

Mehdi Kazemzadeh-Narbat, PhD

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SUMMARY

Biomaterials engineer and researcher with industry experience in FDA 510(K), a proven track record, an award winning PhD thesis and recipient of national scholarships/fellowships. Have had publications in high-profile journals, patents (IP generation), and conferences. Flexible with strong leadership and teamwork skills in cross-functional team environment.

TECHNICAL SKILLS AND SELECTED CERTIFICATES

- Design, Evaluation and Characterization of Biomaterials and experienced in **SEM, FE-SEM, FIB-SEM, BSE, Light microscopy, CLSM, Fluorescence microscopy, XRD, EDX, FTIR, ATR-FTIR, Fluorescence spectroscopy, UV/Vis, Raman spectroscopy, UPLC-MS, ELISA, contact angle, Image analyzer software, DSC, TGA, Freeze dryer, CPD, Zeta potential, Mechanical testing** (compressive, tensile, shear), and **Nanoindenter** (hardness testing)
- Experienced in **Biocompatibility testing (ISO 10993), cell culture** (cytotoxicity test, ALP test, staining, etc.), **bacteria culture** (antimicrobial, inhibition tests, etc.), **blood compatibility** (Hemolysis assay, Platelete activation test)
- Experienced in **in vivo** (Pre-clinical Animal Models), **in vitro and ex-vivo** study and **bone histomorphometry**
- Certified from Canadian Council on Animal Care (CCAC) / National Institutional Animal User Training (NIAUT)
- Experienced in Orthopaedic Implants, Bone Tissue Engineering, and Biodegradable Biomaterials
- Experienced in Antimicrobial and Calcium Phosphate Coatings (including Hydroxyapatite) on Orthopaedic Implants
- Experienced in Drug Delivery Systems/Controlled Release of Proteins, Peptides, and Biomolecules from Biomaterials
- Experienced in **ISO/FDA (510K)** regulations (approval processing and clearance)
- Familiar with **Project Management, GLP, cGMP, and Ethics**
- Computer skills: Excel, Word, PowerPoint, Statistical analysis (SPSS), GraphPad Prism, EndNote, Photoshop, Corel-Draw, Microsoft Project, and Internet proficiency. Familiar with Design of Experiments (DOE), and SolidsWorks.
- Experienced in US patent research and writing
- Broad experience in science presentations (oral and posters) at international conferences in English.

RESEARCH/PROJECT EXPERIENCE

- **Postdoctoral fellow, Halifax, Canada (Dalhousie University-Dartmouth Medical Research) 6/2013-present**
 - Research and pre-Clinical Evaluation of Hot Melt Degradable Polymer Adhesive (PLA/PCL blend) for Craniomaxillofacial Fractures (seeking FDA 510(K)/CE marking)
 - Research and pre-Clinical Evaluation of Reinforced Adhesive Patch Materials (seeking FDA 510(K)/CE marking)
 - Application of Chitosan Nanoparticles as Drug Delivery Systems
 - Writing funding/grant applications, business plans, pitching, generating new ideas (entrepreneur)
- **Graduate Intern, Vancouver, Canada 9/2011-1/2012**
Centre for Drug Research and Development (CDRD)
Research topic: Formulation of Docetaxel in HPG polymer for Non-Invasive Bladder Cancer Treatment
- **Teaching assistant, Vancouver, Canada 2009-2012**
Department of Materials Engineering, University of British Columbia (UBC)
Courses: "Advanced Biomaterials", and "Engineering Materials Laboratory"
- **Research Associate, Tehran, Iran 1/2008-4/2008**
Iran University of Medical Sciences
Research topic: Hydroxyapatite-Alumina and Silicon Carbide Composite Scaffold for Bone Tissue Engineering
- **Research Associate, Tehran, Iran 1/2005-7/2006**
Materials & Energy Research Center (MERC)
Research topic: Design and Fabrication of Porous Gelatin-Hydroxyapatite Composite for Bone Tissue Engineering

NON-ACADEMIC TEAM BASED/SUPERVISORY EXPERIENCE

- **Engineer Supervisor, Tehran, Iran** 10/2006-1/2008
BNM Medical Company-distributor of Ortho Clinical Diagnostic (Johnson and Johnson)
Supervising over 10 staffs toward distribution of medical laboratory equipment of Ortho Clinical Diagnostics all over Iran. Responsible for sales, conducting circulatory maintenance, after sale supports including field service, and routine monitoring of clinical sites. Certified and trained by J&J for sales and field service of J&J diagnostic equipment such as dry clinical chemistry (250) and immunodiagnostic system (ECiQ).
- **Medical Sales Engineer, and Field Service Engineer, Tehran, Iran** 1/2005-10/2006
BNM Medical Company-distributor of Ortho Clinical Diagnostic (Johnson and Johnson)
- **Field Service Engineer, Tehran, Iran** 11/2003-1/2005
Dana Tashkhis Diagnostic Medical Company
Certified field engineer of ESR analyzers, ELISA washer and reader, Chromatography systems and EXCELL cell counter from DREW scientific British corp.
- **Co-op, Tehran, Iran** 1/2001-7/2001
Biomedical Engineering department of Imam Hospital
General training for different clinical biomedical equipment.

EDUCATION

- **The University of British Columbia, Vancouver, Canada**
PhD in Biomedical Engineering (Biomaterials) 5/2008 – 5/2013
Thesis: Local Delivery of Antimicrobial Peptides from Titanium Surface for the Prevention of Implant-Associated Infections.
- **Azad University, Science & Research Branch (SRBIAU), Tehran, Iran**
MSc in Biomedical Engineering (Biomaterials) 1/2002-1/2005
Thesis: Fabrication of Gealtin-Hydroxyapatite Scaffolds for Bone Tissue Engineering
- **Azad University (IAU), Tehran, Iran**
BSc in Biomedical Engineering 1/1997-7/2001

SELECTED AWARDS AND HONORS

- **Two-Year Mitacs Elevate Postdoctoral Fellowship** 8/2013
- **Two-Year Industrial R&D Fellowships (NSERC-IRDF) (pre-approved/declined)** 4/2013
- **Faculty of Applied Science Graduate Award, UBC** 3/2013
- **University Graduate Fellowship (UGF), UBC** 5/2011-9/2012
- **Natural Sciences and Engineering Research Council of Canada (NSERC) Scholarship, UBC** 5/2009-5/2011
- **Cy and Emerald KEYES Scholarship, UBC** 11/2010
- **Travel Award at Canadian Biomaterials Society, Quebec city, Canada** 6/2009
- **National Organization for Development of Talents award, Iran University of Medical Sciences** 1/2008
- **Reviewer** of Journal of Tissue Engineering, Biomedical Materials Research: Part A (JBMR-A), Iranian Journal of Biotechnology (IJB), and Journal of Progress in Biomaterials
- **Authored Biomaterials paper:** Antimicrobial peptides on calcium phosphate-coated titanium for the prevention of implant-associated infections has been selected as the 15 most important publications at the center for hip health and mobility (CHHM) for the UBC Faculty of Medicine Centre Self-Study Report.

CONTRIBUTIONS AND STATEMENTS

- I have published and presented over 20 **articles** in high profile journals and conference proceedings.
- Three **patents** (Rec. No. 50636, SN. 006679/87-A, Rec. No. 38093, SN. 005366/82-A, Rec. No. 38094, SN. 005365/82-A)
- Two **academic Book Translations** (MRI Basic Principles and Applications 2006, ISBN:964-96658-6-2, and Laser Damage in Optical Materials ISBN: 964-6096-60-3).

* References are available upon request.