

## Curriculum Vitae

### HAO XING

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### EDUCATION

- 1) **Doctor of Philosophy, Biological Science** 2016-2021  
Georgia State University, Atlanta, Ga
- 2) **Master of Science, Biology** 2015-2020  
Georgia State University, Atlanta, Ga
- 3) **Master of Arts, Medicine** 2012-2015  
Harbin Medical University, Harbin, China
- 4) **Bachelor of Arts, Medicine** 2008-2012  
Shandong University of Traditional Chinese Medicine, Ji Nan,  
China

### RESEARCH EXPERIENCE

**Institution: Emory University**, Atlanta, GA, 2021- Present

**Position: Post Doctoral Fellow**

Advisor: Dr. Stephen F. Traynelis

**Institution: Georgia State University**, Atlanta, Georgia, 2015- 2021

**Position: Graduate Research Assistant**

Advisor: Dr. Chun Jiang

**Institution: Harbin Medical University, Harbin, China, 2012-2015**

**Position: Research Assistant**

Advisor: Dr. Daling Zhu

**Institution: Shandong University of Traditional Chinese Medicine, Ji Nan, China, 2012**

**Position: Lab Assistant**

Advisor: Dr. Jie Li

### **PATENTS**

1. **Xing, H.**, Johnson, C. M., Sabate, N. N., & Jiang, C. MORPHINE-INDUCED RESPIRATORY DEPRESSION: BEHAVIORAL, PHRENIC AND BRAINSTEM RESPIRATORY NEURONAL EVIDENCE (WO2020236693). International Bureau.  
[https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2020236693&\\_cid=P11-KJJ5PK-03856-1](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2020236693&_cid=P11-KJJ5PK-03856-1)
2. Chun Jiang, Christopher M. Johnson, Ningren Cui, **Hao Xing**, Ze Li, Weiwei Zhong, Yang Wu, Use of Cloperastine to treat Rett Syndrome symptoms. Georgia State University, May/28/2019, Pending patent.
3. Chun Jiang, Weiwei Zhong, Christopher M. Johnson, Yang Wu, **Hao Xing**, Shuang Zhang. METHODS FOR TREATING RETT SYNDROME. Georgia State University, ATTORNEY DOCKET NO. 01618.009PV1, July/19/2016, Pending patent.

### **PUBLICATIONS**

1. **Hao Xing**, Tue Banke, Lu Zhang, Kuai Yu, Russell G. Fritzscheier, Nicholas S. Akins, Srinu Paladugu, Dennis C. Liotta, Hongjie Yuan, Stephen F. Traynelis. Enhancement of hippocampal interneuron excitability by a novel NMDA receptor positive allosteric modulator. Journal of Physiology. July2024, Submitted.

2. Chad Camp, Tue G. Banke, **Hao Xing**, Kuai Yu, Riley E. Perszyk, Jing Zhang, Matt Epplin, Tim Benke, Dennis C. Liotta, Hongjie Yuan, Stephen F. Traynelis. The GluN2C/GluN2D NMDA Receptor Positive Allosteric Modulator (+)-EU1180-453 Enhances Interneuron Output. *iScience*. May2024, Submitted.
3. Jesse E Hanson, Hongjie Yuan, Riley E Perszyk, Tue G Banke, **Hao Xing**, Ming-Chi Tsai, Frank S Menniti, Stephen F Traynelis. Therapeutic potential of N-methyl-D-aspartate receptor modulators in psychiatry. *Neuropsychopharmacology*. 2023 Jun 27.
4. Wu Y, Cui N, **Xing H**, Zhong W, Arrowood C, Johnson CM, Jiang C. In vivo evidence for the cellular basis of central hypoventilation of Rett syndrome and pharmacological correction in the rat model. *J Cell Physiol*. 2021 Dec;236(12):8082-8098.
5. **Hao Xing**. Central Respiratory Depression: Insight With Murine Models Of Rett Syndrome And Morphine Overdose. *ScholarWorks @ Georgia State University*, Sep 15, 2021.
6. **Hao Xing**, Ningren Cui, Christopher M. Johnson, Zaakir Faisthalab, Chun Jiang. Dual synaptic inhibitions of brainstem neurons by GABA and glycine with impact on Rett Syndrome. *J Cell Physiol*. Available online: 10 November 2020.
7. Christopher M Johnson, Ningren Cui, **Hao Xing**, Yang Wu, Chun Jiang. The antitussive cloperastine improves breathing abnormalities in a Rett Syndrome mouse model by blocking presynaptic GIRK channels and enhancing GABA release. *Neuropharmacology*. 2020 Jul 3; 176: 108214.
8. Wu Y, Cui N, **Xing H**, Zhong W, Arrowood C, Johnson CM, Jiang C. Mecp2 Disruption in Rats Causes Reshaping in Firing Activity and Patterns of Brainstem Respiratory Neurons. *Neuroscience*. 2019 Jan 15;397:107-115.
9. Zhong W, Johnson CM, Cui N, **Xing H**, Wu Y, Jiang C. Effects of chronic exposure to low dose THIP on brainstem neuronal excitability in mouse

