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Dr. Chueh-Hung Wu received his medical degree in 2005 and specialized in Physical Medicine and Rehabilitation by 2010. In 2020, he achieved a PhD in Biomedical Engineering. His scholarly contributions encompass over 90 peer-reviewed articles in international medical journals, including notable publications in *Radiology* and *Ultrasonics Sonochemistry*. Dr. Wu is an author and editor of nine textbooks on musculoskeletal ultrasound and rehabilitation medicine. He actively educates on diagnostic and interventional musculoskeletal ultrasound and is a sought-after speaker at prestigious international conferences and workshops, including WFUMB, AFSUMB, ISPRM, ISPRMDC, AOCPRM, ICCNU, ASAUT, KARM, JSOU, JSSF, Pain Diploma, EURO-MUSCULUS, and WORLD-MUSCULUS. Dr. Wu's research interests include sonoelastography, machine learning applications in musculoskeletal ultrasound, thermoresponsive hydrogels in regenerative medicine, and the mechanical effects on glymphatic systems.

Education

1. M.D. (2005), Medicine, National Taiwan University, Taipei, Taiwan
2. Ph.D. (2020), Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan

Licenses and Honors

1. Taiwan Academy of Physical Medicine and Rehabilitation Excellent Research Award (2024)
2. National Taiwan University Outstanding Teaching Award (four times: 2020, 2021, 2022, 2023)
3. National Taiwan University Hospital Excellence in Teaching Materials Award (2022)
4. Yuanta Foundation Excellent Physician-scientist Award (2021)
5. Symbol of National Quality Silver Award (MSKUS center) (2021)
6. Wang Ming-Ning Memorial Foundation Prize of the best scholarly article (2020)
7. Best Postgraduate Research Award, National Taiwan University Hospital College of Medicine (2020)
8. National Taiwan University Hospital Service Excellence Award Team Award (2019)
9. Best Teaching Award of National Taiwan University Hospital (2018)
10. Certification of Certified Interventional Pain Sonologist (CIPS), passed 2017
11. Lien-I Nan Foundation Prize of Young Physician Best Scholarly Article (three times: 2011, 2013, 2016)
12. Best oral presentation of Annual Taiwan Society of Ultrasound in Medicine Conference (twice: 2011, 2014)
13. License of Specialist in Rehabilitation Medicine, Taiwan, passed 2010
14. License of Physician, Taiwan, passed 2005

Selective Publications

Biomaterials

1. Ming-Yen Hsiao, Ya-Wen Wu, Wen-Shiang Chen, Yu-Ling Lin, Po-Ling Kuo, **Chueh-Hung Wu (corresponding)**. Pathogenic Hydrogel? A Novel-Entrapment Neuropathy Model Induced by Ultrasound-Guided Perineural Injections. *International Journal of Molecular Sciences*. 2021 Mar 28;22(7):3494.
2. **Chueh-Hung Wu**, Ming-Kuan Sun, Yi Kung, Yu-Chi Wang, Sen-Lu Chen, Hsin-Hsin Shen, Wen-Shiang Chen, Tai-Horng Young. One injection for one-week controlled release: in vitro and in vivo assessment of ultrasound-triggered drug release from injectable thermoresponsive biocompatible hydrogels. *Ultrasonics Sonochemistry*. 2020 Apr;62:104875. (5y IF=8, Rank: 1/31=3.23%)
3. **Chueh-Hung Wu**, Ming-Kuan Sun, Jay Shieh, Chuin-Shan Chen, Chang-Wei Huang, Chi-An Dai, Shu-Wei Chang, Wen-Shiang Chen, Tai-Horng Young. Ultrasound-responsive NIPAM-based hydrogels with tunable profile of controlled release of large molecules. *Ultrasonics*. 2018 Feb;83:157-163.

Clinical trial

1. Meng Ting Lin, Chun-Li Liao, Ming-Yen Hsiao, Hsueh-Wen Hsueh, Chi-Chao Chao, **Chueh-Hung Wu (corresponding)**. Volume matters in ultrasound-guided perineural dextrose injection for carpal tunnel syndrome: A randomized, double-blinded, three-arm trial. *Frontiers in Pharmacology*. 2020 Dec 17;11:625830. (5y IF=6.1, Rank: 38/277=13.72%, PHARMACOLOGY & PHARMACY)

Sonoelastography

1. **Chueh-Hung Wu**, Wen-Shiang Chen, Tyng-Guey Wang. Elasticity of the Coracohumeral Ligament in Patients with Adhesive Capsulitis of the Shoulder. *Radiology*. 2016 Feb;278(2):458-64. (5y IF=14.1, Rank: 2/135=1.48%, RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING)
2. **Chueh-Hung Wu**, Ke-Vin Chang, Sun Mio, Wen-Shiang Chen, Tyng-Guey Wang. Sonoelastography of the plantar fascia. *Radiology*. 2011 May;259(2):502-7.

Deep learning

1. Cheng-Liang Yeh, **Chueh-Hung Wu**, Ming-Yen Hsiao, Po-Ling Kuo. Real-Time Automated Segmentation of Median Nerve in Dynamic Ultrasonography Using Deep Learning. *Ultrasound in Medicine and Biology*. 2023 May;49(5):1129-1136
2. **Chueh-Hung Wu**, Wei-Ting Syu, Meng-Ting Lin, Cheng-Liang Yeh, Mathieu Boudier-Revéret, Ming-Yen Hsiao, Po-Ling Kuo. Automated Segmentation of Median Nerve in Dynamic Sonography Using Deep Learning: Evaluation of Model Performance. *Diagnostics*. 2021 Oct 14;11(10):1893. doi: 10.3390/diagnostics11101893. (5y IF=3.7, Rank:64/169=34.7%, MEDICINE, GENERAL & INTERNAL)

Systematic Review and Meta-analysis

1. Meng-Ting Lin, I-Chun Liu, Hsien-Po Chang, **Chueh-Hung Wu (Corresponding)**. Impaired median nerve mobility in patients with carpal tunnel syndrome: a systematic review and meta-analysis. *European Radiology*. 2022 Nov 17. doi: 10.1007/s00330-022-09262-9. Online ahead of print
2. Meng-Ting Lin, Ching-Fang Chiang, **Chueh-Hung Wu (Corresponding)**, Yi-Ting Huang, Yu-Kang Tu, Tyng-Guey Wang. Comparative Effectiveness of Injection Therapies in Rotator Cuff Tendinopathy: A Systematic Review, Pairwise and Network Meta-analysis of Randomized Controlled Trials. *Archives of Physical Medicine and Rehabilitation*. 2019 Feb;100(2):336-349.e15.