

Po-Han Chiang, Ph.D.

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Education

Ph.D. in Neuroscience Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan (R.O.C.)	2010 – 2015
Master's Program in Neuroscience Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan (R.O.C.) (Direct pursuit of Ph.D. degree at 1st year)	2009 – 2010
B.S. in Life Science Department of Life Science, National Yang-Ming University, Taipei, Taiwan (R.O.C.)	2005 – 2009

Employment

Assistant Professor Institute of Biomedical Engineering, College of Electrical and Computer Engineering, National Chiao Tung University, Hsinchu, Taiwan (R.O.C.)	2019 – now
Postdoctoral Associate Bioelectronics Group, Department of Material Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA, U.S.A	2016 – 2019
Counselling Officer/ Second Lieutenant Coast Guard Agency, New Taipei, Taiwan (R.O.C.)	2015 – 2016

Honors & Awards

Fellowship of the Higher Education Academy (FHEA) from Advance HE, International Certificate of Learning & Teaching in Higher Education	2020
Fellowship of Einstein Program of Young Scholars Fellowship Program, Ministry of Science and Technology (MOST), Taiwan (ROC)	2018
Outstanding Students Conference Travel Award from Foundation for the Advancement of Outstanding Scholarship to attend and present at Neuroscience 2014, Annual Meeting of Society for Neuroscience in Washington DC, USA	2014
Outstanding Students Conference Travel Award from Foundation for the Advancement of Outstanding Scholarship to attend and present at Neuroscience 2011, Annual Meeting of Society for Neuroscience in Washington DC, USA	2011

Research Interest

- Developing wireless neuronal modulation techniques
- Neuronal circuitry of anxiety disorder and autism spectrum disorder
- Optogenetics, chemogenetics, fiber photometry and patch-clamp electrophysiology
- Spinal cord injury and neuroregeneration
- Neuromorphic computing

Publications

Academic Journals:

1. Heschem S, **Chiang PH**, Moon J, Christiansen M, Jahanshahi A, Liu H, Pralle A, Anikeeva P, Temel Y (2020)
Minimally invasive, magnetothermal nanoparticle technology for therapeutic neuromodulation. *Nature
Communication* (under revision)
2. Park J, Tabet A, Moon J, **Chiang PH**, Koehler F, Sahasrabudhe A, Anikeeva P (2020) Remotely Controlled Proton
Generation for Neuromodulation. *ChemRxiv* 10.26434/chemrxiv.12369893.v1

3. Moon J, Christiansen MG, Rao S, Marcus C, Bono DC, Rosenfeld D, Gregurec D, Varnavides G, **Chiang PH**, Park S, Anikeeva P (2020) Magnetothermal Multiplexing for Selective Remote Control of Cell Signaling. *Advanced Functional Materials* 10.1002/adfm.202000577
4. Frank JA, Antonini MJ, **Chiang PH**, Canales A, Konrad D, Garwood I, Rajic G, Koehler F, Fink Y, Anikeeva P (2020) In vivo photopharmacology enabled by multifunctional fibers. *BioRxiv* 10.1101/2020.03.28.012567v1
5. Gregurec D, Senko AW, Chuvilin A, Reddy P, Sankararaman A, Rosenfeld D, **Chiang PH**, Garcia F, Tafel I, Varnavides G, Ciocan E, Anikeeva P (2020) Magnetic Vortex Nanodiscs Enable Remote Magnetomechanical Neural Stimulation. *ACS nano* 10.1021/acsnano.0c00562
6. Park J, Jin K, Sahasrabudhe A, **Chiang PH**, Maalouf J, Koehler F, Rosenfeld D, Rao S, Tanaka T, Khudiyev T, Schiffer Z, Fink Y, Yizhar O, Manthiram K, Anikeeva P (2020) In situ Electrochemical Generation of Nitric Oxide for Neuronal Modulation. *Nature Nanotechnology* 10.1038/s41565-020-0701-x
7. Rosenfeld D, Senko AW, Moon J, Yick I, Varnavides G, Gregurec D, Koehler F, **Chiang PH**, Christiansen MG, Maeng LY, Widge AS, Anikeeva P (2020) Transgene-free remote magnetothermal regulation of adrenal hormones *Science Advance* 6(15):eaaz3734
8. Rao S, Chen R, LaRocca AA, Christiansen MG, Senko AW, Shi CH, **Chiang PH**, Varnavides G, Xue J, Zhou Y, Park S, Ding R, Moon J, Feng G, Anikeeva P (2019) Remotely controlled chemomagnetic modulation of targeted neural circuits. *Nature Nanotechnology* 14(10):967-973
9. Shahriari D, Loke G, Tafel I, Park S, **Chiang PH**, Fink Y, Anikeeva P (2019) Scalable fabrication of porous microchannel nerve guidance scaffolds with complex geometries. *Advanced Materials* 31(30):e1902021
10. **Chiang PH**, Chien TC, Chen CC, Yanagawa Y, Lien CC. (2015) ASIC-dependent LTP at multiple glutamatergic synapses in amygdala network is required for fear memory. *Scientific Reports* 5:10143
11. **Chiang PH**, Wu PY, Kuo TW, Liu YC, Chan CF, Chien TC, Cheng JK, Huang YY, Chiu CD, Lien CC. (2012) GABA is depolarizing in hippocampal dentate granule cells of the adolescent and adult rats. *Journal of Neuroscience* 32:62-67.
12. **Chiang PH**, Yeh WC, Lee CT, Weng JY, Huang YY, Lien CC. (2010) M₁-like muscarinic acetylcholine receptors regulate fast-spiking interneuron excitability in rat dentate gyrus. *Neuroscience* 169:39-51.

Popular Science Journals:

1. 連正章, 詹筑方, 江柏翰 (2015) 腦中太極. *科學人雜誌* 2015 年第 155 期 1 月號

Scientific Presentation

1. **Chiang PH**, Chien TC, Chen CC, Lien CC. (2014) Characterization of acid-sensing ion channels in the mouse amygdala. Poster presentation, *Society for Neuroscience 44th Annual Meeting, Washington DC, USA*
2. **Chiang PH**, Wu PY, Liu YC, Chien TC, Kuo TW, Cheng HJI, Lien CC. (2012) Excitatory actions of GABA in the dentate gyrus but not in the CA areas of the adult hippocampus. Poster presentation, *Society for Neuroscience 42th Annual Meeting, Washington DC, USA*
3. **Chiang PH**, Yeh WC, Lien CC. (2010) M₁-like muscarinic acetylcholine receptors regulate fast-spiking interneuron excitability in rat dentate gyrus. Poster Presentation, *Society for Neuroscience 40th Annual Meeting, San Diego, CA, USA*

Professional Membership

Member of the Society for Neuroscience
 Member of Chinese Society of Cell and Molecular Biology