

Curriculum Vitae

Amin Mohamadi, MD, MPH

Research Fellow at
Harvard Medical School
Center for Advanced Orthopaedic Studies
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SUMMARY

I am a physician scientist and I am passionate and curious about the unique resilience and adaptivity of humans. I received my M.D. and Master of Public Health from Tehran University of Medical Sciences. Ever since I was a medical student, I have been interested in research and the different ways in which medical practitioners could contribute to scientific production and not merely be the user.

In order to pursue my academic adventures, after graduation and finishing my nationally required clinical service, I joined Massachusetts General Hospital in 2015 to focus on clinical research. With insight from my clinical research, I realized that “the best available” diagnostic or therapeutic modalities do not always address patients’ needs successfully; therefore, I decided to focus more on translational research to further develop medical modalities. Inspired by the multidisciplinary scientific environment of the Center for Advanced Orthopaedic Studies (CAOS), I joined Beth Israel Deaconess Medical Center. Here at CAOS, I have the opportunity to work with world-renowned scientists, engineers and clinicians to utilize the best of bench research to improve patient care. With the mentorship of Professor Brian Snyder, MD PhD and Dr. Ara Nazarian, Dr.Sc, I conduct translational research in a wide spectrum of orthopaedic and trauma surgery.

I aspire to become an academic trauma surgeon to care for patients in critical conditions. By dedicating my clinical practice and academic endeavors to the field of critical and acute trauma, I desire to achieve my ultimate goal of helping patients and their families to restore their well being, not only through addressing illnesses but also through building competence and resiliency.

Aside from my professional life, I enjoy gardening, hiking and simply spending time in nature.

EDUCATION

- 09/15— Harvard Catalyst Certificate in Applied Biostatistics; Harvard Medical School,
06/16 MA, USA
- 02/04— Medical Doctorate; Tehran University of Medical Sciences, Iran
- 01/12 GPA: 16.18 / 20 (equivalent to A) Graduated with *Distinguished* rank (highest
honor rank), Thesis distinction 20/20
- 02/07— Master of Public Health; Tehran University of Medical Sciences, Iran
- 01/12 GPA: 16.97 / 20 (equivalent to A) Graduated with *Distinguished* rank (highest
honor rank), Thesis distinction 20/20 (equivalent to A+)
Focus on Clinical Research
M.D., M.P.H. Thesis: Adherence to international and domestic ethical codes in
randomized clinical trials dissertations and final reports' researches
- 09/97— High School in National Organization for Development of Exceptional Talents.
- 05/03 GPA: 19.01/20 (equivalent to A+)

CURRENT LICENSURE AND CERTIFICATION

2012— MEDICAL COUNCIL OF IRAN

Present

HARVARD CERTIFICATE ON BIOSTATISTICS

GOETHE-ZERTIFIKAT B2 IN GERMAN LANGUAGE PROFICIENCY

PROFESSIONAL SOCIETY MEMBERSHIPS

2012— MEDICAL COUNCIL OF IRAN, PERMANENT MEDICAL LICENSURE

Present

2017— NEW ENGLAND ORTHOPEDIC SOCIETY

Present

2017— ORTHOPAEDIC RESEARCH SOCIETY

Present

CLINICAL EXPERIENCE

- 03/13 General Practitioner at Emergency department, Ali asghar hospital
09/14 Beyram, Iran
- 09/12— General Practitioner in *Salamat* Emergency Medical Center, Tehran, Iran
03/13
- 04/10— Clinical Internship, Teaching Hospitals affiliated to Tehran University
10/11 of Medical Sciences, Iran
- 10/09— Clerkship at the departments of Orthopaedics and trauma surgery, at the
12/09 university medical center of the Johannes Gutenberg University, Mainz,
Germany

