

CURRICULUM VITAE
JAMES H-C. WANG, PhD
BIOGRAPHICAL

Business Address: *MechanoBiology Laboratory*
Department of Orthopaedic Surgery
University of Pittsburgh School of
Medicine, 210 Lothrop St., BST,
E1640, Pittsburgh, PA 15213

E-mail: wanghc@pitt.edu

Business Phone: (412) 648-9102 **Business Fax:** (412) 648-8548

EDUCATION and TRAINING

UNDERGRADUATE:

| | | | |
|-------------|---|------------|---|
| 7/1978-7/82 | Tongji University Shanghai, P.R. China | B.S., 1982 | Prof. Zhu-Xing Zhang (Advisor) Engineering Mechanics |
|-------------|---|------------|---|

GRADUATE:

| | | | |
|-------------|---|-------------|---|
| 9/1985-3/89 | Tongji University Shanghai, P.R. China | M.S., 1989 | Prof. Qing-Chen Zhao (Advisor) Experimental Biomechanics |
| 7/1992-7/96 | University of Cincinnati Cincinnati, OH, USA | Ph.D., 1996 | Edward S. Grood, Ph.D. (Advisor) Bioengineering |

POST-GRADUATE:

| | | | |
|-----------|--|--|--|
| 1991-1992 | Texas Tech Univ Health Sci. Center El Paso, TX, USA | | Jaiyoung Ryu, M.D. Orthopaedic Biomechanics |
| 1996-1997 | Johns Hopkins Medical School Baltimore, MD, USA | | Frank C-P. Yin, M.D., Ph.D. Pascal Goldschmidt, M.D. Cardiovascular Biology/ Biomedical Engineering |
| 1997-1998 | Washington University St Louis, MO, USA | | Frank C-P. Yin, M.D., Ph.D. Biomedical Engineering |

APPOINTMENTS and POSITIONS

ACADEMIC:

| | | |
|----------------|---|---------------------------------------|
| 8/2012-present | University of Pittsburgh School of Medicine Department of Orthopaedic Surgery | Professor (Tenured, Primary) |
| 8/2012-present | University of Pittsburgh Department of Bioengineering | Professor (Secondary) |
| 8/2012-present | University of Pittsburgh Department of Physical Medicine and Rehabilitation | Professor (Secondary) |
| 4/2012-present | University of Pittsburgh Department of Mechanical Engineering and Materials Sciences | Professor (Secondary) |
| 3/2005-7/2012 | University of Pittsburgh School of Medicine Department of Orthopaedic Surgery | Associate Professor (Tenured) |
| 3/2005-7/2012 | University of Pittsburgh Department of Bioengineering | Associate Professor (Secondary) |
| 3/2005-3/2012 | University of Pittsburgh Department of Mechanical Engineering & Materials Science | Associate Professor (Secondary) |
| 1/2007-7/2012 | University of Pittsburgh Department of Physical Medicine and Rehabilitation | Associate Professor (Secondary) |
| 1/2000-2/2005 | University of Pittsburgh School of Medicine MechanoBiology Laboratory Department of Orthopaedic Surgery | Assistant Professor (Primary) |
| 6/2000-2/2005 | University of Pittsburgh Department of Bioengineering | Assistant Professor (secondary) |
| 6/2000-2/2005 | University of Pittsburgh Department of Mechanical Engineering | Assistant Professor (secondary) |
| 11/2002-2005 | Tongji University Life Sci & Biomedical Research Institute | Adjunct Professor |
| 1998-1999 | University of Pittsburgh School of Medicine Musculoskeletal Research Center | Visiting Research Assistant Professor |

Department of Orthopaedic Surgery

| | | |
|-----------|--|-----------------------------|
| 1992-1996 | Noyes-Giannestras Biomech Lab and Cell & Molecular Biology Lab Departments of Aerospace & Engineering Mechanics, and Cell & Molecular Biology University of Cincinnati | Graduate Research Assistant |
| 1988-1991 | Department of Engineering Mechanics Tongji University, Shanghai, China | Instructor |
| 1985-1988 | Experimental Mechanics Lab Department of Engineering Mechanics Tongji University | Research Associate |
| 1982-1988 | Department of Engineering Mechanics Tongji University | Assistant Instructor |

MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

- Orthopaedic Research Society 2002 - present
- International Chinese Musculoskeletal Research Society (ICMRS) 2004 - present
- The Society for Physical Regulation in Biology and Medicine (SPRBM) 1996 - 2009
- Biomedical Engineering Society 1996 - present
- Tissue Engineering Society International 2004 - present

HONORS

Research:

- AIMBE Fellow 2015-
- President, International Chinese Musculoskeletal Research Society (ICMRS) 2015-2017
- President-Elect, International Chinese Musculoskeletal Research Society (ICMRS) 2013-2015
- National Science Foundation Review Panel 2015
- Academic Editor, PloS ONE 2013-
- Editorial Board, Journal of Orthopaedic Translation 2013-
- Editorial Board, AP Journal of SMART 2013-
- Editorial Board, Chinese Journal of Traumatology (English Edition) 2014-
- Editorial Board, Journal of Orthopaedic Surgery 2014-
- Associate Editor, BMC Musculoskeletal Disorders 2011-2014
- Research Grants Council (Hong Kong) 2011-2014
- Medical Research Council (UK) 2011-2012
- NIH ZRG1 CB-J 55R Special Emphasis Panel 2014
- NIH Reviewer for NIH Director's Early Independence Awards (DP5) 2014
- NIH Review Panel on Physiology and Pathobiology of Musculoskeletal,
Oral, and Skin Systems 2009-2013

- NIH Review Panel for the Diversity Fellowships (ZRG1 CVRS-S) Oral, and Skin Systems 2009
- NIH Review Panel for the Bioengineering Sciences & Technologies IRG (Ad hoc member) 2009
- NIH Review Panel for the GO Grant Applications 2009
- President of SPRBM[#] 2008-2009
[#] The Society for Physical Regulation in Biology and Medicine
- President-Elect of SPRBM 2007-2008
- Organizer and Chair for the “Cellular Biomechanics and Tissue Engineering” Session for the 16th International Conference on Mechanics in Medicine and Biology (ICMMB) 2008
- Program Chair for 2007 SPRBM Meeting, Hawaii, USA 2007
- Organizer and Chair for the Orthopedic Soft Tissue Biomechanics Session BMES Meeting 2007, LA, USA. 2007
- Organizer and Chair for the Computational Biomechanics and Engineering Symposium in APCOM'07-EPMEESC XI Congresses, Kyoto, Japan. 2007
- Organizer and Chair of the Symposium of Soft Tissue and Cell Mechanobiology, Chongqing, China. 2005
- National Science Foundation (NSF) Review Panel on “Biomaterials for scaffolding materials” 2007
- Arthritis Foundation Biomechanics/Technology Study Section Member 2005-2009
- National Science Foundation (NSF) Review Panel on “Nano and Bio Mechanics Program” 2008
- NIH Review Panel for “Special Emphasis Panel on Musculoskeletal Tissue Engineering”(Ad hoc member) 2008
- NIH Review Panel for “Bioengineering Sciences & Technologies IRG” (Ad hoc member) 2008
- NIH Review Panel on “Enabling Technologies for Tissue Engineering and Regenerative Medicine” (Ad hoc member) 2007
- Editorial Board Member for the Muscle, ligaments and Tendons Journal (M.L.T.J.) 2010-
- Board of Editorial Consultants for Journal of Biomechanics 2007-
- Board of Editorial Consultants for SMARTT Journal 2009-

- Editorial Consultant for Journal of Medical Biomechanics (Chinese) 2007-
- Editorial Board Member for Journal of Musculoskeletal Research (JMR) 2008-
- Guest Editor for Molecular and Cellular Biomechanics (MCB) 2006
- Council in Physical Science for the SPRBM 2006-2008
- Hulda Irene Duggan Arthritis Investigator 2001- 2007
- NIH Special Review Committee for R21 Grants (Ad hoc member) 2004
- NIH Neuro-Bioengineering Study Section (Ad hoc member) 2004
- NIH Tissue Engineering Study Section (Ad hoc member) 2003
- Award of Shanghai Science and Technology 1990
- Award of Science and Technology of Tongji University 1990

Graduate:

- UC Research Council Fellowship 1996
- Whitaker Graduate Student Award 1995
- Whitaker Graduate Student Travel Award 1995
- UC Research Assistantship 1995-1996
- UC Graduate Assistantship 1992-1994
- Award of Excellent Master Thesis 1989

PUBLICATIONS

Refereed Articles (*h-index 44, Google Scholar*):

1. **Wang, JH-C.**; Zhao, QC.; Hou, TS. An approach for three-dimensional measurement and analysis with an application to the motion study of human spine. *J Tongji Univ* 17(3): 386-393, 1989.
2. **Wang, JH-C.**; Zhao, QC.; Hou, TS. Kinematic behavior of the human lumbar spine. *J Tongji Univ (Special English Issue)*: 103-109, 1990.
3. **Wang, JH-C.**; Zhao, QC.; Hou, TS. Biomechanical study of effects of partial discectomy on kinematic behavior of the lumbar spine. *J Tongji Univ* 18(3): 335-342, 1990.
4. Hou, TS.; Tu, KY.; Xu, YK.; Zhang, WM.; **Wang, JH-C.**; Wang, DL. Effect of partial discectomy on the stability of the lumbar spine: a study of kinematics. *Chinese Medical Journal* 103(5): 396-399, 1990.
5. Hou, TS.; Tu, KY.; Xu, YK.; Li, ZB.; Cai, AH.; **Wang, JH-C.** Lumbar intervertebral disc prosthesis. *Chinese Medical Journal* 104(5): 381-386, 1991.

6. Hou, TS.; Tu, KY.; Xu, YK. ; Zhang, WM. ; **Wang, JH-C.** Experimental studies of discectomy on the stress distribution of the lumbar vertebra. *Chinese J Orthop* 10(5): 88-92, 1991.
7. Han, JS.; **Wang, JH-C.**; Ryu, J.; Rowen, B. A technique for calibrating measurements from photographs of sliced specimens. *J Biomech Eng* 117(11): 495-497, 1995.
8. **Wang, JH-C.**; Ip, W.; Boissy, R.; Grood, ES. Cell orientation response to cyclically deformed substrates: experimental validation of a cell model. *J Biomech* 28(12): 1543-1552, 1995.
9. **Wang, JH-C.** Substrate deformation determines actin cytoskeleton reorganization: A mathematical modeling and experimental study. *J theor Biol.* 202: 33-41, 2000.
10. **Wang, JH-C.**; Grood, ES. The strain magnitude and contact guidance determine orientation response of fibroblasts to cyclic substrate strains. *Conn Tissue Res* 41(1): 29-36, 2000.
11. **Wang, JH-C.**; Han, JS.; Ryu, J.; Rowen, B. A new method for representation of articular surfaces using the influence surface theory of plates. *J Biomech* 33(5): 629-633, 2000.
12. **Wang, JH-C.**; Grood, E.S.; Florer, J.; Wenstrup, R. Alignment and proliferation of MC3T3-E1 osteoblasts in microgrooved silicone substrata subjected to cyclic stretching. *J Biomech* 33(6): 729-735, 2000.
13. **Wang, JH-C.**; Goldschmidt-Clermont, P.; Moldovan, N.; Yin, FC-P. Leukotrienes and tyrosine phosphorylation mediate stretching-induced actin cytoskeletal remodeling in endothelial cells. *Cell Motility & Cytoskeleton* 46:137-145, 2000.
14. **Wang, JH-C.**; Goldschmidt-Clermont, P.; Yin, FC-P. Contractility and reactive oxygen species affect actin cytoskeleton remodeling of the endothelial cell to mechanical stretching. *Ann Biomed Eng* 28: 1165-1171, 2000.
15. Watanabe, N.; Celechovsky, C.; Niyibizi, C.; **Wang, JH-C.**, Takai, S.; Woo, SL-Y. The effect of growth factors on proliferation and matrix synthesis of fibroblasts from goat medial collateral ligament. *J Musculoskeletal Res* 4(4): 257-264, 2000.
16. Neidlinger-Wilke, C.; Grood, ES.; **Wang, JH-C.**; Brand, R.; Claes, L. Cell alignment is induced by cyclic changes in cell length: studies of cells grown in cyclically stretched substrates. *J Orthop Res* 19: 286-293, 2001.
17. **Wang, JH-C.**; Goldschmidt-Clermont, P.; Jeremiah Wille; Yin, FC-P. Specificity of endothelial cell reorientation in response to cyclic mechanical stretching. *J Biomech* 34(12):1563-1572, 2001.
18. Campbell, B.H.; Clark, W.W.; **Wang, JH-C.** A multi-station culture force monitor system to study cellular contractility. *J Biomech* 12:137-140, 2002.
19. **Wang, JH-C.**; Jia, F.; Gilbert, TW.; Woo, SL-Y. Cell orientation determines the alignment of cell-produced collagenous matrix. *J Biomech* 36:97-102, 2003.
20. **Wang, JH-C.**; Jia, F.; Yang, GG.; Yang, SH.; Stone, D.; Woo, SL-Y. Cyclic mechanical stretching of human tendon fibroblasts increases the production of prostaglandin E₂ and levels of cyclooxygenase expression: a novel *in vitro* model study. *Connect Tissue Res* 44:128-133, 2003.
21. Musahl, V.; Abramowitch, S.; Gilbert, T.W.; Tsuda, E.; **Wang, JH-C.**; Woo, SL-Y. The Use of Porcine Small Intestinal Submucosa to Enhance the Healing of the Medial Collateral Ligament – A Functional Tissue Engineering Study in Rabbits. *J Orthop Res* 22(1):214-20, 2004.

22. Li, ZZ.; Yang, G.; Khan, M.; Stone, D.; Woo, SL-Y.; **Wang, JH-C.** Inflammatory response of human tendon fibroblasts to cyclic mechanical stretching. *Am J Sports Med* 32(2): 435- 440, 2004.
23. Peperzak, K.A.; Gilbert, T.W.; **Wang, JH-C.** A multi-station dynamic culture force monitor system to study cell mechanobiology. *Med Eng & Phy* 26(4):355-358, 2004.
24. **Wang, JH-C.**; Yang, G.; Li, ZZ.; Shen, W. Fibroblast responses to mechanical stretching depends on cell orientation. *J Biomech* 37:573-576, 2004.
25. Cetin, S.; Ford, H.R.; Sysko, L.R.; Agarwal, C.; **Wang, JH-C.**; Neal, M.D.; Baty, C.; Apodaca, G.; Hackam, D.J. Endotoxin inhibits intestinal epithelial restitution through activation of Rho-GTPase and increased focal adhesions. *J Biol Chem.* 279:24592-600, 2004.
26. Campbell, B.H.; Agarwal, C.; **Wang, JH-C.** TGF- β 1, TGF- β 3, and PGE₂ regulate contraction of human patellar tendon fibroblasts. *Biomech Model Mechanobiol.* 2:239-45, 2004.
27. **Wang, JH-C.**; Li, ZZ.; Yang, GG.; Khan, M. Repetitively stretched tendon fibroblasts produce inflammatory mediators. *CORR* 422:243-250, 2004.
28. Cilli, F.; Khan, M.; Fu, F.; **Wang, JH-C.** Prostaglandin-E₂ affects the proliferation of and collagen synthesis by human patellar tendon fibroblasts. *Clin J Sports Medicine* 14(4):232-6, 2004.
29. Yang, G.G.; Crawford, R.C.; **Wang, JH-C.** Proliferation and collagen production of human patellar tendon fibroblasts in response to cyclic uniaxial stretching in serum-free conditions. *J Biomech* 37:1543-1550, 2004.
30. Khan, M.H.; Li, ZZ.; **Wang, JH-C.** Repeated exposure of tendon to prostaglandin-E₂ leads to localized tendon degeneration. *Clin. J. Sports Med,* 15(1):27-33, 2005.
31. **Wang, JH-C.**; Yang, G.G.; Li, Z.Z. Controlling cell response to repetitive mechanical stretching. *Ann Biomed Eng* 33(3):337-342, 2005.
32. Alaseirlis, D.A.; Li, Y.; Cilli, F.; Fu, F.H.; **Wang, JH-C.** Decreasing inflammatory response of injured patellar tendons results in increased collagen fibril diameters. *Connect Tissue Res* 46:12-17, 2005.
33. Yang, G.G.; Im, H.J.; **Wang, JH-C.** Repetitive mechanical stretching modulates IL-1 β induced COX-2, MMP-1 expression, and PGE₂ production in human patellar tendon fibroblasts. *Gene* 363: 166-72, 2005.
34. Thampatty, BP.; Im, HJ.; **Wang JH-C.** Leukotriene B₄ at low dosage negates the catabolic effect of prostaglandin E₂ in human patellar tendon fibroblasts. *Gene* 372:103-109, 2006.
35. Agarwal, C.; Britton, Z.T.; Alaseirlis, D.A.; Li, Y.; **Wang JH-C.** Healing and normal fibroblasts exhibit differential proliferation, collagen production, α -SMA expression, and contraction. *Ann Biomed Eng* 34:653-659, 2006.
36. Yang, Z.C.; Chen, J.X.; Lin, J-S.; **Wang, JH-C.** Determining substrate displacement and cell traction fields - a new approach. *J theor. Biol.* 242:607-616, 2006.
37. Chen, J.; Iosifidis, M.; Zhu, J.; Tatarintsev, I.; **Wang, JH-C.** Vanadate ingestion enhances the organization and collagen fibril diameters of rat healing medial collateral ligaments. *Knee Surg Sports Traumatol Arthrosc* 14(8):750-5, 2006.
38. Li, B.; Chen, J.; **Wang, JH-C.** RGD peptide-conjugated poly(dimethylsiloxane) promotes adhesion, proliferation, and collagen secretion of human fibroblasts. *J Biomedical Materials Research* 79 (4): 989-98, 2006.

