Chunyu Liu, Ph.D.

Professor

Department of Psychiatry and Behavioral Sciences,
Department of Neuroscience and Physiology
Research Advisory Committee Chair
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ResearcherID: G-7561-2012
https://publons.com/author/321349
NIH Bibliography: My Bibliography - NCBI (nih.gov)
shorturl.at/joHXY
NSF ID: 000820124
NIH: CHUNYU
Scopus H-index: 41 Scopus preview - Liu, Chunyu - Author details - Scopus
Google H-index 47 Chunyu Liu - Google Scholar

Research Area

Methods: Psychiatric genetics; genomics and epigenomics; bioinformatics; psychological stress; iPSC/organoid cellular models

Questions: Molecular bases of psychiatric disorders and human behavioural traits

Education

Ph.D. in Genetics 1998
Hunan Medical University, National Laboratory of Medical Genetics of China, P.R. China
Dissertation: *Integrated data analysis for cloning and analyzing the novel human genes related to diseases*
Advisor: Jiahui Xia

M.S. in Cell Biology 1994
Xiamen University, P.R. China
Thesis: *Identification of hereditary variation of hybridization between domesticated silkworm and eri silkworm by RAPD assay*
Advisor: Yuanlin Chen

B.S. in Biochemistry 1991
Wuhan University, P.R. China
Advisor: Xiaojun Ma

Postdoctoral Training

Department of Psychiatry, the University of Chicago, USA 1998- 2000
Mentor: Elliot S. Gershon, M.D.

Professional training

Faculty Leadership Essentials for Academic Development (LEAD) course, SUNY Upstate Medical University. 2021-2022

Building Excellent Skills for Teaching (BEST) workshop, SUNY Upstate Medical University. 2021-2022

Professional Experience

Professor (tenured) 2017- present
Department of Psychiatry, SUNY Upstate Medical University, Syracuse, NY, USA
Associate Professor (tenured in 2016) 2011-2017
Department of Psychiatry, University of Illinois at Chicago, USA
Adjunct Professor 2014-present
State Key Laboratory of Medical Genetics, School of Life Science, Central South University, Changsha, China
Visiting Professor 2017-2020
School of Psychology, Shaanxi Normal University, Xi'an, China
Assistant Professor 2005- 2011
Department of Psychiatry and Behavioral Neuroscience, the University of Chicago, USA
Research Associate (Assistant Professor) 2003- 2005
Department of Psychiatry, the University of Chicago, USA
Research Associate 2000- 2003
Department of Psychiatry, the University of Chicago, USA
Research Assistant & Research Associate 1994- 1998
Hunan Medical University, National Laboratory of Medical Genetics of China, P.R. China

Registered Consultant at AlphaSights; GLG 2021 -

Completed Research Grants

1R01MH110920-01 (MPI: Chunyu Liu (Contact), Kevin P. White) 07/01/2016 - 06/30/2020
NIMH $2,055,000 (total) 1 calendar months
1/2 Measuring translational dynamics and the proteome to identify potential brain biomarkers for psychiatric disease

1 U01 MH103340-01 (MPIs: Chunyu Liu (Contact), Kevin White)
NIMH $1,100,000 (each year) 07/01/2014 – 06/31/2017
Genetic variants affect brain gene expression and risks of psychiatric disorders 2.4 calendar months

1R21AG045789-01A1 (MPIs: Elliot Gershon (Contact), Chunyu Liu, Geoff Faulkner)
NIA $150,000 07/01/2014 - 06/30/2017
Somatic Mutations in Brain in Alzheimer's Disease 0.6 calendar months

1P50AA022538-01 (PI: Subhash Pandey)
NIAAA $1,137,842 07/01/2014 – 06/30/2019
Center for Alcohol Research in Epigenetics. 0.6 calendar months

NIH 1R01MH094358-01A1 (PI: Rajiv P Sharma) 2012- 2017
The H3K9 Histone Switch 'Levels' in Schizophrenia Blood and Brain 0.6 calendar months

1R01ES024988 (PI: Chunyu Liu)
NIEHS $325,549 10/01/2014 – 09/30/2017
Integrating epigenomic maps to predict regulatory functions of genetic variants 1.8 calendar months

NIH 1R01MH094483-01 (MPIs: Craig, Edenberg, Gershon, Kelsoe, Nurnberger, and Schork) 2012- 2015
The Bipolar Genome Study

NIH R01 MH080425-01 (direct costs $1,720,459) 2007- 2012
The Genetic and Genomic Study of MicroRNA in Bipolar and Schizophrenia, PI: Chunyu Liu

