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聯絡資訊

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現職

長庚大學	醫學院物理治療學系復健科學所	副教授
長庚大學	創新育成中心	主任
長庚大學	系統神經科學暨腦電生理實驗室	主持人
林口長庚紀念醫院	神經科學研究中心	合聘助理研究員

主要學歷

國立成功大學	生物醫學工程研究所博士	(2011/12)
長庚大學	復健科學研究所碩士	(2004/07)
中國醫藥大學	物理治療系學士	(2002/06)

相關資歷

長庚大學	醫學院物理治療學系復健科學所	副教授	2018/08~迄今
長庚大學	創新育成中心	主任	2020/02~迄今
長庚大學	醫學院物理治療學系復健科學所	助理教授	2015-2018
臺北醫學大學	神經再生醫學博士學位學程	助理教授	2014-2015
臺北醫學大學	神經再生醫學博士學位學程	助理研究員	2012-2014
哈佛大學醫學院	神經科/神經生物所	博士後研究員	2012
哈佛大學醫學院	神經科/神經生物所	訪問研究學者	2010-2011
國立成功大學	醫學工程研究所	博士生研究助理	2006-2010
輔英科技大學	物理治療學系	兼任講師	2009
樹人醫專	物理治療科	兼任講師	2006-2008
長庚大學	復健科學研究所	研究助理	2002-2004
林口長庚醫院	物理治療部	兼任物理治療師	2003-2004

專長領域

神經物理治療、系統神經科學、醫學工程、神經工程、生醫訊號處理、生醫電生理

證照

中華民國物理治療師證書(2003)

中華民國專門職業及技術人員高等考試及格證書(2003)

台灣急診醫學會之初級救護技術員 EMT-1(2003)

會員

台灣復健工程暨輔具科技學會	會員
台灣神經罕見疾病學會	會員
美國神經科學學會 (Society for Neuroscience)	會員

著作、研究計畫與榮譽

A. 期刊論文發表

1. Feng XJ, Huang YT, Huang YZ, Kuo CW, Peng CW, Rotenberg A, Juan CH, Pei YC, Chen YH, Chen KY, Chiang YH, Liu HH, Wu JX, **Hsieh TH***. Early Transcranial Direct Current Stimulation Treatment Exerts Neuroprotective Effects on 6-OHDA-Induced Parkinsonism in Rats. **Brain Stimulation**. 13(3), 655-633, 2020 Mar. (SCI, IF: 6.919, NEUROSCIENCES: 22/267=8.2%)
2. **Hsieh TH**, Kuo CW, Hsieh KH, Shieh MJ, Peng CW, Chen YC, Chang YL, Huang YZ, Chen CH, Chang PK, Chen KY, Chen HY. Probiotics Alleviate the Progressive Deterioration of Motor Functions in a Mouse Model of Parkinson's Disease. **Brain Sciences**, 10(4): 206, 2020 Apr.
3. Wu CY, Huang RY, Liao EC, Lin YC, Chang CW, Chan HL, Huang YZ, **Hsieh TH**, Fan CH, Yeh CK. A preliminary study of Parkinson's gene therapy via sono-magnetic sensing gene vector for conquering extra/intracellular barriers in mice. **Brain Stimulation**. 2020 Mar, 13(3): 786-799
4. Rajneesh CP, **Hsieh TH**, Chen SC, Lai CH, Yang LY, Chin HY, Peng CW. Deep Brain Stimulation of the Pedunculopontine Tegmental Nucleus Renders Neuroprotection through the Suppression of Hippocampal Apoptosis: An Experimental Animal Study. **Brain Sciences**. 2020 Jan, 10(1): 25.
5. Liu HH, He XK, Chen HY, Peng CW, Rotenberg A, Juan CH, Pei YC, Liu HL, Chiang YH, Wang JY, Feng XJ, Huang YZ, **Hsieh TH***. Neuromodulatory Effects of Transcranial Direct Current Stimulation on Motor Excitability in Rats. **Neural Plasticity**. 2019 Dec, 4252943, 2019. (SCI, IF: 3.591, NEUROSCIENCE: 95/267=35.6%)
6. Tsai WL, Chen HY, Huang YZ, Chen YH, Kuo CW, Chen KY, **Hsieh TH***. Long-Term Voluntary Physical Exercise Exerts Neuroprotective Effects and Motor Disturbance Alleviation in a Rat Model of Parkinson's Disease. **Behavioural Neurology**. 2019 Dec, 4829572, 2019. (SCI, IF: 1.908, CLINICAL NEUROLOGY: 142/199=71.3%)
7. Hameed MQ, **Hsieh TH**, Morales-Quezada L, Lee HHC, Damar U, MacMullin PC, Hensch TK, Rotenberg A. Ceftriaxone Treatment Preserves Cortical Inhibitory Interneuron Function via Transient Salvage of GLT-1 in a Rat Traumatic Brain Injury Model. **Cerebral Cortex**. 2019 Dec; 29(11):4506-4518. (SCI, IF: 6.308, NEUROSCIENCES: 24/261)
8. Praveen Rajneesh C, Yang LY, Chen SC, **Hsieh TH**, Chin HY, Peng CW. Cystometric Measurements in Rats with an Experimentally Induced Traumatic Brain Injury and Voiding Dysfunction: A Time-Course Study. **Brain Sciences**. 2019 Nov, 9(11): E325.
9. Chen SG, Tsai CH, Lin CJ, Lee CC, Yu HY, **Hsieh TH***, Liu HL*. Transcranial focused ultrasound

