CURRICULUM VITAE

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NAME (Last Name, First Name)	POSITION TITLE
Lien, Cheng-Chang	Permanent Distinguished Professor, Institute of Neuroscience & Dean, College of Life Sciences

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
China Medical University, Taiwan	M.D.	1990-1997	Medicine
University of Freiburg, Germany	Ph.D.	1998-2003	Physiology/Neuroscience (Mentor: Peter Jonas)
University of Freiburg, Germany	Postdoc	2003-2004	Physiology/Neuroscience (Supervisor: Peter Jonas)
University of California, Berkeley, USA	Postdoc	2004-2006	Neurobiology (Supervisor: Mu-Ming Poo)
Heidelberg University, Germany	Visiting scientist	2012 (July-Sep.)	Institute for physiology and pathophysiology (Prof. Andreas Draguhn)
Charité – Universitätsmedizin Berlin, Germany	Research fellow	2015-2016 2016-2018	NeuroCure Fellowship Alexander von Humboldt Foundation Fellowship

A. Personal statement (Research narrative)

My laboratory investigates brain circuits and behavior, with a particular focus on the neural mechanisms underlying emotion and cognition within the limbic system, specifically the hippocampus and amygdala. By integrating optogenetics and chemogenetics with electrophysiology and calcium imaging, we establish causal links between specific neural circuits and behavioral outcomes. Additionally, we utilize optogenetics-assisted circuit mapping to delineate the organization of these networks. Our research highlights the critical role of GABAergic circuitry in regulating network dynamics and cognitive functions.

Positions and Honors.

Positions and Employment

Since 2023.08: NYCU Permanent Distinguished Professor, National Yang Ming Chiao Tung University
Since 2023/11/01: Director of Life Sciences Research Promotion Center (LSRPC), National Science and Technology Council, Taiwan
Since 2025: Contract Research Fellow, Taipei Veteran General Hospital
Since 2020.11: Dean of College of Life Sciences, National Yang Ming Chiao Tung University (previously named as National Yang-Ming University before 2021.02.01)
Since 2017.08: Distinguished Professor, National Yang Ming Chiao Tung University
2017 – 2021: Director of the Institute of Neuroscience, National Yang-Ming University

Since 2015.08: Professor of the Institute of Neuroscience, National Yang-Ming University
2011.02 – 2015.07: Associate Professor of the Institute of Neuroscience, National Yang-Ming University
2006.07 – 2011.02: Assistant Professor of the Institute of Neuroscience, National Yang-Ming University
1997– 1998: Medical Residency, Neurology, National Taiwan University Hospital

Other Experience and Professional Memberships

2018 – Present: Study Section, Ministry of Science & Technology Grant Review Panel
2016 – Present: Permanent Member, The Chinese Physiological Society, Taiwan
2008 – Present: Regular Member, Society for Neuroscience (SfN), USA
2008 – Present: Permanent Member, Neuroscience Society of Taiwan
2019 – Present: Executive Director and Permanent Member, Taiwanese Society for Computational Neuroscience (SfCN)

Other Academic Activities and Services

1. Convener of the Morphological Medicine and Physiology Division, NSCT (since 2023.01.01)
2. Executive Director, Chinese Physiological Society (2024 – present)
3. Director, Chinese Physiological Society (2022 – 2024)
4. Elected President of the Alexander von Humboldt (AvH) Alumni Association of Taiwan (2022 – present)
5. Member of Scientific Committee for EMBO Workshop on Neural Development (2-6, March, 2018), Taipei, Taiwan
6. Council Member of Neuroscience Society of Taiwan (2016 – 2018 year)
7. Executive Director of Taiwanese Society for Computational Neuroscience (2019 – present)
8. PhD Assessment Committee Member, Faculty of Natural Sciences, Aarhus University, Denmark (2022)
9. Member of the DAAD scholarship election committee for PhD-studies in Germany 2020-2021

***Ad hoc* Peer Review for Scientific Journals**

Nature, PNAS, eLife, Journal of Neuroscience, Journal of Neurophysiology**,** Journal of Physiology (London)**,** Biochimica et Biophysica Acta (BBA – General Subjects), Chinese Journal of Physiology**,** Developmental Neurobiology, PLoS ONE, Neurotoxicity Research; Current Topics in Medicinal Chemistry, Neuropharmacology, Journal of Neuroscience Research, Scientific Reports, Frontiers in Cellular Neuroscience, Cerebral Cortex, Physiology & Behavior, Journal of Visualized Experiments, EJN, Oncotarget, Science signalling; European Neuropsychopharmacology, J Biomedical Science, Journal of the Chinese Medical Association (JCMA), Pain, J Physiological Investigation