NIH R33 MH083521 ($132,107) 2010- 2012
*A Human-Specific Gene (G72/G30) in Transgenic Mice,*PI: Chunyu Liu

NIH R01 MH078151-01A1 ($285,000) 2007- 2010
Genomic Association Study of Bipolar Disorder, PI: John Kelsoe

NIH R21 MH083521-01 (direct costs $198,057) 2008- 2010
*A Human-Specific Gene (G72/G30) in Transgenic Mice,*PI: Chunyu Liu

NIH R01 MH61613-05A1 ($1,221,410) 2005- 2010
Genetic Linkage Studies in Bipolar Disorder, PI: Elliot Gershon

Brain Research Foundation Research Seed Grant ($24,949) 2008- 2009
Genetic Mapping of DNA Methylation Regulators in Human Cerebellum, PI: Chunyu Liu

NIH R01 MH65560-01 ($1,789,320) 2002- 2007
Fine Genomic Mapping of 13q32 in Bipolar Disorder, PI: Elliot Gershon

Brain Research Foundation Research Seed Grant ($22,166) 2006- 2007
Identification of Cis-regulatory Elements for Genes Expressed in Human Brain, PI: Chunyu Liu

Brain Research Foundation Research Seed Grant ($25,000) 2005- 2006
Neurogenesis and Plasticity in Bipolar Disorder, PI: Chunyu Liu

NARSAD Young Investigator Award ($60,000) 2004- 2006
Systematic Association Study of Candidate Genes in Bipolar Disorder, PI: Chunyu Liu

NARSAD Young Investigator Award ($60,000) 2001- 2003
Mutation Screening and Linkage Disequilibrium Analysis of Bipolar Disorder on 13q32
PI: Chunyu Liu

Current Research Grant Support

U01 MH122591-01 (PI: Chunyu Liu)
.6 Calendar Months
NIH $99,476 04/01/20 -03/31/2025
1/3 High-resolution mapping of cell type-specific DNA (hydroxy)methylation in the human brain during postnatal development and in psychiatric disease

• Single-base-pair resolution maps of DNA (hydroxy)methylation will be generated in sorted inhibitory and excitatory neurons at key time points of postnatal brain development as well as in the brains of psychiatrically normal individuals and patients with schizophrenia and bipolar disorder.
• Dr. Liu will coordinate data processing and perform analyses including QTL mapping, causal relationship, and GWAS integration.

1U01MH116489 (PI: Dan Geschwind) 8/17/2018 – 4/30/2023
NIMH $107,680 a year (for subward) **0.5 calendar month**
2/2 Discovery and validation of neuronal enhancers associated with the development of psychiatric disorders.

R01MH122140 (PI: Chunyu Liu)
1.6 Calendar Months
NIH $494,902 a year 02/01/2022 - 03/30/2027
Gene Expression Regulation in Brains of East Asian, African, and European Descent Explains Schizophrenia GWAS in Diverse Populations
•This study aims to learn whether well-known racial differences in schizophrenia genetic risks are due to different risk genes between populations or due to the same risk genes represented by different genetic variants by studying genetic regulators of brain gene expression.
• Dr. Liu will design the study, supervise data production and analysis, and organize publication and data release.

31871276 (PI: Chunyu Liu)
National Natural Science Foundation of China 190,000 RMB (~$30,000) a year 01/01/2019- 12/31/2022
Gene expression regulatory networks and master regulators of the schizophrenia risk genes.
No salary recovery

Pending

Center for Architecture of the Spliced Transcriptome in Human Brain Cells (CAST).
Project Number: 1UM MH130974-01
Name of PD/PI: Liu
Project/Proposal Start and End Date: 07/01/22–06/30/2027
Total Award Amount: $23,817,271

An Atlas of RNA Elements and Their Regulatory Network Associated with ADRD
Name of PD/PI: Xiajun Dong
Primary Place of Performance: SUNY Upstate Medical University, New York State
Project/Proposal Start and End Date: 07/01/22 – 06/30/2027
Total Award Amount: $407,150

Honors and Awards

Changjiang Scholar, Ministry of Education, China 2017
Chair's Award for Most Outstanding Teaching 2007-2008 2008
Department of Psychiatry and Behavioral Neuroscience, the University of Chicago
Southwest Florida Investigator Award 2002 2003
NARSAD Research Partners Program, National Alliance for Research on Schizophrenia and Depression, New York, USA
National Outstanding Doctoral Dissertation Award 2000
Ministry of Education of P. R. China
Cheung Kong Scholars Achievement Award 1999
Ministry of Education of P. R. China

