Eraj Humayun Mirza *(BS, MSc & PhD)* **Curriculum Vitae**

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https://goo.gl/rr3CSk

EDUCATION

2012-2016	University of Malaya PhD (Biomaterials & Tissue Engineering)	Kuala Lumpur, Malaysia.
2009 – 2010	University of Dundee MSc. Biomedical Engineering.	Dundee, UK.
2005 – 2008	Sir Syed University of Engineering & Technology, BS Biomedical Engineering.	Karachi, Pakistan.
2003 – 2004	Intermediate Govt. National College	Karachi, Pakistan.
2002	O'Levels The City School	Karachi, Pakistan.

WORK EXPERIENCE

Duration	Position and Affiliation	Responsibilities	Experience
April 2018	**Assistant Professor** Department of Biomedical Engineering, NED University of Engineering & Technology, Karachi, Pakistan.	Teaching, Research, Curriculum design	Current
February 2017-April 2018	**Assistant Professor** Department of Biomedical Engineering, Sir Syed University of Engineering & Technology, Karachi, Pakistan.	Teaching, Research, Curriculum design, Project supervision, Engineering Council Accreditation	01 Year 02 Months

August 2014-January 2017	**Researcher** Department of Biomedical Technology, College of Applied Medical Sciences, King Saud University, Riyadh, KSA.	Research, teaching, Undergraduate project supervision, curriculum design and accreditation.	02 Years 05 Months
October 2012-October 2015	**Research Scholar** Malaysian International Scholarship Ministry of Higher Education Malaysia, Kuala Lumpur, Malaysia	Research in biomaterials and tissue engineering.	03 Years
2011	**Lecturer** Biomedical Engineering Department Sir Syed University of Engineering & Technology, Karachi, Pakistan.	Teaching and curriculum design.	10 Months
2007	**Internee** Biomedical Engineering Department Aga Khan University, Karachi, Pakistan.	Plan preventive & break down maintenance for critical care, imaging and laboratory equipment	01 Months

RESEARCH INTERESTS

Biomaterials	Biodegradable polymers, polymer fabrication, porous materials, material characterization
Tissue Engineering	Hard and soft tissue engineering
Cellular Biomechanics	Application of bio factors and mechanical stimuli on cells
Biomedical Electronics	Circuit design and its application

ADMINISTRATIVE DUTIES

- Member for National Curriculum Review Committee, Higher Education Commission Pakistan. (2017)
- Pakistan Engineering Council accreditation response committee (2017).

PROFESSIONAL AFFILIATION

Registered Engineer (Pakistan Engineering Council)
Registration # PEC/BioMed/01004

JOURNAL REVIEWER

- Progress in Natural Science: Materials International **(IF=2.598)**
- Journal of Biomedical Materials Research: Part B - Applied Biomaterials **(IF=3.189)**
- MATERIALS SCIENCE (MEDŽIAGOTYRA) **(IF=0.393)**

RESEARCH PUBLICATIONS

Journal Publications

1. Khan AA, Mirza EH, Syed J, Al-Khureif A, Mehmood A, Vallittu PK, et al. Single and Multi-Walled Carbon Nanotube Fillers in Poly(methyl methacrylate)-Based Implant Material. Journal of Biomaterials and Tissue Engineering. 2017;7(9):798-806. **(IF=2.066)**

2. Rez MFA, Binobaid A, Alghosen A, Mirza EH, Alam J, Fouad H, et al., Tubular Poly (ε-caprolactone)/Chitosan Nanofibrous Scaffold Prepared by Electrospinning for Vascular Tissue Engineering Applications. Journal of Biomaterials and Tissue Engineering, 2017; 7(6):427-436. **(IF=2.066)**

3. Mirza, E.H., et al., Physical, mechanical, thermal, and dynamic characterization of carbon nanotubes incorporated poly(methyl methacrylate)-based denture implant. Journal of Composite Materials. **0**(0): p. 0021998317694425. **(IF=1.24)**

4. Mirza, E.H., et al., *Chondroprotective effect of zinc oxide nanoparticles in conjunction with hypoxia on bovine cartilage-matrix synthesis.* Journal of Biomedical Materials Research Part A, 2015. ***(IF=3.263)***

5. MIRZA, E., et al., *POLYOCTANEDIOL CITRATE-ZINC OXIDE NANO-COMPOSITE MULTIFUNCTIONAL TISSUE ENGINEERING SCAFFOLDS WITH ANTI-BACTERIAL PROPERTIES.* Digest Journal of Nanomaterials and Biostructures, 2015. **10**(2): p. 415 - 428. ***(IF=0.971)***

6. Kompany, K., et al., *Polyoctanediol citrate–ZnO composite films: Preparation, characterization and release kinetics of nanoparticles from polymer matrix.* Materials Letters, 2014. **126**: p. 165-168. ***(IF=2.437)***

7. Al-Qahtani, M. and E.H. Mirza, *Thickness of Achilles Tendon is BMI Dependant.* Journal of the College of Physicians and Surgeons Pakistan, 2016. **26**(9). ***(IF=0.399)***

8. Aftab, A.K. and H.M. Eraj, *Influence of Trainee Characteristics on Acquired Pharmacology Knowledge of Dental Professionals: A Pilot Study*. Indian Journal of Pharmaceutical Education and Research, 2016. **50**(3s): p. S280-S285. ***(IF=0.345)***

9. Al-Qahtani, M., et al., *Influence of BMI on Elastographic Strain Ratios of Achilles Tendon.* Journal of Biomedical Engineering and Medical Imaging, 2016. **3**(2): p. 14.