- pulsation suppresses pentylentetrazol induced epilepsy in vivo. *Brain Stimulation*, 2019 Sep 24. 13(1):35-46. (SCI, IF: 6.919, NEUROSCIENCES: 22/267)
10. Lai JH, Chen KY, Wu JC, Olson L, Brené S, Huang CZ, Chen YH, Kang SJ, Ma KH, Hoffer BJ, Hsieh TH, Chiang YH. Voluntary exercise delays progressive deterioration of markers of metabolism and behavior in a mouse model of Parkinson's disease. *Brain Research*. 2019 Oct 1720:146301. (SCI, IF: 2.929, NEUROSCIENCES: 131/267)
 11. Li YT, Chen SC, Yang LY, Hsieh TH, Peng CW. Designing and Implementing a Novel Transcranial Electrostimulation System for Neuroplastic Applications: A Preliminary Study. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. 2019 May; 27(5):805-813. (SCI, IF: 3.478, Rehabilitation: 5/65)
 12. Chen YH, Hsieh TH, Kuo TT, Kao JH, Ma KH, Huang EY, Chou YC, Olson L, Hoffer BJ. Release parameters during progressive degeneration of dopamine neurons in a mouse model reveal earlier impairment of spontaneous than forced behaviors. *Journal of Neurochemistry*. 2019 Jul; 150(1):56-73. (SCI, IF: 4.87, BIOCHEMISTRY: 49/299)
 13. Praveen Rajneesh C, Lai CH, Chen SC, Hsieh TH, Chin HY, Peng CW. Improved voiding function by deep brain stimulation in traumatic brain-injured animals with bladder dysfunctions. *International Urology and Nephrology*. 2019 Jan. 51(1):41-52. (SCI, IF: 1.596, UROLOGY & NEPHROLOGY: 57/80)
 14. Chen YH, Lin BJ, Hsieh TH, Kuo TT, Miller J, Chou YC, Huang EY, Hoffer BJ. Differences in Nicotine Encoding Dopamine Release between the Striatum and Shell Portion of the Nucleus Accumbens. *Cell Transplantation*. 2019 Mar; 28(3):248-261. (SCI, IF: 3.477, TRANSPLANTATION: 10/25)
 15. Wu CW, Chiu WT, Hsieh TH, Hsieh CH, Chen JJ. Modulation of motor excitability by cortical optogenetic theta burst stimulation. *PLoS One*. 2018 Aug; 13(8):e0203333. (SCI, IF: 2.806, MULTIDISCIPLINARY SCIENCES: 15/64)
 16. Yu YW, Hsueh SC, Lai JH, Chen YH, Kang SJ, Chen KY, Hsieh TH, Hoffer BJ, Li Y, Greig NH, Chiang YH. Glucose-Dependent Insulinotropic Polypeptide Mitigates 6-OHDA-Induced Behavioral Impairments in Parkinsonian Rats. *International Journal of Molecular Sciences*. 2018 Apr; 19(4): 1153. (SCI, IF: 3.226, CHEMISTRY, MULTIDISCIPLINARY: 54/166)
 17. Chen YH, Kuo TT, Kao JH, Huang EY, Hsieh TH, Chou YC, Hoffer BJ. Exercise Ameliorates Motor Deficits and Improves Dopaminergic Functions in the Rat Hemi-Parkinson's Model. *Scientific Reports*. 2018 Mar; 5;8(1):3973. (SCI, IF: 4.259, MULTIDISCIPLINARY SCIENCES: 10/64)
 18. Hsieh TH, Peng CW, Chen KY, Huang YZ, Lin YH, Zong WZ, Liang JI, Zhao J, Cheng CY, Chang YJ, Cheng CH, Chuang YF. The Applications of Smart Mobile Device for Detecting Balance Dysfunction in Individuals with Down Syndrome. *Biomedical Engineering: Applications, Basis and Communications*. 2018 Feb; 30(01): 1850007 (EI).
 19. Hsueh SC, Chen KY, Lai JH, Wu CC, Yu YW, Luo Y, Hsieh TH, Chiang YH. Voluntary Physical

