

## Curriculum Vitae

### Hao (Howe) Liu, PT, PhD, MS, FGSA

Professor & Head of Physical Therapy  
School of Allied Health Professions  
Louisiana State University Health Science Center  
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#### Education

- 2001 M.S. University of Mississippi Medical Center, Jackson, MS, Physical Therapy  
1998 Ph.D. University of Mississippi Medical Center, Jackson, MS, Anatomy  
1990 M.S. Suzhou Medical College, Suzhou, China, Neuroanatomy  
1987 B.S. Jiangxi Medical College, Nanchang, China, Medicine

#### Professional History

- 12/23 – present Professor and Head of Physical Therapy, Department of Physical Therapy, Louisiana State University Health Science Center, New Orleans, LA  
8/22 – 11/23 Professor & Director of Collaborative Research, Department of Physical Therapy, Allen College, Waterloo, IA  
3/23 – 11/23 PRN Physical Therapist, Reliant Rehabilitation/TruCare Solutions. Flower Mound and Saginaw, TX  
9/20 – 11/23 Clinical Consultant, ATC Acupuncture & Chiropractic Therapy Clinic Frisco, TX  
9/15 – 8/22 Professor of Physical Therapy, Department of Physical Therapy, University of North Texas Health Science Center, Fort Worth, TX  
01/11 – 07/22 Adjunct Professor of Anatomy, Center for Anatomical Science, University of North Texas Health Science Center, Fort Worth, TX  
9/19 – 3/20 PRN Physical Therapist, Baylor Scott & White Institute for Rehabilitation, Fort Worth, TX  
08/17 – 07/19 Adjunct Professor of Anatomy, Department of Medical Education

	School of Medicine of Fort Worth, Texas Christian University, Fort Worth, TX
12/16/ - 2/18	PRN Physical Therapist, The Carlyle at Stonebridge Park Rehab & Nursing Center, Cantex Continuing Care Network, Southlake, TX
1/15 – 2/17	PRN Physical Therapist, Green Valley Nursing and Rehabilitation Center, Reliant Rehabilitation, North Richland Hills, TX
1/10 – 8/15	Associate Professor of Physical Therapy, Department of Physical Therapy, University of North Texas Health Science Center, Fort Worth, TX
9/09 – 12/09	Associate Professor of Physical Therapy, University of Central Arkansas, Conway, AR
6/03 – 8/09	Assistant Professor of Physical Therapy, University of Central Arkansas, Conway, AR
11/03 – 12/9	PRN physical therapist, Aegis Therapies, Little Rock, AR
12/01 – 6/03	Staff physical therapist, Rehabilitation services, Bibb Medical Center Centreville, AL
1/02 – 6/03	PRN physical therapist, MetroWest (HealthSouth) Hospital Birmingham, AL
6/01 – 11/01	Staff physical therapist, Plantation Manor Nursing Home & Rehabilitation Center, Winnsboro, LA

### **Licensure and Certification**

2001, 2023 – present	Louisiana Board of Physical Therapy Examination. License: #04878
2010 – present	Texas Board of Physical therapy examiners. License: #1194329
2023 – present	Iowa PT Licensure Privilege, Privilege: # CP0190247
03/16 – present	Certified Exercise Expert in Aging Adults (CEEAA), American Academy of Geriatric Physical Therapy

- 06/18 – present      Physical Therapy Scholar for Parkinson Disease, Parkinson Foundation, USA
- 6/20 – present      Certified Hesch Sacroiliac Practitioner (HSP), Hesch Institute for Sacroiliac Treatment, Research, and Education

### **Professional Organization Memberships**

- 1999 – present      American Physical Therapy Association (APTA)  
    APTA Geriatrics 2003 – present  
    APTA Academy of Education 2003-09, 2020-present  
    APTA Research 2003 – 2017, 2020-present
- 1999 -2001                      Mississippi Physical Therapy Association
- 2003 – 2009                      Arkansas Physical Therapy Association
- 2010 – Present                      Texas Physical Therapy Association
- 2005 – Present      Gerontological society of America (GSA)
- 2016 – 2023      American Congress of Rehabilitation Medicine (ACRM)
- 2006-2015      Southern Gerontological Society
- 2004-2006      International Society for Aging and Physical Activity
- 1997 – 2001      American Anatomist Association (AAA)
- 1996 -1998      Society for Experimental Biology & Medicine (SEBM)
- 1995 – 2000      International Brain Research Organization (IBRO)
- 1994 – 2000      Society for Neurosciences (SFN)

### **Peer Reviewed Publications (Articles)**

1. Zhang YH, Adamo D, Liu H, Wang QX, Wu W, Zheng YL, Wang XQ. Inflammatory pain: Mechanisms, assessment, and intervention. *Frontiers in Molecular Neuroscience*. September 2023; Accepted.  
<https://www.frontiersin.org/articles/10.3389/fnmol.2023.1286215/full>

2. Zhao MM, Chen WH, Mo XY, Yang JR, **Liu H**, Shi LL, Ma HW, Jiang ZR, Zhang PW. Functional network alterations in adult obstructive sleep apnea: A resting-state fNIRS study. Journal of Sleep Research. First published: 18 September 2023. <https://doi.org/10.1111/jsr.14033>
3. **Liu H**, Nichols C, Zhang H. Understanding Yin-Yang Philosophic Concept behind Tai Chi Practice. Holistic Nursing Practice. 2023; 37(5):E75-E82. <http://doi:10.1097/HNP.0000000000000598>.
4. **Liu H**, Thomas P, Salem Y, Miller K, McGee M. Comparison of gait parameters between walking up and down an incline with a walking device in the elderly people. Geriatric Nursing. 2023; 53:141-145. <https://doi.org/10.1016/j.gerinurse.2023.07.014>
5. Li L, Li S, **Liu H**, Niu WX, Wang CH. Editorial: Neural Responses for Rehabilitation of the Elderly with Evidence from the Micro, Meso- to Macro- Scale. Frontiers in Aging Neuroscience. 2023; 15:1208578. DOI: [10.3389/fnagi.2023.1208578](https://doi.org/10.3389/fnagi.2023.1208578)
6. Zhu PA, **Liu H**, Bao X. Efficacy of Tai Chi on lower limb functions of Patients with Parkinson disease: a systematic review and meta-analysis. Frontiers in Aging Neurosciences. 2023; 15:1096417. <https://doi.org/10.3389/fnagi.2023.1096417>
7. Quan LJ, Zhao Y, Ouyang CF, Ying DX, Xiong ZC, Li XX, Luo ZQ, Luo J, **Liu H**. The mechanism of chemokine receptor ACKR2 in cognitive impairment in young rats with traumatic brain injury. American Journal of Translational Research. 2023;15(3):1654-1666 [www.ajtr.org](http://www.ajtr.org) /ISSN:1943-8141/AJTR0145156
8. **Liu H**, Wiedman C, Lovelace-Chandler V, Gong SZ, Salem Y. Deep diaphragmatic breathing – anatomical and biomechanical consideration. Journal of Holistic Nursing. Feb 2023; Online ahead of print; <https://doi.org/10.1177/08980101221149866>
9. **Liu H**, Salem Y, Arguello A. Liu H. Brain response and Neurobehavior Changes after Tai Chi practice in the elderly– A literature review. Traditional & Integrative Medicine. 2023. 8(1):86-96. <https://jtim.tums.ac.ir/index.php/jtim/article/view/651>
10. Zhu PA, Xie JY, **Liu H**, Wen YL, Shao YJ, Bao X. Efficacy of high-frequency repetitive transcranial magnetic stimulation at 10Hz in fibromyalgia: a systematic review and meta-analysis. Archives of Physical Medicine & Rehabilitation. 2023; 104(1): 151-159. <https://doi.org/10.1016/j.apmr.2022.05.006>

11. Wang YC, Hu M, Li L, Xu DS, **Liu H**, Wang XQ, Li KL. Physical exercise for age-related neuromusculoskeletal disorders (Editorial). Frontiers in Aging Neuroscience. 2022; 14:1099417. | <https://doi.org/10.3389/fnagi.2022.1099417>
12. Salem Y, Ciani G, Elokda A, Hegazy F, Aboelnasr EA, **Liu H**. Immediate Effects of Task-Oriented Training on Walking and Balance in Patients with Stroke: A Preliminary Study. Ageing Sci Ment Health Stud. 2022; 6(6): 1-5. <https://researchopenworld.com/category/ageing-science-mental-health-studies/>
13. Wu W, Jia J, Li FX, Peng WW, **Liu H**, Chen H, Shi Y. Pain-related Neural Networks and Regulation Mechanisms (Editorial). Frontiers in Molecular Neurosciences. 2022. <https://doi.org/10.3389/fnmol.2022.1051335>
14. Li X, Zhang HJ, Ambrose WL, Lo L, Ge L, Miao P, **Liu H**, Li L, Wang CH. Sling exercise can drive cortical representation of transversus abdominis and multifidus muscles in patients with chronic low back pain. Frontier in Neurology. 2022; 13:904002. <https://doi.org/10.3389/fneur.2022.904002>
15. **Liu H**, Miller K, Arguello E. Effects of Ba-Duan-Jin based deep diaphragmatic breathing on multimorbidity – A case report. International Journal of Physiotherapy and Research. 2022; 10(4):4295-4303. <https://dx.doi.org/10.16965/ijpr.2022.129>
16. **Liu H**, Yasser S, Aggarwal S, Nichols C, Holmes C. Effects of Tai Chi practice on brain as assessed with neuroimaging techniques – a scoping review. Ageing Science & Mental Health Studies. 2022; 6(5): 1-12. DOI: [10.31038/ASMHS.2022651](https://doi.org/10.31038/ASMHS.2022651); <https://researchopenworld.com/effects-of-tai-chi-practice-on-brain-as-assessed-with-neuroimaging-techniques-a-scoping-review/>
17. **Liu H**, Salem Y, Aggarwal S. Effects of Tai Chi on Biomarkers and Its Implication to neurorehabilitation – A systematic review. European Journal of Integrative Medicine. 2022. 50:101391. <https://doi.org/10.1016/j.eujim.2021.101391>
18. Wang KL, Chen YF, Huang SM, **Liu H**, Wu W. Attention bias to pain works comes early and cognitive load matters: Evidence from ERP study on experimental pain. Neural Plasticity. 2021:9940889. <https://doi.org/10.1155/2021/9940889>
19. Li YZ, **Liu H**, Nichols C, Mason D. Manipulative therapy for genital pain – a clinical case report. Journal of Manual and Manipulative Therapy. 2021. 30(2):124-131. <https://doi.org/10.1080/10669817.2021.1985693>

20. Bao X, **Liu H**, Long Y, Tan JW. Therapeutic effect of Fu's subcutaneous needling for shoulder pain-A Randomized Controlled Trial. Anatomical Record. 2021; 304:2552-2558. <https://doi.org/10.1002/ar.24710>
21. Bao X, Li L, **Liu H**, Shi HF, Xu S, Wang MH, Xie JY. Effect of acupuncture combined with rehabilitation exercise for cognitive and motor dysfunction on patients post-stroke. Anatomical Record. 2021; 304:2531-2537. <https://doi.org/10.1002/ar.24700> (as the Top Cited Article Between January 1, 2021 to December 15, 2022 in Anatomical Record published by the Wiley).
22. Shen YL, **Liu H**, Duan ZY, Zai Q, Li JH, Chen WH, Yu B. Comparison of teaching anatomy in physical therapy between China and US. Chinese Journal of Physical Medicine & Rehabilitation. 2021; 43(10):933-935. <http://doi:10.3760/cma.j.issn.0254-1424>.
23. Li H, **Liu H**. Exercise Selections for People with Dementia for Prevention and Interventions. Chinese Journal of Alzheimer's Disease and Related Disorders. 2021; 4:156-161. <http://doi:10.3969/j.issn.2096-5516.2021.02.014>
24. Ge YJ, **Liu H**, Wu QW, Chen AJ, Gao ZP, Xing FM, Liu GT. Effects of a Short Eight Tai Chi-Forms for the Pre-frail Elderly People in Senior Living Communities. Journal of Physiotherapy Theory & Practice. June 2021; <https://doi.org/10.1080/09593985.2021.1926023>
25. Li X, **Liu H**, Ge L, Yan YF, Lo WLA, Li L, Wang CH. Cortical representation of transverse abdominis and multifidus muscles were discrete in patients with chronic low back pain. Evidence elicited by TMS. Neural Plasticity. 2021: 6666024. <https://doi.org/10.1155/2021/6666024>
26. Guo YY, Zhao YW, Salem Y, Miller K, **Liu H**. Effects of Posture on Gait in Older rolling walker users. Geriatric Nursing. 2020. 41(6):916-920. <https://doi.org/10.1016/j.gerinurse.2020.06.017>
27. Wang CH, LI X, Lo WLM, Lu SW, **Liu H**, Lin KY, Lai JY, Li L. Trunk muscle activities during pressure feedback monitoring among Individuals with and without chronic low back pain. BMC Musculoskeletal Disorders. 2020. 21: 569. <https://doi.org/10.1186/s12891-020-03565-y>.
28. **Liu H**, Salem Y, Zhou JJ, Holmes C, Quiben M. Comparison of trunk and leg sway during single leg standing. International Journal of Physiotherapy and Research. 2020. 8(5): 3602-3608.

