

**Yulan Xiong, PhD****Johns Hopkins University, School of Medicine****Personal information**

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Nationality: Chinese, US permanent resident

**Education**

2003-2007 Ph.D., Biochemistry and Molecular Genetics, Lancaster University, Lancaster, UK  
1999-2002 M.S., Molecular Genetics, Capital Normal University (CNU), Beijing, China  
1995-1999 B.S., Biology, Capital Normal University (CNU), Beijing, China

**Research Experience**

2014.09 - present *Tenure-track Assistant Professor*, Johns Hopkins University School of Medicine  
2013.05 - 2014.08 *Research Associate*, Johns Hopkins University School of Medicine  
Laboratory of Drs. Ted and Valina Dawson  
The pathogenesis of Parkinson's disease (PD)  
2007.06 - 2013.04 *Postdoctoral fellow*, Johns Hopkins University School of Medicine  
Laboratory of Drs. Ted and Valina Dawson  
LRRK2 in the pathogenesis of Parkinson's disease (PD)  
2006.11 - 2007.05 *Trainee*, Johns Hopkins University School of Medicine  
Laboratory of Drs. Ted and Valina Dawson  
Role of LRRK2 in the pathogenesis of Parkinson's disease (PD)  
2003.10 - 2006.11 *Ph.D. student*, Lancaster University, UK  
Laboratory of Dr. Clive Price  
Mitotic Exit Network (MEN) in cell division in budding yeast *S. cerevisiae*  
2002.07 - 2003.09 *Research Assistant*, Beijing Agro-Biotechnology Research Center, China  
Functional analysis of protein expression profile in Chinese cabbage  
1999.09 - 2002.07 *Master student*, Capital Normal University, China  
Functional analysis of protein expression profile in Chinese cabbage

**Publications**

1. **Xiong, Y.**, X. Mao, J. N. Stankowski, B. Lee, H. Ko, Y. Lee, S. Neifert, J. C. Grima, D. Swing, L. Iacovitti, L. Tessarollo, T. M. Dawson, V. L. Dawson. (2015) A novel mouse model of Parkinson's disease with conditional expression of mutant LRRK2 in dopaminergic neurons causes progressive neurodegeneration (Manuscript prepared)
2. **Xiong, Y.**, Guiberson, N., Dawson, VL, Dawson, TM. (2015) LKGEF1 acts as a guanine nucleotide exchange factor (GEF) for LRRK2. (Manuscript under preparation)
3. Martin, I., Kim, J., Lee, B., Kang, H., Xu, J., Jia, H., Stankowski JN., Kim, M., Zhong, J., Kumar, M., Andrabi, S., **Xiong, Y.**, Dickson, D., Wszolek, Z., Pandey, A., Dawson, TM, Dawson, VL. (2014) Ribosomal protein s15 phosphorylation mediates LRRK2 neurodegeneration in Parkinson's disease. *Cell* 157(2):472-85.
4. Stafa, K., Tsika, E., Moser, R., Musso, A., Glauser, L., Jones, A., Biskup, S., **Xiong, Y.**, Bandopadhyay, R., Dawson, V., Dawson, T., Moore, D. (2014) Functional Interaction of Parkinson's Disease-Associated LRRK2 with Members of the Dynamin GTPase Superfamily. *Hum. Mol. Genet.* 23 (8): 2055-77.