RESEARCH EXPERIENCE

- 04/16— Postdoctoral Research Fellow, Center for Advanced Orthopaedic Studies,
Present Department of orthopedics, Beth Israel Deaconess Medical Center.
Department of Orthopaedic surgery, Harvard Medical School. Boston, MA
PIs: Brian Snyder M.D., Ph.D. and Ara Nazarian PhD.
Main focus of my studies is dynamic evaluation of cervical spine, translational experiments on bone regeneration in metabolic bone diseases of severely ill animal models as well as *ex-vivo* studies comparing various fixation methods for simulated fractures and musculoskeletal injuries. I also conduct meta-analyses comparing safety, efficacy of several treatment, diagnostic modalities as well as development of predictive models for patients' outcome.
- 03/15— Postdoctoral Research Fellow, Orthopedic Hand and Upper Extremity
04/16 Service, Boston, Massachusetts General Hospital, Boston, MA
PIs: David C. Ring M.D., Ph.D. and Neal C. Chen M.D.
The main focus of my clinical studies was health care utilization and patients' outcomes in the upper extremities and wrist problems. Also I worked on three-dimensional modeling of scaphoid fractures, fracture mapping and

classifications. In addition, I worked on psychological studies within orthopedic departments in order to identify patient characteristics that put certain patients at higher risk of unfavorable outcomes.

09/14— Research associate, Knee and Sport Medicine Research Center, Milad
02/15 Hospital, Tehran, Iran

PI: Hamidreza Aslani M.D.

I worked on foundation of a new research center, and particularly on developing an arthroplasty registry to track patient outcome after knee and hip arthroplasty. I also performed outcome research assessing knee arthroplasty within the Milad hospital, the largest medical center in Iran.

09/08— Research Assistant, Noor Eye Hospital, Tehran, Iran

03/09 PI: Hassan Ghazizadeh Hashemi, MD

Involved with clinical research, data acquisition and statistical analysis in order to compare various surgical modalities for refractive eye surgery

05/08— Summer Research Student, Medical Physiology department, Tarbiat Modares
10/08 University, Tehran, Iran

PI: Alireza Mani, MD, PhD.

I was involved with basic science research in an interdisciplinary team evaluating pathophysiologic response to critical conditions such as septicemia. More specifically, I performed animal experiments, data acquisition and performed non-linear mathematical modeling and statistical analysis and scientific report preparations.

PUBLICATIONS

2018 **Mohamadi A**, Chan JJ, Lian J, Wright CL, Marin AM, Rodriguez EK, von Keudell A, Nazarian A. Risk Factors and Pooled Rate of Prolonged Opioid Use Following Trauma or Surgery: a Systematic Review and Meta-(Regression)Analysis. *Journal of Bone and Joint Surgery*. 2018 Aug 1; 100 (15): 1332-1340

2018 Daly LT, Daly MC, **Mohamadi A**, Chen N. Chronic Scapholunate Interosseous Ligament Disruption: A Systematic Review and Meta-Analysis of

Surgical Treatments. *Hand (NY)*. 2018 Jul 20

- 2018 Yazdi H, Nazarian A, Wu JS, Hafezi P, Babikian M, **Mohamadi A**, Pakdaman R, Ghorbanhoseini M. Different References for Valgus Cut Angle in Total Knee Arthroplasty. *The Archives of Bone and Joint Surgery*. 2018 May 28.
- 2018 Spang III RC, Nasr MC, **Mohamadi A**, DeAngelis JP, Nazarian A, Ramappa AJ. Rehabilitation following meniscal repair: a systematic review. *BMJ Open Sport & Exercise Medicine*. 2018 Apr 1;4(1):e000212.
- 2018 Talaei-Khoei M, **Mohamadi A**, Fischerauer S.F, Ring D, Vranceanu A.M. Type D personality in patients with upper extremity musculoskeletal illness: Internal consistency, structural validity and relationship to pain interference. *General Hospital Psychiatry*. 2018 Jan 1;50:38-44.
- 2017 Serino J, **Mohamadi A**, Orman S, McCormick B, Hanna P, Weaver M.J, Harris M.B, Nazarian A, von Keudell A. Comparison of adverse events and postoperative mobilization following knee extensor mechanism rupture repair: A systematic review and network meta-analysis. *Injury*. 2017 Dec;48(12):2793-2799 <http://dx.doi.org/10.1016/j.injury.2017.10.013>
- 2017 Zheng M, **Mohamadi A**, Szabo T, Snyder B. Evaluation of in-vivo kinematics of cervical spines by co-registering dynamic ultrasound with MRI. *2017 IEEE International Ultrasonics Symposium (IUS)*, (pp. 1-4). (Conference proceeding)
- 2017 Zheng M, **Mohamadi A**, Szabo T, Snyder B. Long-term movement analysis of cervical vertebrae with normalized cross-correlation and subsample estimation. *In Ultrasonics Symposium (IUS), 2017 IEEE International Ultrasonics Symposium (IUS)*, (pp. 1-4). (Conference proceeding)
- 2017 Von Keudell A *, **Mohamadi A ***, Bargon C.A, Jupiter J.B. Open Reduction and Internal Fixation for Lateral Unicondylar Distal Humeral Fractures. *JBJS Essential Surgical Techniques*, 2017 Apr 26; 7 (2): e12
*: Co-first authors
- 2017 **Mohamadi A**, Chan J.J, Claessen F.M.A.P, Ring D, Chen N.C. Corticosteroid Injections Give Small and Transient Pain Relief in Rotator Cuff Tendinosis: A