Review Editorial Board

Since 2022: Reviewer of the Scientific Review Committee (SRC-2) II of the National Health Research Institutes (NHRI)
2022: Reviewer of European Research Council (ERC) Consolidator Grant – 2022
Since 2015: Frontiers in Cellular Neuroscience (Review editor in the Cellular neurophysiology section)
2016: Scientific Reports; Frontiers in Cellular Neuroscience; Neural Plasticity (Guest Editor); French National Research Agency (ANR; External Reviewer); Frontiers in Aging Neuroscience (Review Editor); Matters
2018: External Reviewer of Danish Research in relation to NIH Brain Initiative; French National Research Agency (ANR; External Reviewer)
2019: National Science Centre in Poland (Grant Reviewer)

Honors

2024: National Science and Technology Council (formerly known as MOST) Outstanding Research Award (2024)
2024: Awarded the 6th NHRI "Integrated Biomedical and Health Technology Research Program"
2023: NYCU Outstanding Faculty and Research Fellows
2023: NYCU Permanent Distinguished Professor
2022: Elected chairman of Alexander von Humboldt Alumni Association, Taiwan
2020/02: Honors with Qualifications for Permanent Assessment Exemption for Teachers
2017 – 2019: NYMU Academic Excellence Award (the same award received in 2015 – 2016; 2013 – 2014; 2011 – 2012)
2017 – 2019: Distinguished Professor, National Yang-Ming University
2016: Ministry of Science and Technology (MOST) Outstanding Research Award
2016: TienTe Lee Young Scientist Research Award
2016 – 2018: Research Fellow of Alexander von Humboldt Foundation, Germany
2025: Awarded the 3rd NHRI "Integrated Biomedical and Health Technology Research Program"
2015 – 2016: NeuroCure Fellowship, Berlin, Germany
2012: Award of German Academic Exchange Service (DAAD) Scholarship for the research visit at the Institute for Physiology and Pathophysiology, Ruprecht-Karls-Universität Heidelberg, Germany
2007 – 2012: Teaching award for outstanding teachers in the School of Medicine, National Yang-Ming University.
2010: The Best Poster Award of 2010 TPEVGH-UST Research Grant.
2006: Award of stipend from Cold Spring Harbour for the imaging course: Imaging Structure & Function in the Nervous Systems.
2003: Doctoral thesis with the grade "***summa cum laude***" and research doctorate (research supervisor: Peter Jonas) from Albert-Ludwigs-Universität Freiburg, Germany.
2002: Award of stipend from Marine Biological Laboratory (Woods Hole, USA) for the "Method in Computational Neuroscience" summer course.
1998 – 2003: Award of German Academic Exchange Service (DAAD) Scholarship for the international PhD program in the Institute of Physiology, Albert-Ludwigs-Universität Freiburg, Germany.

Invited Speeches/Chairs in International Conferences

1. 2024/8/25 Neuromodulation for Pain, invited by 2024 3rd Taiwan Society for Neuroscience TSfN Congress.
2. 2024/8/24 Modulation of Hippocampal Cells and Connections: Implication for Anxiety - From Cell, Circuit to Behavior, invited by 2024 3rd Taiwan Society for Neuroscience TSfN Congress.
3. 2024/6/28 Using opto-/ chemo-genetic actuators to interrogate brain circuits and control avoidance behavior 利用光/化學遺傳學工具解析腦迴路與控制迴避行為, invited by 2024 39th Biology Retreat.
4. 2024/6/26 學門召集人 Round Table Discussion, invited by 2024 39th Biology Retreat.
5. 2024/05/03 利用光/化學遺傳學工具解析腦迴路與控制行為, invited by College of Life Sciences, National Chung Hsing University.
6. 2024/04/25 Hippocampus Research – From Cells and Circuits to Behavior, invited by Taipei Veterans General Hospital Department of Medical Research.
7. 2024/04/08 A Neural Circuit Gates Negative Emotion & Nociception in Chronic Pain, invited by MACKAY Medical college.
8. 2023/09/27 Modulating Hippocampal Neurons and Connections: Implications for Anxiety, GRC Distinguished Seminar, invited by the GRC, Academia Sinica.
9. 2023/05/28 – 2023/06/2 Invited talk (talk title: Hypothalamic glutamate/GABA co-transmission modulates hippocampal circuits and supports long-term potentiation) in Spring Hippocampus Research Conference in Verona, Italy.