29. Bao X, **Liu H**, Liu HY, Long Y, Tan JW, Zhu ZM. The effect of intermittent hypoxia training on migraine: A randomized controlled trial. American Journal of Translational Research. 2020. 12(7): 4059-4065.
30. Nichols C, Liu ES, **Liu H**. Complete Adipose Replacement of Bilateral Medial Gastrocnemius Muscle - A Cadaveric Case Report. Academia Anatomica International. 2020; 6(1):62-64.
31. Li X, **Liu H**, Lin KY, Miao P, Zhang BF, Lu SW, Li L, and Wang CH. Effects of different sling settings on electromyographic activities of selected trunk muscles: A preliminary research. BioMed Research International. Volume 2020, Article ID 2945952. <http://doi.org/10.1155/2020/2945952>.
32. Guan HZ, Zhao LJ, **Liu H**, Xie DY, Liu YJ, et al. Effects of intermittent pressure imitating rolling manipulation in traditional Chinese medicine on ultrastructure and metabolism in injured human skeletal muscle cells. American Journal of Translational Research. 2020. 12(1): 248-260.
33. Bao X, Luo JN, Shao YC, Tang ZQ, Liu HY, **Liu H**, Tan JW. Effect of functional electrical stimulation plus body weight-supported treadmill training for gait rehabilitation in patients with poststroke-a retrospective case-matched study. European Journal of Physical and Rehabilitation Medicine. 2020; 56(1):34-40. doi: 10.23736/S1973-9087.19.05879-9.
34. Chen RJ, Liu GY, **Liu H**, Wu QW. Effects of elastic band exercise on the frailty states in pre-frail elderly people. Physiotherapy Theory & Practice. 2020. 36(9): 1000-1008. DOI: 10.1080/09593985.2018.1548673
35. Bao X, Qiu QX, Shao YJ, **Liu H**. Effect of Sitting Ba-Duan-Jin Exercise on Balance and Quality of Life among Older Adults: A preliminary Study. Rehabilitation Nursing. 2020. 45(5): 271-278. doi:10.1097/rnj.0000000000000219.
36. Bao X, Tan JW, Long Y, **Liu H**. Effect of intermittent hypoxia training for dizziness: a randomized controlled trial. Journal of Sports Rehabilitation. 2019. 28:540-543.
37. Li X, Zhou X, **Liu H**, Chen N, Liang JP, et al. Effects of elastic therapeutic taping on knee osteoarthritis: A systematic review and meta-analysis. Aging & Disease. 2018; 9(2):296-308. DOI: 10.14336/AD.2017.0309
38. Bao X, Tan JW, Flyzik, M, Ma, XC, Liu HY, **Liu H**. Effect of therapeutic exercise on knee osteoarthritis after intra-articular injection of botulinum toxin type A, hyaluronate or saline: A randomized controlled trial. Journal of Rehabilitation Medicine. 2018. 50(6):534-541.

39. Salem Y, **Liu H**, Elokda A, Quiben M, Holmes C. Aquatic therapeutic exercises for individuals with neurological disorders: Evidence-based approach. Journal of Aquatic Physical Therapy. 2018; 26(2):11-14.
40. Guo YY, **Liu H**, Huang DF, Yang N. Enlightenment and Thinking of Homogenous Physical Therapy Education in United States. Study and Practice in Medical Education. 2018, 1:5-8.
41. Dong XY, Papa E, **Liu H**, Feng Z. Huang HH, Liao CC. Vagus nerve stimulation causes wake-promotion by activating orexins pathway in traumatic brain injury induced comatose rats. International Journal of Experimental and Clinical Medicine. 2018; 11:4742-4751.
42. Nguyen VH, **Liu H**, Rosales A, Reeves R. A Cadaveric Study on the Surface Projection of the Dorsal Scapular Nerve. International Journal of Physical Therapy & Rehabilitation. 2017, 3:131. <https://doi.org/10.15344/2455-7498/2017/131>.
43. Du Q, Salem Y, **Liu H**, Zhou X, Chen N, Yuan XY, Liang JP, Sun K. A home-based exercise program for children with congenital heart disease following interventional cardiac catheterization: study protocol for a randomized controlled trial. Trial. 2017; 18:38. DOI 10.1186/s13063-016-1773-7.
44. **Liu H**, Quiben M, Holmes C, Connors M, Salem Y. Differences in the Limits of Stability Between Older Rolling Walker Users and Older Single-Tip-Cane Users - A Preliminary Study. Rehabilitation Nursing. 2017; 42(2): 109-116.
45. Xu DQ, Wang H, Chen D, Ross A, **Liu H**, Yurvati A, Raven PB, Shi XR. Aerobic Exercise Training Improves Orthostatic Tolerance in Aging Humans. Medicine & Science in Sports & Exercise. 2016. DOI: 10.1249/MSS.0000000000001153.
46. Arguello E, Stoddard C, **Liu H**, Richardson M, Hartis A. Surface Projection of Interosseous Foramen of the Leg: Cadaver Study. Anatomical Research International. 2016. ID 6312027. <http://dx.doi.org/10.1155/2016/6312027>
47. **Liu H**, Du Q. Periodic Assessment of Walking Devices in Senior Living Communities. Journal of Aging Science. 2016; 4:155. doi: 10.4172/2329-8847.1000155.
48. Zhang H, **Liu H**, Lin Q, Zhang GH, Mason D. Effects of intermittent pressure imitating rolling manipulation on calcium ion homeostasis in human skeletal cells. BMC Complementary & Alternative Medicine. 2016; 16(1): 314.
49. Nguyen VH, **Liu H**, Rosales A, Reeves R. A cadaveric investigation of the dorsal scapular nerve. Anatomical Research International. 2016. Article ID 4106981.



50. Zhao YW, Salem Y, Master H, Holmes C, Liu H. Comparison of surface landmarks in measuring the rolling walker height in older rolling walker users. Physical & Occupational Therapy in Geriatrics. 2016; 33(2):128-138.
51. Miao P, Pan CH, Liu H, Wang CH. Vastus medialis oblique and vastus lateralis activity during a double-leg semisquat with or without hip adduction in patients with patellofemoral pain syndrome. BMC Musculoskeletal Disorder. 2015; 16:289.
52. Miao P, **Liu H**, Pan CH. Evaluation and accreditation of physical therapy education in United States. Chin J Rehabil Theory Pract, 2015, 21(2): 245-248.
53. Miao P, **Liu H**, Pan CH, Yu R. Clinical-oriented Curriculum of Physical Therapy Education in United States. Northwest Med Edu, 2015, 23(1): 1-3.
54. Holmes V, Liu H, Kirchhoff C, Rosales A. A variant of Extensor Medii Proprius – A case Report. International Journal of Anatomical Variation. 2015; 8:32-33.
55. Huang M, **Liu H**, Gu JW, et al. The Effect of Transcutaneous Electrical Nerve Stimulation at Acupuncture Points on Spinal Motor Neuron Excitability in People without Known Neuromuscular Diseases. Journal of the Mississippi Academy Sciences, 2014; 59 (Supple): 267-271.
56. Qiu QX, Wang XM, **Liu H**. Analysis of Effect of falls by assistive ambulatory devices used by older adults in US. Chinese Journal of Rehabilitation Theory and Practice. 2014; 20(1):85-87.
57. Guild J, **Liu H**, Connors M, Holmes C. Comparison of gait while ambulating with three different types of canes with normal subjects: a pilot study. International Journal of Therapies and Rehabilitation Research. 2012, 1 (3):1-9.
58. **Liu H**, Holmes V, Nordon-Craft A, Reeves R. Variation of sternalis muscle: a case report. International Journal of Anatomical Variations. 2012; 5: 59–61.
59. **Liu H**, Connors M, Grando V, Liu H. Tai Chi intervention for older adults using assistive devices in a senior living community: a pilot study. International Journal of Therapy and Rehabilitation. 2012; 19(3): 136-142.
60. **Liu H**, Fletcher J, Garrison K, Holmes C. Bilateral Absence of the Semimembranosus and Quadratus Femoris Muscles: A Case Report. International Journal of Anatomical Variation. 2011; 4:40-42.

61. **Liu H**, Eaves J, Wang W, Womack J, Bullock P. Assessment of canes used by older adults in senior living communities. *Archives of Gerontology & Geriatrics*. 2011; 52(3): 299-303.
62. Nolen J, **Liu H**, Liu H, McGee M, Grando V. Comparison of Gait characteristics with a single-tip cane, tripod cane, and quad cane. *Physical and Occupational Therapy in Geriatrics*. 2010; 28(4):387-395.
63. **Liu H**, Skinner R, Arfaj A, Yates C, Reese N, Williams K, Garcia-Rill E. L-Dopa effect on frequency-dependent depression of the H-reflex in adult rats with complete spinal cord transection. *Brain Research Bulletin*. 2010; 83(5):262-265.
64. **Liu H**, Frank A. Tai Chi as a Balance Improvement Protocol for Older Adults: A Systematic Review. *Journal of Geriatric Physical Therapy*. 2010; 33(3):103-109.
65. **Liu H**, Grando V, Zabel R, Nolen J. Pilot study evaluating fear of falling and falls among older rolling walker users. *International Journal of Therapy and Rehabilitation*. 2009; 16(12): 671-676.
66. **Liu H**, Fletcher J, Dailey M, Persson M. Surface projections of Radial Tunnel under the Supinator Muscle: A cadaver study. *Advances in Physiotherapy*. 2009; 11(4): 234-241.
67. **Liu H**. Assessment of Rolling Walkers Used by Older Adults in Senior Living Communities. *Geriatrics & Gerontology International*. 2009; 9 (2): 124-130.
68. **Liu H**, McGee M, Wang W, Persson M. Comparison of Gait Characteristics between Older Rolling Walker Users and Older potential Walker Users. *Archives of Gerontology & Geriatrics*. 2009; 48, 376-380.
69. **Liu H**, McGee M, Prati V, Garrison K, & Fu Q. Comparison of Standing Balance Parameters Between True and Potential Rolling Walker Users. *Physical & Occupational Therapy in Geriatrics*. 2008; 27:298-309.
70. Zabel RJ, Quiben M, **Liu H**, Charton M. Re-examination of "Normal" values for thoracic curvature in older females based on the index of kyphosis. *Journal of Geriatric Physical Therapy*. 2007; 30(3):144-145.
71. Chen J, **Liu H**, Liu BZ, Quiben M, Uytingco E. Time between Stroke Onset and Rehabilitation: A Predictor of Mobility Recovery for Patients with Stroke in a Chinese Population. *Philippine Journal of Allied Health Sciences*. 2007; 2(1):18-25.

72. **Liu H**, Rainey J, Zabel R, Quiben M, Kehavyov A, Boswell J. Comparison of two exercise programs using the falls efficacy scale, Berg balance scale and ankle dorsiflexor strength in older adults. *Physical & Occupational Therapy in Geriatrics*. 2007; 27(2):43-52.
73. **Liu H**, Zabel R, Prati V. Assessment of dependence on assistive ambulatory devices among older adults: A new tool. *International Journal of Therapy and rehabilitation*. 2007; 14(9): 419-423.
74. **Liu H**, Hu XL, Treadwell A. Variation of Extensor Carpi Radialis Muscles: An Anatomical Case Report. *Chinese Journal of Clinical Anatomy*. 2007; 25(3): 352-354.
75. Prati V, **Liu H**. Perceptions of college students regarding the current physical therapy profession and professional education process. *The Internet Journal of Allied Health Sciences & Practice*. 2006; 4 (4):1-6.
76. Chen J, **Liu H**, Li ZB, Quiben M. Multivariant analysis of stroke rehabilitation outcomes: a pilot study in Chinese population. *Physical & Occupational Therapy in Geriatrics*. 2006; 24:1-14.
77. **Liu H**, Fletcher J. Analysis of physicians' referrals: is further diagnosis needed? *Northern American Journal of Sports Physical Therapy*. 2006; 1:6-12.
78. **Liu H**, Wellons M. Effect of excessive potassium on muscle strength: A case report. *Physical & Occupational Therapy in Geriatrics*. 2005; 23:55-66.
79. Zhang F, **Liu H**, Stile F, Lei MP, Pang Y, Beck J, Dorsett-Martin W, Lineaweaver WC. Effect of Vascular Endothelial Growth Factor on Rat Achilles Tendon Healing. *Plastic and Reconstructive Surgery*. 2003; 112:1613-1619.
80. Zhang F, Richards L, Angel MF, Zhang J, **Liu H**, et al. Accelerating flap maturation by vascular endothelium growth factor in a rat tube flap model. *British Journal of Plastic Surgery*. 2002; 55(1):59-63.
81. Hardy SG, Spaulding T, **Liu H.**, Nick TG, Pearson RH, Hayes AV, Stokic DS. The effect of transcutaneous electrical stimulation on spinal motor neuron excitability in people without known neuromuscular diseases: the roles of stimulus intensity and location. *Physical Therapy*. 2002; 82(4):354-363.
82. **Liu, H.**, and Mihailoff, G. Hypothalamopontine projections in the rat: anterograde axonal transport studies employing light and electron microscopy. *Anatomical Record*. 1999; 255(4): 428-451.