Professional Organizations

American College of Neuropsychopharmacology (Member since 2014)
(Education and Training Committee 2022 -)
Genetics Society of China
American Society of Human Genetics
Society of Biological Psychiatry
International Society of Psychiatric Genetics
(Global Diversity Taskforce, Committee Chair 2015 - 2021)
(IDEA committee 2022 -)
China International Exchange and Promotive Association for Medical and Health Care

Professional Service

Journal Academic Editor

PLoS One (2011 -)
Frontiers in Behavioral and Psychiatric Genetics (2014 -)
Genetics & Epigenetics (2014 -)
Journal of Psychiatry and Brain Science (2016 -)
American Journal of Medical Genetics, Part B (2017 -)

Ad hoc Reviewer

Genome Research
Molecular Psychiatry
Nature Communication
The American Journal of Human Genetics
The American Journal of Psychiatry
The New England Journal of Medicine
Biological Psychiatry
Schizophrenia Bulletin
Human Molecular Genetics
Nucleic Acids Research
Archives of General Psychiatry
Psychiatry Research
BioTechniques
Proteins: Structure, Function and Bioinformatics
Neuroscience Letters
Neurological Sciences
International Journal of Molecular Sciences
Progress in Neuro-Psychopharmacology & Biological Psychiatry
PLoS One
Bipolar Disorders
Journal of Psychopharmacology
BMC Research Notes
Journal of Cellular and Molecular Medicine

Neuroscience & Biobehavioral Reviews
Gene
Neurobiology of Disease
Pharmacogenomics
Frontiers in Neuroscience
Science

Grant Review

SUNY Upstate Medical University, Research Advisory Committee. 2018 - present
Permanent member: BGES 2016 - 2020

Ad hoc

Veternan Affair: Special Emphasis Panel on Million Veteran Program (SPLM) Subcommittee 2017
NIH Study section GHD 2016
NIH Special Emphasis Panel/Scientific Review Group 2010/01 ZRG1 BDCN-N (02); 2012/10 ZRG1 F08-Q (20); 2015 ZMH1-ERB-C; 2015 ZRG1 PSE-N
NIH Study section F08, 2012- 2013
NIH Study section MESH-BBBP-J 2014; BGES 2014, 2015;
NIH Study section GGG 2015
NIH Study section ZES1 2015
Mail reviewer for NIH 2013 ZRG1-BCMB-A 51 R.
ZRG1 MDCN-P (57) 2020
NIDA Core and Research Center of Excellence Grant Program (P30/50) 2020
NIH ZNS1 SRB-M (06) 2021
NIH Transformative Research Award (TRA) 2021
VA Mental Health & Behavior Sciences-A (MHBA) 2021
NIH ZRG1 PSE-H (70) R 2022
Medical Research Council (MRC, UK), Career Development Award Fellowship, NMHB Research Grant Ontario Mental Health Foundation (Canada), Innovational Research Incentives Scheme Vidi, WOTRO Science for Global Development (Netherlands), National Natural Science Foundation (China), French Funding Organization (France). PSI Foundation (Canada), Israel Science Foundation (Israel), Hong Kong Innovation and Technology Commission (China).

UIC, Fall 2012 Chancellor's Graduate Research Fellowship reviewer

Sessions Chaired at National and International Conferences/Symposia

1) Chair, Panel. Genetics of Intermediate Phenotypes in Psychosis. 60th American College of Neuropsychopharmacology. Annual Meeting. December 5-8, 2021.
2) Chair: PsychENCODE Updates: Discovery of Functional Elements for Psychiatric GWAS Signals. 2020 Virtual World Congress of Psychiatric Genetics. Virtual. October 16 – 22, 2020.
3) Chair, Education Session: microRNA: genetics, genomics and its relevance to psychiatry. XXIV. World Congress of Psychiatric Genetics. Jerusalem, Israel, Oct 28- Nov 3, 2016
4) Chair, Symposium: From Gene Expression to Disease Association. XXIV. World Congress of Psychiatric