10. 2023/04/07 Hippocampal Mossy Cell Circuitry and Function, invited by the Department of Neurosciences and Brain Disease Center, China Medical University.
11. 2023/03/23 利用光/化學遺傳學工具解析腦迴路與控制行為, invited by MACKAY Medical college
12. 2023/03/07 利用光遺傳/化學遺傳學工具解析腦迴路與控制行為, 學術專題講座, invited by the Department of Life Sciences, National Cheng Kung University.
13. 2022/12/27 Life Sciences Talk-Mossy cell circuitry and function, Topic: Cheng-Chang Lien TALK by Host: Peter Jonas.
14. 2022/11/01 利用光遺傳/化學遺傳學工具解析腦迴路與控制行為：整合生物學專題講座：Invited by 國立台灣大學 昆蟲學系.
15. 2022/05/04 老化、神經病變與認知功能失調工作坊: Invited by 國立政治大學 台灣心智科學腦學中心.
16. 2021/05/07 神經科學的未來-聯結體與行為的關連 (The future of neuroscience - the relationship between connectome and behavior) ：博、碩士班之綜合討論 (Grand Round) Invited by 中山醫學大學 醫學研究所.
17. 2021/10/01 110年度生命科學新進教師學者研習營研究計畫書撰寫策略 (研究計畫類)
18. 2021/08/06 110年度生理醫學研習會暨科技部研究成果發表會 (研究計畫申請經驗分享)
19. 2020/12/30 Neural mechanisms underlying emotion and cognition: Invited by Seminar in Academia Sinica: The Neuroscience Program of Academia Sinica (NPAS).
20. 2020/12/05 Detecting and Manipulating Anxiety-related Cells in the Brain: Invited by BioPro Workshop: Discovering Brain Science and BioMedincine with Innovative Technologies.
21. 2020/10/30 Reversal of Pain and Affective Comorbidities by Rebalancing Mutual Inhibitory Amygdala Circuits: Invited by 2020 The Taiwan Society for Biochemistry and Molecular Biology Autumn Camp.
22. 2020/09/27 Inter-dentate Gyrus Inhibition Supports Contextual Memory: Invited by The 1st Asia-Pacific Computational and Cognitive Neuroscience (2020 AP-CCN) Conference: Taiwanese Society for Computational Neuroscience.
23. 2020/09/21 健康與疾病之情感與認知腦機制：台大神經生物與認知科學中心15周年慶：腦科學週腦力啟航系列活動：Invited by 台灣大學神經認知與科學研究中心.
24. 2019/09/19 An Amygdala Neural Ensemble Mediates Both Sensory and Negative Affective Components of Chronic Pain: Invited by The 11th NYMU-HU Bilateral Symposium, 2019. [Link]
25. 2019/08/29 Co-transmission of glutamate and GABA by supramammillary nucleus neurons facilitates hippocampal LTP: Invited by Institute of Higher Nervous Activity and Neurophysiology of RAS, Russia.
26. 2019/07/15 IN-N-OUT of Dentate Inhibitory Circuits: Invited by Dr. Ching-Lung Hsu, Janelia Research Campus, Howard Hughes Medical Institute (HHMI), Ashburn, Virginia, USA. [Link]
27. 2019/06/20 In search of the memory engram: Invited by Research Center for Applied Sciences (RCAS), Academia Sinica, Taipei, Taiwan.
28. 2019/04/23 Hippocampal dentate gyrus - from circuits to behaviors: invited by Mackay Medical College, Taiwan.
29. 2019/04/16 Deconstructing Psychophysiology of Chronic Pain: Invited by Dr. Hannah Monyer, German Cancer Research Center (DKFZ), Heidelberg, Germany.