**Invited non-peer-reviewed articles.**

1. Salem Y, **Liu H**. Physical Therapy Guide to Slipped Capital Femoral Epiphysis. APTA Clinical Practice Guidelines Pediatric Series. 2021.
2. **Liu H**. Geriatric rehabilitation: Definitions, Common Contents, and Interventions. International Rehabilitation Engineering and Devices. 2014; 5(2): 64-69.
3. **Liu H**. Selection and Us of Assistive Ambulatory Devices. Acta of Gannan Medical University. 2013; 34:5-9.
4. **Liu H**. Assistive ambulatory devices in aging population: Types, selection, and proper use. International Rehabilitation Engineering and Devices. 2012; 3:57-61.
5. **Liu H**. Medical Consultation (Intervention) in Rolling Walker Selection and Education. Arkansas geriatric education collaborative Bulletin. 2007. May Issue.

### **Peer Reviewed Scientific and Professional Presentations**

1. Zhu PA, Bao X, **Liu H**, Holmes C. Effects of mind-body exercise on fibromyalgia symptoms – a systematic review and meta-analysis. 2024 Combined Sections Meeting (CSM) in Boston, MA from February 15-17, 2024.
2. Arguello E, Stoddard CA, **Liu H**. Effects of Tai Chi on Oxidative Stress – A SystematicReview... 2024 Combined Sections Meeting (CSM) in Boston, MA from February 15-17, 2024.
3. Salem Y, Ahmed Samie ABC, **Liu H**, Torres-Panchame RE, Pottorf O. Aquatic exercises for individuals with rheumatoid arthritis: a systematic review of literature. 2024 Combined Sections Meeting (CSM) in Boston, MA from February 15-17, 2024.
4. Salem Y, Liu H. Use of Yoga for individuals with Down Syndrome. World Physiotherapy Congress 2023. presented. In Dubai. June 2-4, 2023.
5. Salem Y, **Liu H**, Ahmed Samie ABC, Holmes C, Pottorf O, Ciani GJ. Aquatic Exercise for People with Spinal Cord Injury: A Systematic Review. Presented. 2023 Combined Sections Meeting (CSM) in San Diego, CA from February 23-25, 2023.
6. Bao X, **Liu H**, Yoder A, Stroddard C. The effect of intermittent hypoxia training on migraine: a randomized controlled trial. Presented. 2023 Combined Sections Meeting (CSM) in San Diego, CA from February 23-25, 2023

7. Nichols C, Holmes C, Bao X, **Liu H**. Effect of Electro-Acupuncture for Coma Patients after Traumatic Brain Injury. Presented. 2023 Combined Sections Meeting (CSM) in San Diego, CA from February 23-25, 2023
8. Thomas P, Salem Y, **Liu H**. Effects of Assistive Walking Devices Used to Walking Along an Inclined Surface. Presented. 2023 Combined Sections Meeting (CSM) in San Diego, CA from February 23-25, 2023
9. Pina G, Cung B, **Liu H**. Effects of Tai Chi on Depression and Anxiety in Older Adults – a Systematic Review. Presented. 2023 Combined Sections Meeting (CSM) in San Diego, CA from February 23-25, 2023
10. **Liu H**, Salem Y, Arguello E. Brain response in the elderly after Tai Chi practice assessed with neuroimaging techniques: A literature review. 2022 Gerontological Society of America annual conference. Presented. Indianapolis, IN; November 2022.
11. Salem Y, **Liu H**, Holmes CF, Elokda AS. Effectiveness of aquatic exercise for individuals with lower back pain: A systematic review of literature. Presented for 2022 APTA CSM meeting. Feb 2022. St Antonio, TX.
12. Durham SO, Heisterkamp K, Salem Y, **Liu H**. Aquatic exercise for adults with multiple sclerosis: A systematic review. Presented for 2022 APTA CSM meeting. Feb 2022. St Antonio, TX.
13. Shaw ER, Bolstad C, Salem Y, Liu H. Effectiveness of Yoga for individuals with cerebral palsy. Presented for 2022 APTA CSM meeting. Feb 2022. St Antonio, TX.
14. Thayn L, Robichaux S, **Liu H**, Salem Y. Effectiveness of Task-Oriented Gait Training for Children with Cerebral Palsy. Presented for 2022 APTA CSM meeting. Feb 2022. St Antonio, TX.
15. **Liu H**, Salem Y, Arguello E, Aggarwal S. Tai Chi Effects on Brain as Assessed By Neuroimaging Techniques - a Systematic Review. Accepted for 2022 APTA CSM meeting. Feb 2022. St Antonio, TX.
16. Bao X, Nichols C, **Liu H**, Salem Y. Therapeutic effect of Fu's subcutaneous needling for shoulder pain-A Randomized Controlled Trial. Accepted for 2022 APTA CSM meeting. Feb 2022. St Antonio, TX.
17. **Liu H**, Salem Y. Effects of Tai Chi on Inflammatory Biomarkers and Their Implication for neurorehabilitation – A Systematic Review. Poster presentation.

- Accepted. 2021 Annual Conference of Gerontological Society of America (GSA). Phoenix, AZ. November 10-14, 2021.
18. Salem Y, Aggarwal S, **Liu H**, Elokda A. Aquatic Exercises for Children with Muscular Dystrophy and Spinal Muscular Atrophy: A Systematic Review. 75<sup>th</sup> Annual Meeting of the American Academy of Cerebral Palsy and Developmental Medicine. October 6-9, 2021. Virtual.
  19. Salem Y, **Liu H**. Complementary and Alternative Therapies in Neurorehabilitation: Principles, Basic Mechanisms, Clinical Selection, and Evidence. Symposium presentation. Accepted. 2021 Annual Conference of American Congress of Rehabilitation Medicine (ACRM). September 26-29, 2021. Dallas, TX
  20. **Liu H**, Nichols C, Mao H. Impingement of Small Peripheral Nerves in Upper Extremity: Precision anatomy and Clinical Application. Symposium presentation. Accepted. 2021 Annual Conference of American Congress of Rehabilitation Medicine (ACRM). September 26-29, 2021. Dallas, TX
  21. **Liu H**, Salem Y, Aggarwal S, Arguello E, Zhan C. Effects of Tai Chi Practice on Inflammatory Biomarkers – A Systematic Review. Poster presentation. Accepted. 2021 Annual Conference of American Congress of Rehabilitation Medicine (ACRM). September 26-29, 2021. Dallas, TX
  22. Baker J, **Liu H**, Salem Y. Effects of Tai Chi on people with sleep dysfunctions – A Systematic Review. Poster presentation. Accepted. 2021 Annual Conference of American Congress of Rehabilitation Medicine (ACRM). September 26-29, 2021. Dallas, TX.
  23. Hollingshead K, Bustos A, Liu H, Salem Y. Effects of animal assisted intervention for individuals with dementia. 2021 World Physiotherapy Congress. April 2021. Virtual presentation.
  24. Aggarwal S, Salem Y, **Liu H**, Mendez A, Quiben M. A meta-analysis and systematic review of the effectiveness of proprioceptive neuromuscular facilitation in the stroke population. 2021 World Physiotherapy Congress. April 2021. Virtual presentation.
  25. Walls P, Diu P, **Liu H**, Salem Y. Effectiveness of exoskeleton gait speed in patients with spinal cord injury. 2021 World Physiotherapy Congress. April 2021. Virtual presentation.
  26. Aggarwal S, Chen RJ, Wu QW, Salem Y, **Liu H**. Effect of elastic band exercise in pre-frailty elderly people. 2021 World Physiotherapy Congress. April 2021. Virtual presentation.

27. Salem Y, **Liu H**, Paslay E, Richardson M, Quiben M. Vibration therapy for frail older adults in senior-living community. 2021 World Physiotherapy Congress. April 2021. Virtual presentation.
28. Aggarwal S, Salem Y, **Liu H**, Ge YJ, Wu QW. Effects of a Short Tai Chi for Pre-Frail Elderly People in Senior Living Communities. 2021 APTA Combined Section Meeting. Feb 2021.
29. Hollingshead K, Bustos A, Salem Y, **Liu H**. Effects of Animal assisted interventions for individuals with dementia. 2021 APTA Combined Section Meeting. Feb 2021.
30. Aggarwal S, Salem Y, **Liu H**, Mendez A, Quiben MC. Effectiveness of Proprioceptive Neuromuscular Facilitation in the Stroke Population: A Meta-Analysis and Systematic Review. 2021 APTA Combined Section Meeting. Feb 2021.
31. Logsdon L, Kolenovic M, Traina A, Salem Y, **Liu H**. Tai Chi with Chronic Obstructive Pulmonary Disease. 2021 APTA Combined Section Meeting. Feb 2021. – received the 2021 Student Research Award of CSM Cardiovascular & Pulmonary Section.
32. Li YZ, **Liu H**, Nichols C, Mason D. Manual therapy for idiopathic genital pain – a clinical case report. 2021 APTA Combined Section Meeting. Feb 2021.
33. Tran K, Henry Z, Salem Y, **Liu H**. Virtual Reality Intervention for Parkinson's Disease: A Systematic Review. APTA Combined Section Meeting. Denver, CO; Feb 2020.
34. Salem Y, Aggarwal S, **Liu H**, Quiben M, Holmes C. Effectiveness of Aquatic Exercises for Individuals with Parkinson's Disease. APTA Combined Section Meeting. Denver, CO; Feb 2020.
35. Quan LJ, Miller H, **Liu H**. Treatment of hyperbaric oxygen combine with cannabidiol promote recovery of brain damage in newborn rats with hypoxia-ischemia. 2019 Annual Conference of Texas Physical Therapy Association. The Woodlands, TX. Oct 2019.
36. Salem Y, **Liu H**, Paslay E, Fahmy M, Yavuz M, Smith V, Richardson M, Warren S. Effectiveness of the Whole-Body Vibration Therapy and Modality Function in Older Adults with Balance Deficits. 2019 Texas Physical Therapy Association Annual Conference. October 12-13, 2019. Houston, Texas. Poster Presentation.

37. Tran K, Henry A, Salem Y, **Liu H**. The Effectiveness of Virtual Reality as an Intervention for Parkinson's disease: A systematic review. 2019 Texas Physical Therapy Association Annual Conference. October 12-13, 2019. Houston, Texas. Poster Presentation.
38. Lu C. Coleman A, Beasley S, **Liu H**, Nichols C. Coordinated movement of diaphragm and pelvic floor muscle in relation to respiratory function. 2019 Annual Conference of Texas Physical Therapy Association. The Woodlands, TX. Oct 2019.
39. Rokayak, N., Paez G., Salem, Y, **Liu, H**. A Systematic Review Study on The Effects of Strength Training on Bone Mineral in Adult Women. World Congress of Physical Therapy, 2019. Poster Presentation.
40. Salem Y, Quiben M, **Liu H**. Effectiveness of aquatic exercise for children with cerebral palsy: A systematic review. World Congress of Physical Therapy. Geneva, Switzerland. May 2019.
41. Becnel K, Nguyen P, Salem Y, **Liu H**. Effectiveness of Exercise for the Pediatric Oncology Population: A Systematic Review. Washington DC. Jan. 23-26, 2019.
42. Salem Y, **Liu H**, Quiben M, Elokda A, Yavuz M, Holmes C. Aquatic exercise for children with cerebral palsy: A systematic review. Washington DC. Jan. 23-26, 2019.
43. Qiao HF, **Liu H**, Salem Y, Zhang QJ. Effectiveness of surface electromyographic biofeedback therapy on stroke patients with dysphagia. 2018 American Congress of Rehabilitation Medicine. Dallas, TX. Oct. 2018.
44. Qiao HF, **Liu H**, Salem Y, Zhang QJ. *The Effects of Treadmill Training on Gait Function in Individuals with Idiopathic Parkinson's Disease: A Systematic Review*. 2018 American Congress of Rehabilitation Medicine. Dallas, TX. Oct. 2018.
45. Salem Y, Liu H. A Systematic Review Study on the Effects of Strength Training on Bone Mineral in Adult Women. 2018 Texas Physical Therapy Association. San Antonio, TX. Oct 2018.
46. Rose K, Garcia S, Kelley K, **Liu H**. A Systematic Review of Physical Therapy Interventions for Parkinson's Disease. 2018 Texas Physical Therapy Association. San Antonio, TX. Oct 2018.
47. Khan MA, Khan TA, Khan MI, Kanwar K, **Liu H**, Lovely RS. Surface Projection of Cubital Tunnel: Cadaver Study. Experimental Biology 2018. San Diego, CA. April 2018.