models of Rett syndrome: Evidence from symptomatic females. *Neuropharmacology*. 2017 Jan 6; 116: 288-299.

10. Zhong W, Johnson CM, Wu Y, Cui N, **Xing H**, Zhang S, Jiang C. Effects of early-life exposure to THIP on phenotype development in a mouse model of Rett syndrome. *J Neurodev Disord*. 2016 Oct 19; 8: 37.
11. Johnson CM, Zhong W, Cui N, Wu Y, **Xing H**, Zhang S, Jiang C. Defects in brainstem neurons associated with breathing and motor function in the *Mecp2*R168X/Y mouse model of Rett syndrome. *Am J Physiol Cell Physiol*. 2016 Dec 1; 311 (6): C895-C909.
12. Zhang S, Johnson CM, Cui N, **Xing H**, Zhong W, Wu Y, Jiang C. An optogenetic mouse model of rett syndrome targeting on catecholaminergic neurons. *J Neurosci Res*. 2016 Oct; 94 (10): 896-906.
13. Wu Y, Zhong W, Cui N, Johnson CM, **Xing H**, Zhang S, Jiang C. Characterization of Rett Syndrome-like phenotypes in *Mecp2*-knockout rats. *J Neurodev Disord*. 2016 Jun 16; 8: 23.
14. Wang S, Cao W, **Xing H**, Chen YL, Li Q, Shen T, Jiang C, Zhu D, Activation of ERK pathway is required for 15-HETE-induced angiogenesis in human umbilical vascular endothelial cells. *J Recept Signal Transduct Res*. 2016;36(3):225-32.
15. Yan X, Xiaodong Z, Guixia L, Lin L, **Hao X**, Weiwei C , Lihua S, Baofeng Y, Daling Zhu. MicroRNA-30c contributes to the development of hypoxia pulmonary hypertension by decreasing PDGFR $\beta$  expression. *Int J Biochem Cell Biol*. 2015 Jul;64:155-66.
16. Wei L, Zhang B, Cao W, **Xing Hao**, Yu X, Zhu D. Inhibition of CXCL12/CXCR4 suppresses pulmonary arterial smooth muscle cell proliferation and cell cycle progression via PI3K/Akt pathway under hypoxia. *J Recept Signal Transduct Res*. 2014 Nov 25:1-11.
17. Song S, Wang S, Jun M, Lan Y, **Hao Xing**, Lei Zhang, Lin Liao, Daling Zhu. Biliverdin reductase/bilirubin mediates the anti-apoptotic effect of

hypoxia in pulmonary arterial smooth muscle cells through ERK1/2 pathway. *Exp Cell Res.* 2013 Aug 1; 319(13):1973-87.