30. 2019/03/31 Are there pain engrams? (有疼痛記憶痕跡嗎?): 2019 年春季北區頭痛研討會: invited by Taiwan Headache Society and Taiwan Neurological Society, Taipei, Taiwan.
31. 2018/11/22 IN-N-OUT of Dentate GABAergic Interneurons: invited by College of Life Science, National Tsing Hua University.
32. 2018/11/21 A tunable hippocampal affective circuitry: from single neurons to behavior: Symposium on Systems Neuroscience: invited by Institute of Systems Neuroscience, NTHU, Taiwan.
33. 2018/10/24 Hippocampal dentate gyrus - from circuits to behaviors: invited by School of Medicine, National Taiwan University.
34. 2018/09/19 A tunable hippocampal long circuitry for anxiety: invited by 10th Bilateral Meeting 2018 between Heidelberg University and National Yang-Ming University (Taiwan) in Heidelberg.
35. 2018/09/17 Circuit specificity in the inhibitory architecture of the dentate gyrus: DANDRITE lecture: invited by DANDRITE, Dept. Biomedicine, Aarhus University, Denmark.
36. 2018/09/10 Connectivity and function of a longitudinal hippocampal circuitry: The 29th Ion Channel Meeting: invited by CIRB, CNRS UMR, Collège de France.
37. 2018/08/24 如何調控腦中太極來控制心智行為?：基礎研究與生技製藥的對話: Invited by 永信李天德醫藥科技獎得獎人聯誼會.
38. 2018/06/08 Investigating hippocampal dorsoventral connections: implication for mood disorders (海馬迴長軸之聯結性與功能與焦慮症之關聯): invited by Chung Shan Medical University.
39. 2018/05/22 IN-N-OUT of the Inhibitory Circuit Architecture of the Hippocampus: Invited by School of Veterinary Medicine National Taiwan University.
40. 2018/05/11 Deconstructing Psychophysiology of Chronic Pain: Invited by China Medical University, Taiwan.
41. 2018/05/09 探討海馬迴長軸之聯結性與非記憶性功能: 對焦慮與憂鬱症之關聯: Invited by 振興醫療財團法人振興醫院.
42. 2018/04/12 Deconstructing Psychophysiology of Chronic Pain: Invited by Institute of Cellular and Systems Medicine, National Health Research Institutes, Taiwan.
43. 2018/02/20 Circuit specificity in the inhibitory architecture of the dentate gyru: invited by Neuroscience Institute of Alicante, Spain.
44. 2018/02/13 IN-N-OUT of Dentate GABAergic Interneurons: Invited by Hannah Monyer, University of Heidelberg, Germany.
45. 2018/01/19 Deconstructing Psychophysiology of Chronic Pain: Invited by Department of Psychology, National Chung Cheng University, Taiwan.
46. 2017/12/21 Deconstructing Psychophysiology of Chronic Pain: Innsbruck Neuroscience Research Network: Invited by University of Innsbruck, Austria.
47. 2017/11/23 Deconstructing Psychophysiology of Chronic Pain: Invited by Institute of Biomedical Sciences, China Medical University, Taiwan.
48. 2017/11/20 Deconstructing Pyschophysiology of Chronic Pain: Taiwan EMBO Partnership Symposium: Invited by EMBO and the Ministry of Science and Technology of Taiwan.
49. 2017/11/18 Deconstruction of psychophysiology of chronic pain: Frontiers in Translational Medicine 2017: Invited by Institute for Translational Research in Biomedicine, Chang Gung Memorial Hospital, Taiwan.
50. 2017/09/26 IN-N-OUT of Dentate GABAergic Interneurons: Department of Physiology, Anatomy and Neuroscience: Invited by University of Szeged, Hungary.

51. 2017/09/20 Differences in synaptic dynamics between somatic and dendritic inhibition in the hippocampus: FENS Regional Meeting: Invited by University of Pécs', Hungary.
52. 2017/09/11 Background K+ conductance mediates rapid EPSP attenuation in oligodendrocyte precursor cells: 28th Ion Channel Meeting / 6th workshop SFICT: Invited by Collège de France.
53. 2017/09/05 How innovative neurotechnologies have advanced our understanding of brain and mind: ACADEMIC SUMMER - SAILING SEASON 2017: Invited by The Berlin & Brandenburg Branch of the German Humboldt Club and the Academic Sailing Club of Berlin.
54. 2017/06/22 IN-N-OUT of dentate GABAergic interneurons: Neuroscience Colloquium Summer semester 2017: Invited by Charite University Hospital Berlin.
55. 2017/06/19 IN-N-OUT of dentate GABAergic interneurons: The seminar of Institute of Molecular and Cellular Pharmacology (IPMC): Invited by Sophia Antipolis, France.
56. 2017/05/19 Resolving the neural circuits of comorbid chronic pain and anxiety: The 2nd International Taiwanese Congress of Neurology and Annual Meeting of Taiwan Neurological Society: Invited by Taiwan Neurological Society.
57. 2017/05/17 腦與神經性疾病: 生醫科學研究一臨床與基礎的對話: Invited by 國立陽明大學新世代跨領域科學人才培育計畫.
58. 2017/01/25 Perturbation of Amygdala Neuron Excitability Diminishes Pain- and Anxiety-Related Behaviors: The NeuroCure Lunchtime Seminar in Cellular and Molecular Neuroscience: Invited by Charite University Hospital Berlin.
59. 2016/12/14 Resolving the neural circuits of comorbid chronic pain and anxiety: Invited by 振興醫療財團法人振興醫院.
60. 2016/10/15 淺談老年失智:預防與照顧 健康講座: Invited by 德南臺灣廠商聯誼會.
61. 2016/09/16 Chemogenetic perturbation of central amygdala neuron excitability reduces pain- and anxiety-like behaviors: Invited by 中央研究院 Brain Circuits and Diseases Symposium.
62. 2016/06/15 Chemogenetic perturbation of central amygdala neuron excitability reduces pain- and anxiety-like behaviors: Invited by 第三屆國立陽明大學-廈門大學 雙邊研討會.
63. 2016/04/23 淺談老年失智:預防與照顧: Invited by 萊茵台北中文學校.
64. 2016/04/19 Dentate Gyrus GABAergic Circuits: IN-N-OUT Synapses: Invited by Université de Liège.
65. 2016/02/20 淺談老年失智:預防與照顧: Invited by 漢堡中華會館.
66. 2016/01/28 CNS Inhibition: Interneuron IN-N-OUT: Invited by 長庚大學.
67. 2015/12/07 Inhibitory control of memory circuits: Invited by EMBO/Neural Development Conference.
68. 2015/12/02 Dentate Gyrus GABAergic Circuits: IN-N-OUT Synapses: Invited by NeuroCure, Charite.
69. 2015/11/30 淺談老年失智:預防與照顧: Invited by 駐德國柏林大使館.
70. 2015/11/19 Pathway-specific recruitment of dentate gyrus interneurons: Invited by 10th Conference of the Czech Neuroscience Society with International Participation and the Taiwan-Czech Neuroscience Symposium.
71. 2015/11/17 Pathway-specific recruitment of dentate gyrus interneurons: Invited by Institute of Experimental Medicine, Hungarian Academy of Science.
72. 2015/11/02 Dentate gyrus GABAergic circuits: In-N-Out synapses: Invited by The Royal Society of Edinburgh /Ministry of Science and Technology Neuroscience Workshop.