5. Migheli, R., Giudice, M., Spissu, Y., Sanna, G., **Xiong, Y.**, Dawson, TM., Dawson, VL., Galioto, M., Rochitta, G., Biosa, A., Serra, P., Carri, M., Crosio, C., Iaccarino, C. (2013) LRRK2 affects vesicle trafficking, neurotransmitter extracellular level and membrane receptor localization. *PLoS One* 8(10): e77198
6. **Xiong, Y.**, Dawson, VL, Dawson, TM. (2012) LRRK2 GTPase dysfunction in the pathogenesis of Parkinson's disease. *Biochem. Soc. Trans.* 40 (5): 1074-1079
7. **Xiong, Y.**, Yuan, C., Chen, R., Dawson, TM. Dawson, VL. (2012) ArfGAP1 is a GTPase activating protein for LRRK2: reciprocal regulation of ArfGAP1 by LRRK2. *J. Neurosci.* 32(11): 3877-3886.
8. Nikonova, EV.\*, **Xiong, Y.\***, Tanis, KQ., Moore, DJ., Dawson, VL., Vogel, RL., Finney, EM., Stone, DJ., Reynolds, IJ., Kern, JT., Dawson, TM. (2012) Transcriptional responses to loss or gain of function of the leucine-rich repeat kinase 2 (LRRK2) gene uncover biological progress modulated by LRRK2 activity. *Hum. Mol. Genet.* 21(1): 163-74. (\* Contributed equally)
9. Zhang, J., Wang, Y., Chi, Z., Keuss, M., Pai, YM., Kang, HC., Shin, J., Byugyenko, A., Wang, H., **Xiong, Y.**, Pletnikov, M., Mattson, M., Dawson, TM., Dawson, VL. (2011) The AAA+ ATPase Thorase regulates AMPA receptor-dependent synaptic plasticity and behavior. *Cell* 145(2): 284-99.
10. Li, X., Moore, D.J., **Xiong, Y.**, Dawson, T.M. and Dawson, V.L. (2010) Reevaluation of phosphorylationsites in the Parkinson disease-associated leucine-rich repeat kinase 2. *J Biol Chem.* 285(38): 29569-29576.
11. **Xiong Y**, Coombes CE, Kilaru A, Li X, Gitler AD, Bowers JW, Dawson VL, Dawson TM, Moore DJ. (2010) GTPase Activity Plays a Key Role in the Pathobiology of LRRK2. *PLoS Genet.* 6(4): e1000902.
12. Corbett, M., **Y. Xiong**, J.R. Boyne, D.J. Wright, E. Munro and C. Price (2006) IQGAP and Mitotic Exit Network are required for cytokinesis and re-polarization of the actin cytoskeleton in the budding yeast *Saccharomyces cerevisiae*. *Eur. J. Cell Biol.* 85(11): 1201-1215
13. **Xiong, Y.**, R. Ma and M. Cao. (2002) Advances in Carotenoid Metabolic Engineering. *Acad. Ann. Agr. Sci.* 12:264-267

## Funding

|                     |   |                                    |
|---------------------|---|------------------------------------|
| 2015-2017 (pending) | <u>Maryland Stem Cell Research Fund</u>   | Exploratory Research Grant         |
|                     | PI: Yulan Xiong   | \$230,000 (Direct cost: \$200,000) |
| 2015-2018 (pending) | <u>Adrienne Helis Malvin Medical Research Foundation</u>                          | Research Grant                     |
|                     | PI: Yulan Xiong   | \$900,000 (Direct cost: \$807,895) |
| 2015-2018           | <u>The William N. &amp; Bernice E. Bumpus Foundation</u>                          | Innovation Awards                  |
|                     | PI: Yulan Xiong   | \$300,000 (Direct cost: \$300,000) |
|                     | Project: Identification and characterization of the LRRK2 GEF                     |                                    |
| 2014-2019           | <u>NIH/NIA(1K01AG046366) K01 Mentored Research Scientist Development Award</u>    |                                    |
|                     | PI: Yulan Xiong   | \$652,725 (Direct cost: \$604,375) |
|                     | Project: The role of aging in LRRK2-associated Parkinson's disease                |                                    |
| 2010-2011           | <u>The Michael J. FOX foundation (MJFF)</u>                                       | Rapid Response Innovation Awards   |
|                     | PI: Yulan Xiong   | \$75,000                           |
|                     | Project: Identification and validation of the modifiers of LRRK2-induced toxicity |                                    |
| 2008-2009           | <u>American Parkinson's Disease Association (APDA)</u>                            | Postdoctoral Fellowship            |
|                     | PI: Yulan Xiong   | \$35,000                           |
|                     | Project: Modeling LRRK2-induced toxicity in yeast                                 |                                    |
| 2003-2006           | <u>Lancaster University</u>   | Predoctoral Scholarship            |
|                     | Project: Understanding Mitotic Exit Network in cell division in budding yeast     |                                    |

