

## Hua Chai, M.D. Ph.D.

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### CERTIFICATION AND LICENSURE

2019 – present Medical Board of California  
2020 – present DEA License  
2023 - present American Board of Psychiatry and Neurology

### TRAINING

2019-2023 Resident Physician  
Psychiatry Residency Program: Research Track  
**University of California at Los Angeles, CA**

2023-2025 Fellow Physician  
Academic Geriatric Psychiatry Fellowship  
**University of California at Los Angeles, CA**

### EDUCATION

2005-2009 B.A. in Neuroscience  
**Amherst College, Amherst, MA**

2011-2019 Ph.D. in Neuroscience - September 2017  
M.D. - June 2019  
David Geffen School of Medicine  
Medical Scientist Training Program  
**University of California at Los Angeles, CA**

### HONORS AND AWARDS

2007-2009 Barry M. Goldwater Excellence in Education Scholarship: national.  
2013-2014 Jennifer S. Buchwald Graduate Fellowship in Physiology: departmental.  
2017 Eva Mary Kavan Prize for Excellence in Research on the Brain: institutional.  
2019 Edith and Carl Lasky Memorial Award: institutional.  
2024 American College of Neuropsychopharmacology Annual Meeting: Secretary Invited Guest.

### PROFESSIONAL ACTIVITIES

#### Service/Leadership

2011-2014 University of California Los Angeles MSTP: student coordinator for recruitment.  
2013-2014 Planning Committee for the Physiology Distinguished Lecture: graduate student representative.  
2013, 2018 UCLA David Geffen School of Medicine: interviewer.  
2014-2017 UCLA Neuroscience Graduate Program Retreat Planning Committee: member.  
2017-2019 UCLA MSTP Admission Committee: member.  
2019-2023 UCLA Psychiatry Residency Program Holistic Review Committee: member.  
2019-present UCLA internal guide for MSTP students on research opportunities in residency for all specialties: creator and organizer.  
2020-2022 UCLA Psychiatry Residency Program Recruitment Committee: member.  
2021-2023 UCLA Psychiatry Residency Program: Research Track Chief.

2022	UCLA Psychiatry Research Track Design Committee: member.
2022	UCLA Psychiatry Research Track Director Ad-hoc Evaluation Committee: member.
2023-2024	Archstone Geriatric Psychiatry Learning Collaborative: member.
2024	UCLA Psychiatry Residency Reorganization Workgroup: member.

### **Mentoring/Teaching**

2011-2012	Peers for Progress: mentor.
2012, 2018	UCLA David Geffen School of Medicine: pre-med mock interviewer.
2013-2020	Amherst College Pathways Program: mentor.
2014-2017	UCLA Brain Awareness Week: STEM career panelist.
2016-2017	UCLA Department of Physiology: research mentor for an undergraduate student.
2017	Westwood Charter Science Slam: lab session leader.
2018-2019	UCLA David Geffen School of Medicine Teaching Fellowship in Doctoring 2: fellow.
2020-2023	UCLA David Geffen School of Medicine Med Mentors.
2021-2023	UCLA Big Sib Lil Sib.
2021-2023	UCLA Road to Residency: mock-interviewer.
2023-present	UCLA-Caltech Medical Scientist Training Program: Near-Peer Advisor.
2024-2025	UCLA Department of Physiology: research mentor for an undergraduate student.
2024	UCLA-Caltech Medical Scientist Training Program Annual Conference: invited panelist.

### **PROFESSIONAL MEMBERSHIPS**

2012-2019	American Medical Student Association: member
2019-present	American Medical Association: member
2019-present	American Psychiatric Association: member
2019-present	Southern California Psychiatric Society: member
2023-present	American Association for Geriatric Psychiatry: member
2024-present	American Delirium Society: member

### **RESEARCH EXPERIENCES**

Summers 2007-2008	Summer Undergraduate Research Fellow Advisor: Matthew J. Farrer Ph.D. (now at University of British Columbia) <b>Mayo Clinic Jacksonville, FL</b>
August 2008 – May 2009	Undergraduate Thesis Student Advisors: Daniel L. Chase Ph.D. and Stephen A. George Ph.D. <b>University of Massachusetts Amherst and Amherst College, MA</b>
July 2009 – April 2011	Research Technician Advisors: Frederick W. Alt Ph.D. and Bjoern Schwer M.D. Ph.D. (now at University of California San Francisco) <b>Boston Children's Hospital, MA</b>
Summer 2012	Rotation Student Advisor: Baljit S. Khakh Ph.D. <b>University of California at Los Angeles, CA</b>
July 2013 – June 2017	Graduate Student