73. 2015/08/16 - 2015/08/21 Pathway-Specific Recruitment of Dentate Gyrus Interneurons: Invited by Gordon Research Conference.
74. 2014/11/20 Dynamic Inhibitory Control of the Gateway of the Hippocampus: Invited by NIA/seminar.
75. 2014/10/23 Role of panic disorder-associated gene ACCN2 in synaptic function and fear memory: Invited by 國立中山大學 生科系.
76. 2014/10/19 Shunting Inhibition controls the gateway of the hippocampus: Invited by 中德學術交流協會/The 2nd East Asia German Alumni Symposia in Life Science.
77. 2014/10/08 Dynamic Inhibitory Control of the Gateway of the Hippocampus: Invited by 中央研究院 細胞與個體生物學研究所.
78. 2014/09/20 - 2014/09/21 恐慌症相關基因的突觸功能與恐懼記憶的研究: Invited by 2014台灣生物精神醫學會年會.
79. 2014/0707 - 2014/07/08 Shunting Inhibitions Control the Gateway of the Hippocampus: Invited by 2014 國家衛生研究院 生物醫學學術研討會暨何曼德院士紀念研討會.
80. 2014/06/12 - 2014/06/14 Shunting Inhibition Controls the Gateway of the Hippocampus: Invited by 2014香港大學 生理學研討會暨香港神經科學學會與香港生物物理學學會聯席科學會議.
81. 2014/04/30 Application of Passive Cable Theory in Neuroscience: Invited by 國立臺灣大學 理論科學研究中心.
82. 2014/04/23 Organizing Principles for GABAergic Synapses in Memory Microcircuits: Invited by 中華民國細胞及分子生物學學會/第十屆海峽兩岸細胞生物學學術研討會.
83. 2014/04/21 - 2014/04/25 Organizing Principles for GABAergic Synapses in Memory Microcircuits: Invited by 第十屆海峽兩岸細胞生物學學術研討會.
84. 2013/11/28 How Neurotransmitter GABA Controls the Gateway of the Hippocampus?: Invited by 國立成功大學 生命科學系.
85. 2013/11/02 Controlling the Brain with Light: Invited by 2013台灣立體定位功能性神經外科及放射手術學會.
86. 2013/09/10 How Shunting Inhibition Controls the Gateway of the Hippocampus?: Invited by 國立臺灣大學 醫學院腦與心智科學研究所.
87. 2013/07/11 Shunting Inhibition Controls the Gateway of the Hippocampus: Invited by Department of Pharmacology, UC Davis, USA.
88. 2012/12/06 Role of ASIC in Alzheimer's Disease: Friend or Foe?: Invited by 台灣波蘭神經科學研討會: 神經老化.
89. 2012/11/20 The role of acid-sensing ion channel in synaptic function, learning and memory: Invited by 國立陽明大學 藥理學科暨藥理學研究所.
90. 2012/11/01 The two faces of GABA in the adult brain: Invited by 中國科學院 神經科學研究所.
91. 2012/10/25 Distinct dynamic switch of GABA release in fast-spiking and non-fast-spiking GABAergic interneurons in the hippocampus: Invited by KOJACH Symposium 2012 in Pusan/Korean Physiological Society.
92. 2012/09/12 Role of acid-sensing ion channel in synaptic function, learning and memory: Invited by Institute of science and technology, Austria.
93. 2012/07/27 - 2013/09/27 Acid-Sensing Ion Channels in The Hippocampus: Invited by Department of Physiology and Pathophysiology, Heidelberg University.