Genetics. Jerusalem, Israel, Oct 28- Nov 3, 2016

5) Co-chair, Symposium: Progress in Psychiatric Genetics in China. XXIV. World Congress of Psychiatric Genetics. Jerusalem, Israel, Oct 28- Nov 3, 2016
6) Chair, Symposium: A Small Window to Psychiatric Genetics in China. XXII World Congress of Psychiatric Genetics. Copenhagen, Denmark, October 12-16, 2014
7) Discussant, Symposium: Towards Translational Psychiatry: From Genomic Discoveries to Prediction of Treatment Response. XXII World Congress of Psychiatric Genetics. Copenhagen, Denmark, October 12-16, 2014
8) Moderator, Chinese Psychiatric Genetics Summit, Changsha, Hunan, April 2-3, 2014
9) Chair, Symposium: Integration of Genomics, Epigenomics and Genetics for a Biological Understanding of Psychiatric Diseases. Society of Biological Psychiatry. Philadelphia, May 3-5, 2012.
10) Chair, Symposium: Functional Genomics in Post-GWAS of Neuropsychiatric Disease. XIX World Congress of Psychiatric Genetics. Washington DC, Sept 10-14, 2011.
11) Chair, Symposium: DNA Methylation in Human Brain and Neuropsychiatric Diseases. XVII World Congress of Psychiatric Genetics. San Diego, November3-8, 2009.
12) Co-chair, Workshop: Critical Assessment of Massive Data Analysis (CAMDA 2009). Chicago. October 5-6, 2009.
13) Chair, Symposium: microRNA in Human Brain and Neuropsychiatric Diseases. XVI World Congress of Psychiatric Genetics. Osaka, Japan. October 11-15, 2008.
14) Co-chair, Symposium: Functional Studies of DAOA. 63rd Annual Meeting of Society of Biological Psychiatry. Washington DC, USA. May 1- 3, 2008.

Service to the community

Faculty Judge for the 2011, 2012 UIC Student Research Forum, College of Medicine
Postdoc-Faculty Speed Mentoring Program
Judge for the 2011 UIC Research Forum
ACNP Education and Training Committee, 2022-

Teaching Experience

Course Developer and Instructor

Nanocourse: GS647-015 Nanocourse: Computer ABC for Biologists 2019-
Graduate School, SUNY Upstate Medical University

Programming for Modern Biomedical Research (BIOS 20250) 2007- 2010
Biological Sciences Collegiate Division, the University of Chicago

Course Lecturer

N631: Topics in Neuroscience (Genetics and epigenetics), Upstate 2022 -

PATH 512 Molecular Epidemiology And Biomarkers Of Disease: 2012
One lecture about microarray data analysis, University of Illinois at Chicago

GCLS 504 Introduction to Research Methods: two lectures about microarray 2011 – 2012
Graduation Education in Medical Sciences, University of Illinois at Chicago

Psychiatric Genetics Training Program course: Bioinformatics and Genomics 2011 – 2013
Department of Psychiatry, the University of Chicago

Multidisciplinary Approaches to Psychiatric and Behavioral Genetics (PSYC 46900) 2003- 2009
Department of Psychiatry, the University of Chicago
Residency Training Program in Psychiatry: Neurobiology sequence 2007- 2009
Department of Psychiatry, the University of Chicago Medical Center

Research Mentor

Visiting Scientists

- Weihong Kuang, M.D., Associate Professor, Department of Psychiatry, West China Hospital of Sichuan University, Chengdu, P.R. China, June, 2007 - June, 2008
- Wei Luo, M.D., Ph.D., Associate Professor, Department of Neurology, Zhejiang University, 2nd affiliated hospital, Hangzhou, P.R. China, Aug, 2008 - Aug, 2009
- Ran Zhao, M.D., Ph.D., Professor, Department of Psychology, Central University of Finance and Economics, Beijing, P.R. China, Sept, 2011- Sept, 2012
- Zhengmao Hu, Ph.D. Associate Professor, Central South University, Changsha, China, Jan, 2013- Dec, 2013
- Jing Peng, M.D., Ph.D., Associate Professor, Central South University, Changsha, China, Dec, 2012- Oct, 2013
- Ning Yuan, M.D., Associate Professor, Hunan Brain Hospital, Changsha, China, 2016-2017
- ShunKai Lai, Ph.D. Candidate, Jinan University, Guangzhou, China, Feb – August, 2019
- Shishi Ming, Ph.D. Candidate, Central South University, Changsha, China, Oct 2019- Sept 2020
- Zhi Xu, Associate Professor, SouthEast University, Nanjing, China, Nov 2019 – Oct 2020