Advisor: Baljit S. Khakh Ph.D.  
**University of California at Los Angeles, CA**

Nov 2018 – Feb 2019      Medical Student Researcher  
Advisor: Helen Lavretsky M.D. M.S.  
**University of California at Los Angeles, CA**

March 2021 – June 2023      Psychiatry Research Track Resident  
Advisor: Baljit S. Khakh Ph.D.  
**University of California at Los Angeles, CA**

July 2023 – present      Academic Geriatric Psychiatry Fellow  
Advisor: Baljit S. Khakh Ph.D.  
**University of California at Los Angeles, CA**

#### PEER-REVIEWED PUBLICATIONS

1. Vilariño-Güell C, Soto AI, Lincoln SJ, Yahmed SB, Kefi M, Heckman MG, Hulihan MM, **Chai H**, Diehl NN, Amouri R, Rajput A, Mash DC, Dickson DW, Middleton LT, Gibson RA, Hentati F, Farrer MJ (2009). *ATP13A2* variability in Parkinson's disease. *Human Mutation*, 30(3): 406-10. PMCID: PMC2650009.
2. Vilariño-Güell C, **Chai H**, Keeling BH, Young JE, Rajput A, Lynch T, Aasly JO, Uitti RJ, Wszolek ZK, Farrer MJ, Lin SC (2009). MEIS1 p.R272H in familial restless legs syndrome. *Neurology*, 73(3): 243-5. PMCID: PMC2715576.
3. Schwer B, Schumacher B, Lombard DB, Xiao C, Kurtev MV, Gao J, Schneider JI, **Chai H**, Bronson RT, Tsai LH, Deng CX, Alt FW (2010). Neural sirtuin 6 (Sirt6) ablation attenuates somatic growth and causes obesity. *Proc Natl Acad Sci USA*, 107(50): 21790-4. PMCID: PMC3003110.
4. Boboila C, Oksenysh V, Gostissa M, Wang JH, Zha S, Zhang Y, **Chai H**, Lee CS, Jankovic M, Saez LM, Nussenzweig MC, McKinnon PJ, Alt FW, Schwer B (2012). Robust chromosomal DNA repair via alternative end-joining in the absence of X-ray repair cross-complementing protein 1 (XRCC1). *Proc Natl Acad Sci USA*, 109(7): 2473-8. PMCID: PMC3289296.
5. Shi W, Bain AL, Schwer B, Al-Ejeh F, Smith C, Wong L, **Chai H**, Miranda MS, Ho U, Kawaguchi M, Miura Y, Finnie JW, Wall M, Heierhorst J, Wicking C, Spring KJ, Alt FW, Khanna KK (2013). Essential developmental, genomic stability, and tumour suppressor functions of the mouse orthologue of hSSB1/NABP2. *PLoS Genetics*, Feb; 9(2):e1003298. PMCID: PMC3567186.
6. Xu J, **Chai H**, Ehinger K, Egan TM, Srinivasan, R, Frick M, Khakh BS (2014). Imaging P2X4 receptor subcellular distribution, trafficking and regulation using P2X4-pHluorin. *Journal of General Physiology*, 144(1): 81-104. PMCID: PMC4076521.
7. Srinivasan R\*, Huang B\*, Venugopal S, Johnston A, **Chai H**, Zeng H, Golshani P, Khakh BS (2015). Ca<sup>2+</sup> signaling in astrocytes from IP3R2<sup>-/-</sup> mice in brain slices and during startle responses in vivo. *Nature Neuroscience*, 18(5): 708-717. PMCID: PMC4429056. \*co-first authors
8. Srinivasan R\*, Lu TY\*, **Chai H**\*, Xu J, Huang BS, Golshani P, Coppola G, Khakh BS (2016). New transgenic mouse lines for selectively targeting astrocytes and studying calcium signals in astrocyte processes in situ and in vivo. *Neuron*, 92(6): 1181-1195. PMCID: PMC5403514. \*co-first authors
9. **Chai H**\*, Diaz-Castro B\*, Shigetomi E, Monte E, Octeau JC, Yu X, Cohn W, Rajendran PS, Vondriska TM, Whitelegge JP, Coppola G, Khakh BS (2017). Neural circuit-specialized astrocytes: transcriptomic, proteomic, morphological and functional evidence. *Neuron*, 95(3): 531-549. PMCID: PMC5811312. \*co-first authors