94. 2012/06/15 The two faces of GABA in the adult brain: Invited by 中國醫藥大學 神經科學與認知科學研究所.

95. 2012/02/23 國衛院計畫申請經驗分享說明會: Invited by 國立陽明大學 研發處計畫業務組.

96. 2011/08/10 GABA is Depolarizing in Granule Cells of the Adolescent and Adult Dentate Gyrus: Invited by UST-UCSD I-RICE Symposium.

97. 2011/07/15 Acid-Sensing Ion Channel in the Hippocampus: Invited by 國立陽明大學 德國海德堡大學 雙方合作人員交流計畫.

98. 2011/06/01 How Single Small Glass Pipettes Revolutionize Our Understanding of The Brain?: Invited by 台北榮民總醫院 外科部.

99. 2011/05/24 Acid-Sensing Ion Channels in The Hippocampus: Any Role in Synaptic Transmission?: Invited by 國立中央大學 生命科學系.

100. 2011/04/29 Acid-Sensing Ion Channels in The Hippocampus: Any Role in Synaptic Transmission?: Invited by 國立清華大學 生命科學院系統神經科學研究所.

101. 2010/12/02 Acid-Sensing Ion Channels in The Hippocampus: From Genes To Function: Invited by 第四屆海峽兩岸神經科學研討會.

102. 2010/10/09 Acid-Sensing Ion Channels (ASICs) in The Hippocampus: From Genes To Function: Invited by 中華民國基礎神經科學學會.

103. 2010/05/28 Acid-Sensing Ion Channel in The Hippocampus: Invited by 中國醫藥大學.

104. 2010/03/24 Cell Type-Specific Expression of Acid-Sensing Ion Channels in Hippocampal Interneurons: Invited by 中央研究院.

105. 2010/03/19 Acid-Sensing Ion Channels in The Central Nervous System and Their Potential Niche in Neurological Diseases: Invited by 國防醫學院.

106. 2009/12/23 Cell Type-Specific pH Sensing & Calcium Homeostasis of Hippocampal Neurons: Invited by 國立臺灣大學 醫學院.

107. 2009/06/10 Correlating Function and Gene Expression of Individual Hippocampal Neurons: Invited by 中山醫學大學.

108. 2009/04/13 pH Sensing and Calcium Signaling in Hippocampal GABAergic Interneurons: Invited by 台北榮民總醫院 神經內科.

109. 2008/12/26 pH Sensing Ion Channels in The Hippocampus: Invited by 長庚大學.

110. 2008/11/13 Differential pH sensing between neurons and astrocytes of rat hippocampus: Invited by 國防醫學院.

111. 2007/12/06 Fast Channels for Fast Signaling Generation in Hippocampal Interneurons: Invited by 1st International Conference of Viral Membrane Proteins, 國立陽明大學.

112. 2007/11/22 Molecular Mechanisms of High-Frequency Action Potential Generation in Hippocampal Interneurons: Invited by 國立清華大學 生科系.

113. 2007/08/22 - 2007/08/24 Visual stimuli induce long-term plasticity in a developing visual system: Invited by 第23屆生物夏令營研討會.

114. 2007/06/05 Molecular Mechanisms of High-Frequency Action Potential Generation in Hippocampal Interneurons: Invited by 國立中央大學 認知神經科學研究所.

115. 2007/04/19 Queer Channels in Hippocampal Basket Cells: h-Current Without Sag: Invited by 第六屆海峽兩岸細胞生物學學術研討會.

116. 2007/04/16 Queer channels in hippocampal basket cells: h-current without sag: Invited by 中央研究院.

117. 2007/02/02 Molecular mechansims of high-frequency action potential generation in hippocampal GABAergic interneruons: Invited by 中華民國細胞及分子生物學學會/第15屆細胞及分子新知研討會.

