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■ RESEARCH INTERESTS:

We aim to understand how genes and circuits orchestrate complex behavior in *Drosophila*. Three main approaches are taken: (i) to construct a brain-wide wiring diagram at single-cell resolution; (ii) to manipulate specific nodes in the circuits for understanding how brains encode and decode information; and (iii) to develop innovative technologies for functional connectomic research.

■ EDUCATION:

- 1990 Ph.D. in Entomology, Rutgers University, New Jersey, USA
- 1983 M.S. in Plant Pathology and Entomology, National Taiwan University, Taiwan, ROC
- 1981 B.S. in Entomology, National Chung-Hsing University, Taiwan, ROC

■ ACADEMIC POSITION:

- 2017-present Adjunct Investigator, Institute of Molecular and Genomic Medicine, The National Health Research Institutes, Taiwan
- 2016-present Adjunct Investigator, Institute of Physics, Academia Sinica, Taiwan
- 2016-present Adjunct Distinguished Investigator, National Synchrotron Radiation Research Center, Taiwan
- 2016-present Adjunct Distinguished Chair Professor, China Medical University, Taiwan
- 2016-present Director, Industrial Biotechnology Ph.D. program, National Tsing Hua University, Taiwan
- 2014-present Adjunct Chair Professor, Kaohsiung Medical University, Taiwan
- 2014-present Tsing Hua Distinguished Chair Professor, National Tsing Hua University, Taiwan
- 2014-present Dean, College of Life Science, National Tsing Hua University, Taiwan
- 2014-present Academician, Academia Sinica
- 2013-present Scientific Advisory Board member, Center for Brain Activity Mapping at UCSD
- 2013-present Scientific Advisory Board member, Cold Spring Harbor Conferences Asia, China
- 2011-present International Faculty, Kavli Institute for Brain and Mind (KIBM) at the University of California, San Diego, USA.
- 2010-present Adjunct Chair Professor, National Chiao Tung University, Taiwan
- 2008-present Adjunct Investigator, Genomics Research Center, Academia Sinica
- 2007-2014 Tsing Hua Chair Professor, National Tsing Hua University, Taiwan
- 2006-2008 Adjunct Professor, Cold Spring Harbor Laboratory, USA

- 2005 Chair of Biological Science Panel, National Science Council, Taiwan
- 2005-2010 Adjunct Professor, Department of Life Science, National Central University, Taiwan
- 2004-present Director, Brain Research Center, National Tsing Hua University, Taiwan
- 2002-2008 Director, Institute of Biotechnology, National Tsing Hua University, Taiwan
- 2001-2002 Visiting Scientist, Cold Spring Harbor Laboratory, USA
- 1997 Visiting Professor, Neurobiology Laboratory, CNRS, France

■ HONOR:

- 2017 「遠見」雜誌再度選為「新台灣之光 100」
- 2016 TWAS Fellow (世界科學院 院士)
- 2016 Presidential Special Lecturer, The Society for Neuroscience 2016 Annual Meeting (>35,000 participants)
- 2015 National Chair Professorship Award, Ministry of Education (教育部第 19 屆國家講座，生物及醫農類科)
- 2014 Academician, Academia Sinica (中央研究院 院士)
- 2013 有庠科技獎 - 科技論文獎
- 2013-2017 Free-style Outstanding Research Project, MOST (自由型卓越學研計畫, 科技部)
- 2012 Published Taiwan's first "Science" full article.
- 2012 AEARU Distinguished Lecture (東亞研究型大學協會傑出講座)
- 2012 TWAS Prize in Biology (發展中世界科學會 生物學類獎)
- 2012 Hou Jindui Distinguished Honor Award (侯金堆傑出榮譽獎 — 基礎科學生物類)
- 2011-2013 Academic Summit Project, NSC (國科會攻頂計畫)
- 2010 「遠見」雜誌 - 選為中華民國建國百年「新台灣之光 100」
- 2009 The Fifty Scientific Achievements, NSC 50th anniversary (國科會 50 週年慶「50 科學成就」)
- 2008 Teco Award of Teco Technology Foundation (東元科技獎化工 / 生物 / 醫工領域)
- 2008 HuiSun Chair of National Chung Hsing University (中興大學蕙蓀講座)
- 2007 Distinguished Alumnus of National Chung Hsing University (中興大學傑出校友)
- 2007 Outstanding Scholar Award, Foundation for the Advancement of Outstanding Scholarship (傑出人才基金會傑出人才講座)
- 2007 Sun Yat-sen Academic Award (中山學術獎)
- 2007 Outstanding Contributions in Science & Technology, Executive Yuan (行政院傑出科技貢獻獎)
- 2007 Academic Award of Ministry of Education (教育部學術獎)
- 2007 Published Taiwan's first "Cell" paper
- 2004, 2010, 2013 Outstanding Research Award, National Science Council, Taiwan. (國科會傑出獎)