39. Thampatty, BP.; **Wang, JH-C.** A new approach to study fibroblast migration. *Cell Motility & Cytoskeleton* 64 (1):1-5, 2006.
40. Thampatty, BP.; Im, HJ.; **Wang JH-C.** EP₄ receptor regulates collagen type-I, MMP-1, and MMP-3 gene expression in human tendon fibroblasts in response to IL-1 β treatment. *Gene* 386(1-2):154-161, 2007.
41. Li, F.; **Wang, JH-C.**; Wang, Q.M. Monitoring cell adhesion by using thickness shear mode acoustic wave sensors. *Biosensors and Bioelectronics* 23(1): 42-50, 2007.
42. Cetin, S.; Leaphart, C.L.; Li, J.; Ischenko, I.; Hayman, M.; Upperman, J.; Zamora, R.; Watkins, S.; Ford, H.R.; **Wang, JH-C.**; Hackam, D.J. Nitric oxide inhibits enterocyte migration through activation of RhoA-GTPase in a SHP-2 dependent manner. *Am J Physiol Gastrointest Liver Physiol* 292(5): G1347-58, 2007.
43. Chen, J.; Li, H.; SundarRaj, N.; **Wang, JH-C.** α -smooth muscle actin expression enhances cell traction force. *Cell Motility & Cytoskeleton* 64(4):248-57, 2007.
44. Li, B.; Xie, L.; Starr, Z.C.; Yang, Z.C.; Lin, J-S.; **Wang, JH-C.** Development of micropost force sensor array with culture experiments for determination of cell traction forces. *Cell Motility & Cytoskeleton* 64(7): 509-18, 2007.
45. Li, F.; **Wang, JH-C.**; Wang, Q.M. Thickness shear mode acoustic wave sensors for characterizing the viscoelastic properties of cell monolayer. *Sensors and Actuators B: Chemical* 128: 399-406, 2008.
46. Li, F.; Li, B.; Wang, Q.M.; **Wang, JH-C.** Cell shape regulates collagen type I expression in human tendon fibroblasts. *Cell Motility & Cytoskeleton* 65: 332-341,2008.
47. Li, B.; Lin, M.; Tang, Y.; Wang, B.; and **Wang, JH-C.** A novel functional assessment of the differentiation of micropatterned muscle cells. *J Biomech* 41:3349-3353, 2008.
48. Li, X.; Ellman, M.; Muddasani, P.; **Wang, JH-C.**; Cs-Szabo1, G.; van Wijnen, A.J.; and Im, H.J. PGE₂ and its cognate EP receptors control human adult articular cartilage homeostasis and are linked to the pathophysiology of osteoarthritis. *Arthritis & Rheumatism*, 60 (2): 513-523, 2009.
49. Li, B.; Li, F.; Puskar, K.M.; **Wang, JH-C.** Spatial patterning of cell proliferation and differentiation depends on mechanical stress magnitude. *J Biomech* 42 (11): 1622-1627, 2009.
50. Szczodry, M.; Zhang J.; Lim, C.T.; Davitt, H. L.; Yeager, T.; Fu, F.; **Wang, J. H-C.** Treadmill running exercise results in the presence of numerous myofibroblasts in mouse patellar tendons. *J Orthop Res* 27:1373-1378, 2009.
51. Dai, S.; Sodhi, C.; Cetin, S.; Richardson, W.; Branca, M.; Neal, M.D.; Prindle, T.; Ma, C.; Shapiro, R.A.; Li, B.; **Wang, JH-C.**; Hackam, D.J. Extracellular High Mobility Group Box-1 (HMGB1) Inhibits Enterocyte Migration via Activation of Toll-like Receptor-4 and Increased Cell-Matrix Adhesiveness. *J Biol Chem.* 285:4995-5002, 2010.
52. Zhang, J.; **Wang, JH-C.** Characterization of differential properties of rabbit tendon stem cells and tenocytes. *BMC Musculoskeletal Disorders* 11:10, 2010.
53. Satish, L.; Johnson, S.; **Wang, JH-C.**; Post, J.C.; Ehrlich, G.D.; Kathju, S. Chaperonin containing T-complex polypeptide subunit eta (CCT-eta) is a specific regulator of fibroblast motility and contractility. *PLoS ONE* 5(4): e10063, 2010.

54. Zhang, J.; **Wang, JH-C.** Production of PGE₂ increases in tendons subjected to repetitive mechanical loading and induces differentiation of tendon stem cells into non-tenocytes. *J Orthop Res* 28:198-203, 2010.
55. Zhang, J.; **Wang, JH-C.** Mechanobiological response of tendon stem cells: implications of tendon homeostasis and pathogenesis of tendinopathy. *J Orthop Res* 28:639-643, 2010.
56. Zhang, J.; Pan, T.; Liu, Y.; **Wang, JH-C.** Mouse treadmill running enhances tendons by expanding the pool of tendon stem cells (TSCs) and TSC-related cellular production of collagen. *J Orthop Res* 28:1178-1183, 2010.
57. Zhou, J.; Kim, H.Y.; **Wang, JH-C.**; Davidson, L.A. Macroscopic stiffening of embryonic tissues via microtubules, Rho-GEF, and assembly of contractile bundles of actomyosin. *Development* 137, 2785-2794, 2010.
58. Shao, H.; **Wang, JH-C.**; Pollak, M.R.; Well, A. α -Actinin-4 is essential for maintaining the spreading, motility and contractility of fibroblasts. *PLoS ONE* 5(11):e13921, 2010.
59. Zhang, J.; **Wang, JH-C.** Platelet-rich plasma releasate promotes differentiation of tendon stem cells into active tenocytes. *Am J Sports Med* 38: 2477-2486, 2010.
60. Zhang, J.; Pan, T.; Im, H-J.; Fu, F.; **Wang, JH-C.** Differential properties of human ACL and MCL stem cells may be responsible for their differential healing capacity. *BMC Medicine* 9:68, 2011.
61. Zhang, J.; Li, B.; **Wang, JH-C.** The role of engineered tendon matrix in the stemness of tendon stem cells *in vitro* and the promotion of tendon-like tissue formation *in vivo*. *Biomaterials* 32 (29): 6972-6981, 2011.
62. Liu, Z.M.; Blattner, S.M.; Tu, Y.; Tisherman, R.; **Wang, JH-C.**; Kretzler, M.; Wu, C. α -actinin-4 and CLP36 deficiencies contribute to podocyte defects in multiple human glomerulopathies. *J Biol Chem* 286(35):30795-30805, 2011.
63. Zhang, J.; **Wang, JH-C.** BMP-2 mediates PGE₂-induced reduction of proliferation and osteogenic differentiation of human tendon stem cells. *J Orthop Res* 30(1):47-52, 2012.
64. Zhang, J.; Keenan, C.; **Wang, JH-C.** The effects of dexamethasone on human patellar tendon stem cells: implications for dexamethasone treatment of tendon injury. *J Orthop Res*, 31(1):105-10, 2013.
65. Satish, L.; Johnson, S.; Raykha, C.; O’Gorman, D.B.; Gan, B.S.; **Wang, JH-C.**; Kathju, S. Increased CCT-eta expression is a marker of latent and active disease and a modulator of fibroblast contractility in Dupuytren’s contracture. *Cell Stress Chaperones*, 18(4):397-404, 2013.
66. Zhang, J.; **Wang, JH-C.** Human tendon stem cells better maintain their stemness in hypoxic culture conditions. *PloS ONE*, 8(4):e61424, 2013.
67. Yang, Y.; Zhang, J.; Qian, Y.; Dong, S.; Huang, H.; Boada, F.E.; Fu, F.; **Wang, JH-C.** Superparamagnetic iron oxide is suitable to label tendon stem cells and track them in vivo with MR imaging, *Annals of Biomedical Eng*, 41(10):2109-19, 2013.
68. Ellman, M.B.; Kim, J.; An, H.S.; Chen, D.; Kc, R.; Li, X.; Xiao, G.Z.; Yan, D.; Suh, J.; van Wijnen, A.J.; **Wang, JH-C.**; Kim, S.G.; Im, H.J. Lactoferricin enhances BMP7-stimulated anabolic pathways in intervertebral disc cells. *Gene*, 524(2):282-91, 2013.
69. Zhang, J.; Middleton, K.K.; Fu, F.H.; Im, H-J.; **Wang, JH-C.** HGF mediates the anti-inflammatory effects of PRP on injured tendons. *PloS ONE*, 8(6): e67303, 2013.

70. Zhang, J.; **Wang, JH-C.** The effects of mechanical loading on tendons - an in vivo and in vitro model study, *PLoS ONE*, 8(8): e71740, 2013.
71. Maeda, E.; Hagiwara, Y.; **Wang, JH-C.**; Ohashi, T. A new experimental system for simultaneous application of cyclic tensile strain and fluid shear stress to tenocytes in vitro. *Biomedical Microdevices*, 15(6):1067-75, 2013.
72. Jamison, J.; Lauffenburger, D.; **Wang, JH-C.**; Wells, A. PKC δ localization at the membrane increases matrix traction force dependent on PLC γ 1/EGFR signaling. *PLoS ONE* 8(10):e77434, 2013.
73. Zhang, J.; **Wang, JH-C.** Prostaglandin E₂ (PGE₂) exerts biphasic effects on human tendon stem cells. *PLoS ONE* 9(2): e87706, 2014.
74. Zhang, J.; **Wang, JH-C.** Kartogenin (KGN) induces cartilage-like tissue formation in tendon-bone junction. *Bone Research* 2: 14008, 2014.
75. Zhang, J.; Pan, T.; **Wang, JH-C.** Cryotherapy suppresses tendon inflammation in an animal model. *Journal of Orthopaedic Translation* 2 (2): 75-81, 2014.
76. Jamison, J.; **Wang, JH-C.**; Wells, A. PKC δ regulates force signaling during VEGF/CXCL4 induced dissociation of endothelial tubes. *PLoS ONE* 9(4): e93968, 2014.
77. Zhang, J.; **Wang, JH-C.** PRP treatment effects on degenerative tendinopathy - an in vitro model study. *MLTJ* 4 (1): 10-17, 2014.
78. **Wang, JH-C.** Can PRP effectively treat injured tendons (Commentary)? *MLTJ* 4 (1): 35-37, 2014.
79. Wu, H.; Zhao, G.; Zu, H.; **Wang, JH-C.**; Wang, Q. M. Label-free Detection of Protein Released during Platelet Activation by CNT-Enhanced Love Mode SAW Sensors. *2014 IEEE International Ultrasonics Symposium Proceedings*: 1528-1531, 2014. (#: Co-corresponding author)
80. Wu, H.; Zhao, G.; Zu, H.; **Wang, JH-C.**; Wang, Q. M. Aging-related viscoelasticity variation of tendon stem cells (TSC) characterized by quartz thickness shear mode (TSM) resonators. *Sensors & Actuators: B*. 210: 369-380, 2015.
81. Zhang, J.; **Wang, JH-C.** Moderate exercise mitigates the detrimental effects of aging on tendon stem cells. *PLoS ONE*, 10(6):e0130454, 2015.
82. Zhou, Y.; Zhang, Y.; Wu, H.; Hogan, M.V.; **Wang, JH-C.** The differential effects of leukocytes-containing and pure platelet-rich-plasma on tendon stem cells - implications of PRP application for the treatment of tendon injuries. *Stem Cell Research & Therapy*, 6:173, 2015.
83. Kim, J-S.; Ali, M.H.; Wydra, F.; Li, X; Hamilton, J.; An, H.S.; Cs-Szabo, G.; Andrews, S.; Moric, M.; Xiao, G.; **Wang, JH-C.**; Chen, D.; Cavanaugh, J.M; Im, Hee-Jeong. Characterization of degenerative human facet joints and facet joint capsular tissues, *Osteoarthritis and Cartilage*, 23(12):2242-51, 2015.
84. Wu, H.; Zhao, G.; Zu, H.; **Wang, JH-C.**; Wang, Q.M. Real-time monitoring of platelet activation using quartz thickness shear mode (TSM) resonator sensors. *Biophysical J.*, 110: 669-679, 2016. (#: Co-corresponding author)
85. Yuan, T.; Zhang, J.; Zhao, G.; Zhou, Y.; Zhang, C.Q.; **Wang, JH-C.** Creating an animal model of tendinopathy by inducing chondrogenic differentiation with kartogenin. *PLoS ONE*, 11(2):e0148557, 2016.

86. Zhang, J.; Yuan, T.; **Wang, JH-C.** Moderate treadmill running exercise prior to tendon injury enhances wound healing aging rats. *Ontotarget*, in press (2/11/2016)

Reviews (Peer reviewed):

1. **Wang, JH-C.**; Zhou, Y,Q. New advancements on tendon stem cells. *International Journal of Orthopaedics*, 36 (3): 163-167, 2015.
2. Sun, H.B.; Schaniel, C.; Leong, D.J.; Lemischka, I.; and **Wang, JH-C.** Biology and mechano-response of tendon cells: progress overview and perspective. *J Orthop Res* 33(6): 785-792, 2015.
3. **Wang, JH-C.**; Zhang, J.; Nirmala, X. Advancements in the treatment and repair of tendon injuries. *Current Tissue Engineering* 3(2) 71-81, 2014.
4. Yuan, T.; Zhang, C.Q.; **Wang, JH-C.** Augmenting tendon and ligament repair with platelet-rich plasma (PRP). *MLTJ* 3 (3): 139-149, 2013.
5. Jiang, D.; **Wang, JH-C.** Tendinopathy and its treatment with platelet-rich plasma (PRP). *HISTOLOGY AND HISTOPATHOLOGY* 28:1537-1546, 2013.
6. **Wang, JH-C.**; Guo, Q.; and Li, B. Tendon biomechanics and mechanobiology - a mini-review of basic concepts and recent advancements. *Journal of Hand Therapy*, 25(2):133-40, 2012.
7. Li, B.; **Wang, JH-C.** Fibroblasts and myofibroblasts in wound healing: force generation and measurement. *Journal of Tissue Viability* 20, 108-120, 2011.
8. **Wang, JH-C.** Tendon stem cells and platelet-rich plasma (Invited Review). *Chin J Sports Med* 1 (1): 70-78, 2011.
9. Li, B.; **Wang, JH-C.** Application of sensing techniques to cellular force measurement. *Sensor* 2010, 10, 9948-9962.
10. **Wang, JH-C.**; Li, B. Mechanics rules cell biology. *Sports Medicine, Arthroscopy, Rehabilitation, Therapy & Technology* 2:16, 2010.
11. **Wang, JH-C.** Cell traction forces (CTFs) and CTF microscopy applications in musculoskeletal research. *Operative Techniques in Orthopaedics* 20(2):106-109, 2010.
12. **Wang, JH-C.**; Thampatty, B.P. Mechanobiology of adult and stem cells. *International Review of Cell and Molecular Biology* 271: 297-332, 2008.
13. Ekdahl, M.; **Wang, JH-C.**; Ronga, M.; Fu, F. Graft healing in anterior cruciate ligament reconstruction. *Knee Surgery, Sports Traumatology, Arthroscopy* 16(10):935-47, 2008.
14. **Wang, JH-C.**; Lin, J-S. Cell traction force and measurement methods (invited review), *Biomech Model Mechanobiol* 6(6): 361-71, 2007.
15. **Wang, JH-C.**; Thampatty, B.P.; Im, HJ. Mechano-regulation of gene expression in fibroblasts, *Gene* 391:1-15, 2007.
16. **Wang, JH-C.**; Thampatty, B.P. Mechanobiology of fibroblasts – I (invited review), *Chinese J Orthop* 27(5):397-400, 2007.
17. **Wang, JH-C.**; Thampatty, B.P. Mechanobiology of fibroblasts – II (invited review), *Chinese J Orthop* 27(6):477-480, 2007.
18. **Wang, JH-C.** Mechanobiology of tendon (invited review), *J Biomech.* 39:1563–1582, 2006.