- Meta-analysis. *Clinical Orthopaedics and Related Research*, 475(1), 232-243.
- 2017 **Mohamadi A**, Claessen F.M.A.P, Ozkan S, Ring D, Chen N. Diagnostic wrist arthroscopy for nonspecific wrist pain. *Hand (NY)*, 2017; 12(2): 193-196.
- 2016 Zheng M, **Mohamadi A**, Szabo T, Snyder B. *In-vivo* cervical spine FSU dynamic motion measured by dual ultrasound: The effect of muscle activation. 2016 *IEEE International Ultrasonics Symposium (IUS)*, (pp. 1-4). (Conference proceeding)
- 2016 Talaei-Khoei M, **Mohamadi A**, Mellema, J.J, Tourjee, S.M, Ring D, Vranceanu, A.M. The direct and indirect effects of the negative affectivity trait on self reported physical function among patients with upper extremity conditions. *Psychiatry Research*, 2016; 246:568-572.
- 2016 Aslani H, Nourbakhsh S.T, Lahiji F.A, Heydarian K, Jabalameli M, Ghazavi M.T, Tahmasebi M.N, Fayyaz M.R, Sazegari M.A, Mohaddes M, Rajabpour M, Emami M, Jazayeri S.M, Madadi F, Farahini H, Mirzatoloe F, Gharahdaghi M, Ebrahimzadeh M.H, Ebrahimian M, Mirvakili H, Bashti K, Almasizadeh M, Abolghasemian M, Taheriazam A, Motififard M, Yazdi H, Mobarakeh M.K, Shayestehazar M, Moghtadae M, Siavashi B, Sajjadi, M.M, Rasi A.M, Chabok S.K, Zafarani Z, Salehi S, Ahmadi M, **Mohammadi A**, Shahsavand M.E. Iranian Joint Registry (Iranian National Hip and Knee Arthroplasty Registry). *The Archives of Bone and Joint Surgery*. 2016;4(2):192-6.
- 2016 **Mohamadi A**, Davoodi-Makinejad M, Azimi A, Nafissi S. Personality characteristics in MS patients: the role of avoidant personality. *Clinical Neurology and Neurosurgery*; 2016;144:23-7.
- 2015 Aeenparast A, Maftoon F, Farzadi F, **Mohamadi A**. Waiting time for first outpatient visit in specialty level: assessing the provider related factors. *Archives of Iranian Medicine*. 2015; 18(3) 185-188.
- 2014 **Mohamadi A**, Asghari F, Rashidian A. Continuing review of ethics in clinical trials: a surveillance study in Iran. *Journal of Medical Ethics and History of Medicine*. 2014; 7: 22.

- 2013 Khalaj AR, Miri S.R, Porlashkari M, **Mohamadi A**. Prophylactic Anti-Emetic Effect of Dexamethasone and Metoclopramide on the Nausea and Vomiting Induced by Laparoscopic Cholecystectomy: A Randomized, Double Blind, Placebo-Controlled Trial. *Journal of Minimally Invasive Surgical Sciences*. 2013;2(1):18–22.
- 2013 Yahyazadeh-Jabbari S.H, Malekpour N, Mousavi M, Molanayi S, Salmanian B, **Mohamadi A**. Malignant Retroperitoneal Hemangiopericytoma: Report of a 73 Years Old Woman and Review of Literature. *Thrita*. 2013; 2(2): 80-3.
- 2012 Gholami M, Mazaheri M, **Mohamadi A**, Dehpour T, Safari F, Hajizadeh S, Moore K.P, Mani AR. Endotoxemia is associated with partial uncoupling of cardiac pacemaker from cholinergic neural control in rats. *Shock*. 37(2):219-27
- 2011 Gholami M, Hajizadeh S, **Mohamadi A**, Mazaheri P, Mani AR. Endotoxemia impairs chronotropic responsiveness to cholinergic stimulation and decreases heart rate variability in conscious rats. *Inflammation Research* 60, 147-147 (Conference proceeding)
- 2011 Gholami M, Mazaheri P, **Mohamadi A**, Mani A.R. Heart rate dynamics during systemic inflammation. *Inflammation Research* 60, 147-147 (Conference proceeding)
- 2009 Mirghasemi A, **Mohamadi A**, Majles-Ara A, Rahimi-Gabaran N, Sadat M.M. Completely Displaced S-1/S-2 Growth Plate Fracture in an Adolescent: Case Report and Review of Literature. *Journal of Orthopaedic Trauma*. 2009; 23(10):734-8.