10. Oceau JC, **Chai H**, Jiang R, Bonanno S, Martin KC, Khakh BS (2018). An optical neuron-astrocyte proximity assay at synaptic distance scales. *Neuron*, 98(1): 49-66. PMCID: PMC5916847.
11. Xiao N, **Chai H**, Omoloja A (2021). Substance use among adolescents and young adults with chronic kidney disease or kidney failure. *Pediatric Nephrology*, 36(11): 3585-3593. PMID: 33686466.

#### NON-PEER-REVIEWED PUBLICATIONS

1. **Chai H**, Pandey V, Ollivier M, Gutierrez SL, Bhattacharya O, Wohlschlegel JA, Khakh BS (2024). (Abstract) Multiscale Exploration of How Striatal Astrocytes Change with Age. ACNP 63rd Annual Meeting: Poster Abstracts P609-P914. *Neuropsychopharmacol.* 49 (Suppl 1), 418-594.

#### PRESENTATIONS

1. Functional and molecular investigation of physiological astrocyte diversity. Given March 3, 2017 at UCLA Synapses to Circuits (institutional neuroscience seminar series).
2. Neural Circuit-Specialized Astrocytes. Given June 13, 2017 at UCLA thesis defense.
3. Neural Circuit-Specialized Astrocytes. Given September 8, 2017 at annual UCLA MSTP conference.
4. Unraveling of the Mind and COVID-19. Given January 22, 2021 at Psychiatry Residency Program Consult-Liaison lunch talk series.
5. Holistic Review for Research Track aka Science for Science. Given September 17, 2021 at UCLA Psychiatry Residency Program research lunch talk series.
6. Diazepam binding inhibitor: A(nother) protein with unknown function in astrocytes. Given January 14, 2022 at UCLA Psychiatry Residency Program research lunch talk series.
7. Neural Circuit-Specialized Astrocytes. Given May 12, 2022 at lab of Blanca Diaz Castro at University of Edinburgh.
8. Seeing Stars: Astrocytes in Delirium. Given February 24, 2023 at UCLA Psychiatry Residency Program research lunch talk series.
9. Holistic Review for Research Track. Given August 01, 2023 at UCLA Psychiatry Residency Program research lunch talk series.
10. Anxiety in Parkinson's Disease. Given March 4, 2024 at UCLA Geriatric Psychiatry Grand Rounds.
11. Anxiety in Parkinson's Disease. Given May 30, 2024 at Los Angeles County Department of Mental Health Older Adult Consultation Medical Doctor's Seminar Series.
12. Unveiling Astrocyte Functions in Health and Disease. Given November 8, 2024 at University of Southern California Alzheimer's Disease Research Center Research and Education Component Seminar Series.

#### POSTERS, NOTABLE

1. **Chai H**, Diaz-Castro B, Shigetomi E, Coppola G, Khakh BS. Functional and molecular investigation of physiological astrocyte diversity. Gordon Research Conference on Glial Biology: Functional Interactions among Glia & Neurons, Ventura, California, 1-6 March 2015.
2. **Chai H**, Diaz-Castro B, Coppola G, Khakh BS. Functional and molecular investigation of astrocyte physiological diversity. Gordon Research Seminar and Conference on Glial Biology: Functional Interactions among Glia & Neurons, Ventura, California, 4-10 March 2017.
3. **Chai H**, Pandey V, Ollivier M, Gutierrez SL, Bhattacharya O, Wohlschlegel JA, Khakh BS. Multiscale exploration of how striatal astrocytes change with age. Annual Meeting of the American College of Neuropsychopharmacology, Phoenix, Arizona, 8-11 December 2024.

#### LANGUAGES (per U.S. State Department Language Proficiency Definitions)

English: Native Proficiency

Mandarin: Writing (Limited Working Proficiency), Reading (Minimum Professional Proficiency)

Speaking (Full Professional Proficiency)

Japanese: Reading (Elementary Proficiency), Speaking (Elementary Proficiency)