19. **Wang, JH-C.**; Thampatty, B.P. An introductory review of cell mechanobiology (invited review), *Biomech Model Mechanobiol.* 1-16, 2006.
20. **Wang, JH-C.**; Iosifidis, M.; Fu, F. Biomechanical basis of tendinopathy, *CORR* 443:320-332, 2006.
21. Chen, SY, **Wang, JH-C.**; The basis of tendinopathy and recent research advancement, *Chinese J. Sports Medicine* 24(3), 2004.
22. Woo, SL-Y.; Hilderbrand, K.; Watanabe, N.; Fenwick, J.A.; Papageorgiou, C.; **Wang, JH-C.** Tissue engineering of ligament and tendon healing, *CORR* 367S: S312-23, 1999.
23. Lo, M.; **Wang, JH-C.**; Fu, F.H. Tendinopathy Monograph, BMJ PUBLISHING GROUP LIMITED, published online.

Theses/Book Chapter/Program Book:

1. **Wang, JH-C.**; Zhao, G.; Li, B. “Measurement of cell motility using microgrooved substrates.” Cytoskeleton Methods and Protocols (3rd edition), ed. Ray H. Gavin,. Human Press 2015.
2. **Wang, JH-C.**; Zhao, G.; Li, B. “The study of cell motility by cell traction force microscopy (CTFM).” Cytoskeleton Methods and Protocols (3rd edition), ed. Ray H. Gavin,. Human Press 2015.
3. **Wang, JH-C.**; Li, B. Mechanobiology of Cell-Matrix Interactions, Structure and Function of Biomatrix, ed. by Endre A. Balazs, Matix Biology Institute 2012, pages 253- 292.
4. **Wang, JH-C.**; Li, B. The Principles and biological applications of cell traction force microscopy. Microscopy Book Series - Volume # 4: “Microscopy: Science, Technology, Applications and Education.” In press (online available).
5. Li, B; Lin, J-S.; **Wang, JH-C.** Cell mechanobiology: the forces applied to cells and generated by cells, Mechanobiology Handbook, ed. by Jiro Nagatomi, CRC Press 2011, Pages 253–274.
6. **Wang, JH-C.**; Li, B. “Application of cell traction force microscopy for cell biology research.” Cytoskeleton Methods and Protocols (2nd edition), ed. Ray H. Gavin, Chapter 17, p301-313. Human Press 2009.
7. **Wang, JH-C.**; Li, B.; Lin, J-S. “Cell traction force microscopy for musculoskeletal research.” A Practical Manual for Musculoskeletal Research, ed. Leung et al.. Chapter 14, pages 773-787. World Scientific 2008.
8. Thampatty, B.P.; **Wang, JH-C.** “Mechanobiology of fibroblasts.” Chapter 16 in the Mechanosensitivity in Cells and Tissues, p351-378; edited by Kamkin, A. and Kiseleva, I. Springer Netherlands, Oct. 6, 2007.
9. **Wang, JH-C.**; Lin, J-S.; Yang, Z.C. “Cell traction force microscopy.” Chapter in the book of Advanced Bioimaging Technologies in Assessment of Quality of Bone and Scaffold Biomaterials, p227-235; edited by Qing, L.; Genant, H.K.; Griffith, J.; and Leung, K.S.
10. **Wang, JH-C.**; Chen, J.; Li, B.; Thampatty, B.P. “Cell traction force: generation, transmission, regulation, and measurement.” Chapter in the Springer book, 2008.

11. **Wang, JH-C.**; Thampatty, B.P. Mechano-regulation of fibroblast function, The Encyclopedia of Biomaterials and Biomedical Engineering (Editors: Gary L. Bowlin; Gary Wnek), published 15 August 2006.
12. **Wang, JH-C.**; Woo, SL-Y.; Hsu, W.; Stone, D. "Mechanobiological studies of cellular and molecular mechanisms of tendinopathy." Chapter 7 in The Encyclopaedia of Sports Medicine, Tendinopathy in Athletes, edited by Savio L-Y. Woo, Per A.F.H. Renström, and Steven P. Arnoczky.
13. **Wang, JH-C.** (Guest Editor). The 25th SPRBM abstract book: Molecular and Cellular Biomechanics (MCB) 3(4), 2006.
14. **Wang, JH-C.**; Woo, S L-Y.; Fukuda, Y.; Stone, D. "Tendon overuse injury." Scandinavian Text Book of Sports Medicine, November, 2003.
15. Woo, S.L-Y.; Abramowitch, S.D.; Loh, J.C.; Musahl, V.; **Wang, JH-C.** "Ligament healing: present status and the future of functional tissue engineering." Functional Tissue Engineering. Ed. F. Guilak, D. Butler, S. Goldstein, D. Mooney, Springer-Verlag Publishing, New York, 2:17-34, 2003.
16. Woo, SL-Y.; Debski, R. E.; **Wang, JH-C.** Program book of the Interantioanl Symposium on Ligament & Tendons, 2000.
17. **Wang, JH-C.** "Responses of the cells on smooth and microgrooved surfaces subjected to cyclic deformations." PhD thesis, University of Cincinnati, 1996.
18. **Wang, JH-C.** "Biomechanical studies of the effects of discectomy on human lumbar spine." MS thesis, Tongji University, 1989.
19. **Wang, JH-C.** "Application of laser speckle method to determine the displacement field of a holed-plate subjected to tension." BS thesis, Tongji University, 1982.

Popular Press:

1. Gina Kolata, "When It's O.K. To Run Hurt." NY Times, January 11, 2007.
<http://query.nytimes.com/gst/fullpage.html?res=9807EEDC1230F932A25752C0A9619C8B63&pagewanted=all>
2. Natasha Agabalyan, and Clare Wilson. "The Disease that Turns You to Stone." New Scientist, December 20, 2011. <http://www.newscientist.com/article/mg21228432.800-the-disease-that-turns-you-to-stone.html?full=true>
3. Phyllis Rickel-Wong, Book "Flying Up the Stairs!" Tendons Need Exercise - But, Not Too Much Exercise, page 150.
4. **James H-C. Wang.** "Discovering mechanisms of tendinopathy for more effective clinical management." Restore, 2006.
5. **James H-C. Wang.** "Clinical implications of basic research on PRP." Restore, 2014.

Abstracts/Conference papers:

1. Zhou, Y.; Zhang, J.; Wu, H.; Hogan, M.; and **Wang, JH-C.** The differential effects of leukocytes-containing and pure platelet-rich-plasma (PRP) on tendon stem cells - implications of PRP application for the treatment of tendon injuries. 2016 ORS Meeting.

2. Zhou, Y.; Yang, J.; Narava, M.; Zhao, G.; Zhang, J.; Hogan, M.; and **Wang, JH-C**. Kartogenin promotes the formation of fibrocartilage zone between tendon graft and bone tunnel. 2016 ORS Meeting.
3. Zhang, J.; Zheng, N.; Yuan, T.; Zhou, Y.; Narava, M.; Hogan, M.; **Wang, JH-C**. Kartogenin regenerates wounded tendon-bone junction. 2016 ORS Meeting.
4. Zhang, J.; Yuan, T.; Zhou, Y.; Narava, M.; and **Wang, JH-C**. Pre-exercise enhances wound healing in aging rat tendons via TSC and senescence-related mechanisms. 2016 ORS Meeting.
5. Zhang, J.; Nie, D.; and **Wang, JH-C**. Defining the effects of aging on tendon stem/progenitor cells and cell senescence. 2016 ORS Meeting.
6. Zhao, G.; Zhou, Y.; and **Wang, JH-C**. HMGB1 induces sterile inflammation in rodent tendons subject to excessive mechanical loading. 2016 ORS Meeting.
7. Miller, M.; Newsome, H.A.; Yoshida, M.; Wang, JH-C. Musahl, V.; Debski, R.E. Rotator cuff tendons exhibit localized histological differences in tendon degeneration, 2016 ORS Meeting.
8. Zhang, J.; Yuan, T.; and **Wang, JH-C**. Pre-exercise through moderate treadmill running enhances healing of wounded tendons in aging rats. Annual ASBMR Meeting, Seattle, Oct. 9-12, 2015.
9. Zhou, Y.; Zhang, J.; Zhao, G.; and **Wang, JH-C**. Use of Kartogenin to augment the tendon-bone tunnel healing. 2015 Summer Biomechanics, Bioengineering and Biotransport Conference, June 17-20, 2015.
10. Zhang, J.; **Wang, JH-C**. An irradiation-and-injection approach to study TSC differentiation in mouse. ISL&T -XIV, Las Vegas, Mar. 27, 2015.
11. Zhang, J.; **Wang, JH-C**. Aberrant differentiation of tendon stem cells causes tendinopathy. ISL&T -XIV, Las Vegas, Mar. 27, 2015.
12. Zhang, J.; **Wang, JH-C**. A new approach to enhance tendon-bone junction healing by regenerating fibrocartilage zone. ISL&T -XIV, Las Vegas, Mar. 27, 2015.
13. Zhang, J.; **Wang, JH-C**. Mechanical over-loading induced non-tenocyte differentiation of TSCs is not reversible by rest. The 61st ORS Meeting, Las Vegas, Mar. 28-31, 2015.
14. Zhang, J.; **Wang, JH-C**. High CCN-1 levels in aging tendons promote tendon stem cell senescence and tendon degeneration. The 61st ORS Meeting, Las Vegas, Mar. 28-31, 2015.
15. Yuan, T.; Zhao, G.; Zhang, J.; **Wang, JH-C**. Development of a new animal model of overuse tendinopathy. The 61st ORS Meeting, Las Vegas, Mar. 28-31, 2015.
16. Yuan, T.; Zhang, J.; Zhao, G.; Zhou, B.; **Wang, JH-C**. The effects of ketorolac tromethamine on tendons - an in vitro and in vivo study. The 61st ORS Meeting, Las Vegas, Mar. 28-31, 2015.
17. Zhang, J.; **Wang, JH-C**. An irradiation-and-injection approach to study TSC differentiation in a mouse treadmill running model. The 61st ORS Meeting, Las Vegas, Mar. 28-31, 2015.
18. **Wang, JH-C**. Tendon stem cells are responsible for the development of degenerative tendinopathy. The 7th ICOBR Meeting, Xiaomen, Oct. 10-19, 2014.
19. Wu, H.; **Wang, JH-C**; Wang, Q. Label-free detection of protein released during platelet activation by CNT-enhanced love mode SAW sensors. 2014 IEEE International Ultrasonic Symposium, Chicago, September 3-6, 2014.
20. Zheng, N.; Zhang, J.; **Wang, JH-C**. Mechanical testing of rat patella tendons following injury and

- treatment with PRP gel and substance P. The 7th WCB Meeting, Boston, July 6-11, 2014.
21. Zhang, J.; **Wang, JH-C.** Kartogenin (KGN) promotes chondrogenesis in vitro and in vivo. The 60th ORS Meeting, New Orleans, Mar. 15-18, 2014.
 22. Zhang, J.; **Wang, JH-C.** Kartogenin (KGN) accelerates repair of injured meniscus. The 60th ORS Meeting, New Orleans, Mar. 15-18, 2014.
 23. Altman, A.R.; Breighton, K.; Zhao, G.; Parajuli, A.; Tseung, W-J.; Wang, L.; **Wang, JH-C.**; Liu, X.S. Intensive treadmill running induces bone microstructural deterioration in mouse femoral bone. The 60th ORS Meeting, New Orleans, Mar. 15-18, 2014.
 24. Zhang, J.; **Wang, JH-C.** Defining the effects of platelet-rich clot gel on tendon stem cells. The 59th ORS Meeting, San Antonio, Jan. 26-29, 2013.
 25. Zhang, J.; Keenan, C.; **Wang, JH-C.** Dexamethasone causes differentiation of human tendon stem cells into non-tenocytes: Implications for dexamethasone treatment of tendon injury. The 59th ORS Meeting, San Antonio, Jan. 26-29, 2013.
 26. Yang, Y.; Zhang, J.; Qian, Y.; Dong, S.; Huang, H.; Boada, F., Fu, F.H.; **Wang, JH-C.** SPIO labeling tendon stem cells and tracking them in vivo with MR imaging. The 59th ORS Meeting, San Antonio, Jan. 26-29, 2013.
 27. Zhang, J.; Yang, Y.; Wang, N.; Zhao, G.; Fu, F.; **Wang, JH-C.** PRP exerts anti-inflammatory effects on injured tendons through HGF. The 59th ORS Meeting, San Antonio, Jan. 26-29, 2013.
 28. Zhang, J.; Yang, Y.; Wang, N.; Zhao, G.; Fu, F.; **Wang, JH-C.** White blood cells in platelet-rich plasma (PRP) cause inflammatory and catabolic responses in tendon cells. The 59th ORS Meeting, San Antonio, Jan. 26-29, 2013.
 29. Zhang, J.; **Wang, JH-C.** Low oxygen tension promotes proliferation and enhances the stemness of human tendon stem cells. ISL&T-XII, San Francisco, February 3, 2012.
 30. Zhang, J.; **Wang, JH-C.** PGE₂ exerts biphasic effects on human tendon stem cells. The 58th ORS Meeting, San Francisco, February 4-7, 2012.
 31. Zhang, J.; **Wang, JH-C.** Engineered tendon matrix promotes the stemness of tendon stem cells. The 58th ORS Meeting, San Francisco, February 4-7, 2012.
 32. Zhang, J.; Lin, S.; **Wang, JH-C.** The effects of aging on mouse tendon stem cells. The 58th ORS Meeting, San Francisco, February 4-7, 2012.
 33. Zhang, J.; Lin, S.; **Wang, JH-C.** Mechanical loading induces loading-intensity dependent effects on aging tendon stem cells. The 58th ORS Meeting, San Francisco, February 4-7, 2012.
 34. Zhang, J.; Lin, S.; **Wang, JH-C.** Moderate exercise improves degenerative tendons through tendon stem cells. The 58th ORS Meeting, San Francisco, February 4-7, 2012 (podium).
 35. Zhang, J.; **Wang, JH-C.** Engineered tendon matrix promotes the formation of tendon-like tissues in vivo. The 58th ORS Meeting, San Francisco, February 4-7, 2012.
 36. Zhang, J.; **Wang, JH-C.** Platelet-rich plasma (PRP) exerts anti-inflammatory effects on injured tendons. The 58th ORS Meeting, San Francisco, February 4-7, 2012 (podium).
 37. Maeda, E.; Hagiwara, Y.; **Wang, JH-C.**; and Ohashi, T. A new experimental system for the study of tenocyte mechanobiology. The 58th ORS Meeting, San Francisco, February 4-7, 2012.
 38. Zhang, J.; **Wang, JH-C.** Platelet-rich plasma exerts anti-inflammatory action through hepatocyte

- growth factor, Science2011, Pittsburgh, Oct. 5-7, 2011.
39. Dong, S.; Zhang, J.; **Wang, JH-C.** Acellular matrix determines the fate of tendon stem cell differentiation, Science2011, Pittsburgh, Oct. 5-7, 2011.
 40. Zhang, J.; Lin, S.; **Wang, JH-C.** Characterization of aging mouse tendon stem cells. The 5th Annual Research Day of the Aging Institute of UPMC Senior Services and the University of Pittsburgh, Pittsburgh, April 19, 2011.
 41. Zhang, J.; **Wang, JH-C.** Intensive mechanical loading contains the risk of developing tendinopathy. ISL&T-XI, Long Beach, Jan. 12, 2011.
 42. Zhang, J.; **Wang, JH-C.** BMP-2 mediates PGE2 induced osteogenic differentiation of human tendon stem cells. The 57th ORS Meeting, Long Beach, Jan. 13-16, 2011.
 43. Zhang, J.; Pan, T.; **Wang, JH-C.** Treadmill running enhances mechano-growth factor (MGF) expression and tendon stem/progenitor cell proliferation. The 57th ORS Meeting, Long Beach, Jan. 13-16, 2011.
 44. Zhang, J.; **Wang, JH-C.** A comparative study of differential properties of stem cells from human patellar tendon and medial collateral ligament. The 57th ORS Meeting, Long Beach, Jan. 13-16, 2011.
 45. Zhang, J.; **Wang, JH-C.** PRP treatment suppresses non-tenogenic differentiation of tendon stem cells. The 57th ORS Meeting, Long Beach, Jan. 13-16, 2011.
 46. Zhang, J.; **Wang, JH-C.** Characterization of the effects of engineered tendon matrix on tendon stem cells. Science2010, Pittsburgh, Oct. 7-8, 2010.
 47. Zhang, J.; **Wang, JH-C.** Platelet-rich plasma (PRP) stimulates differentiation of tendon stem cells into active tenocytes that increase in number and produce abundant collagen. AOSSM Meeting, Providence, Rhode Island, July 15-18, 2010.
 48. Zhang, J.; **Wang, JH-C.** Mechanical stretching regulates self-renewal of tendon stem cells in a Stretching Magnitude-Dependent Manner. SPRBM Annual Meeting, Tucson, January 13-16, 2010.
 49. Zhang, J.; **Wang, JH-C.** Platelet-rich plasma induces differentiation of tendon stem cells into active tenocytes. SPRBM Annual Meeting, Tucson, January 13-16, 2010.
 50. Zhang, J.; Pan, T.; **Wang, JH-C.** Tendon stem cells exhibit differential properties from tenocytes. The 10th ISL&T, Hong Kong, Feb. 5-6, 2010.
 51. Zhang, J.; Ma, D.; Tisherman, R.; Pan, T.; **Wang, JH-C.** Cryotherapy reduces inflammation and resultant Pain by decreasing PGE2 levels in tissues. The 56th ORS Meeting, New Orleans, March 6-9, 2010.
 52. Zhang, J.; Pan, T.; Im, H-J; Fu, F.; **Wang, JH-C.** Characterization of stem cells from human anterior cruciate ligament and medial collateral ligament. The 56th ORS Meeting, New Orleans, March 6-9, 2010.
 53. Zhang, J.; Pan, T.; **Wang, JH-C.** Mouse treadmill running stimulates tendon stem cell division and collagen production. The 56th ORS Meeting, New Orleans, March 6-9, 2010.
 54. Zhang, J.; **Wang, JH-C.** Self-renewal of tendon stem cells depends on mechanical loading conditions - implications for the development of tendinosis. The 56th ORS Meeting, New Orleans, March 6-9, 2010.
 55. Zhang, J.; Pan, T.; Im, H-J.; **Wang, JH-C.** Human ACL and MCL contain adult stem cells with