MANUSCRIPTS IN PRESS

- 2018 Mortensen SJ*, Vora MM*, **Mohamadi A***, Wright CL, Hanna P, Lechtig A, Egan J, Williamson PM, Wixted JJ, Rutkove SB, Nazarian A. Diagnostic modalities for acute compartment syndrome of the extremities - a systematic review. Accepted for publication at *JAMA Surgery* (August 28th, 2018)
*:Co-first authors
- 2018 Anez-Bustillos L, Cowan E, Cubria MB, Villa-Camacho JC, **Mohamadi A**, Dao DT, Pan AH, Baker MA, Fell GL, Nandivada P, Nazarian A, Puder M. Sex-Dependent Effects of Dietary Omega-3 Fatty Acids in Healthy Mice.

Accepted for publication at *Clinical Nutrition* (August 28th, 2018)

- 2018 Bhashyam AR, Usoro A, **Mohamadi A**, Dyer GSM, Zirkle L, von Keudell A. Clinical Outcomes and Complications of the Surgical Implant Generation Network (SIGN) Intramedullary Nail: A Systematic Review and Meta-analysis. Accepted for publication at *Journal of Orthopaedic Trauma* (August 27th, 2018)
- 2018 Lian J*, **Mohamadi A***, Chan J, Hanna P, Lechtig A, Nazarian A. Comparative Efficacy and Safety of Nonsurgical Treatment Options for Enthesopathy of Extensor Carpi Radialis Brevis: A Systematic Review and Meta-Analysis of Randomized Placebo-Controlled Trials. Accepted for publication at *American Journal of Sport Medicine* (July 31st, 2018)
*:Co-first authors
- 2018 Serebrakian AT, Varon DE, Pickrell BB, Halvorson EG, Grinstaff MW, **Mohamadi A**, Nazarian A, Rodriguez EK, Sinha I. Meta-Analysis and Systematic Review of Split-Thickness Skin Graft Donor-Site Dressings: An Update with Guidelines for Future Studies. Accepted for publication at *Plastic and Reconstructive Surgery – Global Open* (June 25th, 2018)

SELECTED PRESENTATIONS

- 2018 Chan JJ, Kaiser P, **Mohamadi A**, Stupay K, DiGiovanni C, Jeng C, Cerrato R, Vulcano E. Factors Influencing Treatment Recommendations For Base of 5th Metatarsal Fractures In Orthopaedic Residency Programs
Poster presentation at AOFAS Annual Meeting 2018, Boston, MA
- 2018 **Mohamadi A**, Lian J, Chan J, Hanna P, Lechtig A, Nazarian A. Comparative Efficacy and Safety of Nonsurgical Treatment Options for Enthesopathy of Extensor Carpi Radialis Brevis: A Systematic Review and Meta-Analysis of Randomized Placebo-Controlled Trials.
Poster presentation at the Harvard Orthopedic Trauma Research Day, Boston, MA.