- Exercise Improves Subsequent Motor and Cognitive Impairments in a Rat Model of Parkinson's Disease. *International Journal of Molecular Sciences*. 2018 Feb; 19(2): E508. (SCI, IF: 3.226, CHEMISTRY, MULTIDISCIPLINARY: 54/166)
20. Chen SC, Chu PY, Hsieh TH, Li YT, Peng CW. Feasibility of deep brain stimulation for controlling the lower urinary tract functions: An animal study. *Clinical Neurophysiology*. 2017 Dec; 128(12):2438-2449. (SCI, IF: 3.866, CLINICAL NEUROLOGY: 43/194)
 21. Hsieh TH, Lee HH, Hameed M, Pascual-Leone A, Hensch TK, Rotenberg A. Trajectory of Parvalbumin Cell Impairment and Loss of Cortical Inhibition in Traumatic Brain Injury. *Cerebral Cortex*. 2017 Dec; 27(12):5509-5524. (SCI, IF: 6.559, NEUROSCIENCES: 21/259)
 22. Jen E, Hsieh TH, Lu TC, Chen MC, Lee FJ, Lin CT, Chen SC, Chu PY, Peng CW, Lin CW. Effects of pulsed-radiofrequency neuromodulation on the rat with overactive bladder. *Neurology and Urodynamics*. 2017 Sep; 36(7):1734-1741. (SCI, IF: 3.560, Urology & Nephrology: 17/77)
 23. Hsieh TH, Kang JW, Lai JH, Huang YZ, Rotenberg A, Chen KY, Wang JY, Chan SY, Chen SC, Chiang YH, Peng CW. Relationship of mechanical impact magnitude to neurologic dysfunction severity in a rat traumatic brain injury model. *PLoS One*. 2017 May; 12(5):e0178186. (SCI, IF: 2.806, MULTIDISCIPLINARY SCIENCES: 15/64)
 24. Yang LY, Greig NH, Huang YN, Hsieh TH, Tweedie D, Yu QS, Hoffer BJ, Luo Y, Kao YC, Wang JY. Post-traumatic administration of the p53 inactivator pifithrin- α oxygen analogue reduces hippocampal neuronal loss and improves cognitive deficits after experimental traumatic brain injury. *Neurobiology of Disease*. 2016 Dec; 96:216-226. (SCI, IF: 5.020, NEUROSCIENCES: 43/259)
 25. Yu YW, Hsieh TH, Chen KY, Wu CC, Hoffer BJ, Greig NH, Li Y, Lai JH, Chang F, Lin JW, Chen YH, Yang LY, Chiang YH. Glucose-dependent neslinotropic Polypeptide Ameliorates Mild Traumatic Brain Injury-induced cognitive and Sensorimotor Deficits and Neuroinflammation in Rats. *Journal of Neurotrauma*. 2016 Nov; 33(22):2044-2054. (SCI, IF: 5.190, CLINICAL NEUROLOGY: 30/193)
 26. Lin YT[#], Hsieh TH[#]([#]Co-first Author), Chen SC, Lai CH, Kuo TS, Chen CP, Lin CW, Young ST, Peng CW. Effects of pudendal neuromodulation on bladder function in chronic spinal cord-injured rats. *Journal of the Formosan Medical Association*. 2016 Sep; 115(9): 703-713. (SCI, IF: 1.969, MEDICINE, GENERAL & INTERNAL: 46/155)
 27. Hsieh TH, Kao YS, Liu YC, Chen CY, Li YC, Chang YJ. The Changes of Neuromuscular Properties Following Spinal Cord Injury. *Formosan Journal of Physical Therapy*. 2016 Sep; 41(3): 211-222.
 28. Hsieh TH, Lin YT, Chen SC, Peng CW. Chronic pudendal neuromodulation using an implantable microstimulator improves voiding function in diabetic rats. *Journal of Neural Engineering*. 2016 Aug; 13(4):046001. (SCI, IF: 3.920, ENGINEERING, BIOMEDICAL: 14/77)
 29. Chen SC, Hsieh TH, Fan WJ, Lai CH, Peng CW. Does Pharmacological Activation of 5-HT_{1A}