- distinct replicative and differential potential. Science 2009, Pittsburgh, Oct. 15-16, 2009.
56. Zhang, J.; Liu, Y.; **Wang, JH-C**. Exercise improves musculoskeletal tissues through enhancing stem cell proliferation, differentiation, and production of extracellular matrix. BMES Annual Meeting, Pittsburgh, Oct. 7-10, 2009.
 57. Zhang, J.; **Wang, JH-C**. Rabbit tendon stem cells and their mechanobiological responses. BMES Annual Meeting, Pittsburgh, Oct. 7-10, 2009.
 58. Zhang, J.; Im, H.J.; **Wang, JH-C**. Differential characteristics of human ACL and MCL stem cells. BMES Annual Meeting, Pittsburgh, Oct. 7-10, 2009.
 59. Li, B.; **Wang, JH-C**. Window stress threshold drives formation of cell proliferation and differentiation patterns. BMES Annual Meeting, Pittsburgh, Oct. 7-10, 2009.
 60. Zhang, J.; **Wang, JH-C**. Multidifferentiation potential of tendon stem cells. SPRBM Annual Meeting, Hawaii, January 6-9, 2009.
 61. Zhang, J.; **Wang, JH-C**. Tendon inflammation and the role of tendon stem cells in the development of tendinopathy. SPRBM Annual Meeting, Hawaii, January 6-9, 2009.
 62. Zhang, J.; **Wang, JH-C**. Mechanical loading functions as a niche factor that regulates proliferation and differentiation of tendon stem cells. SPRBM Annual Meeting, Hawaii, January 6-9, 2009.
 63. Zhang, J.; **Wang, JH-C**. Identification of a novel stem cell population in rabbit patellar and Achilles tendons. The 55th ORS Meeting, Las Vegas, Nevada, February 22-25, 2009.
 64. Zhang, J.; **Wang, JH-C**. Tendon inflammation may lead to tendon degeneration through tendon stem cells. The 55th ORS Meeting, Las Vegas, Nevada, February 22-25, 2009.
 65. Zhang, J.; **Wang, JH-C**. Mechanical stretching regulates proliferation and differentiation of tendon stem cells. The 55th ORS Meeting, Las Vegas, Nevada, February 22-25, 2009.
 66. Zhang, J.; **Wang, JH-C**. Identification and characterization of rabbit tendon stem cells, Science 2008, Pittsburgh, October 2-3, 2008.
 67. Zhang, J.; Lim, C.T.; Fu, F.H.; **Wang, JH-C**. PGE₂ production in tendons in response to repetitive mechanical loading and the effect of PGE₂ on differentiation of tendon stem cells, Pittsburgh, ICMMB-16, July 23-25, 2008.
 68. Zhang, J.; Lim, C.T.; Fu, F.H.; **Wang, JH-C**. Mechanical stretching alters the morphology and increases the proliferation of tendon stem cells, Pittsburgh, ICMMB-16, July 23-25, 2008.
 69. **Wang, JH-C**; Zhang, J. Identification and characterization of rabbit tendon stem cells. International Society of Stem Cells, Philadelphia, June 11-14, 2008.
 70. Li, B.; Lin, M.; Tang, Y.; Wang, B.; **Wang, JH-C**. Micropatterned C2C12 cells exhibit enhanced differentiation into myotubes – a novel study using cell traction force microscopy. 2008 ORS, San Francisco, Mar. 1-5, 2008.
 71. Szczodry, M.; Davitt, H. L.; Yeager, T.; Li, B.; Fu, F.; **Wang, JH-C**. Chronic treadmill running induces the presence of myofibroblasts in mouse patellar tendons. 2008 ORS, San Francisco, Mar. 1-5, 2008.
 72. Li, X.; Muddasani, P.; Davis, F.; **Wang, JH-C**; Im, H-JI. The potential pathological role of EP2 in human cartilage homeostasis. 2008 ORS, San Francisco, Mar. 1-5, 2008.
 73. Puskar, K.M.; Lin, H.T.; Li, F.; Li, B.; **Wang, JH-C**. A new approach to determine traction forces of

- micropatterned cells. 2008 SPRBM, Miami, Jan. 9-12, 2008.
74. Li, B.; Lin, M.; Liu, Y.; Tang, Y.; Wang, B.; and **Wang, JH-C.** A novel in vitro model for functional assessment of C2C12 cell differentiation. 2008 SPRBM, Miami, Jan. 9-12, 2008.
 75. Li, B.; Li, F.; Lin, J-S. ; and **Wang, JH-C.** External mechanical stress alters cell proliferation and differentiation pattern formation. 2008 SPRBM, Miami, Jan. 9-12, 2008.
 76. Li, X.; **Wang, JH-C.**; Im, H-J. The Pathological Role of Prostaglandin E2 and EP Receptors in Cartilage. 2008 SPRBM, Miami, Jan. 9-12, 2008.
 77. **Wang, JH-C.**; Lin, T.H. Computational modeling of micropost force sensor array (MFSA) with experimental applications. APCOM'07 in conjunction with EPMESC XI, December 3-6, 2007, Kyoto, Japan.
 78. **Wang, JH-C.**; Li, B.; Lin, TH. Mechanical stress controls cell differentiation pattern. APCOM'07 in conjunction with EPMESC XI, December 3-6, 2007, Kyoto, Japan.
 79. Li, B.; Lin, M.; Tang, Y.; Wang, B.; **Wang, JH-C.** Application of micropatterning technology and cell traction force microscopy (CTFM) to functional assessment of C2C12 cell differentiation. Science 2007, Pittsburgh, October 11-12, 2007.
 80. Sowa, G.; Morrow, J.; Coelho, P.; Lin, M.; Xu, X.; Chen, J.; Studer, R.; **Wang, JH-C.**; Kang, J. Nucleus pulposus cells demonstrate high levels of traction force in vitro. Austin, October 23, 2007.
 81. Li, F.; **Wang, JH-C.**; Wang, Q.M. Research on Thickness Shear Mode Resonator as Cell-based Biosensors”, presented at Shanghai University, June 12, 2007, Shanghai, China.
 82. Li, F.; **Wang, JH-C.**; Wang, Q.M. Monitoring cell adhesion and characterizing cell viscoelasticity by using thickness shear mode acoustic wave sensors, presented at the Fifth International Conference on Nonlinear Mechanics (ICNM-V), June 11-14, 2007, Shanghai, China.
 83. Lin, M.M.; **Wang, James H.-C.** Micropost force sensor array (MFSA) modeling and biological applications. USNCCM, San Francisco, July 23-26, 2007.
 84. **Wang, JH-C.**; Li, B. Biological applications of cell traction force microscopy. The 3rd China-Overseas Workshop on Biomechanics. Guangzhou, July 4-8, 2007.
 85. **Wang, JH-C.**; Li, B. Cellular mechanical stress acts as a morphogenetic cue in spatial patterning of cell adhesion, proliferation, and differentiation. ISB 2007, Taipei, July 1-5, 2007.
 86. Kaz, R.; Shamalla-Hannah, L.; Pagnotto, M.; Fu, F.H.; **Wang, JH-C.** A decrease in TNF- α expression levels enhances the quality of healing patellar tendon. ISAKOS, Florence, Italy, May 27-31, 2007.
 87. Li, B.; Li, F.; Szczodry, M.; Xu, X.; Li, H.; **Wang, JH-C.** Mechanical stress regulates cell adhesion, proliferation, and differentiation patterns. MidWest Tissue Engineering. Midwest Tissue Engineering Conference, Podium presentation, Ann Harbor, April 20-21, 2007.
 88. Li, F.; Li, B.; Wang, Q-M.; **Wang, J. H-C.** Cell shape regulates collagen type I expression levels, actin cytoskeleton organization, and focal adhesion distribution. Ann Harbor, April 20-21, 2007.
 89. Li, F.; Li, B.; Wang, Q-M.; **Wang, JH-C.** Cell shape regulates collagen type I expression levels in human tendon fibroblasts. The Pittsburgh Orthopaedic J., March 10, 2007.
 90. Davitt, H. L.; Li, B.; **Wang, JH-C.** Myofibroblasts are present in the patellar tendons of mice after chronic treadmill running. The Pittsburgh Orthopaedic J., March 10, 2007.

91. Ronga, M.; Rubin, M. W.; **Wang, JH-C.**; Irrgang, J. J.; Fu, F. H. Morphological study of failed double bundle ACL grafts. *The Pittsburgh Orthopaedic J.*, March 10, 2007.
92. Szczodry, M.; Li, B.; Deasy, B.; **Wang, JH-C.** Cell proliferation patterns on micropatterned islands. *The Pittsburgh Orthopaedic J.*, March 10, 2007.
93. Tung, K.; **Wang, JH-C.** Differential effects of TGF- β 1 and TGF- β 3 on healing ligament fibroblasts. *The Pittsburgh Orthopaedic J.*, March 10, 2007.
94. Tung, K.; Xu, X.; **Wang, JH-C.** The anabolic and catabolic responses of fibroblasts to TGF- β 1 and IL-1 β . *The Pittsburgh Orthopaedic J.*, March 10, 2007.
95. Chen, JX; Li, HX; SundarRaj, N; **Wang, JH-C.** α -smooth muscle actin expression upregulates myofibroblast traction forces. 53rd ORS Meeting, San Diego, February 11-14, 2007.
96. Thampatty, BP; Im, HJ; **Wang, JH-C.** EP₄ receptor regulates collagen type-I, MMP-1 and MMP-3 gene expression of human tendon fibroblasts in response to IL-1 β . 53rd ORS Meeting, San Diego, February 11-14, 2007.
97. Li, F.; **Wang, JH-C.**; Wang, Q.M. Thickness shear mode resonator biosensor to monitor extracellular matrix (ECM) produced by fibroblasts in culture," presented at The 5th International Forum on Advanced Material Science and Technology (IFAMST-5) June 11-17, 2006, Hunan Province, China.
98. Li, B; Xie, L.; Starr, Z.C.; Yang, Z.; **Wang, JH-C.** Micropost force sensor array (MFSA) for measuring cell traction forces, Hawaii, Jan. 10-13, 2006.
99. Li, B.; Li, F.; Li, H-X.; Xu, L.; Szczodry, M.; Yang, Z-C.; Lin, J-S.; **Wang, JH-C.** Cellular mechanical stress gradient regulates cell proliferation and differentiation patterns, Hawaii, Jan. 10-13, 2006.
100. Li, B; Li, F.; **Wang, JH-C.** Mechanical stress dominates cell growth pattern. 5th WCB, Munich, July 28- Aug. 4, 2006.
101. Li, F.; Wang, Q.M.; and **Wang, JH-C.** An acoustic wave biosensor for probing the viscoelastic properties of living cells. SPIE Defense and Security Symposium, CHEMICAL AND BIOLOGICAL SENSING VII (OR42), Orlando (Kissimmee), Florida, April 17 – 21, 2006.
102. Li, F.; **Wang, JH-C.**; and Wang, Q.M. Thickness shear mode resonator biosensor to monitor extracellular matrix (ECM) produced by fibroblasts in culture. The 5th International Forum on Advanced Material Science and Technology (IFAMST-5) Hunan Province, China, June 11-17, 2006.
103. Li, F.; **Wang, JH-C.**; and Wang, Q.M. Characterization of extracellular matrix (ECM) produced by MC3T3 cells using TSM resonators." 2006 IEEE International Frequency Control Symposium, Miami, Florida, USA, June 5-7, 2006.
104. Lin, J-S.; Yang, Z-C.; and **Wang, JH-C.** A new computational approach to obtain substrate displacement field for determining cell traction forces. MiniSymposium on "Computational Modeling and Mechanobiology of Cells" at WCB-06, Munich, July 28- Aug. 4, 2006.
105. Yang, Z-C., Lin, J-C.; and **Wang, JH-C.** Application of genetic algorithms to determine cell traction field. "Computational Modeling and Mechanobiology of Cells" at WCB-06, Munich, July 28- Aug. 4, 2006.

106. Li, B; Yang, Z.C.; Qin, L.F.; Li, H.X.; **Wang, JH-C.** Use of microforce sensor array to determine differential effect of TGF- β 1 and TGF- β 3 on traction forces of human tendon fibroblasts. Regenerate World Congress on Tissue Engineering and Regenerative Technologies, Pittsburgh, April 24-27, 2006.
107. Chen, J.X.; Li, H.X.; SundarRaj, N.; **Wang, JH-C.** α -smooth muscle actin expression regulates TGF- β 1 stimulated fibroblast traction force. Regenerate World Congress on Tissue Engineering and Regenerative Technologies, Pittsburgh, April 24-27, 2006.
108. Campbell, B.H.; **Wang, JH-C.** The counter-balancing effects of TGF- β 1 and IL-1 β on α -SMA expression and cell traction force. The Pittsburgh Orthopaedic J., March 10, 2006.
109. Li, H.X; Chen, J.X.; **Wang, JH-C.** Cell organization influences ECM organization and composition. The Pittsburgh Orthopaedic J., March 10, 2006.
110. Kaz, R.; Shamalla-Hannah, L.; Pagnotto, M.; Fu, F.H.; **Wang, JH-C.** The effect of reducing TNF- α expression on the quality of healing tendon. The Pittsburgh Orthopaedic J., March 10, 2006.
111. Li, F.; Wang, Q.M.; **Wang, JH-C.** Application of a cell-based functional sensor to determine cell-substrate distance and cell viscoelasticity. The Pittsburgh Orthopaedic J., March 10, 2006.
112. **Wang, JH-C.**; Thampatty, B.P.; Im, H-J. LTB₄ counterbalances the effects of PGE₂ in human tendon fibroblasts, 2006 SPRBM Meeting, Cancun, Jan. 10-13, 2006.
113. **Wang, JH-C.**, Yang, Z.C., Chen, J.X. Lin, J-S . A new traction force microscopy to study cell contractility, 2006 SPRBM Meeting, Cancun, Jan. 10-13, 2006.
114. Li, B.; Chen, J; **Wang, JH-C.** A micro-force sensor array for the detection of cellular traction forces, 52nd ORS Meeting, Chicago, March 18-22, 2006.
115. Chen, JX; Li, HX; **Wang, JH-C.** TGF- β 1 and TGF- β 3 induce differential traction in human tendon fibroblasts, Chicago, March, 52nd ORS Meeting, March 18-22, 2006.
116. Chen, J.X.; Li, H.X.; SundarRaj, N.; **Wang, JH-C.** Basic fibroblast growth factor downregulates traction forces in myofibroblasts, Chicago, the 52nd ORS Meeting, March 18-22, 2006.
117. Tung, K.; **Wang, JH-C.** TGF- β 1 and TGF- β 3 induce dose-dependent contraction and α -smooth muscle actin expression in healing ligament fibroblasts, Chicago, the 52nd ORS Meeting, March 18-22, 2006.
118. Thampatty, BP; Whitmoyer, NC; Im, HJ; **Wang, JH-C.** LTB₄ at low picomolar dosage negates the catabolic effect of PGE₂ in human tendon fibroblasts, Chicago, the 52nd ORS Meeting, March 18-22, 2006.
119. Tung, Ka-Wah; **Wang, James, H-C.** TGF- β 1 and TGF- β 3 induce dose-dependent contraction and α -smooth muscle actin expression in healing ligament fibroblasts. Science 2005, Pittsburgh, October 6, 2005.
120. Li, B., Chen, J., **Wang, JH-C.** Micro-force sensor array made of RGD peptide-conjugated PDMS microposts. Podium presentation, BMES Meeting, Baltimore, September 28, 2005.
121. Li, B., Stankus, J.J., Wagner, W.R., **Wang, JH-C.** Application of polymer/collagen scaffolds to study tendon collagen matrix remodeling. Poster presentation, BMES Meeting, Baltimore, September 28, 2005.

