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Education

- 2019 - present **Post-doctoral Fellow** in Neuroscience
Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
- 2015 - 2019 **Doctor of Philosophy** in Biological Sciences
Department of Developmental and Cell Biology, University of California, Irvine, CA
- 2013 - 2015 **Master of Science** in Biotechnology
Department of Molecular Biology & Biochemistry, University of California, Irvine, CA
- 2009 - 2013 **Bachelor of Science** in Biotechnology and Its Application
School of Life Sciences, Sun Yat-sen University, China
- 2011- 2012 Exchange Student in Biotechnology
School of Biological Sciences, University of Hong Kong, Hong Kong

Research Experience

- 2019 – present **Postdoctoral Fellow**
Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
Advisor: Stephen Shea, Ph.D.
- Neural circuits of social reward in the ventral tegmental area
- 2014 - 2019 **Graduate Student**
Department of Developmental and Cell Biology, University of California, Irvine, CA
Advisor: Diane K. O'Dowd, Ph.D.
- Modeling SCN1A epilepsy in neurons derived from human isogenic iPSCs
- 2012 - 2013 **Undergraduate Researcher**
School of Biological Sciences, Sun Yat-sen University, China
Advisor: Zhumei He Ph.D.
*- Regulation of gallic acid on the expression of aflatoxin metabolism gene cluster in *Aspergillus flavus* by chromatin remodeling*

Publications

1. **Xie Y**, Ng NN, Safrina OS, Ramos CM, Ess K, Schwartz PH, Smith MA, O'Dowd DK. Comparisons of dual isogenic human iPSC pairs identify functional alterations directly caused by an epilepsy associated SCN1A mutation. 2019. *bioRxiv* 524835; doi: <https://doi.org/10.1101/524835>.
2. Das A, Zhu BY*, **Xie Y***, Neumann JC, MacGregor GR, Schutte SS, Hunt RF, and O'Dowd DK. Interneuron dysfunction in a CRISPR/Cas9-edited mouse model of SCN1A GEFS+. In preparation.
3. Schutte RJ*, **Xie Y***, Ng NN*, Figueroa P, Pham AT, and O'Dowd DK. Generation of astrocyte-enriched, neuron-free mouse feeder layers that support differentiation of functionally active networks

of human iPSC-derived neurons. 2018. *J. Neurosci. Methods.* 294: 91-101. doi: 10.1016/j.jneumeth.2017.07.019.

4. **Xie Y***, Schutte RJ*, Ng NN*, Ess K, Schwartz PH, and O'Dowd DK. Reproducible and efficient generation of functionally active neurons from human iPSCs for preclinical disease modeling. 2018. *Stem Cell Res.* 26: 84-94. doi: 10.1016/j.scr.2017.12.003.
5. Zhi Q, **Xie Y**, and He Z. Genome Mining for Aflatoxin Biosynthesis. *Fungal Genom Biol*, 2013, 3(1). doi: 10.4172/2165-8056.1000108.

* **equal contributions.**

Abstracts

1. **Xie Y**, Ng NN, Safrina OS, Ramos CM, Ess K, George AL Jr. Schwartz PH, O'Dowd DK. A CRISPR/Cas9-generated isogenic iPSC model reveals a neuronal subtype-specific mechanism of *SCN1A* epilepsy (2019). UCI Annual EpiCenter Symposium.
2. **Xie Y**, Ng NN, Safrina OS, Ramos CM, Ess K, George AL Jr. Schwartz PH, O'Dowd DK. A GEFS+ *SCN1A* mutation causes cell type-specific and temperature-dependent defects in neurons derived from isogenic hiPSC pairs. Program No. 366.19. 2018 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2018. Online.
3. **Xie Y**, Ng NN, Safrina OS, Konopelski SE, Stover AE, Ess K, George AL Jr. Schwartz PH, O'Dowd DK. Cell type-specific defects in sodium channel functions in an isogenic human iPSC model of genetic epilepsy with febrile seizures plus. Program No. 203.09. 2017 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2017. Online.
4. **Xie Y**, Ng NN, Safrina OS, Konopelski SE, Schutte RJ, Amoozadeh SA, Schutte SS, Stover AE, Ess K, George AL Jr. Smith MA, Schwartz PH, O'Dowd DK. Modeling *SCN1A*-associated epilepsy in human iPSC-derived neurons (2017). Translational Science Day, Institute of Clinical and Translational Science, UC Irvine.
5. **Xie Y**, Ng NN, Safrina OS, Konopelski SE, Schutte RJ, Amoozadeh SA, Schutte SS, Stover AE, Ess K, George AL Jr. Smith MA, Schwartz PH, O'Dowd DK. Modeling *SCN1A*-associated epilepsy in human iPSC-derived neurons. Program No. 582.09. 2016 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2016. Online.
6. **Xie Y**, Schutte RJ, Ng NN, Pham AT, Schutte SS, Banuelos MG, Stover AE, Ess K, George AL Jr., Smith MA, Schwartz PH, and O'Dowd DK. Functional differentiation of active neural networks from human iPSCs for neurological disease modeling (2016). UCI Annual EpiCenter Symposium.
7. **Xie Y**, Schutte RJ, Ng NN, Pham AT, Schutte SS, Banuelos MG, Stover AE, Ess K, George AL Jr., Smith MA, Schwartz PH, and O'Dowd DK. Functional differentiation of active neural networks from human iPSCs for neurological disease modeling. Program No. 665.25. 2015 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2015. Online.

Invited Talks

- 2018 Annual EpiCenter Symposium, UCI
2018 Department seminar, Department of Developmental and Cell Biology, UCI
2017 Department seminar, Department of Developmental and Cell Biology, UCI
2016 Progress in Neuroscience, Department of Anatomy and Neurobiology, UCI

Honors and Awards

- 2019 William F. Holcomb Scholarship, UCI
2019 Otto W. Shaler Scholarship, UCI

- 2018 Travel Award, Department of Developmental and Cell Biology, UCI
- 2018 Fine Science Tools Travel Award, School of Biological Sciences, UCI
- 2017 Invited for full proposal submission for Predoctoral Research Fellowship, American Epilepsy Society
- 2017 Travel Award, Department of Developmental and Cell Biology, UCI
- 2016 Travel Award, Department of Developmental and Cell Biology, UCI
- 2014 Graduate Fellowship, Department of Molecular Biology and Biochemistry, UCI
- 2013 Undergraduate degrees with distinction
- 2012 National Scholarship, awarded by the Ministry of Education, China
- 2012 The First-class Scholarship, Sun Yat-sen University
- 2011 The First-class Scholarship, Sun Yat-sen University
- 2011 Techpool Bio-Pharma Co., Ltd Scholarship
- 2011 Li & Fung Scholarship, Victor and William Fung Foundation
- 2010 The First-class Scholarship, Sun Yat-sen University
- 2010 National Scholarship, awarded by the Ministry of Education, China

Teaching Experiences

- 2018 Teaching assistant. Applied Human Anatomy (undergraduate course). UCI
- 2017 Teaching assistant. Applied Human Anatomy (undergraduate course). UCI
- 2015 Teaching assistant. Stem Cell Lab (graduate course). UCI
- 2015 Teaching assistant. Molecular Biology (undergraduate course). UCI
- 2015 Teaching assistant. Biochemistry (undergraduate course). UCI
- 2015 Teaching assistant. Microbiology Lab (undergraduate course). UCI