- Receptors Improve Urine Flow Rate in Female Rats? *American journal of physiology-Renal physiology*. 2016 Jul; 311(1): F166-175. (SCI, IF: 3.590, UROLOGY&NEPHROLOGY: 15/77)
30. Su TC, Lin SH, Lee PT, Yeh SH, Hsieh TH, Chou SY, Su TP, Hung JJ, Chang WC, Lee YC, Chuang JY. The sigma-1 receptor-zinc finger protein 179 pathway protects against hydrogen peroxide-induced cell injury. *Neuropharmacology*. 2016 Jun; 105:1-9. (SCI, IF: 5.012, PHARMACOLOGY&PHARMACY: 24/257)
 31. Leong MI, Chang YJ, Hsieh TH*. Efficacy of Exercise Training on the Postural Control, Locomotor Function and Cardiorespiratory Endurance in Individuals with Traumatic Brain Injury: Systematic Review. *Formosa Journal of Physical Therapy*. 2016 Mar; 41(1):7-19.
 32. Tsai EM, Wang YC, Lee TT, Tsai CF, Chen HS, Lai FJ, Yokoyama KK, Hsieh TH, Wu RM, Lee JN. Dynamic Trk and G Protein Signalings Regulate Dopaminergic Neurodifferentiation in Human Trophoblast Stem Cells. *PLoS One*. 2015 Nov; 10(11):e0143852. (SCI, IF: 2.806, MULTIDISCIPLINARY SCIENCES: 15/64)
 33. Hsieh TH, Huang YZ, Rotenberg A, Pascual-Leone A, Chiang YH, Wang JY, Chen JJ. Functional dopaminergic neurons in substantia nigra are required for transcranial magnetic stimulation induced motor plasticity. *Cerebral Cortex*. 2015 Jul; 25(7):1806-14. (SCI, IF: 6.559, NEUROSCIENCES: 21/259)
 34. Chen SC, Hsieh TH, Fan WJ, Lai CH, Chen CL, Wei WF, Peng CW. Design and evaluation of potentiometric principles for bladder volume monitoring: a preliminary study. *Sensors*. 2015 Jun; 15(6):12802-15. (SCI, IF: 2.677, INSTRUMENTS & INSTRUMENTATION: 10/58)
 35. Hsieh TH, Huang YZ, Chen JJJ, Rotenberg A, Chiang YH, Chang Chien WS, Chang V, Wang JY, Peng CW. Novel use of theta burst cortical electrical stimulation for modulating motor plasticity in rats. *Journal of Medical and Biological Engineering*. 2015 Feb; 35(1): 62-68. (SCI, IF: 0.989, ENGINEERING, BIOMEDICAL: 62/77)
 36. Fan WJ, Chen SC, Hsieh TH, Lai CH, Lin YS, Peng CW, Kou YR. Influence of Serotonergic Mechanisms on the Urine Flow Rate in Male Rats. *Am J Physiol Regul Integr Comp Physiol*. 2014 Nov; 307(10):R1239-1250. (SCI, IF: 2.982, PHYSIOLOGY: 27/84)
 37. Hameed MQ, Goodrich GS, Dhamne SC, Amandusson A, Hsieh TH, Mou D, Wang Y, Rotenberg A. A Rapid Lateral Fluid Percussion Injury (rLFPI) rodent model of traumatic brain injury and post-traumatic epilepsy. *NeuroReport*. 2014 May; 25(7): 532-536. (SCI, IF: 1.395, NEUROSCIENCES: 223/259)
 38. Dhamne SC, Kothare RS, Yu C, Hsieh TH, Anastasio EM, Pascual-Leone A, Rotenberg A. A measure of acoustic noise generated from transcranial magnetic stimulation coils. *Brain Stimulation*. 2014 May; 7(3): 432-434. (SCI, IF: 6.078, CLINICAL NEUROLOGY: 16/194)
 39. Lin YT, Lai CH, Kuo TS, Chen CC, Chen YL, Young ST, Chen SH, Lai JS, Hsieh TH, Peng CW. Dual-channel neuromodulation of the pudendal nerve with a closed-Loop control strategy to improve bladder functions. *Journal of Medical and Biological Engineering*. 2014 Feb; 34(1): 82-89. (SCI, IF: 0.989, ENGINEERING, BIOMEDICAL: 62/77)