122. Chen, J., Li, H., Li, B., SundarRaj, N., **Wang, JH-C.** Traction force of fibroblasts is regulated by α -SMA expression. Podium presentation, BMES Meeting, Baltimore, September 28, 2005.
123. Yang, Z.C., **Wang, JH-C.** A new traction force microscopy (TFM) method to study cell contractility. Podium presentation, BMES Meeting, Baltimore, September 28, 2005.
124. **Wang, JH-C.** Mechanobiology of tendon and ligament fibroblasts. Podium presentation, 12th International Congress of Biorheology (ICB), Chongqing, May 31, 2005.
125. Agarwal, C, **Wang, JH-C.** Differential phenotypical expression of healing vs. normal fibroblasts. WHS meeting. Podium presentation, Chicago, May 12, 2005.
126. **Wang, JH-C.**, Yang, G. Stretching-magnitude dependent inflammatory response of human tendon fibroblasts. WHS meeting. Podium presentation, Chicago, May 12, 2005.
127. Li, B., Chen, J.X., **Wang, JH-C.** RGD peptide-conjugated silicone elastomer promotes fibroblast adhesion. Midwest Tissue Engineering. Midwest Tissue Engineering Conference, Podium presentation, Cleveland, Apr. 11-12, 2005.
128. Chen, J.X., Li, B., **Wang, JH-C.** TGF- β 1 induces a greater prestress in individual tendon fibroblasts than TGF- β 3. Midwest Tissue Engineering Conference, Poster, Cleveland, Apr. 11-12, 2005.
129. **Wang, JH-C.**, Chen, J.X., Armanios, D., Chu, D. A novel in vitro model to study tendon fibroblast differentiation and migration. Midwest Tissue Engineering Conference, Poster, Cleveland, Apr. 11-12, 2005.
130. **Wang, JH-C.**, Li, F., Wang, Q.M. Controlling the shape and function of human tendon fibroblasts. SPRBM meeting. Podium presentation, South Lake Tahoe, California, Jan. 12-14, 2005.
131. Agarwal, C, **Wang, JH-C.** TGF- β 1 and TGF- β 3 induce differential contraction and α -SMA protein expression in healing ligament fibroblasts. Podium presentation, ORS Meeting, Washington, D.C., February 20-23, 2005.
132. Alaseirlis, D.A., Li, Y., Cilli, F., Fu, F.H., **Wang, JH-C.** Inflammation of injured patellar tendons affects the diameter collagen fibril diameters. Podium presentation, ORS Meeting, Washington, D.C., February 20-23, 2005.
133. Li, Y; Thampatty, B.P., **Wang, JH-C.** Exposure of human tendon fibroblasts to IL-1 β induces Inflammatory response – A new *in vitro* model study. Poster presentation, ORS Meeting, Washington, D.C., February 20-23, 2005.
134. Yang, G., **Wang, JH-C.** Cyclic mechanical stretching regulates IL-1 β induced COX-2 expression in human patella tendon fibroblasts. Poster presentation, ORS Meeting, Washington, D.C., February 20-23, 2005.
135. Chyu, D., **Wang, JH-C.** Myofibroblast differentiation reduces cell motility – A novel model study. BMES Meeting, Philadelphia, Oct. 13-16, 2004.
136. Crawford, R., **Wang, JH-C.** Stretching-increased protein expression of α -smooth muscle actin requires the presence of TGF- β 1 and vice versa. BMES Meeting, Philadelphia, Oct. 13-16, 2004.
137. Agarwal, C, Britton, Z.T., **Wang, JH-C.** Differential effect of TGF- β 1 and TGF- β 3 on the contraction and α -smooth muscle actin protein expression in healing ligament fibroblasts. Midwest Connective Tissue Workshop, Cleveland, Sept. 10, 2004.

138. Li, F., Wang, Q.-M., **Wang, JH-C.** Application of microcontact printing technology to control cell shape and function. Midwest Connective Tissue Workshop, Cleveland, Sept. 10, 2004.
139. Thampatty, B.P., **Wang, JH-C.** Leukotriene B₄ and prostaglandin E₂ influence proliferation of human tendon fibroblasts – Implication in the development of tendinopathy. Midwest Connective Tissue Workshop, Cleveland, Sept. 10, 2004.
140. Li, F., **Wang, JH-C.**, Shun, T.Y., Wang, Q.M. Quartz thickness shear mode resonator as a functional biosensor for monitoring living cell behavior under controlled biological environments. IEEE International Ultrasonics, Ferroelectric and Frequency Control Joint 50th Anniversary Conference, Palais des Congres, Montreal, Canada. P333-338, August 23-27, 2004.
141. **Wang, JH-C.** Mechanobiological studies of molecular mechanisms of tendinopathy. The Whitaker Foundation's Annual Biomedical Eng Res Conference, Aug. 12-14, 2004.
142. Yang, G.G., **Wang, JH-C.** Cyclic Mechanical Stretching Regulates IL-1 β Induced COX-2 Gene Expression in Human Patellar Tendon Fibroblasts. Midwest Connective Tissue Workshop, Cleveland, Sept. 10, 2004.
143. Agarwal, C, Britton, Z.T., **Wang, JH-C.** Healing and normal fibroblasts exhibit differential proliferation, contraction and α -smooth muscle actin expression. M-TEC, Pittsburgh, Apr. 16, 2004.
144. Li, Y.X., Yang, G.G., **Wang, JH-C.** IL-1 β induces inflammatory response in human patellar tendon fibroblasts. M-TEC, Pittsburgh, Apr. 16, 2004.
145. Bennett, J.M., **Wang, JH-C.**, Rubinstein, R.E., Kokai, L.E., Marra, K.G. Vanadate-loaded polymer microspheres for wound healing applications. Plastic Surgery Research Council, Ann Arbor, MI, June 11, 2004.
146. Wang, G., **Wang, JH-C.** Stretching-induced activation of p38 mapk regulates α -SMA expression. IL&T Symposium, March 10, 2004.
147. **Wang, JH-C.**, Wang, G.Q. Superoxide regulates α -SMA via p38 MAPK. Wound Healing Society Meeting, Atlanta, May 24, 2004.
148. Shen, W., Li, ZZ., **Wang, JH-C.** Mechanical stretching regulates myofibroblast differentiation. Pittsburgh Science Fair, Pittsburgh, Sep. 24, 2003.
149. Kokai, L.E., Tebbets, B.M., Rubin, J.P., **Wang, JH-C.**, Marra, K.G. Controlled release of sodium orthovanadate from polymeric biomaterials and the effect on fibroblast and adipose-derived adult stem cell proliferation. University of Pittsburgh Research Experience for Undergraduates Summer Symposium, Pittsburgh, August 6, 2003.
150. Shen, W., Li, ZZ., **Wang, JH-C.** Mechanical stretching regulates myofibroblast differentiation. Pittsburgh Science Fair, Pittsburgh, Sep. 24, 2003.
151. Britton, Z.T., Agarwal, C., **Wang, JH-C.** Healing fibroblasts express higher levels of α -SMA actin than normal fibroblasts. BMES Meeting, Navshivile, Oct. 2003.
152. Britton, Z.T., Agarwal, C., **Wang, JH-C.** Differential α -smooth muscle actin expression in healing and normal fibroblasts, MSRC Tech Symposium, July 29, 2003.
153. Martin, M., **Wang, JH-C.**, Marra, K.G. Vanadate delivery to improve MCL healing. Meeting of the Minds, Carnegie Mellon University, Pittsburgh, May 7, 2003.

154. Martin, M., Zhu, J., Marra, K.G., **Wang, JH-C.** Vanadate delivery to improve mcl healing. Engineering Tissue Growth, Pittsburgh, March 19, 2003.
155. Cetin, S., Ford, H.R., Watkins, S.C., **Wang, JH-C.**, Neal, M.D., Li, J., Sysko, L. Grishin, A. Agarwal, C., and Hackam, D.J. The regulation of enterocyte migration by endotoxin requires Rho-GTPase and increased focal adhesion formation. The 43th Annual Meeting of the American Society for Cell Biology, San Fransisco, Dec. 13-17, 2003.
156. Agarwal, C, Britton, Z.T., **Wang, JH-C.** Healing and normal fibroblasts exhibit differential contraction and α -smooth muscle actin expression. ORS 2004, March 7, 2004.
157. Yang, G.G., Crawford, R.C., **Wang, JH-C.** Stretching-induced collagen type I synthesis in human tendon fibroblasts is mediated by TGF- β 1. ASME Winter Meeting, July 10, 2003.
158. Gilbert, T.W., **Wang, JH-C.**, Badylak, S.F., Woo, SL-Y. Development of a novel model system to study remodeling of ECM scffolds in response to cyclic stretching. ASME Winter Meeting, July 10, 2003.
159. **Wang, JH-C.**, Li, Z.Z., Yang, G.G., Khan, M. Inflammatory responses of human patellar tendon fibroblasts to repetitive mechanical loading. The Whitaker Foundation's Annual Biomedical Eng Research Conference, Aug. 7-10, 2003.
160. **Wang, JH-C.**, Yang, G.G. Microarray analysis of multiple gene expression of human tendon fibroblasts in response to cyclic mechanical stretching, Podium presentation, Midwest Tissue Engineering Conference, Cincinnati, Apr. 11-12, 2003.
161. Shen, W., Li, ZZ., **Wang, JH-C.** Cyclic mechanical stretching induces differentiation of fibroblasts into myofibroblasts." Midwest Tissue Engineering Conference, Cincinnati, Apr. 11-12, 2003.
162. Zhu, JH, Takakura, Y, Woo, SL-Y, **Wang, JH-C.** Application of vanadate to enhance rat mcl healing: *in vitro* and *in vivo* studies, Midwest Tissue Engineering Conference, Cincinnati, Apr. 11-12, 2003.
163. Li, ZZ, Ynag, G., Khan, M., Stone, D., Woo, SL-Y., **Wang, JH-C.** Cyclic stretching of human patellar tendon fibroblasts induces production of PGE₂ and LTB₄ in a balanced manner, IL&T Symposium, Feb. 1st, 2003.
164. **Wang, JH-C.** A mechanobiological approach to study cellualr and molecular mechanisms for the development of tendinopathy, IL&T Symposium, Feb. 1st, 2003.
165. Martin, M., Zhu, J., Marra, K.G., **Wang, JH-C.** Vanadate delivery to improve MCL healing, ETG, Pittsburgh, March, 2003.
166. Li, ZZ, Ynag, G., Khan, M., Stone, D., Woo, SL-Y., **Wang, JH-C.** An *in vitro* study of molecular mechanisms for the development of tendinopathy, Midwest Connective Tissue Workshop, Chicago, Oct. 11, 2002.
167. Peperzak, K., **Wang, JH-C.** The application of a dynamic cell culture force monitor to studying fibroblast mechanobiology, Pittsburgh Science Fair, Pittsburgh, Sep. 18, 2002.
168. Martin, M., Collins, K.L.; Zhu, J.; Marra, K.G., **Wang, JH-C.** "The effect of a controlled release of vanadate on fibroblast proliferation," Duquesne University Undergraduate Research Program, 2002, Summer Research Symposium, Pittsburgh, July 2002.
169. Martin, M., Collins, K.L., Zhu, J., Marra, K.G., **Wang, JH-C.** A study of controlled release of vanadate and its effect on fibroblast proliferation, MSRC Tech Symposium, July 2002.

170. Peperzak, K., **Wang, JH-C.** Development of a dynamic cell culture force monitor to study cell mechanobiology, MSRC Tech Symposium, July 2002.
171. Paga, N., Li, Z.Z., **Wang, JH-C.** Cyclic stretching increases 5-Lopoxygenase expression and leukotriene B4 production: An implication of tendinopathy, MSRC Tech Symposium, July 2002.
172. Hrutkay, R., Li, Z.M., **Wang, JH-C.** Inflammatory and proliferative responses of tenosynovium fibroblasts to cyclic mechanical stretching, MSRC Tech Symposium, July 2002.
173. **Wang, JH-C.,** Yang, GG. Cyclic stretching of human tendon fibroblasts increases PGE₂ production but decreased inflammatory gene expression: implications for tendon pathophysiology, ORS Conference 2003.
174. Li, Z.Z., Yang, G.G., Stone, D., Woo, SL-Y., **Wang, JH-C.** Cyclic stretching of human tendon fibroblasts increases LTB₄ production: A potential mechanism for the development of tendinitis, ORS Conference 2003.
175. Campbell, BH., **Wang, JH-C.** TGF- β 1 and TGF- β 3 differentially affect human tendon fibroblast contraction: An *in vitro* model to study the mechanisms of scar tissue formation, ORS Confence 2003.
176. **Wang, JH-C.,** Yang, G.G., Stone, D., Woo, SL-Y. and Li, Z.Z. Molecular mechanisms for the development of tendinitis, World Congress of Biomechanics, Calgary, Canada, Nov. 9th, 2002.
177. Campbell, BH., **Wang, JH-C.** PGE₂ Inhibits Human Tendon Fibroblast Contraction: A Potential Role in Tendon Healing, Wound Healing Conference, May 30, 2002.
178. Li, Z.M., Pfaeffle, J., **Wang, JH-C.,** Sotereanos, D.G., Bioengineering studies of carpal tunnel syndrome. MIRM Retreat Meeting, Feb. 4-5, 2002.
179. Campbell, BH., **Wang, JH-C.** TGF- β 1 and TGF- β 3 differentially induce contraction of human tendon fibroblasts: implication for improving healing quality of tendon, ORS, Feb., 2002.
180. **Wang, JH-C.,** Yang, GG., Yang, SH., Salari, N., Civic, B., Stone, D., and Woo, SL-Y. Prostaglandin regulation and its effect on proliferation and collagen synthesis in the human tendon fibroblasts. Midwest Connective Tissue Conference, Oct., 2001.
181. Campbell, BH., **Wang, JH-C.** TGF- β 3 induces less HPTF contraction than TGF- β 1: A potential role of TGF- β 3 in reducing scar formation in healing tendons. Pittsburgh Science Fair (poster), Sept. 13, 2001.
182. Salari, N., Civic, B., **Wang, JH-C.** The effect of prostaglandin E₂ on human tendon fibroblast proliferation and collagen synthesis –implication of tendinitis development. Pittsburgh Science Fair 2001, Sept. 13, 2001.
183. Gilbert, TW., **Wang, JH-C.,** Woo, SL-Y. Small intestinal submucosa supports growth of tendon fibroblasts *in vitro*. Engineering Tissue Conference International, Pittsburgh, March 26, 2001.
184. **Wang, JH-C.,** Jia F. Stone D., Woo, SL-Y. Application of mechanobiology to Studying Mechanism of Tendinitis and Enhancing Tissue Healing, International Symposium on Ligaments and Tendons - II, San Fransisco, Feb 24, 2001.
185. **Wang, JH-C.,** Stone, D., Jia, F., Woo, SL-Y. Cyclic stretching of human tendon fibroblasts induces high levels of prostaglandin E₂: Implication for the mechanism of tendinitis, ORS Conference 2001.