48. Guzman JL, McEwen M, Cooper R, **Liu H**. The effect of Music on Gait patterns for Patients with Parkinson's Disease. 2018 APTA Combined Section Meeting. New Orleans, LA. 2018.
49. Salem Y, **Liu H**. Qualitative Analysis of Aquatic Literatures for Quality and Trends. 2018 APTA Combined Section Meeting. New Orleans, LA. 2018.
50. Salem Y, **Liu H**, Young A, Tolbert M, Elokda A, Holmes C. Use of Yoga Exercises for Young Children with Down Syndrome. 2018 APTA Combined Section Meeting. New Orleans, LA. 2018.
51. Salem Y, Jay N, Downing A, Cook R, **Liu H**. Effects of Aerobic Exercise for Children with Down Syndrome: A Systematic Review of Literature. 2018 APTA Combined Section Meeting. New Orleans, LA. 2018.
52. Bao X, Long Y, Tan JW, Salem Y, Quiben M, **Liu H**. Effect of ultrasound-guided injection of botulinum toxin type A for shoulder pain on post-stroke patients. 2017 American Congress of Rehabilitation Medicine (ACRM) Annual Conference, Atlanta, GA. Oct 2017.
53. Bao X, Long Y, Tan JW, Salem Y, Quiben M, **Liu H**. The effect and mechanism of botulinum toxin type A for knee osteoarthritis through ultrasound guidance. 2017 American Congress of Rehabilitation Medicine (ACRM) Annual Conference, Atlanta, GA. Oct 2017.
54. Valle M, Vo A, Liu H. Salem Y. Effectiveness of aquatic therapy interventions in the management of children with cerebral palsy: A systematic review. 2017 Annual Conference of American Academy of Cerebral Palsy and Developmental Medicine. Sep 2017.
55. Pennucci M, **Liu H**, Dillard D, Baker S, Comparison of Trunk and Leg Sway During Single Leg Stance. 2017 Annual Conference of International Society of Rehabilitation and Physical Medicine, Buenos Aires, Argentina. May 2017.
56. Liu H, Huang HY, Nana A, Truong T, Salas N, Master H, Salem Y, Pena J. From a Regular to a Smart Walker with Installation of Variety of Sensors. 2017 Annual Conference of International Society of Rehabilitation and Physical Medicine, Buenos Aires, Argentina. May 2017.
57. Salem Y, & Holmes C, **Liu H**. Exercise program for a patient with Sjogren's Disease: A complex patient case study. 2017 Combined Section Meeting of American Physical Therapy Association; San Antonio, TX. Feb 15-17, 2017.

58. Wu QW, Wang XW, **Liu H**, Salem Y. The effect of bilateral limbs rehabilitation training on post-stroke patients. 2017 Combined Section Meeting of American Physical Therapy Association; San Antonio, TX. Feb 15-17, 2017.
59. Becnel M, Vo A, *Salem Y*, **Liu H**. Effectiveness of Aquatic Therapy. Interventions In the Management Of Children With Cerebral Palsy: A Systematic Review. 2017 Combined Section Meeting of American Physical Therapy Association; San Antonio, TX. Feb 15-17, 2017.
60. Zhang H, Wang YL, Zhang GH, Zhang GY, Mou X, Huang L, **Liu H**. The Isokinetic Test and Surface EMG Examination of Core Muscle Groups in Professional Baseball and Softball Players with Waist Sport Injuries. 2016 Annual Conference of American Congress of Rehabilitation Medicine (ACRM). Chicago, IL. Oct-Nov. 2016.
61. Zhang H, **Liu H**, Lin Q, Zhang GH, Mason D. Effects of Intermittent Pressure Imitating Rolling manipulation on Calcium ion Mediation in Human Skeletal Muscle Cells. 2016 Annual Conference of American Congress of Rehabilitation Medicine (ACRM). Chicago, IL. Oct-Nov. 2016.
62. Nguyen V, **Liu H**, Rosales A, Reeves R. A cadaveric investigation of the surface projection of the dorsal scapular nerve. 2016 Annual Conference of Texas Physical Therapy Association. Oct 2016. Fort Worth, TX.
63. Fang H, Coppock A, Mabutas K, Bolinger E, Salem Y, **Liu H**. The effects of animal-assisted therapy on older adults with dementia: A systematic review. 2016 Annual Conference of Texas Physical Therapy Association. Oct 2016. Fort Worth, TX.
64. Patel TM, **Liu H**, Lin CF, Salem Y. Effect of Physical Therapy for patients with Temporomandibular Joint Syndrome. Presented at the 2016 the combined section meeting of APTA. Los Angeles, CA. February 2016.
65. Salem Y, **Liu H**. Physical function in individuals with DiGeorge syndrome or Velocardiofacial syndrome. Presented at the 2015 TPTA annual conference. Arlington, TX. Oct 22, 2015.
66. Salem Y, **Liu H**. The effect of aquatic therapy on neuromuscular disease: A review of the literature. Presented at the 2015 TPTA annual conference. Arlington, TX. Oct 22, 2015.
67. Salem Y, Liu H, Podgore J, Shartz B. Benefits and barriers of physical therapy student participation in resource-poor international clinical education. 2015 World Congress of Physiotherapy Conference. Singapore, May 1-4, 2015.

68. Shi C, Truong T, **Liu H**. Effects of Leaning-forward Posture on Gait Parameters During Rolling Walker Use: A Preliminary Study. Presented at the 2015 TPTA annual conference. Arlington, TX. Oct 22, 2015.
69. Pittmon W, Salem Y, **Liu H**. Effects of music therapy on functional mobility patients with stroke. Presented at the 2015 TPTA annual conference. Arlington, TX. Oct 22, 2015.
70. Salem Y, **Liu H**. Effectiveness of aquatic therapy interventions in the management of children with cerebral palsy: A systematic review. Presented at the 2015 TPTA annual conference. Arlington, TX. Oct 22, 2015.
71. Salem Y, **Liu H**. Yoga exercise for young children with Down syndrome. Presented at the 2015 TPTA annual conference. Arlington, TX. Oct 22, 2015.
72. Master H, Salem Y, Holmes C, **Liu H**. Mirror Therapy for Patients with Hemiparesis – A Systematic Review. Presented at the 2015 Combined Section Meeting of American Physical Therapy Association (APTA), Indianapolis, IN, Feb 2015.
73. Miao P, Wang CH, **Liu H**, Pan CH. Characteristics of Surface Electric Signals of Vastus Lateralis and Vastus Medialis Oblique in Patients with Patellofemoral Pain Syndrome. Presented at the 2015 Combined Section Meeting of American Physical Therapy Association (APTA), Indianapolis, IN, Feb 2015.
74. Schwarz B, Salem Y, **Liu H**, Holmes C, Podgore, J. Perceived Benefits and Barriers of Participation of Physical Therapy Students In Resource-Poor International Clinical Education. Presented at the 2015 Combined Section Meeting of American Physical Therapy Association (APTA), Indianapolis, IN, Feb 2015.
75. Arguello E, Richardson M, **Liu H**. Surface Projection of Interosseous Foramen of Leg – Cadaver Study. Presented at the 2014 annual conference of Texas Physical Therapy Association. Galveston, TX. October 2014.
76. Bao Y, **Liu H**, Holmes C. Comparison of Elastic Bandage and Ankle-Foot Orthoses on Strephenopodia in Patients with Stroke. Presented at the 2014 annual conference of Texas Physical Therapy Association. Galveston, TX. October 2014.
77. Yarbrough K, Fugler J, Martel R, Wheeler A, **Liu H**, Salem Y. Use of Yoga in Children with Autism: A Systematic Review of Literature. Presented at the 2014 annual conference of Texas Physical Therapy Association. Galveston, TX. October 2014.

78. Salem Y, Altume D, **Liu H**, et al. Physical Function in Individuals with 22q11.2 Deletion Syndrome. 21<sup>st</sup> International Scientific Meeting of Velo-Cardio-Facial Syndrome. Las Vegas, NV. July 10-13, 2014.
79. **Liu H**, Qiu QX, Holmes C. Effect of Ba-Duang-Jin on Balance and Quality of Life. 2014 Annual Conference of Southern Gerontological Society, Little Rock, AR. April 3-6, 2014.
80. Salem Y, **Liu H**, Podgore J, Holmes C, Do S, Ghahremani S, Henson C. International Clinical Education For Physical Therapy Students. The Combined Sections Meeting of the American Physical Therapy Association. Las Vegas, Nevada. February 3-6, 2014.
81. **Liu H**, Salem Y, Huang M. Comparison of gait parameters between walking up and down an incline with and without using a walking device. Presented at the 2014 CSM meeting in Las Vegas, NV. February 3-6, 2014.
82. Salem Y, Bakry W, **Liu H**. Aquatic Exercises for Individuals with Multiple Sclerosis. The Combined Sections Meeting of the American Physical Therapy Association. Las Vegas, Nevada. February 3-6, 2014.
83. Salem Y, **Liu H**, Corbin A. Physical therapy for children with autism: evidence and treatment. The 5th Annual Adventures in Autism Intervention and Research Conference. Denton, Texas. July 27, 2013.
84. Hall H, **Liu H**. Backward Walking (BW) Used as an Intervention for Increases in Gait Speed and Balance: A Systematic Review. 2013 Annual Conference of Texas Physical Therapy Association, Arlington, TX. Oct. 24-27, 2013.
85. Liu H. Analysis of Tai Chi as an Exercise Program for Balance Improvement in Older Adults. 7<sup>th</sup> World Congress of the International Society of Physical and Rehabilitation Medicine. Beijing, China. June 2013.
86. **Liu H**, Qiu Q, Zhao YW, Schwarz B. Effect of a Qi-Gong on Balance and Quality of Life among Older Adults – A Pilot Study. 2013 APTA annual conference, Salt Lake City, UT. June 2013.
87. **Liu H**, Salem Y, Qiu Q, Weeks N. Analysis of Exercise Programs in Assisted Living Facilities – A Cross-sectional Study. 2013 APTA annual conference, Salt Lake City, UT. June 2013.
88. Quiben M, **Liu H**, Zabel R. Comparison of the flexicurve and tragus to wall measurements of thoracic kyphosis. The 2013 Combined Section Meeting of the American Physical Therapy Association, San Diego, CA January 2013.

89. Quiben M, **Liu H**, Zabel R. Comparison of thoracic kyphosis measurements: the flexicurve and tragus to wall. 2012 Annual Conference of Texas Physical Therapy Association, San Antonio, TX . Oct 2012.
90. U LS, Hall J, Guild J, Dallman R, **Liu H**. Analysis of Patients Referred to Physical Therapy in Long Term Care Facilities. 2012 Annual Conference of Texas Physical Therapy Association, San Antonio, TX. Oct 2012.
91. Salem Y, **Liu H**. Physical therapy for children with autism: evidence and treatment. 4th Annual Adventures in Autism Intervention and Research Conference. July 28, 2012. Denton, Texas.
92. Guild J, **Liu H**, Connors M, Holmes C. Comparison of Gait while ambulating with three different types of canes with normal subjects: A pilot Study. 2012 South Central Regional American Society of Biomechanics Meeting. Dallas, TX. April 2012.
93. Tao CB, Gu FH, **Liu H**, Guild J, Walden M. Comparison of Surface Landmarks for Measuring the Individualized Height of An Assistive Ambulatory Device. Will be presented at the 2012 Annual Conference of the American Physical Therapy Association in Tampa FL in June 2012.
94. Kunder K, Bowler K, **Liu H**, Lovelace-Chandler V. A Model for Providing Comprehensive Pediatric Rehabilitation Services in Malawi. Will be presented at the Combined Section Meeting of the American Physical Therapy Association in Chicago, IL. Feb 2012.
95. **Liu H**, Guild J, Connors M, Holmes C. Comparison of Gait While Ambulating With Three Different Types of Canes with Normal Subjects: A Pilot Study. Presented at the 2011 annual conference of the Texas Physical Therapy Association in Woodland, TX, October 2011.
96. Tao CB, **Liu H**. Effects of A Short Form Tai Chi intervention Compared to A Stretching Exercise and Walking Program in Older Adults – A Randomized Control Trial. Presented at the 2011 Annual Conference of the American Physical Therapy Association in National Harbor, MD. June 2011.
97. **Liu H**, McGee M, Wang W, Womack J. Effects of a forward-leaning posture on gait parameters in individuals using rolling walkers for ambulation assistance. Presented at the 2011 Annual Conference of the American Physical Therapy Association in National Harbor, MD. June 2011.
98. **Liu H**. Jiao Y. A six-form Tai Chi intervention for older adults – A Pilot study. Presented at the Southern Gerontological Society 25<sup>th</sup> Annual Scientific Meeting, Raleigh, NC, April 2011.