**Invited Talks**

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|---------|--|
| 2014.11 | Nanosymposia, Society for Neuroscience 44th annual meeting, Washington DC, USA |
| 2014.05 | Clinical Neuroscience Seminars, Johns Hopkins University, USA                  |
| 2010.11 | Nanosymposia, Society for Neuroscience 40th annual meeting, San Diego, USA     |
| 2006.03 | Postgraduate symposium II, Lancaster University, UK                            |

**Teaching Experience & Formal training**

|              |  |
|--------------|--|
| 2008-present | <i>Mentor</i> to 2 graduate students from Johns Hopkins University                       |
| 2007-2013    | <i>Mentor</i> to 5 undergraduate students from Johns Hopkins University                  |
| 2003-2006    | <i>Mentor</i> to 2 undergraduate students from Lancaster University                      |
| 2000-2002    | <i>Class Instructor</i> of undergraduate students, Capital Normal University             |
| 2000         | <i>Teaching Assistant</i> of Genetics, Capital Normal University                         |
| 1999         | <i>Lecturer</i> of Principle of Biology, The affiliated high school of Peking University |
| 1995-1999    | <i>Formal Training</i> on teaching skills, Capital Normal University                     |

**Awards & Honors**

|           |   |
|-----------|---|
| 2015-2018 | The William N. & Bernice E. Bumpus Foundation Innovation Awards               |
| 2014-2019 | K01 Mentored Research Scientist Development Award, NIH/NIA                    |
| 2014      | Invited Speaker, Nanosymposia in Society for Neuroscience, Washington DC, USA |
| 2010-2011 | The Michael J. Fox foundation (MJFF) Rapid Response Innovation Awards         |
| 2010      | Invited Speaker, Nanosymposia in Society for Neuroscience, San Diego, USA     |
| 2008-2009 | American Parkinson's disease Association (APDA) postdoctoral fellowship award |
| 2003-2006 | Lancaster University Scholarship, Lancaster University                        |
| 1998&2000 | Tri-excellent Student Scholarship, Capital Normal University                  |
| 1996-1999 | Dean's award for study excellence, Capital Normal University                  |
| 1995-1999 | Capital Normal University Scholarship, Capital Normal University              |

**Abstracts**

1. **Y. Xiong**, X. Mao, J. N. Stankowski, B. Lee, H. Ko, Y. Lee, S. Neifert, J. C. Grima, D. Swing, L. Iacovitti, L. Tessarollo, T. M. Dawson, V. L. Dawson. A novel mouse model of Parkinson's disease with conditional expression of mutant LRRK2 in dopaminergic neurons causes progressive neurodegeneration. Society for Neuroscience 44th Annual Meeting, Washington DC, USA (2014)
2. X. Mao, D. Kim, J. Xu, **Y. Xiong**, S. Brahmachan, G. Umanah, J. Shin, J. Zhang, T. Ou, S. Karuppagounder, H. Kang, Z. Chi, V. Dawson, H. Ko, T. Dawson. Identification of the alpha-Synuclein Transmission Receptor. Keystone Symposia Conference, Colorado, USA (2014)
3. X. Mao, J. Xu, G. Umanah, **Y. Xiong**, S. Brahmachari, J. Zhang, Z. Chi, J.-H. Shin, S. Karuppagounder, D. Kim, H. Ko, V. Dawson, T. Dawson. Identification of the Alpha-Synuclein Transmission Receptor. Society for Neuroscience 43th Annual Meeting, San Diego, USA (2013)
4. S. S. Karuppagounder, **Y. Xiong**, S. A. Andrabi, Y. Lee, I. Martin, S. Brahmachari, T.M. Dawson, V.L. Dawson. G2019S-LRRK2 transgenic mice display exacerbated mptp-mediated neurotoxicity. Society for Neuroscience 42th Annual Meeting, New Orleans, USA (2012)
5. C. Yuan, Shin JH, Wang SX, **Xiong Y**, Lee Y, Dawson, VL, Dawson, TM. PARIS (ZNF746) induces retinal degeneration via suppressing PGC-1alpha. Society for Neuroscience 41th Annual Meeting, Washington DC, USA (2011)
6. Tang, L, **Xiong Y**, Dawson VL, Dawson TM. " Suggested Cell Toxicity of LRRK2 GTPase-COR-Kinase (GCK)". Institute of Biological Engineering (IBE) 2011 Annual Conference, Atlanta, GA, USA (2011)
7. **Xiong Y**, Coombes CE, Li X, Kilaru A, Gitler AD, Bowers WJ, Moore DJ, Dawson VL, Dawson TM.