- 2018 **Mohamadi A**, Chan J.J, Lian J, Wright C.L, Marine A.M, Rodriguez, E.K, von Keudell A, Nazarian A. Risk Factors and Pooled Rate of Prolonged Opioid Use Following Trauma or Surgery: a Systematic Review and Meta-(Regression)Analysis.
Podium presentation at Orthopedic Research Society (ORS), 2018 Annual Meeting, New Orleans, LA
- 2018 Serino J, **Mohamadi A**, Orman S, McCormick B, Hanna P, Weaver MJ, Harris MB, Nazarian A, von Keudell A. Comparison of adverse events and postoperative mobilization following knee extensor mechanism rupture repair: A systematic review and network meta-analysis.
Poster presentation at Orthopedic Research Society (ORS), 2018 Annual Meeting, New Orleans, LA
- 2018 Orman S, **Mohamadi A**, Serino J, Hanna P, Murphy J, Weaver MJ; Dyer G, Nazarian A, von Keudell A. Comparison Of Surgical And Non-surgical Treatments For 3 And 4-part Proximal Humerus Fractures In Elderly Patients: A Network Meta-analysis
Podium presentation at American Academy of Orthopedic Surgeons (AAOS), 2018 Annual Meeting, New Orleans, LA
- 2018 Zheng M, **Mohamadi A**, Szabo LT, Snyder BD. Effects of Motion Blurring and Tissue Artifacts on Accuracy of Bone Motion Analysis Using Ultrasound
Poster presentation at Orthopedic Research Society (ORS), 2018 Annual Meeting, New Orleans, LA
- 2018 Zheng M, **Mohamadi A**, Szabo LT, Snyder BD. Cervical Spine Kinematics from Dynamic Ultrasound Images Co-Registered to Patient-specific 3D MRI
Poster presentation at Orthopedic Research Society (ORS), 2018 Annual Meeting, New Orleans, LA
- 2018 **Mohamadi A**, Chan J.J, Lian J, Wright C.L, Marine A.M, Rodriguez, E.K, von Keudell A, Nazarian A. Risk Factors and Pooled Rate of Prolonged Opioid Use Following Trauma or Surgery: a Systematic Review and Meta-(Regression)Analysis.
Poster presentation at American Academy of Orthopedic Surgeons (AAOS), 2018 Annual Meeting, New Orleans, LA

- 2017 **Mohamadi A**, Chan J.J, Lian J, Wright C.L, Marine A.M, Rodriguez, E.K, von Keudell A, Nazarian A. Risk Factors and Pooled Rate of Prolonged Opioid Use Following Trauma or Surgery: a Systematic Review and Meta-(Regression)Analysis.
Podium presentation at the New England Orthopedic Society, 2017 Fall Meeting, Waltham, MA.
- 2017 **Mohamadi, A**, Chan J, Lian J, Rodriguez E.K, von Keudell A, Nazarian A. The pooled rate and risk factors for prolonged opioid use after major surgery or trauma: a systematic review and meta-analysis.
Podium presentation at the Harvard Orthopedic Trauma Research Day, Boston, MA.
- 2017 **Mohamadi A**, Zheng M, Snyder BD. Ultrasound is a Reliable Modality for Measuring Cervical Spine Intervertebral Disk Height.
Poster presentation at the Orthopedic Research Society (ORS), 2017 Annual Meeting, San Diego, CA.
- 2017 Zheng M, **Mohamadi A**, Szabo LT, Snyder BD. Real Time *In-vivo* Cervical Functional Spine Unit Kinematics Evaluated by Merging Static MRI with Dynamic Ultrasound Images
Poster presentation at the Orthopedic Research Society (ORS), 2017 Annual Meeting, San Diego, CA.
- 2017 von Keudell A, Kachooei A, Nasr M, **Mohamadi A**, Okajima S, Egan J, Dyer GSM, Nazarian A. Biomechanical properties of a new intramedullary suture anchor fixation compared to tension band wiring in osteoporotic olecranon fractures.
Poster presentation at the Orthopedic Research Society (ORS), 2017 Annual Meeting, San Diego, CA.
- 2017 **Mohamadi A**, Egan J, Nevett M, Ierardi K, Okajima S, Vrahas M, Rodriguez EK, Nazarian A, Weaver M. The Effect of Various Lateral Locking Plate Configurations on the Fixation Stiffness in Osteoporotic Femoral Sawbones.
Poster presentation at the Orthopedic Research Society (ORS), 2017 Annual Meeting, San Diego, CA.

