

## 杨凯

### 工作单位:

武汉理工大学化生学院制药系

副教授



### 教育经历:

2004.09 - 2010.12	多伦多大学 (加拿大)	博士	神经生物学
2001.09 - 2004.05	佛罗里达州立大学 (美国)	硕士	分子和细胞生物学
1994.09 - 1998.07	武汉大学 (中国)	学士	细胞和发育生物学

### 工作经历:

2013.07 - Now 英属哥伦比亚大学 (加拿大) 博士后 神经生物学  
导师: Brian MacVicar (加拿大皇家科学院院士, University of British Columbia 脑研究所所长, 加拿大神经科学协会前主席)

2011.01 - 2013.06 Robarts Research Institute (加拿大) 博士后 神经生物学  
导师: John F. Macdonald (加拿大皇家科学院院士, 多伦多大学生理系前系主任, Robarts Research Institute 的前所长)

### 研究方向:

离子通道和神经环路在老年痴呆和其它神经疾病中的作用

### 研究技术:

膜片钳, 双光子技术, 动物行为学技术和分子生物学技术

### 科研奖励 (AWARDS)

2014/8 - 2016/08 Heart and Stroke foundation research fellowship

2010/8 - 2010/12 Doctoral Thesis Completion Grant

2009/10 - 2009/11 The 9th International symposium on VIP, PACAP and related peptides travel award

2009/5 - 2009/6 Canadian neuroscience meeting Travel award

2005/9 - 2009/8 University of Toronto Open Fellowship

### 主要科研项目:

项目名称: Neuron-Glia interactions in brain disease , 承办人: Brian MacVicar, 国家级 CIHR 课题, 起止时间: 2015-2022 年, 金额: 330 万加元, 本人承担 1/3 项目的完成任务。

项目名称: Pannexin in cytotoxic swelling-induced cell death , 承办人: Brian MacVicar, 国家级 CIHR 课题, 起止时间: 2010-2015 年, 金额: 78 万加元, 本人承担大部分项目的完成任务。

项目名称: The subtypes of NMDAR determines the direction of synaptic plasticity

承办人: John F. Macdonald, 国家级 CIHR 课题, 起止时间: 2005-2010 年, 金额: 80 万加元, 本人承担大部分项目的完成任务。

### 代表性论文 (PAPERS)

#### ***PUBLISHED (CITATION FROM GOOGLE SCHOLAR)***

1. **Yang K**, Wang CC, Sun TL (2019) The role of intracellular chaperone protein, Sigma receptors, in Parkinson's Disease (PD) and Major Depressive Disorder (MDD). **Front Pharmacol**, 12 May, <http://doi.org/10.3389/fphar.2019.00528>
2. **Yang K**, Lei G, Xie YF, Macdonald, Jackson MF (2014) Differential regulation of NMDAR and NMDAR-mediated metaplasticity by anandamide and 2-AG in the hippocampus. **Hippocampus**, 24(12): 1601-1614.

*Impact factor is 4.0, citation: 9*

3. **Yang K**, Jackson MF, Macdonald JF (2014) Recent progress in understanding subtype specific regulation of NMDA receptors by G protein coupled receptors (GPCRs). **Int J Mol Sci**, 15 (2): 3003-24.

*Corresponding author, impact factor is 3.25, citation: 8*

4. Vasefi M, **Yang K**, Li J, Kruk J, Heikkila JJ, MacDonald JF, Beazely MA. (2013) Acute 5-HT7 receptor activation increases NMDA-evoked currents and

differentially alters NMDA receptor subunit phosphorylation and trafficking in hippocampal neurons. **Molecular Brain**, 6 (1): 24

*Impact factor is 3.7, citation: 17*

5. **Yang K**, Trepanier C, Sidhu B, Xie YF, Li H, Lei G, Salter MW, Orser BA, Nakazawa T, Yamamoto T, Jackson MF, Macdonald JF. (2012) Metaplasticity gated through differential regulation of GluN2A versus GluN2B receptors by Src family kinases. **EMBO J**, 31(4): 805-816.

*Impact factor is 9.6, citation: 49*

6. **Yang K**, Belrose J, Trepanier CH, Lei G, Jackson MF, Macdonald JF. (2011) Fyn, a potential target for Alzheimer's disease. **J Alzheimers Dis**, 27(2): 243-252.