40. Liang JI, Lin PC, Chen MY, **Hsieh TH**, Chen JJ, Yeh ML. The effect of tenocyte/hyaluronic acid therapy on the early recovery of healing Achilles tendon in rats. *Journal of Materials Science: Materials in Medicine*. 2014 Jan; 25(1):217-227. (SCI, IF: 2.325; ENGINEERING, BIOMEDICAL: 29/77)
41. Tsai YP, Chang CW, Lee JS, Liang JI, **Hsieh TH**, Yeh ML, Sze CI. Direct radiofrequency application improves pain and gait in collagenase-induced acute achilles tendon injury. *Evidence-Based Complementary and Alternative Medicine*. 2013 Oct; 2013:402692. (SCI, IF: 1.740, INTEGRATIVE & COMPLEMENTARY MEDICINE: 10/26)
42. Lee TT, Tsai CF, **Hsieh TH**, Chen JJ, Wang YC, Kao MC, Wu RM, Singh S, Tsai EM, Lee JN. Ectopic pregnancy-derived human trophoblastic stem cells regenerate dopaminergic nigrostriatal pathway to treat parkinsonian rats. *PLoS One*. 2012 Dec; 7(12): e52491. (SCI, IF: 2.806, MULTIDISCIPLINARY SCIENCES: 15/64)
43. Liang JI, Chen MY, **Hsieh TH**, Liu CY, Lam CF, Chen JJ, Yeh ML. Video-based gait analysis for functional evaluation of healing achilles tendon in rats. *Annals of Biomedical Engineering*. 2012 Dec; 40(12):2532-2540. (SCI, IF: 3.221, ENGINEERING, BIOMEDICAL: 18/77)
44. Lee HY#, **Hsieh TH**# (#Co-first Author), Liang JI, Yeh ML, Chen JJ. Quantitative video-based gait pattern analysis for hemiparkinsonian rats. *Medical & Biological Engineering & Computing*. 2012 Sep; 50(9):937-946. (SCI, IF: 1.916, COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS: 29/100)
45. **Hsieh TH**, Dhamne SC, Chen JJ, Carpenter LL, Anastasio EM, Pascual-Leone A, Rotenberg A. Minimal heating of aneurysm clips during repetitive transcranial magnetic stimulation. *Clinical Neurophysiology*. 2012 Jul; 123(7):1471-1473. (SCI, IF: 3.866, CLINICAL NEUROLOGY: 43/194)
46. **Hsieh TH**, Dhamne SC, Chen JJ, Pascual-Leone A, Jensen FE, Rotenberg A. A new measure of cortical inhibition by mechanomyography and paired-pulse transcranial magnetic stimulation in unanesthetized rats. *Journal of Neurophysiology*. 2012 Feb; 107(3): 966-972. (SCI, IF: 2.396, PHYSIOLOGY: 26/81)
47. **Hsieh TH**, Chen JJ, Chen LH, Chiang PT, Lee HY. Time-course gait analysis of hemiparkinsonian rats following 6-hydroxydopamine lesion. *Behavioural Brain Research*. 2011 Sep; 222(1):1-9. (SCI, IF: 3.002, BEHAVIORAL SCIENCES: 16/51)
48. Chang YJ#, **Hsieh TH**# (#Co-first Author), Huang YM, Hsu MJ, Wong AMK. A lack of modulation of motor evoked potential in sensory-impaired individuals with spinal cord injuries. *Journal of Medical and Biological Engineering*. 2011 Aug; 31(1): 37-43, 2011. (SCI, IF: 0.989, ENGINEERING, BIOMEDICAL: 62/77)
49. Huang CY, **Hsieh TH**, Lu SC, Su FC. Effect of the kinesio tape to muscle activity and vertical jump performance in healthy inactive people. *BioMedical Engineering Online*. 2011 Aug; 10(1):70. (SCI, IF: 1.683, ENGINEERING, BIOMEDICAL: 49/77)
50. **Hsieh TH**, Tsai JY, Wu YN, Hwang IS, Chen TI, Chen JJ. Time course quantification of spastic

hypertonia following spinal hemisection in rats. *Neuroscience*. 2010 Apr; 167(1): 185-198. (SCI, IF: 3.277, NEUROSCIENCES: 100/259)

B. 研討會發表

1. **Hsieh TH**, Liu HH, Juan CH, Rotenberg A, Pei YC, Huang YZ. Neuromodulatory effects of transcranial direct current stimulation on motor excitability and inhibition in rats. Neuroscience 2019. Oct 19-23, 2019. Chicago, USA.
2. **Hsieh TH**, Huang YT, Feng XJ, Huang YZ. Therapeutic effects of transcranial direct current stimulation (tDCS) in motor and cognitive impairments in Parkinsonian rat model. The 13th CME International Conference on Complex Medical Engineering. Dortmund, Germany. September 23-25, 2019.
3. **Hsieh TH**, Lin PY, Huang YZ, Chung YF. Development of Quantitative Measurement Device for Spasticity in Children with Cerebral Palsy. The 13th CME International Conference on Complex Medical Engineering. Dortmund, Germany. September 23-25, 2019.
4. **Hsieh TH**, JH Chen, CW Peng, A Rotenberg, YH Chiang, YZ Huang. Therapeutic benefits on motor functions and neuroprotective effect of repetitive transcranial magnetic stimulation on parkinsonian rats. 5th World Parkinson Congress (WPC 2019). Kyoto, Japan. June 4-7, 2019
5. **Hsieh TH**, Juan CH, Huang YZ. Animal Models of Transcranial Brain Stimulation: Methods and Mechanisms. The 12th ICME International Conference on Complex Medical Engineering (CME 2018). Matsue, Japan. Sep 6-9, 2018
6. **Hsieh TH**, Chang Chien WS, Peng CW, Huang YZ, Chen JJ. The therapeutic effects of cortical electrical stimulation in an animal model of Parkinson's disease. 21st International Congress of Parkinson's Disease and Movement Disorders. Vancouver, Canada. Jun 4-8, 2017
7. **Hsieh TH**, Peng CW, Rotenberg A, Chiang YH, Huang YZ, Chen JJ. Development of Cortical Electrical Stimulation Technique for Improving Neuroplasticity and Motor Function in Parkinsonian Rats. The 2nd Global Conference on Biomedical Engineering. Taipei, Taiwan, Aug 17-19, 2016
8. **Hsieh TH**, Huang YZ, Rotenberg A, Chiang YH, Chen JJ. (2015, Oct). Early repetitive transcranial magnetic stimulation intervention exerts neuroprotective effects and ameliorates motor deficits on Parkinson's disease model of rats. Neuroscience 2015 (45th annual meeting of the Society for Neuroscience), Chicago, USA. MOST 103-2320-B-182-033-MY2.
9. Chan SY, Peng CW, Chiang YH, **Hsieh TH***. Characterizing effects of mechanical impact and neurological properties in vivo mouse model of traumatic brain injury. The 1st International Taiwanese Congress of Neurology (1st ITCN) of the Taiwan Neurological Society (TNS). Taipei, Taiwan, May 7-10, 2015
10. Peng CW, Huang YZ, Chen JJ, Chiang YH, Chen SC, **Hsieh TH***. Cortical Electrical Stimulation with Theta Burst Paradigm for the Neuroplastic Modulation in the Rat. The 2nd Bangkok International Conference on Biological Engineering & Natural Science, Bangkok, Thailand, Jan

18-20, 2014.