118. 2006/12/12 Application of patch clamp technique in neuroscience: Invited by 國立成功大學 生命科學系.

119. 2006/12/08 Molecular Mechanism of Fast-Spiking Pattern in GABAergic Intereurons: Invited by 國立臺灣大學 動物學研究所.

B. Peer-reviewed publications (in reverse chronological order). *Corresponding author

1. Hou WH, Jariwala M, Wang KY, Seewald A, Lin YL, Liou YC, Ricci A, Ferraguti F, Lien CC*, Capogna M. (2024). Inhibitory fear memory engram in the mouse central lateral amygdala. **Cell Reports**. doi: 10.1016/j.celrep.2024.114468. (Corresponding author and Lead contact)

2. Ramos-Prats A, Matulewicz P, Edenhofer ML, Wang KY, Yeh CW, Fajardo-Serrano A, Kress M, Kummer K, Lien CC, Ferraguti (2024). Loss of $mGlu_5$ receptors in somatostatin-expressing neurons alters negative emotional states. **Mol Psychiatry**. 2024 Apr 4. doi: 10.1038/s41380-024-02541-5..

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6. Chou TM, Lee ZF, Wang SJ, Lien CC*, Chen SP* (2022). CGRP-dependent sensitization of PKC-δ positive neurons in central amygdala mediates chronic migraine. **Journal of Headache & Pain.** 23:157.

7. Lin YL, Yang ZS, Wong WY, Lin SC, Wang SJ, Chen SP, Cheng JK, Lu H, Lien CC*. (2022) Cellular mechanisms underlying central sensitization in a mouse model of chronic muscle pain. **eLife.**11:e78610.

8. Huang PH, Yang TY, Yeh CW, Huang SM, Chang HC, Hung YF, Chu WC, Cho KH, Lu TP, Kuo PH, Lee LJ, Kuo LW, Lien CC, Cheng HJ. (2022) Involvement of a BH3-only apoptosis sensitizer gene Blm-s in hippocampus-mediated mood control. **Translational Psychiatry.** 12(1):411.

9. Devina T, Wong YH, Hsiao CW, Li YJ, Lien CC, Cheng IH (2022). Endoplasmic reticulum stress induces Alzheimer disease-like phenotypes in the neuron derived from the induced pluripotent stem cell with D678H mutation on amyloid precursor protein. **Journal of Neurochemistry** 163(1):26-39. (*# Cover article*)

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11. Abdulmajeed W, Wang KY, Wu JW, Ajibola MI, Cheng IH, Lien CC* (2022). Connectivity and synaptic features of hilar mossy cells and their effects on granule cell activity along the hippocampal longitudinal axis. **Journal of Physiology** 600(14):3355-3381. (*# Cover article*)

12. Yen TY, Huang Y, MacLaren DAA, Schlesiger MI, Monyer H, Lien CC* (2022). Inhibitory projections connecting the dentate gyri in the two hemispheres support spatial and contextual memory. **Cell Reports** 39(7):110831.

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16. Wang KY, Wu JW, Cheng JK, Chen CC, Wong WY, Averkin RG, Tamás G, Nakazawa K, Lien CC* (2021). Elevation of hilar mossy cell activity suppresses hippocampal excitability and avoidance behavior. **Cell Reports** 36:109702. (*# Featured in Cover*)

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19. Hsu YT, Chang YG, Liu YC, Wang KY, Chen HM, Lee DJ, Yang SS, Tsai CH, Lien CC*, Chern YJ*. (2019). Enhanced Na^+-K^+-$2Cl^-$ cotransporter 1 underlies motor dysfunction in Huntington's disease. **Movement Disorders** 34(6): 845-857. (*corresponding) (*Featured in Cover*) (2021 IF: 9.698; R/C: 16/212 in CLINICAL NEUROLOGY)

20. Martina M*, Lien CC* (2018). Book Chapter: Physiological properties of hippocampal neurons. **Hippocampal Microcircuits**: 91-126. (*corresponding)