Postdoctoral Fellows

- Jiajun Shi, Ph.D. Oct. 2005 –Oct. 2008
- Lijun Cheng, Ph.D. Oct. 2005 –Oct. 2010
- Hongmin Zhu, Ph.D. Sept 2006 – Sept 2008
- Dandan Zhang, Ph.D. Nov. 2007.11- August, 2010
- Fabio Pibiri, Ph.D. Feb, 2009 –May, 2011
- Qi Chen, Ph.D. July, 2008–June, 2011
- Chao Chen, Ph.D. July, 2011- 2014
- Annie Shieh, Ph.D. August 2015 – 2018
- Shan Jiang, Ph.D. November 2015 - 2016
- Ramu Vadukapuram, Ph.D. 2016 - 2019

Graduate Students

Tang Haiyan, Meng Qingtuan, Bin Langman, Yan Jing, Central South University, 2014 – 2015
Meng Qingtuan, Yan Xia, Chuan Jiao, Kangli Wang, Central South University, 2015 – 2019
Cuihua Xia, Rujia Dai, Yi Jiang, Chaodong Ding, Central South University, 2015 – 2020

Visiting Graduate Students

Yongjun Wang, Ph.D. 2014-2015.
Jinsong Tang, Ph.D. 2007-2008, Thesis: MRI Study on Brain Neuronetwork Connections in Early Onset Schizophrenia and DNA Copy Number Variations in Major Psychosis
Chao Chen, Ph.D. 2008- 2011, Thesis: Evaluation of Six Batch Adjustment Methods in

Expression Microarray Data and Application of Gene Co-expression Network in Schizophrenia

Undergraduate Students

Christopher Armoskus, the University of Chicago, 2008
Karishma Furtado, the University of Chicago, 2009
Raj Patel, Loyola University, 2009
Lewie Zeng, the University of Chicago, 2009 - 2010
Kevin Zhang, the University of Chicago, 2009 - 2012
2012 Conte Center Summer Research Program
Ashwin Nayak, University of Illinois at Urbana-Champaign,
2012 Conte Center Summer Research Program
Alex Merlo, University of Illinois at Chicago, 2012
Noah Stephen Curtis, University of Illinois at Chicago, 2012
Lindsey Jay, University of Chicago, 2016
2016 Conte Center Summer Research Program

Pre-College Research Student Advisees, Illinois Mathematics and Science Academy

Ashley Ro, Nikita Veera, Shannon Tai, Kelly Yom, 2009 -2011

Summer interns

Jaden Tian (WashU), Zhanlin Chen (Yale), Lindsey Jay (U of C), Contessa Norris (Purdue) 2016
Basia Walenkiewicz (SUNY SURF program) 2018
Xiangyu Liao (UC Davis), Dina Silvestri (Syracuse University) 2021

Students that won awards:

Yan Xia (2016, ISPG Hugh Gurling Memorial Award)
Yan Xia (2017, ASHG Charles J. Epstein Awards)
Yan Xia (2017, ACGA Outstanding Graduate Student Presentation Award)
Chadong Ding (2018, ACGA Outstanding Graduate Student Presentation Award)
Rujia Dai (2018, ISPG Hugh Gurling Memorial Award)
Chuan Jia (2018, ASHG Charles J. Epstein Trainee Awards for Excellence in Human Genetics Research, Semifinalists)
Yu Chen (2021, ISPG Hugh Gurling Memorial Award)
Yu Chen (2021, ASHG Reviewer's Choice Award)

Current students at SUNY Upstate Medical University

Ph.D. candidates

- Rujia Dai (2019-)
- Gayathri Ganesh (2022 -)
- Yu Wei (2022 -)

MD/PhD candidates

- Tatiana Mikhailova (2022 -)

Extracurricular Education Program Created

BioMedical Programming Club: Biological Sciences Collegiate Division, the University of Chicago.