■代表論文:

- Shih HW, Wu CL, Chang SW, Liu TH, Lai JSY, Fu TF, Fu CC, Chiang AS* (2015) Parallel circuits control temperature preference in *Drosophila* during aging. *Nature Communications* 6, 7775.
- Shih CT*, Sporns O, Yuan SL, Su TS, Lin YJ, Chuang CC, Wang TY, Lo CC, Greenspan RJ, Chiang AS* (2015) Connectomics-based analysis of information flow in the *Drosophila* brain. *Curr Biol* 25, 1249-1258.
- Wu MC, Chu LA, Hsiao PY, Lin YY, Chi CC, Liu TH, Fu CC*, Chiang AS* (2014) Optogenetic control of selective neural activity in multiple freely moving *Drosophila* adults. *Proc Natl Acad Sci USA* 111, 5367-5372.
- Wu CL, Shih MFM, Lee PT, Chiang AS* (2013) An octopamine-mushroom body circuit

- modulates the formation of anesthesia-resistant memory in *Drosophila*. *Curr Biol* 23, 1-9
- Lin HH, Chu LA, Fu TF, Dickson BJ, Chiang AS* (2013) Parallel neural pathways mediate CO₂ avoidance responses in *Drosophila*. *Science* 340, 1338-1341.
 - Pai TP, Chen CC, Lin HH, Chin AL, Lai JSY, Lee PT, Tully T, Chiang AS* (2013) *Drosophila* ORB protein in two mushroom body-output neurons is necessary for long-term memory formation. *Proc Natl Acad Sci USA* 110, 7898-7903.
 - Chen CC, Wu JK, Lin HW, Pai TP, Fu TF, Wu CL, Tully T, Chiang AS* (2012) Visualizing long-term memory formation in two neurons of the *Drosophila* brain. *Science* 335, 678–685.
 - Lai JSY, Lo SJ, Dickson BJ and Chiang AS* (2012) Auditory circuit in the *Drosophila* brain. *Proc Natl Acad Sci USA* 109, 2607-2612.
 - Lee PT, Lin HW, Chang YH, Fu TF, Dubnau J, Hirsh J, Lee T and Chiang AS* (2011) Serotonin-mushroom body circuit modulating the formation of anesthesia-resistant memory in *Drosophila*. *Proc Natl Acad Sci USA* 108, 13794–13799.
 - Wu CL, Shih MF, Lai SY, Yang HT, Turner GC, Chen L, Chiang AS* (2011) Heterotypic gap junctions between two neurons in the *Drosophila* brain are critical for memory. *Curr Biol* 21, 848-854.
 - Chiang AS*, Lin CY, Chuang CC, Chang HM, Hsieh CH, Yeh CW, Shih CT, Wu JJ, Wang GT, Chen YC, Wu CC, Chen GY, Ching YT, Lee PC, Lin CY, Lin HH, Wu CC, Hsu HW, Huang YA, Chen JY, Chiang HJ, Lu CF, Ni RF, Yeh CY, Hwang JK (2011) Three-dimensional reconstruction of brain-wide wiring networks in *Drosophila* at single cell resolution. *Curr Biol* 21, 1-11.
 - Wu CL, Xia S, Fu TF, Wang H, Chen YH, Leong D, Chiang AS*, Tully T* (2007) Specific requirement of NMDA receptors for long-term memory consolidation in *Drosophila* ellipsoid body. *Nature Neurosci* 10, 1578-1586.
 - Lin HH, Lai JSY, Chin AL, Chen YC, Chiang AS* (2007) A map of olfactory representation in the *Drosophila* mushroom body. *Cell* 128, 1205-1218.