186. **Wang, JH-C.**, Cassinelli E., Abramowitch SD, Woo SL-Y., Badylak SF. Small intestine submucosa enhances healing of medial collateral ligament in a rabbit model, 3rd SIS Symposium, 2000.
187. Clark, WW., **Wang, JH-C.** A piezoelectrically-actuated cell stretching device. Podium presentation at 24th *Annual Meeting of American Society of Biomechanics*, 2000.
188. **Wang, JH-C.**, Jia F. and Woo, SL-Y. Engineering collagen scaffolds with aligned collagen fibrils, Pittsburgh Orthopaedic Tissue Engineering Symposium, Pittsburgh, Apr. 16, 2000.
189. **Wang, JH-C.**, Celechovsky, C., Woo, SL-Y. Alignment and collagen synthesis of human patellar tendon fibroblasts grown in microgrooved surfaces in response to cyclic stretching, International Symposium on Ligaments and Tendons -I, Orlando, Florida, March 11, 2000.
190. **Wang, JH-C.**, Woo, SL-Y., Li, J., Xiao, X. Adeno-associated virus transduction efficiency in fibroblasts is species dependent, ORS Conference 2000.
191. **Wang, JH-C.**, Stone, D., Woo, SL-Y. A new method to align and orient human patellar tendon fibroblasts during cyclic stretching, ORS Conference 2000.
192. Chen, JL-S, Chyu, MK, **Wang, JH-C.**, Zhang, T. Thermal modeling of cultured cells in microgrooves, Proceedings of NHTC'01, 35th National Heat Transfer Conference, Anaheim, CA, June 10-12, 2000.
193. **Wang, JH-C.**, Celechovsky, C., Stone, D. and Woo, SL-Y. A novel culture model to study tendonitis induced by repetitive motion, University of Pittsburgh Arthritis Conference, Pittsburgh, PA, Oct. 28, 1999.
194. **Wang, JH-C.**, Celechovsky, C., Woo, SL-Y. Effects of silicone microgrooves on 3T3 fibroblasts, BMES/EMBS, Atlanta, Oct. 1999.
195. **Wang, JH-C.**, Yin, FC-P. Contractility affects stress fiber remodeling and reorientation of the endothelial cells in response to mechanical stretching. International Mechanical engineering Congress & Exposition, BED-Vol. 43, p119, 1999.
196. Watanabe N., Woo, SL-Y., Papageorgiou, CD., **Wang, JH-C.** Potential use of bone marrow cells for medial collateral ligament (MCL) healing, Tissue Engineering Conference, 1999.
197. **Wang, JH-C.**, Yin, FC-P. Reactive oxygen species affect cell reorientation response to mechanical stretching, BMES Meeting, Cleveland, Oct. 1998.
198. **Wang, JH-C.**, Yin, FC-P. Mechanical stretching induces reactive oxygen species dependent apoptosis in human aortic endothelial cells, BMES Meeting, Cleveland, Oct. 1998.
199. **Wang, JH-C.**, Goldschmidt-Clermont, P., Yin, FC-P. Actin stress fibers and endothelial cell response to stretching: role of the protein tyrosine kinase and arachidonic metabolic pathways. 70th Scientific Sessions of American Heart Association, Orlando, Nov. 1997.
200. **Wang, JH-C.** and Yin, FC-P. Cell orientation response to cyclic stretching, BMES Meeting, San Diego, Oct. 1997.
201. **Wang, JH-C.**, Grood, ES. Cell behavior in response to cyclic substrate deformations. *Ann Biomed Eng* 23: S58, 1995.
202. **Wang, JH-C.**, Grood, ES. , Ip, W., Boissy, R. The signal responsible for orienting cells grown on cyclically deformed surfaces. *FASEB J* 9(3):588, 1995.

203. **Wang, JH-C.**, Groot, ES., Ip, W., Neidlinger-Wilke, C., Claes, L., Gray, M., and Sobek, D. The effect of contact guidance on the realignment of fibroblasts grown on cyclically deformed substrates. *Transactions of the 2nd Combined Meeting of the Orthopedic Research Society of USA, Japan, Canada and Europe*, p27, 1995.
204. **Wang, JH-C.**, Ryu, J., Han, JS., Rowen, BA. Calibration technique for measurements from photographs of sliced specimens, presented in *the 17th Annual Meeting of American Society of Biomechanics*, 1993.
205. **Wang, JH-C.**, Ryu, J., Han, JS., Rowen, BA. A new method for representation of articular surfaces, *Advances in Bioengineering*, Bed-Vol. 22: 33-34, 1992.

PROFESSIONAL ACTIVITIES

TEACHING:

Courses/lectures --

1. ***Theoretic Mechanics***
120 students from Mechanical Engineering, Tongji University, 1983-1989.
4 hours of lecture per week
2. ***Strength of Materials***
90 students from Mechanical Engineering and Civil Engineering, Tongji University, 1987-1989.
4 hours of lecture per week, and 2 hours of session every two weeks for homework problems
3. ***Intramural Internship (BioE 1002)***
20 students from Bioengineering, University of Pittsburgh, 2000-2004.
4 hours/week office hours, and organize a Tech Symposium
4. ***Industrial Internship (BioE 1003)***
6 Students from Bioengineering, University of Pittsburgh, 2001-2004.
2h/week
5. ***Functional Tissue Engineering (BioE 2072)*** – A lecture on “Functional tissue engineering of tendon healing” for BioE graduate students, 2003.
6. ***Statics, Dynamics, and Mechanics of Materials (BioE 1630)*** – A lecture on “Application of mechanics to cell biology” for BioE undergraduate students, 2003.
7. ***Statics, Dynamics, and Mechanics of Materials (BioE 1630)*** – A lecture on “Mechanical forces control cellular responses” for BioE undergraduate students, Spring 2004.
8. ***Introduction to Cell Mechanobiology (BioE 2065/ME 2064)*** - Graduate students from Bioengineering and Mechanical Engineering Departments, University of Pittsburgh, 1.5h, twice a week, Spring 2003-2004 (Teaching Evaluation: 3.82, median 3.65 in the School of Engineering).

9. *Tissue Biomechanics (BioE 2064)* – A lecture on “Basics of cell biology and mechanobiology” for BioE undergraduate students, Spring 2005.

Supervision --

Postdoctoral/Resident Fellows/Research Associates:

| | |
|--------------------------------------|-------------------------------------|
| Zhaozhu Li, MD | Shaohua Yang, PhD |
| Mustafa Khan, MD | Fengyan Jia, MD |
| Ezequiel Cassinelli, MD (Resident) | Volker Musahl, MD (Resident) |
| Feridun Cilli, MD | Guangqing Wang, MD, PhD |
| Dimosthenis Alaseirlis, MD | Yunxia Li, MD |
| Padma Thampatty, PhD | Michael Iosifidis, MD |
| Bin Li, PhD | Jianxin Chen, MS |
| Rodrigo Kaz, MD | Hongxia Li, MD |
| Michael Pagnotto, MD (Resident) | Mario Ronga, MD |
| Michal Szczodry, MD | Kathy Puskar, PhD |
| Chanteak Lim, MD | Sung Ho Kook, PhD |
| Deshun Ma, PhD | Sen Lin, PhD |
| Yunfa Yang, MD | He Huang, MD |
| Ning Wang, MD | Dapeng Jiang, MD, PhD (9/12 - 8/13) |
| Ting Yuan, MD (10/12 - 9/14) | Binghua Zhou, MD (12/12 - 3/14) |
| Daibang Nie (7/2015 - present) | Greg Meloy, MD (1//13 to 6/13) |
| Jianying Zhang, PhD (2008 - present) | |

Graduate Students:

| | |
|--|---|
| Yan Liu, PhD student (Co-advisor) | |
| Fang Li, PhD student (Co-advisor) | |
| Brian Campbell, M.S., MD (Advisor) | Jinhong Zhu, MS student (Advisor) |
| Charu Agarwal, MS (Advisor) | Richard Crawford, PhD student (Advisor) |
| Weiqun Yu, PhD student (Advisor) | Wei Shen, PhD student (Advisor) |
| Tom Gilbert, PhD student (Thesis committee 2006) | |
| Vaishnavi Panchapakesa, MS student (Thesis committee 2006) | |
| Yong He, PhD student (Thesis committee 2006) | |

Hye Young Kim, PhD student (Thesis committee 2008-2010)
Jian Zhou, PhD student (Thesis committee 2008-2010)
Zegbeh Jallah, PhD student (Thesis committee 2010-)
Joshua Jamison, PhD student (Thesis committee 2010-2014)
Guangyi Zhou, PhD student (Thesis advisor 2011 -)
George Huang, PhD student (Academic advisor 2013 - 2014)
Dick Chow, PhD Student (Thesis committee, 2013)
Joe Shawky, PhD Student (Thesis committee, 2014-2016)
Tim Jackson, PhD Student (Thesis committee, 2015)

Medical Students

| | |
|--|---|
| Ka-Wah Tung, Medical Student (2005-2007) | Brian Campbell, Medical Student (2005-2007) |
| Jennifer Chen, Medical Student (2006-2007) | Katie Hughes (2009) |
| Tiffany Pan (2009-2010) | Sicong Wang (2014) |

Undergraduate Students:

Daniel Armanios (2006 Rhodes Scholarship winner. Helped recruit and mentor him while he was a high school student and undergraduate student at Pitt.)

Robert Tisherman (May 2009 – 2011; Barry M. Goldwater Scholarship winner.)

| | |
|---------------------------------|--------------------------------|
| Brian Civic | Nima Salari |
| Beth Kirkpatrick | Philip Magcalas |
| Nicole Paga | Morgana Martin |
| Katherin Peperzak | LaDahvia S. Flournoy |
| Joe Konwinski | Zachary Britton |
| Amine Hallab | Bryan Shelly |
| Nathan Bloom | Daniel Meikle |
| Derrick Chyu | Daniel Armanios |
| Summer Kostelnik | Nathan Whitmoyer (2005 Summer) |
| Heather Metz | Igor Tatarintsev (2005 Summer) |
| Lishan Mou (2005 Summer) | Luke Xie (2005 Summer) |
| Mike Mathews (2005 Summer) | Sylvia Kang (2006) |
| Michael Lin (2006 -2007 Summer) | Amar Mehta (2006 Summer) |
| Leo Xu (2006 -2007 Summer) | Sonal Dewan (2007 Summer) |

Julie Blanchi (French student, 2007 Summer)
Joseph Wang (Jan. 2008- 2009 Summer)
Bernard Siu (Jan. 2009 –July 2009)
Sebastien Persaud (2010-2011)
Aaron Ledgewood (2010-2011)
Michael Watson (2010-2011)
Julie Yu (2011 Summer)
Jack Li (2011 Fall)
Dennis Ou (2011 Fall)
Cara Vernacchia (2012 Summer)
Eric Moe (2013 Spring)
Claire Schafer (2013 Fall)
Nia James (2104 Summer)
Joanna Rose Mapel (2015 Spring)
Dolphurs Hayes (2015 Summer)
Audrey Stitt (2015 Fall -)

Torin Yeager (2007- 2009)
Nicholas Kucher (2008 Summer)
David Rizwan (2009 Summer)
Ying Wang (2010, 2011Summer)
Lauren Glikes (2010-)
Camille Keenan (2010-2012)
Jinie Haytko (2011 Summer)
Salil Doshi (2011 Fall)
Nancy Davison (2012 Summer)
Jacob Reck (2013 - 2015)
Shayna Cohen (2013 Spring)
Mitchell Moser (2013 Fall)
Saimanoj Reddy Narava (2015 - 2016)
Aja Pollard (2015 Summer)
Jason Xue (2015 Fall -)

High/Middle School Students:

Derrick Chyu (2001)
Rena Xu (2004)
Sumeet Shroff (2007, 2008 Summer)

James Morrow (2002)
Tomas Hu (2000)
Yilu Zhang (2007 Summer)

Responsibilities include advising research in general, in particular experimental design and methods, data analysis, statistics, presentation, and also drafting/revising manuscripts.

RESEARCH:

Active grants --

1. **"The role of TSCs in the degenerative tendinopathy induced by mechanical loading."** PI, 20%, 3/01/15 -- 2/28/20, NIH/NIAMS 1R01AR065949-01A1 (2 percentile), \$1,925,000.
2. **"Repair of tendinopathic tendons."** PI, 20%, 9/1/11--8/31/16, NIH/NIAMS 1R01AR061395, \$1,893,750.

3. **“NIH Diversity Supplemental grant.”** PI, 7/01/04 - 6/30/16, supplemental to the NIH/NIAMS R01AR061395, \$78,232.
4. **“Pre-exercise improves repair of injured aging tendons.”** PI, 5%, 7/01/15 -- 6/30/16. The Pittsburgh Foundation, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
5. **“Excessive mechanical loading on plantar fascia leads to plantar fasciitis.”** PI, 5%, 7/01/14 -- 6/30/16. The Pittsburgh Foundation, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
6. **“Development of novel bioartificial ligament using autologous biological scaffold and cells.”** Co-I, 5%, 8/1/13 - 4/28/16, DoD Grant# W81XWH-13-2-0030, \$400,000.
7. **“Exercise improves aging tendons by inducing cellular and molecular changes.”** PI, 5%, 2/01/16 – 7/31/16. Pittsburgh Pepper Center Pilot Study, \$25,000.

Completed grants –

1. **“An interdisciplinary and integrative study of tendinopathy.”** PI (Co-I: Freddie Fu, MD), 20%, 9/1/02--8/31/13, NIH/NIAMS 2R01AR049921-05 (Competitive renewal), \$1,261,952.
2. **“A tissue specific approach to enhance tendon repair.”** PI, 10%, 9/1/12--8/31/15, NIH/NIAMS R21AR060920, \$416,625.
3. **“Defining the role of tendon stem cells in the development of tendinopathy.”** PI, 5%, 9/1/08 -- 8/31/13, NIAMS 3R01049921S1, \$151,500.
4. **“Development of novel bioartificial ligament using autologous biological scaffold and cells.”** Co-PI (Co-PI: Rocky Tuan), 5%, 7/1/11--12/31/12, DoD, \$200,000.
5. **“Tendon stem cell-based mechanisms of PRP treatment.”** PI (Co-I: Freddie Fu, MD), 5%, 7/1/10— 6/30/12, The Pittsburgh Foundation, Albert B. Ferguson, JR., MD Orthopaedic Fund (M2010-0094), \$5,000.
6. **“An interdisciplinary and integrative study of tendinopathy.”** PI, 5%, 9/1/09--8/31/11, NIH/NIAMS 3R01AR049921-07S2 (ARRA funding), \$234,160.
7. **“Exercise revives aging tendons through rejuvenating tendon stem cells.”** PI, 5%, 9/01/10 – 8/31/11. Pepper Pilot Grant, Pepper Center Pilot Funding Program, \$25,000.
8. **“Use of a novel biomolecule to augment and accelerate the tendon-bone interface healing.”** PI, 5%, 7/01/13 -- 6/30/15. The Pittsburgh Foundation, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
9. **“Identification and characterization of ACL stem cells for repair and regeneration of injured ACL.”** PI (Co-I: Freddie Fu, MD), 5%, 7/1/08—6/30/10, The Pittsburgh Foundation, Albert B. Ferguson, JR., MD Orthopaedic Fund (M2008-0050), \$5,000.

10. **“Interaction of mechanical and inflammatory signals in disc matrix preservation.”** Co-Investigator, 5%, 9/15/08 – 6/30/10, NIAMS 1R21AR055681, \$166,650.
11. **“Cellular and tissue mechanobiology postdoctoral fellowship.”** PI, 5%, 6/26/2007--8/15/08, Pittsburgh Tissue Engineering Institute, \$49,144.
12. **“UPMC Bridge Funding.”** PI, 5%, 11/01/06 – 6/30/08, University of Pittsburgh School of Medicine, \$65,000.
13. **“A multidisciplinary study of mechanisms for tendinitis.”** PI, 30%, 9/1/02--8/31/07, NIH/NIAMS R01 AR049921, \$1,051,071.
14. **“NIH supplemental grant for underrepresented minority.”** PI, 9/1/02-8/31/07, supplemental to the NIH/NIAMS R01 AR049921, \$185,914.
15. **“Grant support for SPRBM Meeting.”** PI, 5%, \$5,000, Smith & Nephew Inc., 11/01/06 – 10/31/07.
16. **“An acoustic wave cytosensor system for living cell study.”** Co-PI, 50%, NSF, 9/01/04 – 8/31/07, \$240,000.
17. **“A request for funding to support 25th SPRBM Meeting.”** PI, 5%, \$13,000, NIAMS/NIBIB R13, 11/01/06 – 8/31/07.
18. **“Inflammatory reaction and apoptosis of tendon fibroblasts.”** PI, 15%, 7/1/01--6/30/07, Arthritis Foundation, \$400,000.
19. **“Bioengineering study of tendinitis.”** PI, 5%, 9/1/01—8/31/05, Whitaker Foundation, \$224,821.
20. **“MCL healing: Interdisciplinary studies.”** PI: Savior Woo, Ph.D.; Co-Investigator: James H-C. Wang, Ph.D., 10%, NIH/NIAMSRO1 7/01/02 – 6/30/07, \$1,577,436.
21. **“Molecular mechanisms of tendinitis.”** PI, 5%, 6/1/04—5/31/05, The Pittsburgh Foundation, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
22. **“Molecular mechanisms of carpal tunnel syndrome.”** PI: Zong-Ming Li; Co-Investigator: James H-C. Wang, Ph.D. The Pittsburgh Foundation, Albert B. Ferguson, M.D., Orthopaedic Fund. 7/01/04 - 6/30/05, \$5,000.
23. **“Magnolia Award for Visiting Scholars and Scientists.”** PI, 1/01/05 – 12/31/05, Shanghai Science and Technology Foundation, RMB20,000.
24. **“*In vitro* model study of the molecular mechanism of tendinitis.”** PI, 15%, 3/01/01--2/28/04, NIH/NIAMS 1P30 AR47372, \$225,000.
25. **“A novel alternative approach to study biological mechanisms for tendinitis.”** PI, 5%, 9/1/02--8/31/04, Alternatives Research & Development Foundation, \$40,000.