11. **Hsieh TH**, Peng CW, Huang YZ, Rotenberg A, Chen JJ, Wang JY, Chiang YH. Modulation of motor cortical excitability by theta burst cortical electrical stimulation in rats. Neuroscience 2013, San Diego, California, USA, Nov 9-13, 2013.
12. Lee H, **Hsieh TH**, Hameed MQ, Hensch T, Rotenberg A. Loss of parvalbumin interneurons underlies impaired cortical inhibition in post-traumatic epileptogenesis. Neuroscience 2013, San Diego, California, USA, Nov 9-13, 2013.
13. Hameed MQ, **Hsieh TH**, Morales-Quezada JL, Goodrich GS, Wang XH, Rosenberg P, Rotenberg A. Ceftriaxone treatment after traumatic brain injury preserves cortical inhibition and improves functional outcomes. Neuroscience 2013, San Diego, California, USA, Nov 9-13, 2013.
14. Hameed MQ, **Hsieh TH**, Morales-Quezada JL, Wang X, Zelener J, Rosenberg P, Rotenberg A. Ceftriaxone treatment of Traumatic Brain injury. Military Health System Research Symposium (MHSRS), Fort Lauderdale, Florida, USA, 12-15 Aug, 2013.
15. Kang JW, **Hsieh TH**, Yu YW, Chiang YH, Wang JY. Quantitative assessment of impact kinematics and injury severity in an experimental model of weight-drop induced traumatic brain injury. 2013 International Symposium on Physiomics & Taiwan-Hong Kong Physiology Symposium. Nov 1-2, 2013, Taipei, Taiwan
16. Chang Chien WS, **Hsieh TH**, Peng CW, Chen JJ. Novel Use of Theta Burst Cortical Electrical Stimulation for Modulating Brain Plasticity in Parkinson's Disease Rats. 2013 International Symposium on Physiomics & Taiwan-Hong Kong Physiology Symposium. Nov 1-2, 2013, Taipei, Taiwan
17. **Hsieh TH**, Huang YZ, Chen JJ. Magnitude of Dopamine Depletion Predicts Plasticity Deficits in a Rat Model of Parkinson's disease. 1st Taiwan International Congress of Parkinson's Disease and Movement Disorders (2013TIC), Taipei, Taiwan, Mar 30-31, 2013.
18. Hameed M, **Hsieh TH**, Goldie J, Rotenberg A. Paired-pulse transcranial magnetic stimulation as a feedback sensor in a closed loop analgesia/anesthesia system. Military Health System Research Symposium (MHSRS). Florida, USA. Aug 13-16, 2012.
19. **Hsieh TH**, Hameed M, Chen JJ, Wang YP, Amandusson A, Pascual-Leone A, Jensen FE, Rotenberg A. Progressive loss of intracortical inhibition following traumatic brain injury detected by transcranial magnetic stimulation and mechanomyogram in rats. American Epilepsy Society 65th Annual Meeting, Baltimore, USA. Abstr: 3.075, Dec 2-6, 2011.
20. **Hsieh TH**, Dhamne S, Pascual-Leone A, Jensen F, Rotenberg A. Loss of cortical inhibition following traumatic brain injury detected by mechanomyography and paired-pulse transcranial magnetic stimulation in unanesthetized rats. Advanced Technology Applications for Combat Casualty Care (ATACCC) 2011 Conference. Florida, USA, 15-18 August, 2011.
21. **Hsieh TH**, Dhamne S, Chen JJ, Pascual-Leone A, Jensen FE, Rotenberg A. Loss of cortical inhibition following traumatic brain injury detected by mechanomyography and paired-pulse