### **ABSTRACTS AND PRESENTATIONS**

1. Poster: American Epilepsy Society, 2023  
**Hao Xing**, Rui Song, Jin Zhang, Riley E. Perszyk, Chad R. Camp, Weiting Tang, Varun Kannan, Jia Li, Yuchen Xu, Jiahui Chen, Yinlong Li, Steven H. Liang, Stephen F. Traynelis, Hongjie Yuan. *Differential Responses of Seizure-related GRIN Variants Located in Pore-forming M2 Domain of N-methyl-D-aspartate Receptor to FDA-approved Inhibitors.*
2. Poster: Society for Neuroscience, 2023  
**Hao Xing**, Nick S. Akins, Dennis Liotta, Hongjie Yuan, Ellen J. Hess, Stephen F. Traynelis. *GluN2D-selective N-methyl-D-aspartate receptor modulators regulate excitatory postsynaptic currents in dorsal-lateral striatal cholinergic interneuron.*
3. Poster: iGluR 2023 Ion Channel Conference, 2023  
**Hao Xing**, Chris Sinon, Riley E. Perszyk, Russell G. Fritzscheier, Nicholas S. Akins, Srinu Paladugu, Dennis C. Liotta, Hongjie Yuan, Stephen F. Traynelis. *Enhancement of hippocampal interneuron excitability by a novel NMDA receptor positive allosteric modulator.*
4. Poster: Society for Neuroscience, 2022  
**Hao Xing**, Chad R. Camp, Tue Banke, Matthew P. Epplin, Russell Fritzscheier, Sukhan Kim, Jing Zhang, Dennis Liotta, Hongjie Yuan, Stephen F. Traynelis. *A positive allosteric modulator of GluN2D-expressing N-methyl-D-aspartate receptor regulates CA1 pyramidal cell excitability via facilitating synaptic input from GABAergic interneuron.*
5. Poster: Georgia State University B&B Retreat, 2019  
**H. Xing**, C. M. Johnson, N. N. Sabate, C. Jiang. *Morphine-induced central hypoventilation: behavioral, phrenic and brainstem respiratory neuronal evidence.*
6. Poster: 50<sup>th</sup> Neuroscience, Society for Neuroscience, 2019

**H. Xing**, C. M. Johnson, N. N. Sabate, C. Jiang. *Morphine-induced central hypoventilation: behavioral, phrenic and brainstem respiratory neuronal evidence*

7. Poster: Georgia State University B&B Retreat, 2019  
Christopher M. Johnson, Ningren Cui, **Hao Xing**, Ze Li, Weiwei Zhong, Chun Jiang. *Effects of the antitussive cloperastine on a rett syndrome mouse model*
8. Poster: Neuroscience Conference, 2018  
Christopher M. Johnson, Ningren Cui, **Hao Xing**, Ze Li, Chun Jiang. *Effects of the antitussive cloperastine on a rett syndrome mouse model*
9. Poster: Georgia State University Biology Department Retreat, 9-2018  
Christopher M. Johnson, Ningren Cui, **Hao Xing**, Ze Li, Weiwei Zhong, Yang Wu, Chun Jiang. *GIRK channel inhibition improves respiratory dysfunction in a Rett Syndrome mouse model*
10. Poster: Georgia State University B&B Retreat, 5-2018  
Christopher M. Johnson, Ningren Cui, **Hao Xing**, Ze Li, Yang Wu, Chun Jiang. *Cellular Effects of Mutations of the Gene Mecp2 on GABAergic Neurons.*
11. Poster: Georgia BioSummit, 9-2017  
Christopher M. Johnson, Ningren Cui, **Hao Xing**, Yang Wu, Chun Jiang. *Cellular Effects of Mutations of the Gene Mecp2 on GABAergic Neurons.*
12. Poster: Georgia State University B&B Retreat, 5-2017  
Yang Wu, Ningren Cui, **Hao Xing**, Weiwei Zhong, Christopher M. Johnson and Chun Jiang. *In vivo Studies of Brainstem Neurons with Respiratory Rhythm Activity in a Rat Model of Rett Syndrome.*
13. Poster: Georgia State University B&B Retreat, 5-2016  
Shuang Zhang, Christopher M. Johnson, Ningren Cui, Yang Wu, **Hao Xing**, Weiwei Zhong, Chun Jiang. *An optogenetic mouse model of Rett syndrome targeting on catecholaminergic neurons.*

### **INSTRUCTION**

Instructed summer undergraduate student for patch clamp, Emory University, 2023.

Graduation Teaching Assistant, Georgia State University

BIOL 1104 Introductory Biology II: 2017-2020.

### **MEMBERSHIPS**

American Epilepsy Society

Society for Neuroscience

### **HONORS AND AWARDS**

Brain & Behavior Fellowship, Georgia State University, 2018-2020