26. **“Bioengineering industrial internships.”** PI: Savior Woo, Ph.D.; Co-Investigator: James H-C. Wang, Ph.D., 8%, 9/1/01--8/31/04, Whitaker Foundation, \$180,000.
27. **“Altered mechanical stretching of the human aortic endothelial cells results in dysfunctional cellular responses.”** PI, 5%, 4/1/02 – 3/31/04, The Competitive Medical Research Fund (CMRF), University of Pittsburgh Medical Center, \$25,000.
28. **“A novel tissue engineering approach to enhance the quality of the healing ligament.”** PI, 5%, 7/1/03--6/30/04, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
29. **“*In vitro* model study of cellular mechanism of tendinitis induced by repetitive motion.”** PI, 10%, 3/00--2/01, Biomed Pilot Research Grant from Rockefeller Brothers Fund, \$25,000.
30. **“Cell death due to excessive repetitive loading leads to tendinitis.”** PI, 5%, 6/00--5/01, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
31. **“Tendinitis is due to repetitive exposure of PGE₂ to tendon fibroblasts.”** PI, 5%, 7/1/01--6/30/02, Albert B. Ferguson, JR., MD Orthopaedic Fund, \$5,000.
32. **“Nano-scaled imaging and nano-force probing during gene delivery process by atomic force microscope.”** Co-PI, 5%, 7/1/00--6/30/01, University of Pittsburgh Small Grants Program, \$16,000.
33. **“Enhancing biomechanical and biological properties of healing MCL using scaffolding and gene transfer technologies.”** PI, 5%, 5/12/00--5/11/01, MSRC Research Grant, \$5,000.
34. **“Mechanical stretching up-regulated tyrosine phosphorylation of pp125FAK in tenocytes leads to tendonitis.”** PI., 5%, 5/99--4/00, MSRC Research Grant, \$5,000.
35. **“Stretching-induced hydrogen peroxide and apoptosis in human aortic endothelial cells.”** PI, 15%, 9/98-8/99, Jewish Foundation, \$50,000.
36. **“Low back pain--A biomechanical study.”** PI, 15%, 9/87-8/88. Academy of Tongji University Science and Technology, \$2,500.

Invited Presentations/Lectures

1. **Wang, JH-C.** "Is the PRP treatment of tendon injuries really valid?" Chinese University of Hongkong, November 25, 2015.
2. **Wang, JH-C.** "Tendon stem cells, tendinopathy, and tendon repair." COA, Chongqing, November 19, 2015.
3. **Wang, JH-C.** "Is there any substance in PRP treatment for tendinopathy?" Shanghai Jiatong Univ 9th People's Hospital, Shanghai, November 16, 2015.
4. **Wang, JH-C.** "What does PRP do to injured tendons?" AAOS Biologic Treatments Symposium, Rosemont, Illinois, November 7, 2015.

5. **Wang, JH-C.** "Mechanobiology of cell-matrix interactions." Seminar at Beihai Hospital, Guangxi Medical Univ., April 16, 2015.
6. **Wang, JH-C.** "Tendon stem cells, tendinopathy, and tendon repair." Regenerative Medicine Forum, Guangxi Medical University, Guangxi, April 15, 2015.
7. **Wang, JH-C.** "TSC-based mechanism of tendinopathy and treatment with PRP." International stem cell biology and bone conference, Chengdu, April 13, 2015.
8. **Wang, JH-C.** "Tendon stem cell mechanobiology." 2015 ICMRS-ASBMR Meeting, Changsha, April 10, 2015.
9. **Wang, JH-C.** "Aberrant differentiation of tendon stem cells causes the development of degenerative tendinopathy." ISL&T-XIV, Las Vegas, March 28, 2015.
10. **Wang, JH-C.** "The efficacy of PRP treatment for tendinopathy," AOSSM Workshop, Colorado Springs, Co. Feb. 28, 2015.
11. **Wang, JH-C.** "Aberrant differentiation of tendon stem cells causes degenerative tendinopathy." The 7th International Conference on Osteoporosis and Bone Research, Xiamen, China, Oct. 16-19, 2014.
12. **Wang, JH-C.** "Tendon stem/progenitor cell and its role in the development of degenerative tendinopathy" The 3rd International Scientific Tendinopathy Symposium, Oxford University, UK, September 5, 2014.
13. **Wang, JH-C.** "PRP treatment of tendon injuries - any substance in it?" Shanghai OTR Meeting, Shanghai, May 17, 2014.
14. **Wang, JH-C.** "Cell mechanobiology and translational biomedical research." Shanghai Jiaotong Univ School of Biomedical Engineering. May 9, 2014.
15. **Wang, JH-C.** "Tendon stem cells, tendinopathy, and tendon repair." Changzheng Hospital, Shanghai, May 8, 2014.
16. **Wang, JH-C.** "Mechanobiology of Cell-Matrix Interactions." Donghua Univ Seminar, May 5, 2014.
17. **Wang, JH-C.** "Expanding tendon stem cells for tendon tissue engineering." Seminar for the Center for Craniofacial Regeneration (CCR), Pittsburgh, April 9, 2014.
18. **Wang, JH-C.** "Tendon stem cells for tendon regeneration." Annual MIRM Retreat, Pittsburgh, March 10, 2014.
19. **Wang, JH-C.** "Tendon stem cells, tendinopathy, and tendon repair." PM&R Grand Rounds at Univ of Pittsburgh, Pittsburgh, Feb. 19, 2014.
20. **Wang, JH-C.** "Tendon stem cells, tendinopathy, and tendon repair." The 6th WACBE Meeting, Beijing, Aug. 7, 2013.
21. **Wang, JH-C.** "The safety and efficacy of platelet-rich plasma (PRP) treatment for injured tendons." The 7th Orthopaedic Translation Meeting, Shanghai, May 26, 2013.
22. **Wang, JH-C.** "Tendon stem cell mechanobiology and tendon repair." The First ICMRS Meeting, Suzhou, May 22, 2013.
23. **Wang, JH-C.** "Tendon stem cells, tendinopathy, and tendon repair." Seminar at Univ of Penn, Philadelphia, April 9, 2013.

24. **Wang, JH-C.** "Cell traction force microscopy for cell biological research." Seminar at Wayne State University School of Medicine, March 28, 2013.
25. **Wang, JH-C.** "Does PRP work?" Ferguson Lab meeting, Pittsburgh, Mar. 1, 2013.
26. **Wang, JH-C.** "Mechanobiology of aging tendon stem cells." Basic Biology of Aging Seminar Series, Pittsburgh, Feb. 15, 2013.
27. **Wang, JH-C.** "The mechanism of tendinopathy and PRP Treatment." Huashan Hospital, Shanghai, Nov. 28, 2012.
28. **Wang, JH-C.** "The stem cell mechanism of tendinopathy." The 2012 COA Meeting, Beijing, Nov. 16, 2012.
29. **Wang, JH-C.** "Tendinopathy, exercise, and tendon treatment." The Second Annual Symposium on Regenerative Rehabilitation, Pittsburgh, Nov. 12, 2012.
30. **Wang, JH-C.** "Mechanobiology of tendon stem cells." ICHTS Musculoskeletal Summit Workshop, Minneapolis, MN, Oct. 11, 2012.
31. **Wang, JH-C.** "Mechanobiology of tendon stem cells." West China Medical School, Chengdu, China, May 5, 2012.
32. **Wang, JH-C.** "Enhancing the stemness of tendon stem cells for tissue engineering of injured tendons." The Third Military University, Chongqing, China, May 4, 2012.
33. **Wang, JH-C.** "Tendon stem cells and platelet-rich plasma in orthopaedic applications." Suzhou Univ Orthopaedic Institute Seminar, May 3, 2012.
34. **Wang, JH-C.** "Tendinopathy: Basic science behind clinical treatments." The 9th IFOSMA-Shanghai, April 25-28, 2012.
35. **Wang, JH-C.** "Tendon stem cell mechanobiology." Seminar at the University of Hokkaido, Sapporo, Japan, April 24, 2012.
36. **Wang, JH-C.** "Tendinopathy and tendon repair." 2012 AOSSM Research Meeting, Vail, Colorado, March 3-4, 2012.
37. **Wang, JH-C.** "Enhancing the stemness of tendon stem cells for tissue engineering of injured tendons." 2012 McGowan Institute Scientific Retreat, Nemaquin Woodlands Resort, March 5-7, 2012.
38. **Wang, JH-C.** "Tendon stem cell mechanobiology." 2012 BMES-SPRBM Cellular and Molecular Engineering Conference, Puerto Rico, Jan. 3-7, 2012.
39. **Wang, JH-C.** "The molecular and cellular mechanisms for rehabilitation and regeneration of injured tendons." First Annual Symposium on Regenerative Rehabilitation, Pittsburgh, Nov. 3, 2011.
40. **Wang, JH-C.** "Defining the effects of platelet-rich plasma (PRP) on injured tendons." MIRM Wound Healing Seminar, Pittsburgh, Oct. 18, 2011.
41. **Wang, JH-C.** "The stemness of tendon stem cells in vitro and tendon formation in vivo." Biomechanics Day, CMU, Pittsburgh, Sept. 13, 2011.
42. **Wang, JH-C.** "Repair of tendinopathic tendons." A presentation in the University of Pittsburgh Department of Orthopaedic Surgery, Pittsburgh, July 18, 2011.
43. **Wang, JH-C.** "Mechanobiology of cell-matrix interactions." International Conference on the

Structure and Function of Biomatrix, Budapest, Hungary, July 6-7, 2011.

44. **Wang, JH-C.** "Tendon stem cells and platelet-rich plasma for repair of injured tendons." ASME Summer Bioengineering Conference, Farmington, June 22, 2011.
45. **Wang, JH-C.** "Tendon stem cell mechanobiology." Soochow University Medical School Orthopaedic Institute, Suzhou, China, June 10, 2011.
46. **Wang, JH-C.** "Mechanobiology of tendon and ligament cells." University of Malaya, Malaysia, May 31, 2011.
47. **Wang, JH-C.** "Does PRP work on injured tendons?" 2011 McGowan Institute Scientific Retreat, Nemaquin Woodlands Resort, March 7-9, 2011.
48. **Wang, JH-C.** "Mechanical forces and cell biomechanics/mechanobiology." The Pittsburgh Biomechanics Seminar Series, Pittsburgh, Oct. 5, 2010.
49. **Wang, JH-C.** "Tendon stem cells and tendon repair with PRP." The Sun Valley Musculoskeletal Biology Workshop of the IBMS, Sun Valley, Idaho, Aug. 1-4, 2010.
50. **Wang, JH-C.** "Tendon stem cells, tendon injury, and tendon repair with PRP." The Orthopaedic Biomechanics Workshop, Shanghai, July 24, 2010.
51. **Wang, JH-C.** "Does platelet-rich plasma (PRP) work on injured tendons?" The Third Military University, Chongqing, China, July 8th, 2010.
52. **Wang, JH-C.** "Tendon stem cells and platelet-rich plasma in orthopaedic research and application." Soochow University Medical School Orthopaedic Institute, Suzhou, China, July 6th, 2010.
53. **Wang, JH-C.** "The stem cell mechanisms of enhancing tendon healing by platelet-rich plasma." The MIRM Wound Healing Seminar, Pittsburgh, April 6, 2010.
54. **Wang, JH-C.** "Tendon and ligament stem cell mechanobiology." The MIRM Wound Healing Seminar, Pittsburgh, Mar. 16, 2010.
55. **Wang, JH-C.** "Mechanics rules cell biology (keynote speech)." The 10th ISL&T, Hong Kong, Feb. 5-6, 2010.
56. **Wang, JH-C.** "Tendon stem cell-based mechanisms of PRP treatment." The Double-Bundle Group Meeting, Department of Orthopaedic Surgery, Pittsburgh, Jan. 20, 2010.
57. **Wang, JH-C.** "Tendon and ligament stem cells." The First Joint Symposium of ICHTS and CSOS, National Yang Ming Univ., Taipei, Nov. 16, 2009.
58. **Wang, JH-C.** "Tendinopathy and tendon stem cells." Department of Orthopaedics Seminar, University of Rochester School of Medicine, Rochester, Oct. 28, 2009.
59. **Wang, JH-C.** "Mechanical forces, biomechanics, and mechanobiology." Biomechanics Day, CMU, Pittsburgh, Sept. 22, 2009.
60. **Wang, JH-C.** "Tendinopathy and pathogenic role of tendon stem cells." Southwest Hospital, The Third Military University, Chongqing, June 17, 2009.
61. **Wang, JH-C.** "Tendon stem cells (TSCs), tendon inflammation, and TSC mechanobiology." Chongqing University, Chongqing, June 18, 2009.
62. **Wang, JH-C.** "Does the development of tendinopathy involve tendon inflammation?" 2009 China Sports Medicine & Arthroscopy Conference, Qingdao, June 11-14, 2009.

63. **Wang, JH-C.** “Exercise, tendon stem cells, and tendinopathy.” 2009 China Sports Medicine & Arthroscopy Conference, Qingdao, June 11-14, 2009.
64. **Wang, JH-C.** “Tendon stem cell mechanobiology.” CMU Biomedical Engineering Seminar, Pittsburgh, Dec. 8th, 2008
65. **Wang, JH-C.** “Mechanobiology of tendon stem cells: implications for treatment of tendinopathy.” Tissue Engineering Forum, The Third Military University, Chongqing, Nov. 1, 2008.
66. **Wang, JH-C.** “Tendinopathy and tendon stem cell tissue engineering.” Eastern Forum 2008 Meeting, Shanghai, Oct. 28, 2008.
67. **Wang, JH-C.** “Experimental cell mechanobiology – The need for theoretical modeling,” 2008 Meeting of the Society for Natural Philosophy, Pittsburgh, Sept. 19-21, 2008.
68. **Wang, JH-C.** “PGE₂ production in tendons and its effect on tendon stem cell differentiation.” The 16th International Conference on Mechanics in Medicine and Biology (ICMMB), Pittsburgh, July 24th, 2008.
69. **Wang, JH-C.** “Cell traction force microscopy and tendon stem cells.” Shanghai 9th People's Hospital, Shanghai Second Medical University, Shanghai, April 18, 2008.
70. **Wang, JH-C.** “Tendon stem cells: isolation and characterization.” Chongqing University College of Bioengineering, Chongqing, April 15, 2008.
71. **Wang, JH-C.** “Cellular and molecular mechanisms for the development of tendinopathy.” International Symposium on Ligaments and Tendons, Hong Kong, April 10, 2008.
72. **Wang, JH-C.** “Cell traction force microscopy and its applications in musculoskeletal investigations.” Department of Orthopaedics & Traumatology, The University of Hong Kong, April 9, 2008.
73. **Wang, JH-C.** “Cell traction force microscopy for musculoskeletal research.” MIRM Retreat, Nemaolin Resort, March 12, 2008.
74. **Wang, JH-C.** “Mechanical Forces and cell mechanobiology.” Magee-Women's Research Institute, Pittsburgh, January 24, 2008.
75. **Wang, JH-C.** “Mechanical forces, cells, and cell mechanobiology.” The Department of Bioengineering and Robotics, Tohoku University, Sendai, Japan, Dec. 6th, 2007.
76. **Wang, JH-C.** “Cell traction force microscopy and biological applications.” The 44th Society of Engineering Science (SES) Meeting, Texas A&M University, College Station TX, October 22-24, 2007.
77. **Wang, JH-C.** “Recent progresses in investigation of molecular mechanisms of the development of tendinopathy.” The Third Military University, China, May 24, 2007.
78. **Wang, JH-C.** “Recent progresses in biological applications of cell traction force microscopy.” Chongqing University College of Bioengineering, China, May 23, 2007.
79. **Wang, JH-C.** “Application of biomaterials to biomedical research.” Shanghai Institute of Technology, China, May 17, 2007.
80. **Wang, JH-C.** “Cells, tissues, and mechanobiology.” Nebraska Research and Innovation Conference, Omaha, Nebraska, March 21, 2007.
81. **Wang, JH-C.** “Biomedical research overview in the MechanoBiology Laboratory.” The 2nd hospital of Harbin Medical University, Harbin, Nov. 14, 2006.