2007- 2010

Invited Presentations

1. Genetics and brain epigenetics of psychiatric disorders and human behavior. University of Connecticut. Animal Science Seminar. Sept 10, 2021. Online.
2. PsychENCODE and Psychiatric Genetics. WCPG. PGC Day. Online. Oct 12-14, 2021.
3. Basic Science Research of Psychiatry. Keynote speaker for the Annual meeting of Society of Basic Theory in Chinese Medicine. Online. Nov 3, 2020.
4. Functional Annotation of GWAS Findings in Psychiatric Disorders. Program in Quantitative Genomics Seminar. Harvard School of Public Health. Online. Nov 17. 2020.
5. Genetics and Epigenetics of Drug Response. SUNY Upstate Medical University, Department of Psychiatry. Grand Round. Feb 7, 2019
6. Studies of Genetics and Epigenetics of Drug Response. The University of Chicago HongKong Center. April 15, 2019
7. Open Science and Big Data. Zhejiang University. Hanzhou, China April 21. 2019.
8. Studies of Genetics and Epigenetics of Drug Response. Hunan Society of Psychiatrist 2019 Annual Meeting. Changsha, China, June 1st 2019
9. Current Psychiatric Genetics, Epigenetics, and Cellular Models. Chinese Society of Psychiatry 2019 Annual Meeting, Nanjing, China. August 29-31, 2019.
10. Psychiatric Genetics, Epigenetics, and Cellular Models in Coming Years. Beijing Normal University. Beijing China, Sept 6, 2019.
11. Psychiatric GWAS, PsychENCODE, and After. University of Texas at Houston. Oct 4th. 2019
12. Multi –omics of psychiatric disorders, SUNY Upstate Medical University, 18th annual Biomedical Sciences Retreat on September 11, 2018, Welch Allyn in Skaneateles, NY, USA
13. Aproaching Psychiatric Genetics. SURF Reseasrch Seminar, SUNY Upstate Medical University, June 28th, 2018, Syracuse, NY, USA
14. Precision Medicine on DSM5-based Psychiatric Disorders. 2018 Annual Sino-American Convention for the Diagnosis and Treatment of Major Mental Illnesses. May 25th, 2018, Beijing, China
15. Updates on PsychENCODE - a path to functional interpretation of GWAS signals. The Fifth Chinese Psychiatric Genetics Summit, Suzhou Mental Health Hospital, May 17th, 2018, Suzhou, Jiangsu, China.
16. Ten Years of Psychiatric GWAS and After. Vanderbilt Genetics Institute. Feb 21, 2018. Nashville, Tennessee. USA
17. Psychiatric GWAS and Clinical Implications. SUNY Upstate Psychiatry Grand Round. March 1, 2018. Syracuse, New York. USA
18. From Genetics to Regulatory Networks Underlying Psychiatric Disorders. Beijing Pediatric Research Institute. June 15, 2017. Beijing, China.
19. Brain Functional Annotation of Genetic Variants/Mutations. Xiangya International Summit of Pediatric Neurology. June 10, 2017. Changsha, China
20. Current Genetics of Schizophrenia from phenotype to gene, and drug targets. Xiangya Workshop on Schizophrenia. April 21, 2017. Changsha, China
21. Epigenetics of Psychiatric Disorders. 50th Winter Conference on Brain Research. January 28- Feb 2, 2017. Big Sky, Montana.

22. Coexpression Network Analyses Identify Regulatory Systems Associated With Psychiatric Disorders. American College of Neuropsychopharmacology Panel: Using Human Genetics GWAS and Expression Data to Drive Discovery. Dec 4-8, 2016. Hollywood, Florida,
23. From gene expression regulation networks to genetic association of psychiatric disorders. 14th Annual CBC Symposium. November 11, 2016. Chicago.
24. GWAS of Psychiatry: the told and untold. Retreat of the T32 Training Program. The University of Chicago. April 15, 2016. Chicago
25. Progress of genetics and epigenetics of psychiatric disorders. Forum for Development and Innovation of Mental Health Research. Huilongguan Hospital. May 8-9, 2015. Beijing, China.
26. Genetics and epigenetics of psychiatric disorders, today and future. Kangning Mental Hospital. May 7, 2015. Shenzhen, China.
27. Research progress of genetics and epigenetics of psychiatric disorders. Hunan Mental Hospital. April 30, 2015. Changsha, China.
28. Circadian rhythms of DNA methylation and gene expression. Global Chinese Congress of Genetics. October 29 to November 1st, 2014. Changsha, Hunan, China
29. Somatic mutation in Alzheimer's brain. Forum of Neuronal Circuitry of Emotion and Memory. November 8-9, 2014. Changsha, Hunan, China
30. De novo mutations in neuropsychiatric disorders. Xiangya Forum of Pediatric Neurology. November 8-9, 2014. Changsha, Hunan, China
31. Current psychiatric genetics and future perspective. Society of Chinese Traditional Medicine. August 21-23, 2014. Hanzhou, Zhejiang, China
32. Brain expression QTLs and GWAS signals of psychiatric diseases. International Conference on Functional and Comparative Genomics & Pharmacogenomics, November 12-14, 2013. North Shore, Chicago
33. Current genetics of Alzheimer's diseases. Neuropsychiatry Forum. July 6th, 2013. 148th Hospital. Zibo, Shangdong, China
34. Brain molecular QTL mapping and GWAS of psychiatric diseases, Symposium at Society of Biological Psychiatry, 68th Annual Scientific Convention, May 16-18, 2013. San Francisco, California
35. Sexually dimorphic DNA methylation sites are conserved across human brain and blood, Symposium at Society of Biological Psychiatry, 68th Annual Scientific Convention, May 16-18, 2013. San Francisco, California
36. Integrate genetics, epigenetics and genomics to understand psychiatric disorders. Psychiatry Institute Neuroscience Seminar. June 18th, 2012. University of Illinois at Chicago.
37. Brain eQTLs and function-based GWAS of bipolar disorder identified novel disease risk genes. American College of Neuropsychopharmacology Panel: Beyond genome-wide association studies -- new approaches to risk of psychiatric illness Dec 4-8, 2011. Waikoloa, Hawaii
38. Genetics of gene expression regulation and bipolar disorder. August 21, 2011. Beijing University. 6th Mental Health Hospital. Beijing, China
39. Genetics of gene expression regulation and bipolar disorder. March 21, 2011. Anschutz Medical Campus, University of Colorado, Colorado.
40. Genetics and epigenetics of schizophrenia and bipolar disorder. Nov. 24, 2009. Fudan University, State Key Laboratory of Genetic Engineering, Shanghai, China

