

Current Position

Professor, Department and Institute of Physiology
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Education

1998-2000 Department of Pharmacology, National Cheng Kung University, Taiwan
2003-2008 Department of Basic Medical Science, National Cheng Kung University, Taiwan

Research and Academic Experience

2008-2011 Postdoctoral Fellow, Department of Pharmacology, National Cheng Kung University, Taiwan
2010-2010 Visiting Postdoctoral Fellow, Baylor College of Medicine, The Cain Foundation Laboratories, Houston, Texas, USA
2011-2011 Visiting Postdoctoral Fellow, Institut de Neurobiologie de la Méditerranée INSERM, Marseille, France
2011-2016 Assistant Professor, Department and Institute of Physiology, National Yang-Ming University, Taipei, Taiwan.
2016-2019 Associate Professor, Department and Institute of Physiology, National Yang-Ming University, Taipei, Taiwan.
2019-2021 Professor, Department and Institute of Physiology, National Yang-Ming University, Taipei, Taiwan.

Honors

2006 Taipei Medical University-Wanfang hospital distinguished neuroscience award in Taiwan, Taiwan Neuroscience Society Annual Meeting International Stroke Symposium, Taiwan.
2006 Outstanding research award, National Cheng Kung University, Tainan, Taiwan.
2009 The Best Presentation Award, Japan-Taiwan Joint Symposium on Cell Signaling and Gene Regulation, Kobe, Japan.
2010 Fifth session of TienTe Lee award, Taiwan.
2010 The Robert K.S. Lim and Shih-Chun Wang Memorial Scholarships and Awards, to attend the 7th FENS forum of European Neuroscience, Amsterdam, Netherlands.
2020-2022 Project for Excellent Junior Research Investigators, Ministry of Science and Technology (MOST) Taiwan

Research

Dr. Hui-Ching Lin is currently the professor in the Institute of Physiology and Brain Research Center at National Yang Ming Chiao Tung University. Dr. Lin has expertise in the synaptic functions of neurodevelopmental disorders and neuropsychiatric disorders with specialization in electrophysiology and animal behavior. Dr. Lin's research applies several pharmacological and brain stimulation strategies on animal disease models of autism spectrum disorder and treatment-resistant depression. Dr. Lin's works have

been published in several journals, including Cerebral cortex, Molecular Neurobiology, Journal of Biomedical Science, Neural Plasticity, Neuropharmacology and Phytomedicine, etc.