99. **Liu H**, Tipton P. Effect of a Selected 6-Form Tai Chi on Improvement in Balance and Quality of Life among Older Adults. Presented at the Combined Section Meeting of the American Physical Therapy Association in New Orleans, LA. Feb 2011.
100. **Liu H**, Fisher C, Holmes C. A Hands-on Review of Clinical Anatomy. A continuing education course for 2010 annual conference of Texas Physical Therapy Association (TPTA). Arlington, TX. October 23<sup>rd</sup>, 2010.
101. **Liu H**, Nolen J, Wang, W, Hart S. A short form Tai Chi intervention for older adults – A preliminary longitudinal study. Presented at the 2010 Annual Conference of the American Physical Therapy Association in Boston, MD. June 2010.
102. Nolen J, **Liu H**, McGee M. Comparison of Gait Characteristics with a Single-Tip Cane, Tripod Cane, and Quad Cane. Presented at the 2010 Annual Conference of the American Physical Therapy Association in Boston, MD. June 2010.
103. Lancaster K, McGee M, Forbush S, **Liu H**. A Task-Oriented Approach in the Management of Erb-Duchenne Palsy in a Typically Developing Pediatric Male: A Case Report. Presented at the 2010 Annual Conference of the American Physical Therapy Association in Boston, MD. June 2010.
104. **Liu H**, Wang W. Evaluation of Canes Used by Older People in Senior Communities. Presented at the 2010 Combined Section Meeting of American Physical Therapy Association in San Diego, CA. Feb 2010.
105. **Liu H**, Forbush S, Surface Anatomy and Nerve Innervation of the Sinus Tarsi: Cadaver Study. Presented at the 2010 Combined Section Meeting of American Physical Therapy Association in San Diego, CA. Feb 2010.
106. Garrison K, **Liu H**, Forbush S. Variation of Extensor Medii Proprius: A Case Report. Presented at the 2010 Combined Section Meeting of American Physical Therapy Association in San Diego, CA. Feb 2010.
107. **Liu H**, Grando V, Zabel R, Nolen J. Fear of falling among Older Walker Users: A Cross-Sectional Study. Presented at The Gerontological Society of America's 62nd Annual Scientific Meeting, taking place in Atlanta, GA, November 2009.
108. Quiben M, Zabel R, **Liu H**, Rainey J. Biomechanical Analysis of Sit-to-Stand and Sit-to-Walk in Young and Older Males. Presented at the 2009 APTA Annual Conference in Baltimore, MD, June 2009.
109. **Liu H**, Quiben M, Huang M. Effect of Ambulatory Devices on the Limits of Stability Measured by Multi-directional Reach Tests. Presented at the 2009 Combined

Section Meeting of American Physical Therapy Association in Las Vegas, NV, Feb 2009.

110. **Liu H**, Persson M, Stanley G, Eaves J. Assessment of Rolling Walkers Used by Older People in Senior Living Communities. Presented at the 2009 Combined Section Meeting of American Physical Therapy Association in Las Vegas, NV, Feb 2009.
111. Quiben M, Zabel R, **Liu H**, Rainey J. Biomechanics of Sit-to-stand and Sit-to-walk in Older Males. Presented at the 2009 Combined Section Meeting of American Physical Therapy Association in Las Vegas, NV, Feb 2009.
112. Quiben M, Zabel R, **Liu H**, Rainey J. Biomechanics of Sit-to-stand and Sit-to-walk in Young Males. Presented at the 2009 Combined Section Meeting of American Physical Therapy Association in Las Vegas, NV, Feb 2009.
113. Huang M, Feng YZ, **Liu H**, Barnes L, Adah F, Greenwald N. Low Level Laser Therapy Improves Learning and Memory Functions in Neonatal Rats Following Hypoxic Ischemic Brain Injury. Presented at the 2009 Combined Section Meeting of American Physical Therapy Association in Las Vegas, NV, Feb 2009.
114. **Liu H**, Jordan K. Assessment of Canes Used by Older People in Senior Living Communities. Presented at the 2009 conference of National Association of Clinical Nurse Specialists, St Louis, MO, March 2009.
115. Wang W, **Liu H**, Lewis S, Persson M. Teaching the Complexity of Patient Compliance Management by Interactive Student-Centered Learning: A Six-Week Pilot Exercise Program for First Year PT Students. Presented at the 2008 APTA annual conference in San Antonio, TX, June 2008.
116. **Liu H**, McGee, M, Prati V, Huang M. Gait Characteristics in Older Rolling Walker Users: A Pilot Study. Presented at the 2008 APTA annual conference in San Antonio, TX, June 2008.
117. **Liu H**, Frank A, Strigler A, Stanley G, Persson M, Eaves J. Tai Chi as a Balance Improvement Protocol for Older Adults: A Review. Presented at the 2008 APTA annual conference in San Antonio, TX, June 2008.
118. **Liu H**, Fletcher J, Courtney R, Walter C, Wilkson C, Marshall C, Schultz M, Wang W. Surface Anatomy of Inter-compartmental Foramen on Legs: A Cadaver Study. Presented at the 2008 APTA annual conference in Little Rock, AR, April 2008.
119. Wang Y, **Liu H**, Cheng LH, Fletcher J. Comparison of Acupuncture and Electroacupuncture Interventions in Older Patients with Stroke. Presented at the 29th annual meeting of Southern Gerontological Society in Atlanta, GA, April 2008.

120. **Liu H**, McGee M. Effect of Forward-Leaning Posture on Gait Parameters during Ambulation with a Rolling Walker. Presented at the 29th annual meeting of the Southern Gerontological Society in Atlanta, GA, April 2008.
121. Zabel R, Quiben Q, **Liu H**, Charton, M. Re-examination of Normal Values for Thoracic Curvature in Older Females Based on the Index of Kyphosis. Presented at the 2008 APTA Combined Section Meeting in Nashville, TN, Feb 2008.
122. Zabel R, Quiben M, Charton M, **Liu H**. Reliability of Tragus to Wall as a Measure of Upper Thoracic Curvature in a Sample of Older Women. Presented at the 56th Conference of Gerontology Society of America in San Francisco, CA, November 2007.
123. **Liu H**, McGee M, Prati V, Garrison K, Fu QY. Comparison of Standing Balance Parameters between Older Assistive Ambulatory Device Users and Non-users. Accepted for presentation at the 56th Conference of Gerontology Society of America in San Francisco, CA, November 2007.
124. **Liu H**, Zabel R, Quiben M. Falls as a Side Effect of Using Assistive Ambulatory Devices: a Preliminary Pilot Study. Presented at the 4th International Confederation of Physical Therapy in Vancouver, Canada, June 2007. Abstract published by Physiotherapy. 2007; 93 (S1):S623.
125. Prati V, **Liu H**. Determining the Effect of Therapeutic Exercise Interventions on Fracture Risks for Women Older than 65 Years Old with Low Bone Mass. Presented at the 2007 APTA annual conference in Denver, CO. June 2007.
126. **Liu H**, Allen SA, Prati V. Test and Retest Reliability of Ambulatory Device Dependence Efficacy Scale for Ambulation (ADDESA) for Institutionalized Older Adults. Presented at 2007 APTA annual conference in Denver, CO. June 2007.
127. Huang M, **Liu H**, Hardy P, Hayes A, Nick T, Curbow-Wilcox K, Greenwald N, Stokic D. The Effect of Transcutaneous Electrical Nerve Stimulation at Acupuncture Points on Spinal Motor Neuron Excitability in People without Known Neuromuscular Diseases. Presented at the 2007 APTA Combined Section Meeting in Boston, MA. February 2007.
128. **Liu H**, Garrison K. Bilateral Abductor Digital Minimi Accessorius Originating from the Palmaris Longus Muscles: A Case Report. Presented at the 2007 APTA Combined Section Meeting in Boston, MA. February 2007.
129. Dailey M, **Liu H**, Treadwell A, Hoskinds J. Surface Anatomy of the Radial Tunnel: A Cadaver Study. Presented at the 2007 APTA Combined Section Meeting in Boston, MA. February 2007.



130. **Liu H**, Skinner R, Arfaj A, Yates C, Reese N, Garcia-Rill E. Influence of Combined L-Dopa and Passive Exercise on H-reflex in Rats with Spinal Cord Transaction. Presented at the 2007 APTA Combined Section Meeting in Boston, MA. February 2007.
131. **Liu H**, Chen J, Rainey J, Li ZB, Liu J. Length of Post-onset Time: A Predictor of Rehabilitation Outcome for Patients with Stroke in Shanghai, China. Presented at the 27th Annual Meeting of Southern Gerontology Society, Lexington, KY. April 2006.
132. Jefferson J, **Liu H**. Analysis of Physician's Referrals to Pediatric Physical Therapy: Do Physical Therapist's Practice Autonomy? Presented at the 2006 APTA annual conference in Orlando, FL. June 2006.
133. **Liu H**, Quiben M, Zabel R, Rainey J, Boswell J, Kehayov, A. Effect of An Exercise Program on Functional Mobility in Older Individuals: A Pilot study. Presented at the 2006 APTA annual conference in Orlando, FL. June 2006.
134. **Liu H**, McGee M, Quiben M, Treadwell A, Loftin K. Observation of Variation of Extensor Carpi Radialis Muscles: A Case Report. Presented at 2006 APTA combined section meeting in New Orleans, LA. Feb 2006.
135. **Liu H**, Quiben M, Chen J, Li ZB. A Retrograde Study of Multivariant Effect on the Stroke Rehabilitation Outcomes. Presented at the 2005 Conference of the Neurodevelopment Treatment Association. Houston, TX. Oct 2005.
136. Prati V, **Liu H**, Fletcher J. Perception of College Students to the Current Physical Therapy Profession and Professional Education. Presented at the 2005 APTA annual conference in Boston, MA. June 2005.
137. Chen J, **Liu H**, Li, ZB, Quiben, M. Multivariant Analysis of Stroke Rehabilitation Outcomes: A Pilot Study in the Chinese Population. Presented at the 2005 APTA annual conference in Boston, MA. June 2005.
138. **Liu H**, Taylor D. Excessive Potassium in Muscle Strength: A Case Report. Presented at the 2005 APTA Combined Section Meeting in New Orleans, LA. Feb 2005.
139. **Liu H**, Fletcher J. Analysis of Physicians' Referrals: Is Further Diagnosis Needed? Presented at the 2004 APTA Combined Section Meeting in Nashville, TN. Feb 2004.
140. Liu, H. and G.A. Mihailoff. Direct connections between hypothalamopontine pathways arising in the lateral and posterior hypothalamic areas and

pontocerebellar projections reaching the ventral paraflocculus: light and electron microscopic studies in the rat. *Neuroscience Abstracts*, vol. 24:669. 1998.

141. Liu, H. And G.A. Mihailoff. Projections from the hypothalamus to the basilar pontine nuclei in the rat. *Mississippi Academy Sciences*. 1996.
142. Liu, H. and G.A. Mihailoff. Descending hypothalamic projections to the basilar pontine nuclei studied with light and electron microscopy in the rat. *Neuroscience Abstracts*, vol. 22:1630. 1996.