- 2017 Usoro A, Bhashyam AR, **Mohamadi A**, Dyer GS, Zirkle LG, von Keudell A. Clinical Outcomes and Complications of the SIGN Intramedullary Nail: A Systematic Review and Meta-Analysis.
Poster presentation at Orthopaedic Trauma Association (OTA) 2017 Annual Meeting, Vancouver, BC.
- 2017 Orman S, **Mohamadi A**, Serino J, Hanna P, Murphy J, Weaver MJ; Dyer G, Nazarian A, von Keudell A. Comparison of Surgical and Nonsurgical Treatments for 3 and 4-Part Proximal Humerus Fractures in Patients Over 65 Years: A Network Meta-Analysis.
Poster presentation at Orthopaedic Trauma Association (OTA) 2017 Annual Meeting, Vancouver, BC.
- 2017 Zheng M, **Mohamadi A**, Szabo T, Snyder B. Long-term movement analysis of cervical vertebrae with normalized cross-correlation and subsample estimation. Poster presentation at Ultrasonics Symposium (IUS), 2017, Washington, DC.
- 2017 Zheng M, **Mohamadi A**, Szabo T, Snyder B. Evaluation of *in-vivo* kinematics of cervical spines by co-registering dynamic ultrasound with MRI. Poster presentation at Ultrasonics Symposium (IUS), 2017, Washington, DC.
- 2016 Zheng M, **Mohamadi A**, Szabo T, Snyder B. *In-vivo* cervical spine FSU dynamic motion measured by dual ultrasound: The effect of muscle activation. Poster presentation at Ultrasonics Symposium (IUS) 2016, Tours, France.
- 2017 Daly LT, Daly MC, **Mohamadi A**, Chen N. Scapholunate Interosseous Ligament Reconstruction: A Systematic Review and Meta-Analysis.
Poster presentation at American association for hand surgery (AAHS) 2017 Waikoloa, HI.
- 2017 **Mohamadi A**, Masoudi A, Chaus GW, Vrahas MS, Rodriguez EK, Nazarian A, Weaver MJ. The Effect of Surgeon Controlled Factors on Fixation Stiffness in Lateral Locked Plating of Distal Femoral Fractures.
Poster presentation at the Orthopedic Research Society (ORS), 2017 Annual Meeting, San Diego, CA.
- 2016 Zheng M, **Mohamadi A**, Szabo LT, Snyder BD. Clinical Ultrasound Can Measure Static and Dynamic Cervical Spine Intervertebral Disc Heights. Poster presentation at The Radiological Society of North America (RSNA)

2017 Chicago IL.

- 2016 von Keudell A, Kachooei A, Nasr M, **Mohamadi A**, Okajima S, Egan J, Dyer GSM, Nazarian A. Biomechanical properties of a new intramedullary suture anchor fixation compared to tension band wiring in osteoporotic olecranon fractures.
Poster presentation at Annual Research Poster Symposium, Massachusetts Medical Society, Waltham, MA.
Awarded the second best presentation
- 2016 **Mohamadi A**, Kootstra T, Ring D, Chen N. Change of diagnosis after wrist arthroscopy.
Podium presentation at the 27th Annual Richard J. Smith, M.D. Day, Harvard Medical School; Boston, MA.
- 2015 **Mohamadi A**, Claessen F.M.A.P, Ozkan S, Ring D, Chen N. Diagnostic wrist arthroscopy for nonspecific wrist pain.
Podium presentation at the 43th New England Hand Society Annual Meeting; Sturbridge, MA.
- 2015 **Mohamadi A**, Kachooei A.R, Moradi A, Janssen S.J, Ring D. The Influence of Dominant Limb Involvement on DASH and QuickDASH.
Podium presentation at the 26th Annual Richard J. Smith Day. Harvard Medical School; Boston, MA.
- 2014 **Mohamadi A**, Yahyazadeh-Jabari S.H, Beheshtie M. Pineal region tumors; a 10 year experience in Iran.
Podium presentation at the 24th IMSSC; Istanbul, Turkey
- 2007 **Mohamadi A**, Rahimian N, Yeganeh O, Salavati A. A method for human normal thyroid cell culture for subsequent mitogenic agent studies.
The 8th International Conference of Medical Sciences students; Shiraz, Iran

- 2006 **Mohamadi A**, Masoom N, Karimyan N. The effect of heat shock proteins on apoptosis in neurodegenerative disease (Awarded with TUMS travel grant) 20th International Conference of Medical Sciences Student; Istanbul, Turkey

REPORT OF TECHNOLOGY DEVELOPMENT

- 2017 **Ultrasound-based technique for evaluation of dynamic spinal motion**
We developed an ultrasound-based technique that provides a non-invasive, realtime, quantitative, *in-vivo* image of the C-spine that allows for assessment of the dynamic motion of contiguous functional spinal units. For this propose, we also developed a multiframe method that enables accurate tracking of the motion of vertebra from ultrasound radio-frequency data for dynamic assessments over an extended time without error accumulation.
- 2014 **Iranian Joint Registry (WWW.IJR.IR):**
As a group, developed a nationwide web-based registry for joint replacement surgeries to track arthroplasty outcomes in term of implant survival, complications and revisions. Responsible for preparing comparative review of similar international databases, preparing data sets and developing medical algorithms and interactive data forms. Also member of quality assessment and project management team.
- 2013 **Cancer Outcome Database of Milad Hospital:**
In a group with health information technologists, developed a web based Cancer registry at Milad Hospital as a tertiary referral hospital based on ICD-10 codes for survival analysis to record baseline evaluation, histopathology records, medical and surgical treatments, follow-ups and outcome of patients.