- transcranial magnetic stimulation in unanesthetized rats. European Congress on Clinical Neurophysiology and International Conference on Transcranial Magnetic and Direct Current Stimulation, Rome, Italy. Abstr P20.9, June 21-25, 2011.
22. Dhamne S, **Hsieh TH**, Carpenter L, Anastasio E, Pascual-Leone A, Rotenberg A. Minimal heating of aneurysm clips during repetitive transcranial magnetic stimulation. European Congress on Clinical Neurophysiology and International Conference on Transcranial Magnetic and Direct Current Stimulation, Rome, Italy. Abstr: P20.10, June 21-25, 2011.
 23. Dhamne S, Ekstein D, **Hsieh TH**, Loddenkemper T, Pascual-Leone A, Jensen FE, Rotenberg A. Cathodal transcranial direct current stimulation suppresses pentylentetrazol-induced seizures in rats. European Congress on Clinical Neurophysiology and International Conference on Transcranial Magnetic and Direct Current Stimulation, Rome, Italy. Abstr: P20.8, June 21-25, 2011.
 24. Zhou Z, Dhamne SC, **Hsieh TH**, Ekstein D, Pascual-Leone A, Loddenkemper T, Jensen FE, Rotenberg A. Enhanced cortical inhibition accompanies seizure suppression by cathodal transcranial direct current stimulation in pentylentetrazole rat seizure model. American Epilepsy Society 65th Annual Meeting, Baltimore, USA. Abstr: 3.073. Dec 2-6, 2011.
 25. Hameed MQ, Goodrich GS, Dhamne SC, **Hsieh TH**, Wang YP, Rotenberg A. Rapid lateral fluid percussion injury (rLFPI): A model of traumatic brain injury and post-traumatic epilepsy. American Epilepsy Society 65th Annual Meeting, Baltimore, USA. Abstr: P20.10. Dec 2-6, 2011.
 26. Liang JI, Liu CY, **Hsieh TH**, Chen JJJ, Chen MY, Yeh ML. Evaluation of function in the rat Achilles tendon repair. The IVth International Symposium and Workshop on Virtual Interactive Musculoskeletal System (VIMS), Tainan, Taiwan, Oct 28-29, 2010

C. 專書及專書論文

Ph.D. dissertation: Effects of Repetitive Transcranial Magnetic Stimulation on Brain Plasticity and Motor Function in Parkinsonian Rats. Department of Biomedical Engineering, National Cheng Kung University, Tainan, Taiwan, 2011/12.

謝宗勳(2004): 動作誘發電位和 H 反射在感覺缺損之脊髓損傷患者經周邊神經刺激後之調控。長庚大學復健科學研究所碩士論文。桃園。

神經物理治療學(下冊)：第 19 章周邊神經損傷之物理治療。出版社：禾楓書局 出版日期：2020/02/12

c. 政府與長庚醫院研究計畫明細

執行期間	計畫名稱	經費來源	擔任工作
2020-2023	於帕金森氏症大鼠模型中探討創新特效型經顱陣發電刺激之作用機制與其療效:可行性評估之研究	科技部	主持人
2020-2022	大專校院推動創新創業教育計畫	教育部	主持人
2019-2020	在創傷性腦損傷動物模式下探討新式經顱交流電刺激對於神經調控與治療效應	科技部	主持人
2018-2019	腦性麻痺之肌痙攣評估與治療系統開發	科技部	主持人
2018-2021	以創傷性腦損傷動物模式探討新式皮質電刺激應用於神經復健治療之效應	長庚醫院	主持人
2016-2018	合併重複性經顱磁刺激與運動訓練治療對於增進帕金森氏症大鼠神經塑性與運動功能之效果	長庚醫院	主持人
2017-2019	巴金森氏病之提示智慧助行鞋研發與應用研究	科技部	共同主持人
2016-2019	全超音波相控陣列是中樞神經基因遞送治療系統之研發--子計畫三:帕金森病之超音波神經滋養基因遞送治療臨床試驗前評估	科技部	共同主持人
2018-2019	穿戴式擴增實境導航系統應用於無創式超音波腦部治療導引	科技部	共同主持人
2017-2020	在動物模式下發展新式大腦皮質電刺激技術應用於帕金森氏症膀胱功能障礙之復健治療	科技部	共同主持人
2017-2018	巴金森氏症之新穎療法	科技部	共同主持人
2017-2019	以帕金森氏症動物模式探討跨顱直流電刺激對於帕金森氏症運動與認知缺損之生理與治療效應	科技部	主持人
2016-2017	在帕金森氏症動物模式下發展電生理生物指標以及相對應之皮質電刺激治療策略來增進神經塑性與運動功能	科技部	主持人
2014~2016	發展皮質電刺激技術於增進帕金森大鼠之神經可塑性與運動功能之研究	科技部	主持人
2014~2017	在腦損傷鼠模式下探討中樞神經電刺激調控對於膀胱功能之影響	科技部	共同主持人
2015-2018	重複性經顱光電刺激調控運動神經可塑性改善帕金森氏症大鼠運動功能	科技部	共同主持人

2015-2016	發展神經退化性疾病之電生理生物指標以及相對應之治療策略：以亨丁頓舞蹈症為例--發展神經退化性疾病之電生理生物指標以及相對應之治療策略：以亨丁頓舞蹈症為例	科技部	共同主持人
2015-2016	臺灣小鼠診所--國家綜合小鼠表現型暨藥效分析中心	科技部	共同主持人
2015-2016	Netrin-1 與 ephrin 訊息的協同作用·對脊髓運動神經發育所扮演的角色	科技部	共同主持人
2014-2015	微型化經顱直流電系統之研發與復健治療應用(第二年)	科技部	共同主持人
2014~2015	第五型趨化物對於神經退化中所扮演的角色	科技部	共同主持人
2014~2015	運動及環境豐富化引發的神經滋養與神經重塑在輕度腦外傷動物的治療效果	科技部	共同主持人
2013-2014	微型化經顱直流電系統之研發與復健治療應用	科技部	共同主持人