Selected Publications

- 1 Lee CW, Wu HF, Chu MC, Chung YJ, Li CT*, Lin HC* Mechanism of intermittent theta-burst stimulation in synaptic pathology in the prefrontal cortex in an antidepressant-resistant depression rat model. *Cerebral Cortex*. 2021 Jan 31(1):575-590. doi: 10.1093/cercor/bhaa244 *co-corresponding author.
- 2 Lee CW, FangYP, Chu MC, Chung YJ, Chi H, Tang CW, So EC, Lin HC, Lin HC* Differential mechanisms of synaptic plasticity for susceptibility and resilience to chronic social defeat stress in male mice *Biochem Biophys Res Commun*. 2021 May 26. DOI: 10.1016/j.bbrc.2021.05.064. *co-corresponding author.
- 3 Chu MC, Lee JY, Lee HF, Chu KW, Wu HF, Lee CW, Lin CH, Tang CW*, Lin HC*. Increased GABAergic inhibitory function against ischemic long-term potentiation in the CA1 region of the hippocampus. *Biochem Biophys Res Commun*. 2020 Mar 29. pii: S0006-291X(20)30601-X. *co-corresponding author.
- 4 Wu HF, Lu TY, Chu MC, Chen PS, Lee CW, Lin HC*. Targeting the inhibition of fatty acid amide hydrolase ameliorate the endocannabinoid-mediated synaptic dysfunction in a valproic acid-induced rat model of Autism. *Neuropharmacology*. 2020 Jan 162:107736
- 5 Chang CW, Lo YC, Lin SH, Yang SH, Lin HC, Lin TC, Li SJ, Hsieh CC, Ro V, Chung YJ, Chang YC, Lee CW, Kuo CH, Chen SY, Chen YY. Modulation of Theta-Band Local Field Potential Oscillations Across Brain Networks With Central Thalamic Deep Brain Stimulation to Enhance Spatial Working Memory. *Front Neurosci*. 2019 Nov 26;13:1269
- 6 Lin TC#, Lo YC#, Lin HC#, Li SJ, Lin SH, Wu HF, Chu MC, Lee CW, Lin IC, Chang CW, Liu YC, Chen TC, Lin YJ, Ian Shih YY, Chen YY. MR imaging central thalamic deep brain stimulation restored autistic-like social deficits in the rat. *Brain Stimul*. 2019 Nov - Dec;12(6):1410-1420.
- 7 Wu HF, Chen YJ, Chu MC, Hsu YT, Lu TY, Chen IT, Chen PS, Lin HC *. Deep Brain Stimulation Modified Autism-like Deficits via the Serotonin System in a Valproic Acid-Induced Rat Model. *International Journal of Molecular Sciences*. 2018 Sep; 19(9) pii: E2840.
- 8 Kuo CJ, Huang CC, Chou SY, Lo YC, Kao TJ, Huang NK, Lin C, Lin HC, Lin HC*, Lee YC*. Potential therapeutic effect of curcumin, a natural mTOR inhibitor, in tuberous sclerosis complex. *Phytomedicine*. 2018 Sep. (Accepted) *co-corresponding author.
- 9 Lee YC, Huang WC, Lin JH, Kao TJ, Lin HC, Lee KH, Lin HC, Shen CJ, Chang WC, Huang CC. Znf179 E3 ligase-mediated TDP-43 polyubiquitination is involved in TDP-43- ubiquitinated inclusions (UBI)(+)-related neurodegenerative pathology. *Journal of Biomedical Science*. 2018 Nov 8;25(1):76.
- 10 Lee HT, Lee KI, Lin HC, Lee TS. Genetic Deletion of Soluble Epoxide Hydroxylase Causes Anxiety-Like Behaviors in Mice. 2018 Jul *Molecular Neurobiology*.
- 11 Wu HF, Chen PS, Hsu YT, Lee CW, Wang TF, Chen YJ, Lin HC*. D-Cycloserine ameliorates autism-like deficits by removing GluA2-containing AMPA receptors in a valproic acid-induced rat model. *Molecular Neurobiology*. 2018 Jun;55(6):4811-4824.
- 12 Chang LH, Lin HC, Huang SS, Chen IC, Chu KW, Chih CL, Liang YW, Lee YC, Chen YY, Lee YH, Lee IH. Blockade of soluble epoxide hydrolase attenuates post-ischemic neuronal hyperexcitation and confers resilience against stroke with TrkB activation. *Scientific Reports* . 2018 Jan 8;8(1):118.
- 13 Wu HF, Chen PS, Chen YJ, Lee CW, Chen IT, Lin HC*. Alleviation of N-methyl-D-aspartate Receptor-Dependent Long-term depression via regulation of the Glycogen Synthase Kinase-3 β pathway in the amygdala of a valproic acid-induced animal model of autism. *Molecular Neurobiology* 2017 Sep; 54(7), 5264-5276.
- 14 Wu HF#, Chen YJ#, Wu SZ, Lee CW, Chen IT, Lee YC, Huang CC, Hsing CH, Tang CW, Lin HC*. Soluble epoxide hydrolase inhibitor and 14, 15-epoxyeicosatrienoic acid-facilitated long-term potentiation through cAMP and CaMKII in the hippocampus. *Neural Plasticity*. 2017:3467805. 2017Jul. #equal contribution.
- 15 Huang HJ, Wang YT, Lin HC, Lee YH, Lin AM. Soluble Epoxide Hydrolase Inhibition Attenuates MPTP-Induced Neurotoxicity in the Nigrostriatal Dopaminergic System: Involvement of α -Synuclein Aggregation and ER Stress. *Molecular Neurobiology*. 2017Aug. DOI: 10.1007/s12035-017-0726-9