### **On campus Research Presentations (Students' research Projects)**

1. Valencia K, Rodriguez Y, Vasquez M, Galvan-Godines V, **Liu H**. Evaluation of physical therapy telerehabilitation on Covid-19 patients. Presented on Research Appreciation Day. March 25, 2022. UNTHSC.
2. Thomas P, Liu H. Diaphragmatic breathing impacts on biophysiological systems. Presented on Research Appreciation Day. March 25, 2022. UNTHSC.
3. Durham SO, Heisterkamp K, Salem Y, **Liu H**. Aquatic exercise for adults with multiple sclerosis: A systematic review. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.
4. Shaw ER, Bolstad C, Salem Y, Liu H. Effectiveness of Yoga for individuals with cerebral palsy. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.
5. Thayn L, Robichaux S, **Liu H**, Salem Y. Effectiveness of Task-Oriented Gait Training for Children with Cerebral Palsy. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.
6. Baker J, **Liu H**, Salem Y. Effects of Tai Chi on people with sleep dysfunctions – A Systematic Review. Poster presentation. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.
7. Hollingshead K, Bustos A, **Liu H**, Salem Y. Effects of animal assisted intervention for individuals with dementia. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.
8. Aggarwal S, Salem Y, **Liu H**, Mendez A, Quiben M. A meta-analysis and systematic review of the effectiveness of proprioceptive neuromuscular facilitation in the stroke population. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.
9. Walls P, Diu P, **Liu H**, Salem Y. Effectiveness of exoskeleton gait speed in patients with spinal cord injury. Presented on Research Appreciation Day. March 26, 2021. UNTHSC.

10. Traina A, Kolenovic M, Logsdon L **Liu H**. Tai Chi and Cardiovascular Conditions. Research Appreciation Day. March 27, 2020. UNTHSC.
11. Kolenovic M, Trainna A, Logsdon L, **Liu H**. Tai Chi and Diabetic Peripheral Neuropathies. Research Appreciation Day. March 27, 2020. UNTHSC.
12. Bradly L. **Liu H**, Reese R, Quiben M. Surface Projection of Long Thoracic Nerve in Cadaveric Study. Research Appreciation Day. March 27, 2020. UNTHSC.
13. Penfield M, Bell R, **Liu H**. Anatomical Mapping of The Posterior Interosseous Nerve and Artery. Research Appreciation Day. March 27, 2020. UNTHSC.
14. Salem Y, **Liu H**. A Systematic Review of the Effectiveness Aquatic Exercises has for Individuals with Parkinson's Disease. Research Appreciation Day. March 27, 2020. UNTHSC.
15. Li Y, Smith V, **Liu H**, Mason D. Osteopathic Manipulation for Genital Pain - A Case Report. Presented on Research Appreciation Day. March 2019, UNTHSC.
16. Paez G, Rokayak N, Salem Y, **Liu H**. Effects of Strength Training on Bone Mineral Density in Adult Women: A Systematic Review. Presented on Research Appreciation Day. March 2019.
17. Becnel K, Van Nguyen P, Salem Y, Liu H. A Literature Review of Exercise in the Pediatric Oncology Population. Presented on Research Appreciation Day. March 2018.
18. Downing A, Jay N, Cook N, **Liu H**, and Salem Y Effects of Aerobic Exercise for Children with Down Syndrome: A Systematic Review of Literature. UNTHSC Research Appreciation Day. April 2017.
19. Guzman J, McEwen M, Cooper R, **Liu H**. The Effect of Music on Gait Pattern for Patients with Parkinson's Disease. UNTHSC Research Appreciation Day. April 2017.
20. Arguello E, Truong T, Holmes C, **Liu H**. Variation of the Origins of the Phrenic and Long Thoracic Nerves – A Case Report. UNTHSC Research Appreciation Day. April 2017.
21. Caldwell-Webster T, Cramer C, Cramer C, Holmes C, Salem Y, **Liu H**. Whole Body Vibration Therapy for Patients with Multiple Sclerosis – A Review. UNTHSC Research Appreciation Day. April 2017.

22. Bao X, Baker S, Salem Y, Quiben M, Liu H. The Effect and Mechanism of Botulinum Toxin Type A For Knee Osteoarthritis Through Ultrasound Guidance. Presented on Research Appreciation Day. March 2017, UNTHSC.
23. Brown J, **Liu H**. Multifactorial Effect of Testing Single Leg Stance. Presented on Research Appreciation Day. March 2016, UNTHSC.
24. Fang H, Crocker K, Balcar B, Liu H. Observation of Variation of Extensor Carpi Radialis Muscles: A Case Report. 2013 UNTHSC Research Appreciation Day. March 2014.
25. Guild JR, Peterson LC, Peterson J, Langford R, **Liu H**. Mirror therapy's efficacy and mechanism in the promotion of motor recovery in hemiparetic post stroke populations. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 12, 2013.
26. Liras G, Kirchhoff CA, Duong K, McMullen M, Stone C, Wier R, **Liu H**. Anatomical variation of the Latissimus Dorsi—Axillary Arch. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 12, 2013.
27. Nguyen V, Hidrogo J, Hodge, C, Jiwani A, Tsen A, Varghese L, Vinnakota RD, Rosales A, **Liu H**, Reeves R. Extensor Indicis Brevis: a rare anatomical variant of the upper limb. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 12, 2013
28. Vice L, Vaghasia M, **Liu H**, Guttman G. Anatomical variation of the Sternocleidomastoid muscle: a case report. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 12, 2013.
29. Lowry D, Langner C, Krug K, Smith H, Saverine A, **Liu H**. Bilateral appearance of adipose medial gastrocnemius muscle: a case report. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 12, 2013.
30. Gu FH, Tao CB, Guild J, Walden M, **Liu H**. Comparison of Surface Landmarks for Measuring the Individualized Height of an Assistive Ambulatory Device. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 2012.
31. Walden M, Guild J, **Liu H**. COMPARISON OF GAIT WHILE AMBULATING WITH THREE DIFFERENT TYPES OF CANES WITH NORMAL SUBJECTS: A PILOT STUDY. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 2012.
32. Corbin AM, Liu H. A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS TO SHOW EVIDENCE-BASED PHYSICAL THERAPY INTERVENTIONS

FOR PATIENTS SUFFERING FROM POST-STROKE COMPLICATIONS. Research Appreciation Day, University of North Texas Health Science Center, Fort Worth, TX. April 2012.

### **Book and Book Chapters**

1. Liao LR, Wang YL, Li YQ, Zhu Y, **Liu H**. Translator (also the main auditor) of Chinese version of the textbook “A Comprehensive Guide to Geriatric Rehabilitation (Kauffman TL, Scott R, Barr JO, Moran ML) (3<sup>rd</sup> ed). McGraw Hill Education; Publishing House of Electronics Industry. Beijing, China. March 2023.
2. Salem Y, **Liu H**. Chapter 8. Rheumatic Disorders. (In: Pediatrics for Physical Therapy Assistant. 2e. O’Shea R.). Elsevier. 2022.
3. **Liu H**. Therapeutic Exercise for Patients with Dementia. (Book chapter in book: Wang J. Treatments for Patients with Dementia at Home). People’s Health Press, Beijing, China. Currently under review. 2021.
4. **Liu H**, Wu QW. Translation into Chinese of Geriatric Physical Therapy – A case study approach. Written Staples WH. McGraw Hill Education. People’s Health Press. Beijing, China. Oct 2020.
5. **Liu H**. Essential English for Rehabilitation and Therapy Professionals. World Book Press of Shanghai. Shanghai, China. Jan 2020.
6. Wang SB, Wang HF, He CQ, **Liu H**. Rehabilitation Therapy in Sports Injury (2<sup>nd</sup> ed). Electric Industry Press. Shanghai, China. 2019.
7. **Liu H**, Guo YY. Physical Modalities. (In: Rehabilitation Medicine, 1<sup>st</sup> ed). Electric Industry Press. Shanghai, China. 2019.
8. **Liu H**. Tai Chi for Neurological disorders. In: Neurological Rehabilitation. Editor-in-chief: Darcy Umphred, 7<sup>th</sup> ed.). Elsevier. 2019.
9. **Liu H**, Luo J. Musculoskeletal Anatomy for Rehabilitation Professionals. Jiangxi Science & Technology Publisher. Nanchang, China. 2016.
10. Potter JF, **Liu H**. Chapter 31. Gait Impairment Questions Writer. In: Durso SC, Sullivan GM. Geriatric Review Syllabus: A Core Curriculum in Geriatric Medicine, 9<sup>th</sup> Ed. 2016.

11. **Liu H**, Salem Y. Chapter 32: Variation of Pelvic Diaphragm and External Anal Sphincter. In: Tubbs S, Shoja MM, Loukas M. Comprehensive Encyclopedia of Human Anatomic Variation. Wiley Publisher. 2016.
12. **Liu H**, Li H. Guidance of Health for Older Adults in USA. Sichuan University Press. Chengdu, China. January 2015.

### **Funded/Approved Grant/Contracts Activities:**

- 2023 Dyadic Tele-Tai Chi Qigong Program for People with Parkinson Disease and Their Caregivers Living in Community. Parking Foundation (2023-2024), \$3,000.00, PI.
- 2021 Intermittent Hypoxia Training: Novel Rehabilitative Therapy for Ischemic Stroke. UNTHSC Applied Research Grant (5/1/19-2/28/21) , \$30,000.00, Co-I.
- 2021 Education and Research Pathway Training Program for DEI Awareness in Healthcare Workforce. 2021 UNTHSC DEI Awareness Grant (2021-2022), \$10,000.00, Co-PI.
- 2020 Effect of Combined Vibration Therapy with Regular Exercise for Patients with Multiple Sclerosis in Community. Institute of Aging and Alzheimer Disease, UNTHSC, (09/01/2017 – 12/31/2020). \$20,000.00. PI.
- 2019 Vibration Therapy for Patients with Subacute Stroke. Texas Physical Therapy Association Foundation, (2016-2019), \$45,00.00, Co-PI
- 2018 Balance assessment in the elderly after a 12-week Computerized game-based intervention. Alexandave Industries. Inc., (6/2016 – 6/2018), \$10,250.00, PI
- 2017 Gait Assessment When walking with a Rolling Walker to Make a Turn. TCOM Research Fund of UNTHSC, 2/2016 – 2/2017, \$1,000.00. Mentor
- 2017 SmartWalker – A New Design of Rolling Walker to Reduce Falls and Walker-use Related Side Effects. Texas Medical Research Collaborative Fund, 06/01/14 – 05/31/17, \$100,000.00, PI
- 2016 Analysis of Gait When Walking with a Rolling Walker with Leaning Forward Posture. TCOM Research Fund of UNTHSC, 2/2015 – 2/2016, \$1,000.00. Mentor
- 2015 Use of Yoga for Young Children with Down Syndrome. UNTHSC Research Grant, 04/01/2014 – 08/31/2015, \$12,200.00, Co-PI

- 2015 Creating the Flipped Classroom for Human Gross Anatomy. UNTHSC Teaching Fund, 03/01/2014 – 08/31/2015, \$10,000.00, Co-PI
- 2013 Functional Assessment for Patients with DiGeorge Syndrome. Texas Physical Therapy Association Research Fund, 2012-2013, \$1,500.00, Co-PI.
- 2008 Effect of Assistive Ambulatory Devices on Balance and Posture in Older Individuals. University Research Council (URC) grant of University of Central Arkansas; 2007-2008, \$4,550.00, PI
- 2007 Depression and Fear of Falling Among the Elderly People Using Assistive Ambulatory Devices. University Research Council (URC) grant of University of Central Arkansas; 2006-2007, \$1,377.00, PI
- 2007 Tailored Home Exercise-Partner Intervention for Post-Hospitalized Frail Elders. Department of Health and Human Services, University of Arkansas for Medical Sciences, 2007-2008, \$15,000.00, Co-I
- 2006 Influence of Combined L-dopa and Passive Exercise on Restoration of the Frequency Dependent Depression of the H-Reflex in Rats with Spinal Cord Injury. Arkansas Biomedical Research Infrastructure Network (BRIN) sponsored by NIH Award #: 5 P20 RR016460, ORSP/ARIA #: 0701; 2005-2006, \$16,724.00, PI.
- 2006 Effect of An Exercise Program on Functional Mobility in Older Individuals: A Pilot Study. Faculty Enhancement Grant of University of Central Arkansas; 2005-2006, \$1,000.00, PI
- 2005 Effects of an Exercise Program on Risk of Falling in Elderly Individuals: Outcome Measured with Falls Efficacy Scales and Berg Balance Scale. University Research Council (URC) grant of University of Central Arkansas; 2004-2005, \$2,102.00, PI
- 1992 Hypothalamopontine projections Under project of “Morphology of Basilar Pontine Nuclei”. National Institute of Health (NS 12644), 1992-1998, Co-I.

### **Honors and Awards**

- 2023 FOCUS Spotlight Award, Allen College. April 2023.
- 2022 FOCUS Spotlight Award, Allen College. December 2022
- 2022 William Gould Memorial Faculty Award. Texas Physical Therapy Association; October 2022.