PEER REVIEW

- 2018— Present *Clinical Orthopaedics and Related Research*
- 2017— Present *BMC Musculoskeletal Disorders*
- 2016— Present *PlosOne*

- 2015— Present *Archive of Bone and Joint Surgery*
- 09/12— 03/15 *Thrita Journal*
- 2011 Scientific jury
The 12th Students 'International Conference on Biomedical and Interdisciplinary Research, Isfahan. Iran
- 2008 Scientific jury and board member
Annual young researchers' conference of Golestan university of medical sciences, Gorgan. Iran

INDUSTRIAL EXPERIENCE

- 04/12— Clinical Trials Supervisor; medical affair
- 07/12 Aryogen Biopharma pharmaceutical company, Iran

INTERNATIONAL ACADEMIC EXPERIENCE

- 08/08 European Summer Academy on Bioethics, held by: Heinrich Pesch Haus/Center for applied ethics, Ludwigshafen, Germany
- 03/09 European Spring Event on Neuroethics, held by Heinrich Pesch Haus/center for applied ethics, Ludwigshafen, Germany

MAJOR ADMINISTRATIVE LEADERSHIP POSITIONS

- 08/14— General Secretary, Committee of Medical Ethics
- 02/15 Milad Hospital, Iran
- 10/06— Director, Students' Scientific Research Center
- 11/07 Tehran University of Medical Sciences, Iran

ACADEMIC / PROFESSIONAL SERVICE

- 09/13— Committee of Medical Ethics
- 02/15 Milad Hospital, Iran

- 06/06— Research Council of SSRC
 10/11 Tehran University of Medical Sciences, Iran
 01/07— Advisory Council for medical student research policy setting
 01/09 Ministry of Health and Medical Education, IR Iran

REPORT OF LECTURES AND TRAININGS AND PRESENTATIONS _____

- 2013— Patient Safety and Risk Management in Hospitals
 2015 Weekly lectures with problem solving discussion, Milad Hospital, Tehran, Iran
 2008, Science Olympiad preparation courses (Biology)
 2011 National Organization for Development of Exceptional Talents schools, Arak, Iran
 2006— Research Methodology and Bio statistical methods workshops for biomedical
 2010 students
 Students' Scientific Research center, Tehran University of Medical Sciences, Tehran, Iran

REPORT OF FUNDED AND UNFUNDED PROJECTS _____

- 2016— Development of Ultrasound to Measure *In-vivo* Dynamic Cervical Spine
 Present Intervertebral Disc Mechanics, DoD grant
 2016— Biomechanical properties of a new intramedullary suture anchor fixation
 2017 compared to tension band wiring in osteoporotic olecranon fractures. Supported by AO North America research grant.
 2015— Retrospective assessment of wrist arthroscopy utilization as diagnostic or
 2016 therapeutic procedure in three urban hospitals
 Three dimensional mapping and classification of scaphoid fractures
 Prospective studies of psychological factors associated with arm illness and pain
 2013— DIREG_C_05765 sponsored by sanofi-aventis
 2014 Registry of treatment patterns in patients with metastatic castration-resistant prostate cancer (mCRPC) with progression during or after Docetaxel-Based