41. Genetics and epigenetics of schizophrenia and bipolar disorder. Nov. 19, 2009. Kunming Primate Research Center, Chinese Academy of Sciences, Kunming, China
42. Current genetics and epigenetics of schizophrenia and bipolar disorder. Nov. 23, 2009. Wenzhou Medical College, Genomic Medicine Institute, Wenzhou, Zhejiang, China
43. Genetics and epigenetics of schizophrenia and bipolar disorder. Nov. 24, 2009. Bio-X Center, Shanghai Jiaotong University, Shanghai, China
44. MicroRNA genomic variations in psychiatric diseases. Symposium at the International Congress on Schizophrenia Research. March 28-31, 2009. San Diego, California
45. Genetics of schizophrenia and bipolar disorders. NCIBI (National Center for Integrative Biomedical informatics) Workshop on Translational Bioinformatics. July 29-30, 2009. Ann Arbor, Michigan
46. Sequencing in the study of psychiatric diseases. Symposium, Next Generation Sequencing Data Analysis and Exploring Next Generation Sequencing meetings. Sept. 21-23, 2009. Providence, Rhode Island
47. Genome-wide association study in psychiatric disorders. Lecture, Oct. 6, 2008. Institute of Mental Health, Central South University. Changsha, China
48. Association study of trace amine receptors in bipolar disorder. Symposium at the CINP International College of Neuropsychopharmacology. July 9-13, 2006. Chicago, Illinois

Patents Obtained:(Patent title: International Application Number: International Publication Number)

1. Human M6b1 gene: PCT/CN97/00107: WO 99/21982
2. Human Atrophin-1 related gene: PCT/CN97/00108: WO 99/21983
3. Exostosin-4 gene: PCT/CN97/00126: WO 99/25822
4. An Ataxin-2 like gene: PCT/CN98/00009: WO 99/36527
5. Isoform 1 of Dimethylglycine dehydrogenase-like gene: PCT/CN98/00040: WO 99/47559
6. Isoform 2 of Dimethylglycine dehydrogenase-like gene: PCT/CN98/00041: WO 99/47560
7. Connexin 31, Human Gap Junction Protein beta-3: PCT/CN98/00056: WO 99/51634
8. Connexin 31.1, Human Gap Junction Protein beta-4: PCT/CN98/00055: WO 99/51738

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SNP-Cruncher: SNP Data Mining Toolkit, the University of Chicago, 2001

Bioinformatics Web/Applications Developed

http://bioinfo.psych.uic.edu/ for a group of tools
R package: Meth27QC, Teng L., Chen C., Liu C*. 2011.

Bibliography (H-index 45)

Peer-reviewed Journal Articles (updated 01/01/2022)

58 first or corresponding (*) author

1. Yu Chen, Jiacheng Dai, Longfei Tang, Tatiana Mikhailova, Qiuman Liang, Miao Li, Jiaqi Zhou, Jinghong Qiu, Richard Kopp, Cynthia Weickert, Chao Chen*, Chunyu Liu*. Neuroimmune transcriptome changes in patient brains of psychiatric and neurological disorders. 2022. (submitted)
2. Cuihua Xia, Rujia Dai, Jing Yu, Chunling Zhang, Ma-li Wong*, Chunyu Liu*. Dysregulated spliceosome gene expression may be a common process in brains of neurological and psychiatric disorders.

