BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Zhou Zhi Dong	Assistant Professor Associate Principle Investigator

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Nantong Medical University, P.R. China	M.D	1991	Medicine
The First People's Hospital of Nantong City, Jiangsu Province, P. R. China.	Post-graduate clinical training	1996	Internal Medicine
Chinese Academy of Science, P.R. China	Ph.D	2003	Biochemistry & Molecular Biology / Biophysics

A. Personal Statement

I graduated as a medical doctor in 1991 and had 5 years of postgraduate clinical training in internal medicine. Subsequently I acquired my PhD and received my post-doctor training in researches on PD in National University of Singapore from 2003. Later I joined the National Neuroscience Institute (NNI) as a member of the National PD Translational Bench to Bedside team and continue to work on PD under the supervision of Prof Tan Eng King, Director of Research at NNI. Currently, I am an independent Clinician Scientist at NNI and a regular rank Assistant Professor of NBD, Duke-NUS Medical School as well as a PI of NMRC and SHF grants. I have a board background in Medicine, Mitochondria, Neuroscience and Translational Researches with specific training and expertise in key research areas for this application. So far I have successfully administered and completed 3 NMRC and SHF grants on translational researches on PD in Singapore, collaborated with other researchers, and produced impactful publications from each project. The current application builds logically on my previous studies. In this study we will target to identify and validate novel therapeutic targets to modulate mitochondrial unfolded protein response (mtUPR) signaling, which will be significant to PD pathogenesis and therapy. I have a demonstrated record of previous accomplishments on translational researches on PD, and my specific expertise and experience have prepared me to lead and perform the current proposed project. In summary, our proposal leverages on the expertise of clinicians, clinician scientists, basic scientists and chemists, as well as multiple cutting-edge techniques available in Singapore. Our Bench to Bedside translational researches target to identify new PD therapeutic biomarkers, which can improve diagnosis, prognosis and therapy of PD and benefit our PD patients.

B. Positions and Honors.

Positions and Employment

1991- 1996 Resident Physician, Department of Endocrinology, the First Nantong People's Hospital, P.R.China

2003- 2008 Research Fellow, Department of Biological Science, National University of Singapore, working on Molecular pathogenesis and therapy on dopamine neuron degeneration in Parkinson's disease

2009- 2012 Research Fellow, National Neuroscience Institute of Singapore, working on Molecular pathogenesis and therapy on neuron degeneration and other human neurodegenerative diseases

2012- 2018 Associate Clinician Scientist, National Neuroscience Institute of Singapore, working on Translational Neuroscience researches on neuron degeneration

in Parkinson's disease (PD), Alzheimer's disease (AD) and other human neurodegenerative disorders.

2018-Current Associate Principal Investigator, National Neuroscience Institute of Singapore, working on Translational Neuroscience researches on neuron degeneration in Parkinson's disease (PD), Alzheimer's disease (AD) and other human neurodegenerative disorders.

2012- 2015 Adjunct Assistant Professor, the Neuroscience and Behavioral Disorders Programme (NBD), Duke-NUS Graduate Medical School, Singapore

2015- Current Regular Rank, Assistant Professor, the Neuroscience and Behavioral Disorders Programme (NBD), Duke-NUS Graduate Medical School, Singapore

Other Experience and Professional Memberships

1999 National Certificates for Clinical Doctors, Shanghai, P.R.China
2010- 2013 Membership, American Society of Neuroscience
2013- Current Membership, Singapore-China Association for Advancement of Science and Technology
2015- Current Membership, Academy Medicine of Singapore
2016 Invited reviewer for "Annuals of Neurology"
2016 Editorial board member of "Biomedical & Pharmacology Journal"
2016 Editorial board member of "International Journal of Neurological Disorders & Interventions"
2016 Editorial board member of "World Journal of Learning Disabilities"
2017 Honorable member of "EC Neurology" Editor Panel
2017 Honorable member of "EC Psychology and Psychiatry" Editor Panel
2017 Invited reviewer of "SDRP Journal of Cellular and Molecular Physiology"
2017 Editor board member of "SM Neurodegenerative Disorders"
2017 Editor board member of "International Journal of Cognition and Behaviour"
2017 Editor board member of "SM Journal of Neuroinfectious Diseases"
2017 Editor Panel member of Advance in Neurology and neuroscience
2017 Editor Panel member of SM Journal of Brain Research & Therapy
2017 Editor Panel member of Journal of Alzheimer's, Parkinsonism and Dementia
2017 Editor Panel member of Alzheimer's and Parkinson's Diseases
2017 Editor Panel member of International Archives of Substance Abuse and Rehabilitation
2017 Editor Panel member of Journal of Clinical and Bioanalytical Chemistry
2017 Editor Panel member of Journal of Neurogenetics & Research
2017 Editor Panel member of SM journal of carcinogenesis
2017 Editor Panel member of Journal of Brain Behavior and Cognitive sciences
2017 Editor Panel member of international journal of case reports
2018 Associate Editor of Annals of Reviews & Research
2018 Editorial Board member of Determinations in Nanomedicine & Nanotechnology
2018 Editorial Board member of Global Journal of Neurology