10. Al-Qahtani, M., et al., *A Comparative Study of Shear-Wave Elastography and Strain Elastography on a Breast Phantom for Diagnosis of Tumor and Cyst.* Journal of Biomedical Engineering and Medical Imaging, 2015. **2**(3): p. 24.

11. Al-Qahtani, M., O. Altwijri, and E.H. Mirza, *Effect of Pore Size on Mechanical Integrity and Blood Flow in Polymeric Biomaterial via Computer Simulation Model.* Rev. Tec. Ing. Univ. Zulia, 2015. **38**(2): p. 47-52. ***(IF=0.065)***

12. Wbin-Wan-Ibrahim, W.A., E.H. Mirza, and S.F. Akbar Ali, *Significance of herbal medicine in removing excessive iron content in human.* Pakistan journal of pharmaceutical sciences, 2013. **26**(4): p. 823-826. ***(IF=0.798)***

13. Al-Rawi, A.H.M., W.M.A.B.W. Ibrahim, and E.H. Mirza, *DC feedback for wide band frequency fixed current source.* Journal of Electrical Bioimpedance, 2013. **4**(1): p. 33-37.

14. Khan, A.A., A.Z. Siddiqui, S.F. Mohsin, M.M. Al Momani, and E.H. Mirza, *Impact of network aided platforms as educational tools on academic performance and attitude of pharmacology students.* Pakistan journal of medical sciences, 2017. **33**(6): p. 1473. ***(IF=0.345)***

15. Effect of Training on Stiffness of Distal Biceps Tendon: A Pilot Study, Kuwait Medical Journal (ISI-WoS) 2017 ***(Accepted)***

16. Physical, mechanical, chemical and thermal properties of nanoscale graphene oxide-poly methylmethacrylate composites (ISI-WoS) 2018 ***(Accepted)***

17. Influence of Gain Settings on Strain Ratios of Elastographic Image and Texture Parameters of B-Mode Image on Thyroid Tissue, Biomedical Research (ISI-WoS) 2018 ***(Accepted)***

Conference Publications

1. Al-Qahtani M, Altwijri O, Mirza EH. Effect of pore size on mechanical attributes of bone mimicking biomaterial via computer simulation model. 2015.

2. Ibrahim BW, Azhar WM, Mirza E. Remote sensing electrocardiography. 2013. IEEE. p 1-3.

3. Ali SFA, Asif M, ul Hassan SN, Mirza EH. To Observe the Effects of Cystus-Sud on Mercury Concentration in Blood and Urine of Tobacco Smokers. 2013. Springer. p 126-129.

4. Ali SFA, Asif M, Mirza EH, ul Hassan SN. Reduction in Increased Cadmium Concentration from Human Blood and Urine of Cigarette Smokers by using Cystus-Sud. 2013. Springer. p 132-135.

5. ul Hassan SN, Ali SFA, Mirza EH. Surgical Arm Rest Using Novel Smart Material Based Fluid. International Conference on Advances in Electrical and Electronics Engineering. Pattaya; 2012. p 13-15.

6. Mirza EH, Ali SFA, Asif M, Azhar bin Ibrahim WM, Najam ul Hassan S. Evaluation of anti-corrosion properties of DLC coatings for medical devices. 2012 27-28 Feb. 2012. p 117-122.

7. Ibrahim B, Azhar WM, Ali SFA, Asif M, Mirza EH. Release of excessive iron concentration from human blood and urine of cigarette smokers by using Cystus-Sud. 2012. IEEE. p 133-138.

8. Ali SFA, Mehdi SU, Asif M, Hassan SNU, Mirza EH. Detection of Iron and Manganese Concentrations in Human Biological Fluid with Flame Atomic Absorption Spectroscopy (FAAS).

RESEARCH EXPERIENCE

POST GRADUATE

Fabrication of scaffolds (Poly octanediol citrate, Poly Caprolactone, PCL-Citric Acid)
Tissue Culture of Chondrocytes
DNA assay (Hoechst)
GAGs Analysis (DMMB)
Cell Viability assay (Alamar Blue)
Rt-PCR (gene expression analysis)
Ultrasound for diagnosis of tumor
Ultrasound Elastography of phantoms and patients
Electrochemical Measurements
Coatings to prevent biofilm formation (Q-Sense)
Evaluation of Corrosion of DLC coatings in medical devices
Designing of ultrasound blade on solidworks
Evaluation of ultrasound blade on Ansys
Adhesion of bacterial assays (contact angle measurement)
Rapid prototyping
Bioreactors
Tissue Culture Techniques