82. **Wang, JH-C.** “The basics of scientific investigation.” The 2nd hospital of Harbin Medical University, Harbin, Nov. 14, 2006.
83. **Wang, JH-C.** “Cell mechanobiological response to mechanical loading.” Tsinghua University Institute of Biomechanics and Biomedical Engineering, Beijing, Nov. 13, 2006.
84. **Wang, JH-C.** “Cell traction force microscopy and its applications in musculoskeletal research.” 1st CORS meeting, Beijing, Nov. 11-12, 2006.
85. **Wang, JH-C.** “Mechanical stress dominates cell growth pattern.” Mini-Symposium on the Computational Modeling and Mechanobiology of Cells at the 5th WCB, Munich, July 28th- Aug. 4th, 2006.
86. **Wang, JH-C.** “A new computational approach to obtaining substrate displacement field for determining cell traction forces”. Mini-Symposium on the Computational Modeling and Mechanobiology of Cells at the 5th WCB, Munich, July 28th- Aug. 4th, 2006.
87. **Wang, JH-C.** “Biological applications of cell traction force microscopy.” Shanghai Tissue Engineering Center, Shanghai, July 13, 2006.
88. **Wang, JH-C.** “Tendinopathy and tendon/ligament repair.” Shanghai Tissue Engineering Center, Shanghai, July 13, 2006.
89. **Wang, JH-C.** “An overview of biomedical research in the MechanoBiology Laboratory.” Shanghai University of Sports, July 6, 2006.
90. **Wang, JH-C.** “Tendon and ligament injuries and repair.” Shanghai University of Sports, July 6, 2006.
91. **Wang, JH-C.** “Scientific research and personal life journey in America.” Tongji University Institute of Biomedical Engineering, July 4, 2006.
92. **Wang, JH-C.** “Cell traction force microscopy and its biological applications.” Chongqing University Bioengineering College, June 22, 2006.
93. **Wang, JH-C.** “The role of lipid inflammatory mediators in the development of tendinopathy.” Chongqing University Bioengineering College, June 22, 2006.
94. **Wang, JH-C.** “Basics of scientific research.” Chongqing University Bioengineering College, June 23, 2006.
95. **Wang, JH-C.** “Introduction to functional tissue engineering.” Chongqing University Bioengineering College, June 23, 2006.
96. **Wang, JH-C.** “Mechanobiology of tendon/ligament fibroblasts.” Chongqing University Bioengineering College, June 22, 2006.
97. **Wang, JH-C.** “Alpha-smooth muscle actin expression regulates cell traction forces.” Wound Healing Conference, Pittsburgh, April 4th, 2006.
98. **Wang, JH-C.** “Fibroblast mechanobiology.” Invited Lecture for Seminar du GDR2760, Marseille, France, Jan. 18, 2006.
99. **Wang, JH-C.** “Biomedical research – an overview of research activities in MBL.” CNRS, Nancy, France, Jan. 20, 2006.

100. **Wang, JH-C.** “Traction force microscopy and its application to determining the role of α -SMA in TGF- β induced fibroblast traction.” Ophthalmology Research Seminar, Pittsburgh, November 23, 2005.
101. **Wang, JH-C.** “Current research in the MechanoBiology Lab.” Presentation at the UPMC Department of Orthopaedic Surgery Seminar, Pittsburgh, October 15, 2005.
102. **Wang, JH-C.** “Mechanobiological studies in the MechanoBiology Lab.” Presentation at the Bose/Carnegie Mellon Tech Forum, CMU, July 12, 2005.
103. **Wang, JH-C.** “Cell mechanobiology research – an overview.” Seminar at the Tongji University Life Science and Technology Institute, Shanghai, June 7th, 2005.
104. **Wang, JH-C.** “Basic concepts of cell biology.” Lecture to Undergraduate Students at the Tongji University Life Science and Technology Institute, Shanghai, June 8th, 2005.
105. **Wang, JH-C.** “Traction force microscopy.” Series of Lecture to Graduate Students at the Tongji University Life Science and Technology Institute, Shanghai, June 9th, 2005.
106. **Wang, JH-C.** “p38 MAPK expression in response to cyclic mechanical stretching.” Series of Lecture to Graduate Students at the Tongji University Life Science and Technology Institute, Shanghai, June 10th, 2005.
107. **Wang, JH-C.** “Basics of practical statistics and scientific research.” Series of Lecture to Graduate Students at the Tongji University Life Science and Technology Institute, Shanghai, June 10th, 2005.
108. **Wang, JH-C.** “*In vitro and in vivo* studies of tendinopathy.” Department of Orthopaedic Surgery, Southwestern Hospital, The Third Military Medical University, Chongqing, May 31st, 2005.
109. **Wang, JH-C.** “Decreasing the inflammation of injured tendons increases collagen fibril diameters.” MIRM Wound Healing Research Seminar, Pittsburgh, March 1st, 2005.
110. **Wang, JH-C.** “An Overview of Cell Mechanobiology Studies in MechanoBiology Lab.” Orthopaedic Research Seminar, Pittsburgh, Jan. 25th, 2005.
111. **Wang, JH-C.** “Mechanobiology of tendon/ligament fibroblasts.” Seminar at the National Centre for Biomedical Engineering Science, National University of Ireland, Galway, Ireland, September 23rd, 2004.
112. **Wang, JH-C.** “Cellular and molecular studies of tendon mechanobiology,” Cleveland Clinic Foundation, Cleveland, September 10th, 2004.
113. **Wang, JH-C.** “Superoxide regulates stretching-induced α -SMA expression via activation of p38 MAPK.” MIRM Wound Healing Research Seminar, Pittsburgh, June 1st, 2004.
114. **Wang, JH-C.** “Functional tissue engineering (FTE) to improve the quality of healing tendons/ligaments.” The Ohio State University Biomedical Engineering Seminar, Columbus, April 29th, 2004.
115. **Wang, JH-C.** “Orthopaedic engineering: Mechanobiological and tissue engineering studies.” Purdue University Biomedical Engineering Seminar, West Lafayette, April 5th, 2004.
116. **Wang, JH-C.** “Fibroblast mechanobiology and tissue engineering of tendon and ligament healing.” University of Cincinnati Biomedical Engineering Seminar, Cincinnati, March 25, 2004.
117. **Wang, JH-C.** “Molecular mechanisms of tendon repetitive motion injuries.” Midwest Connective Tissue Workshop, Chicago, November 15, 2003.

118. **Wang, JH-C.** “Mechanobiological studies of tendinopathy,” IOC Olympic Academy, Athens, Greece, October 5, 2003.
119. **Wang, JH-C.** “Mechanical forces regulate cellular structure and function,” Georgia Tech, Atlanta, October 23 2003.
120. **Wang, JH-C.** “Basic research on tendinopathy” Chinese Sports Medicine Conference,” Beijing, China, November 6, 2002.
121. **Wang, JH-C.** *In vitro* model studies of molecular mechanisms for tendinitis. World Congress of Biomechanics, Calgary, Canada, August 9, 2002.
122. **Wang, JH-C.** Biomechanics and functional tissue engineering of tendons and ligaments, 2002 China- Advanced Course on Orthopedics Sports Medicine and Rehabilitation, Shanghai, China, Nov. 9, 2002.
123. **Wang, JH-C.** “Basic research on the biological mechanisms for tendinopathy.” 2002 China-Advanced Course on Orthopedics Sports Medicine and Rehabilitation, Shanghai, China, Nov. 9, 2002.
124. **Wang, JH-C.** “Mechanobiology and functional tissue engineering”. Tongji Univ. Life Science and Biomedical Research Institute, Shanghai, China, Feb. 26, 2002.
125. **Wang, JH-C.** “Introduction to cell mechanobiology” and “functional tissue engineering of tendons” Sports Medicine Research Institute, Hua-Shan Hospital, Feb. 28, 2002.
126. **Wang, JH-C.** “Mechanobiology of cells subjected to cyclic mechanical stretching”. Mayo Clinic, Rochester, Oct. 26, 2001.
127. **Wang, JH-C.** “How cells respond to mechanical environment?” University of Pittsburgh Mechanical Engineering Seminar, Nov. 17, 2000.
128. **Wang, JH-C.** “From tendinitis to tendinosis- A novel *in vitro* model study,” University of Pittsburgh Arthritis Research Conference, Dec.14, 2000.
129. **Wang, JH-C.** “SIS enhances structural properties of healing MCL,” Third SIS Symposium, Orlando, Nov. 29, 2000.
130. **Wang, JH-C.** “Repetitive loading induced tendinitis: A novel *in vitro* model and preliminary data,” University of Pittsburgh Arthritis Research Conference, Pittsburgh, Feb. 25, 2000.
131. **Wang, JH-C.** “Statistics—review of basic concepts and literature,” Musculoskeletal Research Center, Department of Orthopaedic Surgery, Pittsburgh, Jan. 2000.
132. **Wang, JH-C.;** Debski, RE.; Woo, SL-Y. “Mechanical factors during modeling of connective tissue”, Physiology of Connective Tissue in Tendon and Skeletal Muscle, Second Bispebjerg Sports Medicine Symposium, Copenhagen, Denmark. October 1999.
133. **Wang, JH-C.** “Experimental design and data evaluation in orthopaedic research”, Musculoskeletal Research Center, Department of Orthopaedic Surgery, Pittsburgh, September 1999
134. **Wang, JH-C.** “Notes on practical statistics”, Musculoskeletal Research Center, Department of Orthopaedic Surgery, Pittsburgh, July 1999.
135. **Wang, JH-C.** “Responses of human endothelial cells to mechanical stretching,” Texas Heart Institute, Houston, December 1998.

136. **Wang, JH-C.**; Frank FC-P. “Cell reorientation in response to cyclic substrate stretching.” Annual Meeting of Biomedical Engineering Society, San Diego. October 1997.

Society Conferences/Services

1. Bioengineering Department Faculty Search Committee 2015-2016.
2. Reviewer for Summer Biomechanics, Bioengineering & Biotransport Conference (SB³C), Snowbird Resort, Utah, June 17-20, 2015.
3. Chair person for the Mechanotransduction session of SB³C.
4. Reviewer for the Orthopedic Research Society (ORS) Meeting 2015.
5. Chair of NIRA Presentations Session at the ORS 2014 Annual Meeting
6. Reviewer for the Orthopedic Research Society (ORS) Meeting 2014.
7. Reviewer for the Orthopedic Research Society (ORS) Meeting 2013.
8. Elected President of the International Chinese Musculoskeletal Research Society, 2013.
9. Elected Chair of Communication Committee of the International Chinese Hard Tissue Society (ICHTS: 2011-2013).
10. Elected Member of the Board of Directors of ICHTS (2011-2013).
11. Reviewer for the Orthopedic Research Society (ORS) Meeting 2012.
12. Track Chair for Cellular Force Transduction, IEEE-EMBS 2013 Meeting, Osaka, Japan.
13. Chair of NIRA Presentations Session at the ORS 2012 Annual Meeting.
14. Chair for the session of Molecular Mechanics, 2011 BMES-SPRBM Inaugural Conference on Cellular and Molecular Bioengineering, Miami Beach, Florida, Jan. 4-8, 2011.
15. Mentor for postdoctoral mentees at 2011 ORS meeting (Amy Chung, PhD; Liming Bian, PhD; Kadie Vanderman, PhD).
16. Ad Hoc Committee for By-Laws of ICHTS (International Chinese Hard Tissue Society).
17. Chair for the session of Stem Cells and Regenerative Medicine, 2010 SPRBM Meeting, Tucson, Jan. 13-16, 2010.
18. Chair for the session of Forces at Cellular and Molecular Levels, 2009 BMES Meeting, Pittsburgh, Oct. 7-10, 2009.
19. Chair for the session of the Biomaterials and Tissue Engineering, 2009 SPRBM Meeting, Hawaii, Jan. 6-9, 2009.
20. Chair for the session of Tendinopathy, the International Symposium on Ligaments & Tendons –IX, Las Vegas, Feb. 21st, 2009.
21. Organizer and Co-Chair for the session of Forces at Cellular and Molecular Levels, BMES Meeting 2009, Pittsburgh, Oct. 7-10, 2009.
22. Organizer and Chair for the session of Orthopedic Soft Tissue Biomechanics, BMES Meeting 2007, LA, Oct. 26-29, 2007.
23. Reviewer for the Orthopedic Research Society (ORS) Meeting 2008.

24. Program Chair for SPRBM Meeting 2007. (SPRBM: The Society for Physical Regulation in Biology and Medicine)
25. Chairperson for the session of Molecular and Cellular Biomechanics, ORS Meeting 2007.
26. Reviewer for the Orthopedic Research Society (ORS) Meeting 2007.
27. Organizer and Chair for the Computational Biomechanics and Engineering Symposium in APCOM'07- EPMESC XI Congresses, Kyoto, Dec. 2007.
28. Reviewer for the 6th Combined ORS Meeting, Oct. 20-24, 2007, Honolulu, Hawaii.
29. Chair of the Membership Committee for the Society of Physical Regulation in Biology and Medicine (SPRBM), Jan. 2005-2006.
30. Reviewer for the Orthopedic Research Society (ORS) Meeting 2005.
31. Chairperson for Tendon Biomechanics session, ORS Meeting 2005.
32. Organizer and session Chair of the Symposium of Soft Tissue and Cell Mechanobiology, 2nd International Congress of Biorheology (12th ICB) and 5th International Conference on Clinical Hemorheology (5th ICCH), May 30th – June 3rd, 2005, Chongqing, China.
33. Chairperson for Cellular & Molecular Engineering: Cell Mechanics, BMES Meeting 2005.
34. Reviewer for the Orthopedic Research Society (ORS) Meeting 2004.
35. Chairperson for Tendon and Ligament Biomechanics Session, ORS Meeting 2004.
36. Chairperson for the podium session of Ligament Biomechanics and Biology, International Symposium on Ligaments & Tendons, March 2000, Orlando.
37. Co-Chair of Organizing Committee of the International Symposium on Ligaments & Tendons-I, March 2000, Orlando.
38. Program Committee of the International Symposium on Ligaments & Tendons-II, 2001, San Francisco.
39. Chairperson for the Bone session. American Society of Biomechanics Meeting, October 1999, Pittsburgh

Referee for Scholarly Journals and Reviewer of Grants/Awards and Patents

Journals --

- Acta Biomaterialia
- Acta Biochimica et Biophysica Sinica
- Aging Cell
- American Journal of Sports Medicine
- Annals of Biomedical Engineering
- Arthritis & Rheumatism
- Biodrugs
- Biomaterials
- Biomechanics and Modeling in Mechanobiology
- BioMed Research International
- Biophysical Journal
- Biorheology

- BMC Musculoskeletal Disorders
- British Medical Bulletin
- Cell Adhesion & Migration
- Cell and Tissue Research
- Cell Biochemistry & Biophysics
- Cell Communication & Adhesion
- Cell Motility and the Cytoskeleton
- Cell Proliferation
- Cells Tissues Organs
- Cellular and Molecular Bioengineering
- Clinica Chimica Acta
- Clinical Biomechanics
- Clinical Orthopedics and Related Research
- Connective Tissue Research
- Critical Reviews in Biomedical Engineering
- Current Pharmaceutical Design
- Cytokine
- Encyclopedia of Medical Devices and Instrumentation
- Experimental Cell Research
- Experimental Mechanics
- Expert Opinion On Biological Therapy
- Gene
- Histology and Histopathology
- International Journal of Molecular Sciences
- Journal of Biomechanical Engineering
- Journal of Biomechanics
- Journal of Biomedical Materials Research: Part A
- Journal of Biomedical Optics
- Journal of Bone and Joint Surgery (JBJS)
- Journal of Cell Science
- Journal of Cellular Biochemistry
- Journal of Cellular Physiology
- Journal of Histochemistry & Cytochemistry
- Journal of Orthopaedic Research
- Journal of Orthopaedic Surgery and Research
- Journal of Orthopaedic Translation

- Journal of the Royal Society Interface
- Journal of Theoretical Biology
- Journal of Tissue Engineering and Regenerative Medicine
- Knee Surgery
- Life Sciences
- Mechanisms of Ageing and Development
- Medical Biomechanics
- Molecular and Cellular Biomechanics

- Nature Communications
- Nature Reviews Rheumatology
- NeuroReport
- Organogenesis
- Osteoarthritis and Cartilage
- Plastic and Reconstructive Surgery
- PLoS
- PNAS
- Prostaglandins, Leukotrienes & Essential Fatty Acids
- Science Signaling
- Seminars in Arthritis and Rheumatism
- Sensors
- Stem Cells and Development
- Stem Cell Research
- Surgical Innovation
- The American Journal of Orthopedics
- The Knee
- Tissue Engineering
- Trends in Biotechnology
- Ultrasound in Medicine and Biology
- Wound Repair and Regeneration

Grants/Awards –

- Aircast Foundation
- Alberta Heritage Foundation for Medical Research (Canada)
- American Society of Biomechanics
- Arthritis Foundation
- Association Française Contre les Myopathies
- International Science and Technology Center
- Medical Research Council (MRC)
- National Health Research Institute (Taiwan)
- National Institutes of Health (USA)
- National Science Foundation (Taiwan)
- National Science Foundation (USA)
- North Carolina Biotechnology Center Science & Technology Development Program
- Orthopaedic Research UK
- Pittsburgh Tissue Engineering Initiative
- PSI Foundation (Canada)
- Research Grants Council (Hong Kong)
- Science Foundation Ireland (SFI)
- University of Missouri Research Board
- University of Pittsburgh Office of Technology Management
- University of Pittsburgh Small Grants Program
- U.S. Civilian Research & Development Foundation (CRDF)
- Whitaker Foundation

- WorkSafeBC (Canada)
- W. M. Keck Foundation

LIST OF CURRENT RESEARCH INTERESTS

- Cellular and molecular mechanisms of tendinopathy
- Tendon/ligament stem cell mechanobiology
- Functional tissue engineering of tendon/ligament healing using PRP, stem cells, and tissue specific engineered matrix
- Application of bio-technologies to biological research