Honors

1990 Excellent Student Award, P. R. China
1997 Excellent Post-Graduate Student Award, P. R. China
1998 Excellent Post-Graduate Student Award, P. R. China
2006 Winner of Biotech fair, the Third prize, MOE, Singapore
2011 Winner of Biotech fair, the Second Prize, MOE, Singapore
2013 Transition Award, NMRC, Singapore
2018 Long Service Award (10 years), NNI, Singapore

C. Selected peer-reviewed publications (selected from 42 peer-reviewed publications).

1). Zhi Dong Zhou, et al. Molecular targets for modulating the protein translation vital to proteostasis and neuron degeneration in Parkinson's disease. ***Translational Neurodegeneration***. 2019 in press. **IF: 5.872**

2). Zhi Dong Zhou, Ji Chao Tristan Lee & Eng King Tan. Pathophysiological mechanisms linking F-box only protein 7 (FBXO7) and Parkinson's disease (PD), ***Mutation Research/Reviews in Mutation Research*** 2018, 8: 72-78. **IF: 5.47**

3). Zhi Dong Zhou at al. Dopamine (DA) toxicity in pathogenesis and therapy of Parkinson's disease (PD). **J Clin Bioanal Chem** 2017;1(1):1-3. IF: NA. *, Corresponding author
4). Zhi Dong Zhou & Eng King Tan. Iron Regulatory Protein (IRP)-Iron Responsive Element (IRE) Signaling Pathway in Human Neurodegenerative Diseases. M**olecular Neurodegeneration,** 2017 Oct 23;12(1):75. **IF: 6.78.** *, Corresponding author
5). Zhong Can Zhen.,.**Zhi Dong Zhou**, et al. LRRK2 Interacts with ATM and Regulates Mdm2-p53 Cell Proliferation Axis in Response to Genotoxic Stress. ***Human Molecular Genetics***. **IF: 5.985**
6). Bin Xiao, Xiao Deng, Grace Lim, Shaoping Xie, **Zhi Dong Zhou**, and et al. Superoxide drives progression of Parkin/PINK1-dependent mitophagy following translocation of Parkin to mitochondria. ***Cell death and Disease***. 2017 Oct 12;8(10):e3097. **IF: 5.378**
7). Zhong Can Chen,,, **Zhi Dong Zhou,** et al. Phosphorylation of amyloid precursor protein by mutant LRRK2 promotes AICD activity and neurotoxicity in Parkinson's disease. **Science Signaling.** 2017 Jul 18;10(488). **IF: 6.494**
8). Lifeng Qiu,, **Z.D. Zhou,** et al. Immature midbrain dopaminergic neurons derived from floor-plate method improve cell transplantation therapy efficacy for Parkinson's disease. ***STEM CELLS Translational Medicine****, 2017 Sep;6(9):1803-1814. doi: 10.1002/sctm.16-0470..* **IF: 4.00**
9). Bin Xiao;, **Z.D. Zhou;** et al. p62-Mediated Mitochondrial Clustering Attenuates Apoptosis Induced by Mitochondrial Depolarization. ***BBA - Molecular Cell Research***, 2017; 1864(7):1308-1317. **IF: 4.521**
10). Murni T, Wen RJ, ,**Z. D. Zhou**, et al. Varied pathological and therapeutic response effects associated with CHCHD2 mutant and risk variants. ***Human mutation***, 2017 Apr 21. doi: 10.1002/humu.23234. **IF: 4.601**
11). **Z.D. Zhou***, Chao YX, Tan EK. Potential Implications of Mitochondrial Unfolded Protein Response in the Pathogenesis and Therapy of Dopaminergic Neuron Degeneration in Parkinson's Disease. **JSM Biotechnol Bioeng** 2017; 4: 1075. *, Corresponding author, **IF: NA**