- 2021 Service Commendation of 2021 American Congress of Rehabilitation Medicine. For service as the communication officer of Complementary & Integrative Rehab Medicine Networking Group. December 2021.
- 2021 Award of Best Scientific Poster in Geriatric Rehabilitation. 2021 (Virtual) Annual Conference of American Congress of Rehabilitation Medicine.
- 2021 Research Mentor of Recipient of 2021 American Congress of Rehab Medicine.(ACRM) Student's Scientific Poster Award in Complementary & Integrative Rehab Medicine. Joshua Baker - Effects of Tai Chi on people with sleep dysfunctions
- 2021 Research Mentor of the recipient 2021 APTA Cardiovascular & Pulmonary Section Student Research Poster Award (Logsdon L: Tai Chi for Chronic Obstructive Pulmonary Disease).
- 2021 Fellow of Gerontological Society of America. Approved and Starting in May 2021
- 2021 Faculty Achievement Award (Plaque with cash \$2500). University of North Texas Health Science Center (UNTHSC), 2021.
- 2017 Faculty Achievement Award (Plaque with cash \$2500). University of North Texas Health Science Center (UNTHSC), 2017.
- 2016 Valubility of the Month (October). University of North Texas Health Science Center. 2016
- 2014 Outstanding Physical Therapy Researcher Award. Texas Physical Therapy Association, 2014.
- 2009 Nominee of Researcher of The Year (2009). University of Central Arkansas.2009.

**Service in Professional Organizations**

- 2023– present APTA magazine Advisory Committee, Member
- 2022 – 2023 GSA Annual Scientific Meeting iSessions Workgroup, Member
- 2021 – 2022 Mentor of R13 mentorship program – American Congress of Rehabilitation Medicine (ACRM)



2021 – 2023	Communication Officer (Newsletter Editor) of Complementary & Integrative Rehabilitation Medicine Section, ACRM
2020 – 2021	GSA Health Section Awards Review Panel, Member
2016-2019	APTA Award Committee, Member
2016-2017	ACRM Geriatric section program planning committee, member
2013 – 2016	APTA Research Section Award Committee, Member & Chair
2006 – 2012	APTA Annual Conference Abstract & Proposal Review Committee Member
2007 – 2013	APTA McMillan Scholarship Committee, Member

### **External Reviewer for P & T Package**

2023	Reviewed a P & T package from New York Institute of Technology
2021	Reviewed a P & T package from the Pharmacotherapy department, College of Pharmacy, UNTHSC.
2020	Reviewed a P & T package from the Occupational Therapy department at Creighton University
2016	Reviewed a P & T package from Eastern Carolina University
2015	Reviewed a P & T package from the School of Public Health, UNTHSC

### **Consultative and Advisory Services**

2007 – present	Rater of McMaster Online Rating of Evidence (MORE), <b>rated 15</b> articles in average annually, <a href="https://plus.mcmaster.ca/more/">https://plus.mcmaster.ca/more/</a>
2021 – present	Advisory Board Member of Forbes Health <a href="https://www.forbes.com/health/medical-advisory-board/howe-liu/">https://www.forbes.com/health/medical-advisory-board/howe-liu/</a>
2022 – 2023	Co-chair of Advisory Committee of PT program, Hofstra University

### **Editor / Editorial Board Member**

2022 – present	Associate Editor – Frontiers in Rehabilitation Science
2021 – present	Editor – Brain Network and Modulation
2015 – Present	Editorial board member - Translational Research in Anatomy
2008 – Present	Editorial board member - Physical and Occupational Therapy in Geriatrics
2022 – 2023	Guest Associate Editor – Frontiers in Neurology.
2021 – 2023	Guest Associate Editor - Frontier in Aging Neuroscience
2021 – 2022	Guest Associate Editor - Frontier in Molecular Neuroscience

**Active reviewer (in last 5 years) for journals of:**

Frontiers in Aging Neurosciences; Frontiers in Molecular Neurosciences, Frontiers in Rehabilitation Sciences, Physical Therapy, Physical Medicine & Rehabilitation, Archives of Physical Medicine and Rehabilitation, Journal of Neuro Engineering & Rehabilitation, Journal of Neurological Physical Therapy, Clinical Rehabilitation, Journal of Biomechanics, Clinical Anatomy, Bone, Journal of Rehabilitation Medicine, Journal of Sport Rehabilitation, Journal of Geriatric Physical Therapy, Ageing and Diseases, Rehabilitation Nursing, Geriatric Nursing, Assistive Technology, American Journal of Translational Research, Neural Repair and Neurorehabilitation, Journal of Aquatic Physical Therapy, Research in Sports Medicine, Sports Medicine and Injury Care Journal, BMC Neurology, Neural Plasticity

**Allen College Level**

Allen College Institutional Review Board – member	2022 - now
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**Allen College Department Level**

Dept Curriculum committee – member	2022 – now
Dept Admission Committee – member	2022 – now
Director of Collaborative research	2022 – now
Faculty Search Committee – Chair	2022 – 2023
Dept CAPTE Assessment Committee – Chair	2023 - Now

### **UNTHSC University Level**

Faculty Grievance and Appeal Committee – member	2021 – 2022
Intellectual Property Advisory Committee – Member	2016 – 2022
Associate Dean Search Committee – Member	2020 – 2021
UNTHSC Research Appreciation Day Judge	2015 - 2022
Faculty Grievance and Appeal Committee – member	2011 – 2018
Dean Search Committee – member	2016 – 2018
UNTHSC Research Strategic-Thinking Council – member	2010 - 2013
Committee for Texas Academy of Biomedical Sciences – member	2010 – 2013
Committee of Regents Rule Policy - member	2011 – 2013

### **School level in UNTHSC**

P & T Committee of School of Health Professions – Chair, member, & chair	2011 – 2022
Physician Assistant Chair Search Committee – Member	2021-2021
Faculty Teaching Excellence Award committee – member	2015- 2020
PT Chair Search Committee – Member	2017-2019
Director of International Collaboration of School of Health Professions	2011 – 2013

### **Departmental level – (one of 4 founding members to start up this program in UNTHSC)**

Admission Committee – Member	2021- 2022
P & T Committee – member and chair	2013 - 2021
Faculty Search Committee – member, then chair and then member	2010 – 2022
Research Committee – member and chair	2010 – 2022

Lead person (Coordinator) of Dept Research Lab	2011 – 2022
Student Academic Performance Committee – member	2011 – 2022
Continue Education Task group - Coordinator	2016 - 2022
Student Award & Scholarship Committee – member	2015 - 2022
Student Academic Advisor	2010 – 2022
Annual Recruitment Talk at UNT Kinesiology Dept	2015 – 2019
Annual Campus Day Panel	2013 - 2021
Faculty Workload Evaluation Task force Group - member/chair	2016 - 2018
Bylaw and P & T Committee – Chair	2011 – 2013
Curriculum Committee - member	2010 - 2013
Admission Committee - member	2010 - 2013

### **On-campus Committees at University of Central Arkansas (UCA) (2003-09)**

#### Departmental level:

a. Departmental Self-study group for re-accreditation - member	2009
b. Departmental Promotion & Tenure Committee – member	2009 – 2009
c. Research Forum coordinator	2007 – 2009
d. Budget Planning & Advisory Committee – member	2005 – 2009
e. Department PhD Admission Committee - member	2003 – 2009
f. Committee for Publication and Public Relations – Chair	2007 – 2009
g. PhD Program Committee – member	2006 – 2009
h. Departmental Research Committee – member	2007 – 2009
i. Faculty Search Committee - member	2006 – 2009

- j. DPT Student Academic Advisor 2003 -- 2009
- k. Year 1 Track Team – member and lead 2001 - 2009
- l. Instructional Technology/Computer Committee - member 2004 – 2006
- m. Student Safety Assessment Committee – member 2004 – 2006

College level:

- a. Geriatrics special interest group - member 2007 – 2009
- b. Minority Student Recruitment Committee - member 2005 -- 2007
- c. Outstanding Student Award Committee - member 2004 -- 2006

University level:

- a. Institutional Review Committee (IRB) - member 2006 – 2009  
(review 15-20 IRB applications annually)
- b. Institutional Animal Care and Use Committee (IACUC) - member 2005-2009  
(Review 5-8 IACUC applications annually)
- c. Committee for Public Service Award 2004 – 2006
- d. Committee for Outstanding Teacher Award 2006 – 2008
- e. Committee for Outstanding Teacher Award 2006 – 2008

**Mentorship**

**Mentor for Visiting Scholars:**

1. Zhou Jingjie, PT, MS. 2019-2020. Additive effect of E-stim on stroke patients who are receiving therapeutic exercise.
2. Wang, Kangling. MD, PhD. 2018-2019. Psychological analysis of pain in geriatric patients; and in those who use wheelchairs for mobility.
3. Li, Yingzhi, MD, PhD. 2017-2018. Hands-on manipulation for sacroiliac joints.
4. Guo Yuanyuan, MD, MS. 2017-2018. Postural analysis when using rolling walkers for ambulation in older adults.
5. Liu, Hao, MD, PhD. 2016-2017. Analysis of Exercise programs provided in senior living communities in metropolitan area.

6. Shao, Yingjin, MD, MS, PT. 2015-2016. Dry needling studies.
7. Bao Yi, MS, PT. 2014 – 2015. Comparison of physical therapy studies between US and China.
8. Ping Miao, MD, MS. 2014 – May 2015. EMG study on vastus medialis during squatting.
9. Rui (Ray) Ma, MD, PhD. 2013 – 2014. Identification of anatomical variation of musculoskeletal system in upper extremity in gross lab.
10. Qiu, Qixiang (Shawn). MD, MS. 2012 – 2013. Baduanjin exercise for older adults in senior living communities.

**Mentor for a post-doctoral fellow:**

1. Dr. Xiao Bao. MD, PhD. 2016-2017 on research of ultrasound guided interventions for patients with musculoskeletal pain; effect of intermittent hypoxia training for patients with mild dementia.

**Mentorship for PhD Students (as PhD advisor or advisor committee member)**

- PhD Qualification Oral and Written Exam Committee: Baghi, Raziye (a PhD student at Physical Therapy Department of University of Maryland at Baltimore) (2020-2021)
- Lab mentor: Libby Bradley (she did lab rotation in my lab in Summer and fall 2019) – Revisit of long thoracic nerve – Surface projection assessment
- PhD Committee member for Ms. Victoria Kowalewski (2014-2018)
- PhD Advisor for Vuvi Nguyen, 2012 –2017
- PhD Advisor for Ms. Myles Quiben (Graduated in 2009)
- PhD Committee member for Mr. Chad Glasmore (Graduated in 2009)
- PhD Committee member for Ms. Margaret McGee (graduated in 2007)
- PhD Committee member for Mr. James Fletcher (graduated in 2006)

**Mentorship for Master degree students (in the Structural Anatomy & Rehab Program)**

- Committee member for Mr. Taylor Craig – Revisit the sciatic nerve with an approach of clinical application (2021-2022)
- Lab mentor for Ms. Vaughna Galvin (Summer 2019)

**Supervisorship (for technician in my lab):**

1. Hiral Master – PT. 2013-2015
2. Tony Truong, BS – 2015-2018
3. Vincent Smith, BS – 2018-2019

4. Jay You Kim, MS – 2019-2020

#### **Mentorship for MD Students:**

1. Joshua Baker (Class 2024) – Effect of Tai Chi exercise for people with insomnia.
2. Blake Richard (Class 2014-2018) – Assessment of gait when using a rolling walker to make a turn.
3. Justin Koenemann and Javier Piraino (Class 2013 – 2017). Anatomical analysis of anterior interosseous syndrome.
4. Talon Miner (Class 2011 – 2015). Effect of osteopathic manipulation on bottom of foot to improve lower extremity circulation.
5. Cindy Shi (Class 2012 – 2016). Analysis of posture influence on gait among those who use rolling walkers for daily activity.

#### **Research Mentor for DPT students at UNTHSC**

- Research mentor for physical therapy student projects (not required) – 2010-2013
- Jeff Guild in Class 2013 who received Dean's award for student's research excellence award for his peer-reviewed article in study on walking sticks.
- Research mentor for physical therapy students group project (required) – Mirror therapy study in Class 2013 – 2012-2013.
- Jeff Guild, Lauren Peterson, Jenny Peterson, Rachael Langford who received 1<sup>st</sup> place ward of Physical Therapy in 2013 RAD (Research Appreciation Day), UNTHSC 2013.
- Alex Gustaf, Sam Taylor. Gait analysis walking on an incline with different ambulatory devices. Presented at the 2014 Conference of Texas Physical Therapy Association, Arlington, TX
- Hesper Fang, Case report of extensor indices proprius – a cadaver study. Presented at UNTHSC 2014 Research Appreciation Day.
- Ceci U. Analysis of exercise programs in assisted living communities. Presented at the 2013 Conference of Texas Physical Therapy Association, San Antonio, TX.
- Rebecca Pares. Functional analysis of people with DeGorge syndrome. Presented at the 2014 US DeGorge Syndrome conference, Las Vegas, NV. July 2014.
- Fang H, Mabutas K, Coppock A, Bolinger E (Class 2015). The effects of animal-assisted therapy on older adults with dementia: a systematic review.
- Chad Pittmon (Class 2016) - Effects of music therapy on functional mobility patients with stroke.