D. 研發成果專利

類別	專利名稱	國別	專利號碼	發明人	專利核准日期
發明專利	下肢肌痙攣評估治療系統	中華民國	I694810	<u>謝宗勳</u> 、陳國軒、黃英儒、莊育芬、彭志維	2020/06/01
發明專利	Transcranial burst Electrostimulation apparatus	歐盟	EP310620 2B1	Chih-Wei Peng, Shih-Ching Chen, Yu Ting Li, Hsiang Ching Lee, Jia-Jin Chen, <u>Tsung-Hsun Hsieh</u> , Chien-Hung Lai; Jiunn-Horng Kang	2019/8/7
發明專利	經顱陣發型電刺激裝置及其應用	中華民國	I573606	彭志維、陳適卿、李昱廷、李向晴、陳家進、 <u>謝宗勳</u> 、賴建宏、康峻宏	2017/03/11
發明專利	動物行為監測方法	中華民國	I468967	梁仁溢、 <u>謝宗勳</u> 、葉明龍	2015/01/11
發明專利	動物實驗步態存錄分析方法	中華民國	I386239	李筱瑜、張登慶、 <u>謝宗勳</u> 、程政群	2013/02/21
發明專利	動物步態檢測系統與方法	中華民國	I484941	梁仁溢、 <u>謝宗勳</u>	2015/05/21

發明專利	定量與產生腦創傷動物模式之方法與系統	中華民國	I493374	謝宗勳、康靜維、蔣永孝、王家儀、彭志維、尤郁雯	2015/07/21
新型專利	動物行為量測裝置	中華民國	M504987	謝宗勳、陳凱筠、吳忠哲、蔣永孝	2015/07/21

E. 榮譽及獎勵

1. 期刊論文Trajectory of Parvalbumin Cell Impairment and Loss of Cortical Inhibition in Traumatic Brain Injury (*Cerebral Cortex*, 2017)獲評入選社團法人安安慢飛天使關懷學會-2018全國神經精神科學勵翔獎
2. 獲科技部獎勵特殊優秀人才補助(2017/08-2018/07)
3. 獲科技部補助大專校院延攬特殊優秀人才補助(2014/03-2014/12)
4. 期刊論文Novel Use of Theta Burst Cortical Electrical Stimulation for Modulating Motor Plasticity in Rats，發表於國際SCI期刊Journal of Medical and Biological Engineering 雜誌，該篇獲評為2015年度優秀論文
5. 張簡宛珊，謝宗勳，彭志維，陳家進。2013生物醫學工程科技研討會-優等論文
6. 謝宗勳，獲國科會補助出席國際會議: Neuroscience 2013, San Diego, USA, 2013
7. 謝宗勳指導國科會候鳥計畫(Taiwan Tech Trek)學員 Vincent Chang 獲得 2013 候鳥計畫-成果發表會-生命科學組-第二名
8. 謝宗勳，榮獲中華民國斐陶斐榮譽學會 (The Phi Tau Phi Scholastic Honor Society)榮譽會員，2012

F. 校內與校外行政輔導資歷

A. 校內

1. 擔任長庚大學創新育成中心-主任(2020/2-)
2. 擔任長庚大學公共關係事務委員會-委員(2019/8-)
3. 擔任醫學院研究發展委員會-委員(2019/8-)
4. 擔任醫學院-宣傳策略小組-委員(2019/8-)
5. 擔任醫學院課程委員會-校友代表
6. 擔任委員會主席，委員會名稱: 物治系網管與設備委員會
7. 擔任委員會委員，委員會名稱: 物治系招生委員會、國際交流委員會、產學發展委員會、招生委員會
8. 擔任導師(2015~)、擔任系學會輔導老師(2015/9-2016/8)

9. 擔任長庚大學校友業務委員會-醫學院委員代表
10. 長庚大學物理治療學系系友會-擔任總務
11. 主辦長庚大學物治、職治、早療學術海報展示與競賽(2017~)

B. 校外

1. 擔任國際期刊 *BioMed Research International* 之 Editorial Board
2. 擔任台灣復健工程暨輔具科技學會-副秘書長(2015/11-迄今)
3. 擔任台灣復健工程暨輔具科技學會之學術教育委員會、資訊與傳播委員會-委員(2014/09-迄今)
4. 擔任科技部生科司跨領域專案規劃委員(2017/5-7)
5. 擔任衛生福利部護理及健康照護司-預防及延緩失能照護方案研發及人才培訓計畫-培訓師資(2017/12~迄今)
6. 2017 國際生物力學與復健工程暨輔具科技學術研討會-籌辦委員
7. 擔任科技部生科司專題研究計畫-初審委員
8. 指導詹舒晏同學獲得「團法人健康科學文教基金會」補助學生暑期研究計畫獎助金