12), **Z.D. Zhou** * et al. Dopamine (DA) Dependent Toxicity Relevant to DA Neuron Degeneration in Parkinson's Disease (PD). ***Austin Journal Of Drug Abuse And Addiction***. 2016; 3(1): 1010. Corresponding author. **IF: NA**
13), Yin Xia Chao,, **Zhi Dong Zhou**, et al. Evaluation of Tenm4 association with essential tremor in Singapore Chinese population. **Movement Disorders**. 2016; 31, S100. **IF: 7.072**
14), **Z. D. Zhou*** & Eng King Tan, Potential pathophysiological crosstalk between Parkin and FBXO7 signalling pathways*. **Electronical Journal of Biology***. 2016. Vol. 12(4): 439-442. *, Corresponding author, **IF: NA**.
15), **Z. D. Zhou***, Wuan Ting Saw, Eng King Tan. Mitochondrial CHCHD containing proteins: physiologic functions and link with neurodegenerative diseases. ***Molecular Neurobiology***, 2016 Sep 8. [Epub ahead of print], doi:10.1007/s12035-016-0099-5. *, Co-Corresponding author, **IF: 6.067**
16). Yin Xia Chao, **Z. D. Zhou**, Eng-King Tan. Comment and response: Plasma Coenzyme Q10 Levels and Multiple System Atrophy. ***JAMA Neurology****,* Published online October 24, 2016. doi:10.1001/jamaneurol.2016.4130. **IF: 10.029**
17), **Z. D. Zhou***, et al. Linking F-box protein 7 and Parkin to neuronal degeneration in Parkinson's disease (PD). ***Mol Brain***, 2016; 9: 41. *, Co-Corresponding author, **IF: 3.401**
18), Angeles, D C,, **Zhou ZD**, et al. Antioxidants inhibit Neuronal Toxicity in Parkinson's Disease-linked LRRK2. ***Annals of Clinical and Translational Neurology***, 2016; 3(4): 288–294, **IF: 9.63**
19), **Z. D. Zhou**, et al. F-box protein 7 mutations promote protein aggregation in mitochondria and inhibit mitophagy. ***Hum Mol Genet.*** 2015 Nov 15;24(22):6314-30, **IF : 5.985**
20), Chao YX, , **Zhou ZD**, ,et al. Association Analysis of COQ2 Variant in Dementia and Essential Tremor. ***Parkinson's Disorders.*** Volume 2015, Article ID 926280, http://dx.doi.org/10.1155/2015/926280**, IF : 1.722**
21), Angeles, D C,, **Zhou ZD**, et al. Thiol-peroxidases ameliorate LRRK2 mutant-induced mitochondrial and dopaminergic neuronal degeneration in Drosophila. ***Human Molecular Genetics*** (2014) June 15; 23:3157-65. **IF: 5.985**
22), **Z.D. Zhou**, et al. Mutant PINK1 up-regulates tyrosine hydroxylase and dopamine levels leading to vulnerability of dopaminergic neurons. ***Free Radical Biology & Medicine***, 2014. 68:220-33, **IF: 5.606**

D. Research Support.

Completed research support

1. Therapeutic effects and molecular mechanism of polyphenols in black tea and neuroprotection in Parkinson's Disease. NMRC Project no. NMRC/CNIG/1093/2012.
Role: Principal Investigator,
Awarded from 2013-2016.
Amount: S$198,000.00

2. Lrrk2 regulate levels of tyrosine hydroxylase and dopamine via interaction with transcriptional factor Lrrk2-int1 in dopaminergic neurons, contributing to dopaminergic neuron vulnerability. NMRC Project no. NMRC/TA/0018/2013.
Role: Principal Investigator,
Awarded from 2013-2017.
Amount: $375,000.00

3. Iron species induced dopaminergic neuron degeneration in Drosophila, a sporadic Parkinson's disease animal model. SHF grant no. NRS13/004.
Role: Principal Investigator,
Awarded from 2013-2016.
Amount: $ 149,976.00