- Juarez C, Wolf G, Bello A (Class 2017). Effects Of Aquatic Therapy On Neuromuscular Disease: A Review Of The Literature.
- Pennucci M, Dillard D, Baker S (Class 2018), Comparison of Trunk and Leg Sway During Single Leg Stance.
- Jay N, Downing A, Cook R. (Class 2017). Effects of Aerobic Exercise for Children with Down Syndrome: A Systematic Review of Literature.
- Guzman JL, McEwen M, Cooper R, (Class 2018). The effect of Music on Gait patterns for Patients with Parkinson's Disease.
- Garcia S, Kelley C, Rose K (Class 2019). A Systematic Review of Physical Therapy Interventions for Parkinson's Disease Introduction.
- Coleman A, Beasley S, (Class 2020). Nichols C. Coordinated movement of diaphragm and pelvic floor muscle in relation to respiratory function.
- Tran K, Henry Z, Salem Y, Liu H. Virtual Reality Intervention for Parkinson's Disease: A Systematic Review.
- Logsdon L, Kolenovic M, Traina A, (Class 2021). Tai Chi with Chronic Obstructive Pulmonary Disease.
- Traina A, Logsdon L, Kolenovic M Class 2021). Tai Chi and Cardiovascular Conditions.
- Gary Pina, Bieu Cung, (Class 2023). Effects of Tai Chi on Depression and Anxiety in th Elderly People.
- Prince Thomas. (Class 2023) Comparison of Gait Parameters when walking with a Rolling walker and a Cane on an Inclined Surface in Older Adults.

### **Research Mentor for Physician Assistant (PA) Program students**

- Marc Saldivar (Feb 2010 – 2012)
- Bensley Mathew (Feb 2010 – 2012)

### **Research Mentor for DPT (Non-PhD) students at UCA**

- Victor Prati (2005 – 2007)
- Micah Daily (2006 – 2007)
- Garrett Stanley (2007 – 2008)
- Mary Persson (2007 – 2008)
- Jeff Nolan (2008 – 2009)
- Jill Womack (2009-2010)
- Paige Bullock (2009-2010)
- Josh Eaves (2009 – 2010)
- Park Tipton (2009 – 2010)



## Teaching Activities

### Teaching in LSUHSC PT program

2024 Spring Pathophysiology (4) Course director

### Teaching Responsibility for PT in Allen College (PT Dept)

2022 Fall DPT 621 Pathology (4) Course director

DPT 631 Pharmacology (3) Course director

2023 Spring DPT 601 Anatomy (5) Course director

DPT 863 Geriatric PT (3) Co-Course director

DPT 878 PT for Special Population (3) Co-Course director

2022 Fall DPT 621 Pathology (4) Course director

DPT 631 Pharmacology (3) Course director

### Teaching Responsibility for PT in UNTHSC (PT Dept)

2023 Fall Gross Anatomy I Co-Course director

2022 Fall Clinical Anatomy I (CA I) Course Director

CA II - Neuroanatomy: Course Director

2022 Summer Evidence-Based Practice II Course Director

Health Promotion Lecturer

Therapeutic intervention Lecturer

Comp Exam Faculty Member

Spring PT Pharmacology Lecturer

		Diagnostic Imaging	Co-Course director
		Evidence-Based Practice III	Lecturer
		Culture, Teaching, & Learning	Lecturer
		Development & Geriatrics	Lab instructor
2021	Fall	Clinical Anatomy I (CA I)	Course director
		CA II - Neuroanatomy:	Course Director
	Summer	Evidence-Based Practice II	Course Director
		Therapeutic intervention Comp Exam	Lecturer Faculty Member
	Spring	PT Pharmacology	Lecturer
		Diagnostic Imaging	Co-Course director
		Evidence-Based Practice III	Co-Course Director
		Culture, Teaching, & Learning	Lecturer
2020	Fall	Clinical Anatomy I (CA I)	Course director
		CA II - Neuroanatomy:	Course Director
	Summer	Evidence-Based Practice II	Course Director
		Therapeutic intervention	Lecturer
		Comp Exam	Faculty Member
	Spring	Tai Chi for Health (An Elective Course for all Students on Campus)	Course Director
		PT Pharmacology	Lecturer
		Diagnostic Imaging	Course director
		Evidence-Based Practice III	Co-Course Director
		SAGE	Instructor

		(a true-case based interdisciplinary course)	
2019	Fall	Clinical Anatomy I (CA I)	Course director
		CA II - Neuroanatomy:	Course Director
	Summer	Evidence-Based Practice II	Course Director
		Therapeutic intervention	Lecturer
		Comp Exam	Faculty Member
	Spring	Tai Chi for Health (An Elective Course for all Students on Campus)	Course Director
		PT Pharmacology	Lecturer
		Diagnostic Imaging	Course director
		Evidence-Based Practice III	Co-Course Director
		SAGE (a true-case based interdisciplinary course)	Instructor
		BMSC 5150	Lab Mentor
2018	Fall	Clinical Anatomy I	Course Director
		Gross Anatomy (Med School)	Anatomy Instructor
		CA II – Neuroanatomy (combined with PA)	Course Director
		IPE	Instructor/group leader
	Summer	Evidence-Based Practice II	Course Director
		Comp Exam	Faculty Member
	Spring	PT Pharmacology	Co-course Director
		Evidence-Based Practice III	Co-Course Director
		IPE	Instructor/group leader
		SAGE	Instructor

		(a true-case based interdisciplinary course)	
2017	Fall	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Gross Anatomy (Med School)	Lab Instructor
		IPE	Instructor/group leader
	Summer	Evidence-Based Practice II	Course Director
	Spring	Comp Exam IPE (interprofessional education)	Faculty Member Instructor/group leader
2016	Fall	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Gross Anatomy (Med School)	Lab Instructor
		IPE	Instructor/group leader
	Summer	Evidence-Based Practice II	Course Director
		Comp Exam	Faculty Member
	Spring	IPE (interprofessional education)	Instructor/group leader
2015	Fall	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Gross Anatomy (Med School)	Lab Instructor
		IPE	Instructor/group leader
	Summer:	Evidence-based practice II	

		(case-based):	Course director
	Spring	IPE (interprofessional education)	Instructor/group leader
2014	Fall:	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Gross Anatomy (Med School)	Lab Instructor
	Summer:	Evidence-based practice II (case-based):	Course director
2013	Fall:	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Gross Anatomy (Med School)	Lab Instructor
	Summer:	Evidence-based practice II (case-based):	Course director
2012	Summer:	Evidence-based practice II (case-based)	Course director
	Fall:	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Evidence-based Practice I (Statistics and Res Design):	Course director
		Gross Anatomy (Med School)	Lab Instructor
2011	Spring:	Pathology & Pharmacology:	Course director
	Summer:	Evidence-based practice II (case-based):	Course director

	Fall:	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
		Evidence-based Practice I (Statistics and Res Design):	Course director
2010	Fall:	Applied Anatomy/Kinesiology	Course director
		Evidence-based Practice I (Statistics and Res Design):	Course director
		Gross Anatomy:	Course instructor

**Teaching Responsibility: Anatomy for Physician Assistant program in UNTHSC**

2011	Fall:	Clinical Anatomy I (CA I) - PA (A PA/PT Combined course)	Course director
		CA II – Neuroanatomy - PA (A PA/PT Combined course)	Course Director
2012	Fall:	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
2013	Fall	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
2014	Fall:	Clinical Anatomy I (CA I) - PA (A PA/PT Combined course)	Course director
		CA II – Neuroanatomy - PA (A PA/PT Combined course)	Course Director

2015	Fall:	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
2016	Fall	Clinical Anatomy I (CA I) (A PA/PT Combined course)	Course director
		CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director
2017	Fall:	Clinical Anatomy I (CA I) - PA (A PA/PT Combined course)	Course director
		CA II – Neuroanatomy - PA (A PA/PT Combined course)	Course Director
2018	Fall:	CA II - Neuroanatomy: (A PA/PT Combined course)	Course Director

**Teaching Responsibility: Anatomy for Osteopathic Medicine Students in UNTHSC**

2013 – Fall 2017. Fall Lab instructor of anatomy

**Teaching at the Department of Medical Education; School of Medicine, Texas Christian University/UNTHSC**

2017-2019: Course development of Anatomy and Neuroanatomy Course lead

**Teaching at University of Central Arkansas (Summer 2003 – Fall 2009)**

2003	Summer:	Adv. Anatomy (PTHY 7390)	Course director
	Fall	Gross Anatomy (PTHY 5055)	Course director
		Cardiopulmonary PT (PTHY 7520)	Lab instructor
2004	Spring	Neuroscience (PTHY 6501)	Lab director
	Summer	Adv. Anatomy (PTHY 7390)	Course director

	Applied Histology, Physiology & Pathology (PTHY (7330))	Course director
	Differential Dx (PTHY 7365)	Lecturer
Fall	Gross Anatomy (PTHY 5055)	Course director
	Cardiopulmonary PT (PTHY 7520)	lecturer
2005	Spring Neuroscience (PTHY 6501)	Lab director
	International PT study (PTHY 5190/5290)	course director
	Summer Adv. Anatomy (PTHY 7390)	Course director
	Applied Histology, Physiology & Pathology (PTHY (7330))	Course director
	Differential Dx (PTHY 7365)	Co-course director
Fall	Gross Anatomy (PTHY 5055)	Course director
	Gross Anatomy – OT (combined with PT)	Course director
	Cardiopulmonary PT (PTHY 7520)	lecturer
2006	Spring Neuroscience (PTHY 6501)	Lab director
	Summer Advanced Anatomy (PTHY 7390)	Course director
	Res Design (PTHY 6340)	Co-Course director
Fall	Gross Anatomy (PTHY 5055)	Course director
	Gross Anatomy – OT (combined with PT)	Course director
	Cardiopulmonary PT (PTHY 7520)	lecturer
2007	Spring Neuroscience (PTHY 6501)	Lab director



	international PT study (PTHY 5190/5290)	course director
	Summer Advanced Anatomy (PTHY 7390)	Course director
	Res Design (PTHY 6340)	Course director
	Pathology (PTHY 6150)	Lecturer
Fall	Gross Anatomy (PTHY 5055)	Course director
	Cardiopulmonary PT (PTHY 7520)	lecturer
	Gross Anatomy – Speech Therapy	Lecturer
2008	Spring Neuroscience (PTHY 6501)	Lab director
	Summer Res Design (PTHY 6340)	Course director
	Pathology (PTHY 6150)	Lecturer
Fall	Gross Anatomy (PTHY 5055)	Course director
	Cardiopulmonary PT (PTHY 7520)	lecturer
2009	Spring Neuroscience (PTHY 6501)	Lab director
	international PT study (PTHY 5190/5290)	Course director
	Summer Advanced Anatomy (PTHY 7390)	Course director
	Res Design (PTHY 6340)	Course director
Fall	Gross Anatomy (PTHY 5055)	Course director

**Teaching as a teaching assistant in the PhD program of Anatomy of University of Mississippi Medical Center**

1994-1997 Fall: Lab instructor of Anatomy, Histology, & Embryology for medical students

Spring: Lab instructor of Neuroscience for medical students

### **Teaching for Continuous Education**

1. Liu H, Reese N. Clinical Anatomy: A Hands-on Review for the Physical Therapists and Physical Therapist Assistants. University of Central Arkansas. PT Alumni Weekend. Oct 2006.
2. Liu H, Garrison K, Reese N. Clinical Anatomy: A hands-on Review for the Physical Therapists and Physical Therapist Assistants. University of Central Arkansas. PT Alumni Weekend. Oct 2008.
3. Liu H, Fisher C. Clinical Anatomy: A hands-on Review for the Physical Therapists and Physical Therapist Assistants. TPTA annual conference CE course (conducted on campus of University of North Texas Health Science Center). Arlington, TX. October 2011.
4. Johnson V, Liu H. Vestibular Physical Therapy. University of North Texas Health Science Center. PT Alumni Weekend. Oct 2016.
5. Salem Y, Quiben M, Liu H. Physical Therapy for Parkinson Disease. University of North Texas Health Science Center. PT Alumni Weekend. Oct 2016.
6. Liu H, Quiben M. Tai Chi for patients with neurological disorders. TPTA annual conference CE course. Sugarland, TX. 2018.
7. Liu H. Tai Chi for Health – A Lab Based Introduction of Tai Chi Practice. University of North Texas Health Science Center. PT Alumni Weekend. Oct 2021.