- "GTPase Activity Plays a Key Role in the Pathobiology of LRRK2". *Society for Neuroscience 40th Annual Meeting*, San Diego, USA (2010)
8. Nikonova EV, Tanis KQ, **Xiong Y**, Moore DJ, Dawson VL, Vogel RL, Finney EM, Stone DJ, Reynolds IJ, Kern JT and Dawson TM. "The transcriptional responses to loss or gain of function of the leucine-rich repeat kinase 2 (LRRK2) gene uncover paths to new Parkinson's disease therapies". *Society for Neuroscience 40th Annual Meeting*, San Diego, USA (2010)
  9. **Xiong Y**, Dawson VL, Dawson TM, Moore DJ. "A Yeast Model of LRRK2-Induced Toxicity." *Society for Neuroscience 38th Annual Meeting*, San Diego, USA (2008)
  10. **Xiong Y**, Corbett, M., D.J. Wright, E. Munro and C. Price. "Roles of Hof1p, Iqg1p and Mitotic Exit Network (MEN) in cell division in budding yeast *Saccharomyces cerevisiae*." *Postgraduate symposium I*, Lancaster University, UK. (2005)

### Leadership & Committee services & Career Development

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| 2014         | Panelist on workshop "Writing Successful K Applications: Beyond the Basics", JHU |
| 2007-present | Member, Society for Neuroscience   |
| 2004&2005    | Member, Genetics Society Pombe Club, UK  |
| 2004         | Member, British Yeast Group, UK  |
| 2000-2001    | Events Committee Representatives, Graduate Student Association, CNU              |
| 1996-1998    | Events Committee Representatives, Undergraduate Student Association, CNU         |

### References

1. **Dr. Ted M. Dawson, M.D., Ph.D.**  
 Director, Institute for Cell Engineering,  
 Director, Morris K. Udall Parkinson's Disease Research Center  
 Leonard & Madlyn Abramson Professor in Neurodegenerative Diseases  
 Professor, Neurology and Neuroscience  
 Johns Hopkins University School of Medicine  
 (Tel) 410-614-4067      email: [tdawson@jhmi.edu](mailto:tdawson@jhmi.edu)
2. **Dr. Duoia Pan, Ph.D.**  
 Investigator, Howard Hughes Medical Institute (HHMI)  
 Professor, Molecular Biology and Genetics, Johns Hopkins University School of Medicine  
 (Tel) 410-502-3179      email: [djpan@jhmi.edu](mailto:djpan@jhmi.edu)
3. **Dr. Clive Price, Ph.D.**  
 Senior Lecturer, Division of Biomedical and Life Sciences  
 Faculty of Health and Medicine, Lancaster University,  
 (Tel) +44-1524-593137      email: [c.price1@lancaster.ac.uk](mailto:c.price1@lancaster.ac.uk)