Discover Mental Health. 2022 (revision)

3. **Chunyu Liu***, Elliot S. Gershon. Disease-related Phenotypes for Genetic Studies of Psychiatric Disorders. Molecular Psychiatry. (revision)
4. Chao Chen, Qingtuan Meng, Wendiao Zhang, Xuan Wang, Chuan Jiao, Sheng Xu, Chunyu Liu, and Beisha Tang. Human forebrain organoids reveal connections between valproic acid exposure and autism risk. Translational Psychiatry. (accepted)
5. Yun Zhang, Chunyu Liu*. Evaluating the challenges and reproducibility of studies investigating DNA methylation signatures of psychological stress. Epigenomics. 2022. (Online)
6. Haixia Gu, Xue'er Ma, Jingjing Zhao, Chunyu Liu*. A Meta-analysis of Salivary Cortisol Responses in the Trier Social Stress Test to Evaluate the Effects of Speech Topics, Sex, and Sample Size. Comprehensive. Psychoneuroendocrinology. Volume 10, May 2022.
7. Kangli Wang, Rujia Dai, Yan Xia, Jianghua Tian, Chuan Jiao, Tatiana Mikhailova, Chunling Zhang, Chao Chen, **Chunyu Liu***. Spatiotemporal specificity of correlated DNA methylation and gene expression pairs across different human tissues and stages of brain development. *Epigenetics*. 2021. (online).
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Invited Reviews/Editorials

1. Gershon ES, **Liu C**, Badner JA (2008): Genome-wide association in bipolar disorder. *Mol Psychiatry* 13: 1-2.
2. Tang J and **Liu C**. Genome-wide association studies of neuropsychiatric diseases. The 5th Symposium for Chinese Neuroscientists Worldwide. Progress of Neuroscience (5). 2008. 7-25-2008.

Book Chapters

1. Grennan K, Zhang F, **Liu C*.**(2012): microRNAs and Their Potential Roles in Schizophrenia and Bipolar Disorder. miRNAs and human diseases. Kerala, India: Research Signpost. Editors: Junming Yue and Lu Lu.
2. **Liu C***. (2012): QTL Mapping of Molecular Traits for Studies of Human Complex Diseases. In Translational Bioinformatics: Computational Genomics. Springer. Editor: Yin Yao.
3. Shi J, Cheng L, Gershon ES, **Liu C*.** (2008): G72/G30 in Neuropsychiatric Disorders. In Javitt, DC; Kantrowitz, J; Lajtha, A. editors. *Handbook of Neurochemistry and Molecular Neurobiology*: Springer.
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7. **Liu C*,** Chen C. (2014) Multi-gene inheritance: Medical Genetics (Chinese textbook).
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9. **Liu C***, Jiao C, Wang K, Yuan N. (2017) DNA Methylation and Psychiatric Disorders. In Epigenetics and Psychiatric Disease, Progress in Molecular Biology and Translational Science. volume 158. ELSEVIER. Editor: Dennis Grayson.

Abstracts

1. Haixia Gu, Chunyu Liu. New High-Throughput Method to Induce Robust Psychological Stress. 60th American College of Neuropsychopharmacology. Annual Meeting. December 5-8, 2021.
2. Longfei Tang, Yu Chen, Cuihua Xia, Chao Chen, Chunyu Liu. Comparing Gene Expression Changes in Blood and Brain of Schizophrenia. 2021 Virtual World Congress of Psychiatric Genetics, Oct 11-15. Virtual
3. Cindy Wen, Rujia Dai, Pawel F. Przytycki, Minsoo Kim, Arjun Bhattacharya, Pan Zhang, Rebecca L. Walker, Dalila Pinto, Katherine S. Pollard, Chunyu Liu, Michael J. Gandal. Large-Scale, Multi-Ethnic Resource of Gene, Isoform, and Splicing Regulation in the Developing Human Brain. 2021 Virtual

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4. Yu Chen, Sihan Liu, Feiran Wang, Yi Jiang, Fangyuan Duan, Yan Xia, Miao Li, Wenying Qiu, Chao Ma, Jufang Huang, Shuhua Xu, Beisha Tang, Hailiang Huang, Chunyu Liu, Chao Chen. Brain eQTL of East Asian, African American, and European Descent Explains Schizophrenia GWAS in Diverse Populations. 2021 Virtual World Congress of Psychiatric Genetics, Oct 11-15. Virtual
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