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Grant Support

1. Planning and promotion of research in morphological medicine and physiology (形態及生理醫學學門規劃研究推動計畫) (NSTC 113-2312-B-A49-003-; 113.01.01-113.12.31)
2. Promoting Life Science Research with a Focus on Talent Cultivation (生命科學推動中心計畫-以人才培育為核心的生命科學研究推廣) (NSTC 112-2735-B-A49-001; 113.11.01-113.10.31)
3. Multi-scale interrogation on engram connectome and modulation of brain dynamics in health and disease (NSTC 112-2321-B-A49-009 -; 112.05.01-113.04.30)
4. Planning and promotion of research in morphological medicine and physiology (形態及生理醫學學門規劃研究推動計畫) (NSTC 112-2312-B-A49-001-; 112.01.01-112.12.31)
5. Role of central amygdala neurons in nociceptive processing in health and disease (NSTC 111-2320-B-A49 -009 -MY3; 112.08.01-114.07.31)
6. Interrogation of the function of inter-hemispheric hippocampal inhibition in contextual memories (NHRI-EX111-11135NI / NHRI-EX112-11135N / NHRI-EX113-11135N; 111.01.01-113.12.31)
7. Mapping, deciphering, and modulation of memory engrams – an interdisciplinary approach (MOST 110-2321-B-010-006 - / MOST 111-2321-B-A49-005- ; 110.01.01-111.12.31)
8. Hippocampal circuits mediating the anxiety-modulating actions of mGlu5 receptors (MOE; 109.11.01-111.10.31)
9. Investigating Synaptic Correlates of Conditioned Fear in Central Amygdala Inhibitory Circuits (MOST 108-2320-B-010-026-MY3; 108.08.01-111.07.31)
10. Regulation of in vivo Cortico-Hippocampal Transmission and Recognition Memory by a Subcortical Afferent (MOST108-2923-B-010-001-MY2; 108.01.01-110.06.30)
11. Network mechanisms of the memory engram formation (MOST 108-2911-I-010-503 / MOST 108-2911-I-010-506; 108.09.01-111.08.31)
12. A Multi-Level Study on Memory Engrams and Their Circuits (MOST 108-2321-B-010 -009 -MY2; 108.06.01-109.12.31)

13. Investigating Hippocampal Affective Circuits: Implications for Anxiety and Depression (NHRI-EX108-10814NI / NHRI-EX109-10814NI / NHRI-EX110-10814NI; 108.01.01-110.12.31)
14. Regulation of in vivo Cortico-Hippocampal Transmission and Recognition Memory by a Subcortical Afferent (MOST 108-2923-B-010-001-MY2; 108.01.01-109.12.31)
15. Inhibiting Inhibition: Circuit-Level and Behavioral Functions of Interneuron-Specific Interneurons in Cortico-Hippocampal Networks (MOST 106-2923-B-010 -001 -MY3; 106.10.01-109.09.30)
16. Investigating recruitment of specific interneuron types underlying routing of distinct excitatory inputs to the hippocampus (MOST 106-2320-B-010-011-MY3; 106.08.01-109.07.31)
17. Role of panic disorder-associated gene Accn2 in synaptic function and fear memory (NHRI-EX105-10508NI / NHRI-EX106-10508NI / NHRI-EX107-10508NI; 105.1.1-107.12.31)
18. Dissecting inhibitory circuit mechanisms in controlling excitability of the hippocampal dentate gyrus with optogenetic and chemogenetic tools (MOST 104-2321-B-010-021 / MOST 105-2321-B-010-012; 104.08.01-106.07.31)
19. Electrophysiological and optogenetic approaches to illuminating the functional projections to the hippocampal dentate gyrus (MOST 103-2320-B-010-041-MY3; 103.08.01-106.07.31)
20. Deciphering Pathogenic Roles of ASIC in CNS Disorders Using ASIC Conditional Knockout Mice (NHRI-EX101-10105NI / NHRI-EX103-10105NI / NHRI-EX103-10105NI / NHRI-EX104-10105NI; 101.1.1-104.12.31)
21. Probing the Role of ASIC1a in Fear Circuits using Electrophysiology, Voltage Imaging and Optogenetics Approaches (NSC 101-2321-B-010-024- / NSC 102-2321-B-010-019- / NSC 103-2321-B-010-010-; 101.09.01-104.07.31)
22. Deciphering Physiological Roles of Acid-Sensing Ion Channels in Neural Networks Using Genetically Engineered and Mutant Mice (NSC 100-2320-B-010-014-MY3; 100.08.01-103.07.31)
23. Neuronal Cell-Type Dependent pH-Sensing in Rat Hippocampus (NSC 97-2321-B-010-005- / NSC 98-2321-B-010-001 / NSC 99-2321-B-010-001- / NSC 100-2321-B-010-001-; 97.12.01-101.11.30)
24. Functional Alterations of GABAergic Circuitry in a Rat Model of Epilepsy (NHRI-EX97-9720NC / NHRI-EX98-9720NC / NHRI-EX99-9720NC / NHRI-EX100-9720NC; 97.01.01-100.12.31)
25. Dendritic Signaling of GABAergic Interneurons of Rat Hippocampus (NSC 96-2320-B-010-010-MY2; 96.02.01-97.07.31)