Sheervalilou, R. Ghods, S. C. Kundu and M. Gholipourmalekabadi (2020). 3D scaffold materials for skin cancer modeling. Biomaterials for 3D Tumor Modeling, Elsevier: 305-328.

Zarebkohan, A., R. Sheervalilou, S. C. Kundu and M. Gholipournalekabadi (2020). "3d scaffold materials for skin cancer modeling." Elsivier book series-Biomaterials for 3D Cancer Modeling.

### ***Patent:***

Artificial skin for full-thickness skin wound healing made from decellularized human amniotic membrane/electrospun silk fibroin protein. Iran.

Skin substitute for prevention of skin hypertrophic scar made from decellularized human amniotic membrane/beeswax. Iran.

### ***Awards and certificates:***

2017: Iran Annual University's Award for the Young Investigators

2017: Technical supervisor for Clean Room and GMP, certificated from Iran FDA

### ***Congress:***

Ghaffari, M., Sepahvandi, A., Moztarzadeh, S., **Gholipourmalekabadi, M.**, and Mozafari, M. (2013) Interaction of Human Mesenchymal Stem Cells with Poorly Crystalline Hydroxyapatite. *Artificial Organs* 37(7)

Jafarkhani, M., Moztarzadeh, F., **Gholipourmalekabadi, M.**, and Mozafari, M. (2013) Computational Fluid Dynamics Modeling of Hydrodynamic Conditions for Tissue Growth Optimization of Tissue-Engineered Scaffolds in a Rotating Bioreactor. *Artificial Organs* 37(7)

Kargozar, S., Soleimani, M., **Gholipourmalekabadi, M.**, Mozafari, M., Korourian, A., and Samadikuchaksaraei, A. (2013) A Ternary System Gelatin-Bioactive Glass Nano-Composite as a Promising Bone Substitute in Repair of Critical-Size Bone Defect. *Artificial Organs* 37(7)

Mohammadi, H., Rezaei, M., Amiri, S.M., Rahimi, Z., Mansouri, K., Khazaie, H., Rahmanzadeh, R., Mehrabi, S., Barati, M., and Ahmadi, M. **Gholipourmalekabadi, M.** Different Expressions of Specific Transcription Factors of Th1 (T-bet) and Th2 cells (GATA-3) by Peripheral Blood Mononuclear Cells From Patients With Multiple Sclerosis.

Nikoo, S., Moztarzadeh, F., **Gholipourmalekabadi, M.**, and Mozafari, M. (2013) Highly Anisotropic and Cellular Poly ( $\epsilon$ -caprolactone)/Gelatin Scaffolds for Ligament/Tendon Tissue Engineering. *Artificial Organs* 37(7)

Samadikuchaksaraei, A., **Gholipourmalekabadi, M.**, and Mozafari, M. (2015) O19-Regenerative Niche Conditioning: a Modern Concept for an Old Approach.

**Scientific Director** in the 4th Iranian Congress on Progress in Tissue Engineering and Regenerative Medicine, 2018.

### *Main Collaborators*

**Prof. Alexander M Seifalian**, UCL, Royal Free London NHS Foundation Trust Hospital London, UK.

**Prof. Rui L Reis**, 3Bs Research Group, Headquarters of the European Institute of Excellence on Tissue Engineering and Regenerative Medicine, University of Minho, Guimaraes, Portugal.

**Prof. Subhas C Kundu**, 3Bs Research Group, Headquarters of the European Institute of Excellence on Tissue Engineering and Regenerative Medicine, University of Minho, Guimaraes, Portugal.

**Prof. John G Hardy**, Department of Chemistry, Lancaster University, Lancaster, Lancashire, United Kingdom.

**Prof. Aziz Ghahary**, British Columbia, Vancouver hospital, Canada.

**Dr. A.M. Urbanska**, Division of Digestive and Liver Disease, Department of Medicine and Herbert Irving Comprehensive Cancer Center, Columbia University, New York, New York 10032, USA

**Dr. Amelia Seifalian**, UCL Centre for Nanotechnology & Regenerative Medicine, UK

**Dr. Azhang Hamelkhan**, Michigan Technological University, Houghton, MI 49931, USA

**Dr. N.P.S. Chauhan**, Udaipur 313001, Rajasthan, India

**Dr. J.C. Caicedo**, Universidad del Valle, Cali, Colombia

**Dr. Hector Hugo Caicedo**, National Biotechnology & Pharmaceutical Association, Chicago, IL, USA

**Dr. Noor Azuan Abu Osman**, University of Malaya, Malaysia

**Dr. Farzin Sahebjam**, University of Nebraska-Lincoln.

### **Research Interests:**

Development of a human functional tissue

Stem cells and tissue engineering

Cancer, cancer stem cells and treatment

Angiogenesis and apoptosis

Wound healing

Bone tissue engineering

Cartilage tissue engineering

Microfluidics

Decellularisation of the human tissues

Molecular diagnosis by monoclonal antibody and nanoparticles

Bio active glass and nanocomposite scaffolds

Gene cloning in eukaryotes cells

### ***Technical Skills***

#### Software and Web Based Knowledge including

1. All standard of Microsoft office software
2. SPSS
3. Scientific and General Database Search
4. Operating systems: Microsoft windows & Linux
5. Endnote software

Laboratory Knowledge including

1. Cell Cultures (Monolayer and Spheroid)
2. Tissue Culture
3. PCR
  - Conventional PCR
  - RT-PCR
  - Real Time PCR
4. Extraction of mesenchymal stem cells from rat bone marrow and human cord blood
5. Extraction of embryonic stem cells from mice and embryoid body generation
6. Flow Cytometry
7. Working experience with common laboratory animals
8. Scanning electron microscopy (sample preparation)
9. Decellularisation of soft tissues
10. MTT and viability test
11. Molecular cloning and genetic engineering of bacterial cells
12. Tissue Samples Fixation and H&E Staining
13. Fabrication of hydroxy apatite \_silicon carbide\_ gelatin nanocomposite scaffolds
14. Fabrication of hydroxy apatite \_gelatin nanocomposite scaffolds
15. ELISA
16. Site-directed mutagenesis by PCR
17. Collagen staining
18. Western Blotting
19. Antibacterial tests: Halo test, colony count, MIC, etc
20. Conventional medical laboratory tests
21. GLP, GMP and manufacturing in clean room

### Applied Bioinformatics and Computational Biology Software's

- Biological database search
- Pairwise and Multiple sequence alignment
- Sequence based database search (BLAST and FASTA)
- Protein structure prediction
- RNA secondary structure prediction
- Primer and probe designing and analysis tools e.g. primer3, primerblast and oligo 6
- Other software's including NCBI utilities and some other sequence assembly and analysis software's applicable for gene manipulation

## References:

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