regimen, Site collaborating investigator

- 2010— Evaluation of adherence to the international and domestic codes of ethics in
2012 randomized clinical trials dissertations and study reports at Tehran University of
Medical Science hospitals (M.D.- M.P.H. Thesis)
Institutional training grant, Tehran University of Medical Sciences/ 85-9523
Collaborating Investigator
The goal of this study was to assess adherence to the international and domestic
codes of ethics in randomized clinical trials sponsored by Tehran University of
Medical Sciences or taken placed in affiliated hospitals of this university.
Secondarily, we aimed to assess effects of administrative and regulatory
proceedings of this university and national committee of medical ethics on
reported adherence to the ethical codes.
- 2010— Evaluation of prophylactic anti-emetic effect of Dexamethasone in patients
2012 undergoing elective laparoscopic cholecystectomy in comparison with
Metoclopramide and placebo (IRCT ID: IRCT201112088329N1)
Institutional training grant, Shahed University/ P 162/78
Collaborating Investigator
Aim of this study was to evaluate the prophylactic anti-emetic effect of
dexamethasone 8 mg IV in patients undergoing elective laparoscopic
cholecystectomy. In this double-blinded placebo controlled clinical trial we
assessed postoperative episodes of vomiting as well as sensation of nausea for 24
hours.
- 2005— Evaluation of effect of low level laser (810 nm) irradiation on normal thyroid
2006 tissue cell function *in-vitro*.
Institutional training grant, Tehran University of Medical Sciences/ 85-9523
Collaborating Investigator
The goal of this study was to harvest normal human follicular thyroid cell and
assess cell proliferation and activity under laser irradiation *in-vitro*.

REPORT OF EDUCATION OF PATIENTS AND SERVICE TO THE COMMUNITY _____

2013 Milad Hospital, Researcher

- Signs and symptoms of breast cancer and breast self exam for outpatients and staff
- 2010 Town Health Center, Medical Intern
Gave a presentation about the healthy nutrition and importance of breakfast school students
- 2008 Rural Health Center, Medical Student
Gave a presentation about the hazards of unsafe behavior and HIV transmission ways to High school students in suburban districts of Tehran

HONORS AND PRIZES

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| 2018 | Travel Award to present study at Orthopaedic Research Society, New Orleans, LA | Orthopaedic Department, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA |
| 2017 | Travel Award to present study at Orthopaedic Research Society, San Diego, CA | Orthopaedic Department, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA |
| 2016 | The Eleventh Annual Research Poster Symposium, Second Place Winner | Massachusetts Medical Society, Waltham, MA |
| 2014—
2015 | Secretary General of Hospital Committee of ethics | Milad Hospital, Tehran, Iran |
| 2014 | Membership and head jury of Internal Audit for clinical excellence | Milad Hospital, Tehran, Iran |
| 2013 | Membership of Hospital Committee of ethics | Milad Hospital, Tehran, Iran |
| 2012 | Graduate with highest rank for thesis (<i>Distinguished MD</i> , MPH thesis) | Tehran University of Medical Sciences, Tehran, Iran |
| 2012 | Fellow of National Foundation of Elites, Based on academic achievements; exempted from | Iran's National Elites Foundation, Tehran, Iran |

mandatory military service

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| 2011 | Special award for the Third place in nationwide scientific competition, <i>The Third National Medical Science Student Olympiad</i> (in the field of health system management) | Deputy for Education
Ministry of Health and Medical
Education of IR Iran |
| 2011 | Membership of Exceptional Talented students of the University Due to achievements in 3 rd academic Olympiad of Medical Students | Vice-chancellor for Education of
Tehran University of Medical
Sciences |
| 2009 | Travel Grant for clerkship in Orthopaedics and Trauma surgery department of Johannes Gutenberg University Hospital, Mainz, Germany | European Life Scientist Organization
(ELSO), Heidelberg, Germany |
| 2008 | Travel Grant for participating European Summer Academy on Bioethics | Heinrich Pesch Haus, Ludwigshafen,
Germany |
| 2007 | Awarded as director of The Best Medical Science Students' Research Committee in the 13th Razi Research Festival on Medical Sciences, A nationwide research festival | By the Vice President of I.R. Iran |
| 2006 | Travel Award for presentation at the 20 th International Medical Sciences Student Conference, Istanbul, Turkey | Tehran University of Medical
Sciences, deputy for research |
| 2006 | Endorsed to start a MPH program as a dual degree MD-MPH program for a selected number of students at Tehran University of Medical Sciences | Tehran University of Medical
Sciences, School of Public Health |
| 2003 | Best Rank in National Universities entrance exam in Markazi Province and | General Governor of Markazi
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ranked 41st in Iran in Nationwide Universities entrance exam (among more than 500,000 participants)

2002 First place in Markazi province, and Ministry of Education, Markazi
12th place in Iran, in nationwide Province
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Parvin Pasalar, Msc. PhD. Role: Director of Exceptional Talent Development Center and Supervisor of Students' Scientific Research Center

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