*Impact factor is 3.9, citation: 30*

7. Li HB, Jackson MF, **Yang K**, Trepanier C, Salter MW, Orser BA, Macdonald JF. (2011) Plasticity of synaptic GluN receptors is required for the Src-dependent induction of long-term potentiation at CA3-CA1 synapses. **Hippocampus**, 21(10): 1053-1061.

*Impact factor is 4.0, citation: 8*

8. **Yang K**, Lei G, Jackson MF, Macdonald JF. (2010) The involvement of PACAP/VIP system in the synaptic transmission in the hippocampus. **J Mol Neurosci**, 42(3): 319-326.

*Impact factor is 2.35, citation: 30*

9. **Yang K**, Trepanier CH, Li H, Beazely MA, Lerner EA, Jackson MF, Macdonald JF. (2009) Vasoactive intestinal peptide acts via multiple signal pathways to regulate hippocampal NMDA receptors and synaptic transmission. **Hippocampus**. 19(9): 779-789.

*Impact factor is 4.0, citation: 22*

10. Xu J, Weerapura M, Ali MK, Jackson MF, Li H, Lei G, Xue S, Kwan CL, Manolson MF, **Yang K**, Macdonald JF, Yu XM. (2008) Control of excitatory synaptic transmission by C-terminal Src kinase. **J Biol Chem**. 283(25): 17503-17514.

*Impact factor is 4.25, citation: 29*

11. **Yang K**, Ding Y, Chin W-C. (2007) K<sup>+</sup>-induced ion-exchanges trigger trypsin activation in pancreas acinar zymogen granules. **Arch Biochem Biophys.** 459(2): 256-263.

*Impact factor is 2.8, citation: 7*

12. Ding Y, **Yang K**, Chin W-C. (2006) Ethanol augments elevated-[Ca<sup>2+</sup>]<sub>i</sub> induced trypsin activation in pancreatic acinar zymogen granules. **Biochem. Biophys. Res. Commun.** 350(3): 593-597.

*Impact factor is 2.37, citation: 14*

### **BOOKS AND CHAPTERS**

1. Belrose JC, Caetano FA, **Yang K**, Lockhart BMW, Jackson MF and MacDonald JF (2012) Mechanisms of Calcium Influx Following Stroke. In: Metal Ion in Stroke (Li YV and Zhang JH (eds.) Springer Series in Translational Stroke Research. Pages 15-39.
2. Ding Y, Chen E, **Yang K**, Chin W-C (2008) The role of Ion-Exchange on Trypsin Premature Activation in Zymogen Granules. In Phase transitions in cell biology Pollack GH, Chin WC (eds.) Springer Netherlands. Pages 51-62.

### **ABSTRACTS**

1. **Yang K**, Lei G, Jackson MF. Postsynaptic NMDARs in hippocampal CA1 cells as a target for endocannabinoids via non-CB1 receptor-dependent actions. The 13th Annual Joint Meeting of G Protein-Coupled Receptor Retreat, London, October 17-19th, 2012.
2. Lei G, Tian M, **Yang K**, Jackson MF, Macdonald JF. Modulation of NMDA receptors by M1 mAChR via striatum enriched phosphatase (STEP). The 13th Annual Joint Meeting of G Protein-Coupled Receptor Retreat, London, October 17-19th, 2012.
3. **Yang K**, Lei G, Jackson MF. Modulation of postsynaptic NMDARs by endocannabinoids via non-CB1 receptor-dependent actions. The canadian neuroscience meeting, Quebec city, Canada, May 29-June 1, 2011.
4. Li H, Jackson MF, **Yang K**, Trepanier C, Orser B, Macdonald JF. Long-lasting potentiation of GluN receptors is required for the maintenance of a non-decrementing component of LTP at CA3-CA1 synapses. The society of neuroscience annual meeting 2010, San Diego, November 13-17, 2010.

5. Trepanier CH, **Yang K**, Salter MW, Macdonald JF. Modulation of NMDAR currents by dopamine D1-like receptors. The society of neuroscience annual meeting 2009, Chicago, October 17-21, 2009.
6. **Yang K**, Sidhu B, Lei G, Macdonald JF. The activation of PACAP receptor (PAC1 receptor) differentially targets NR2A containing NMDA receptor and favours LTP induction. The 9th international symposium on VIP, PACAP and related peptides, Kagoshima, Japan, October 5-8, 2009
7. **Yang K**, Trepanier CH, Sidhu B, Lei G, Jackson MF, Macdonald JF. PACAP receptor (PAC1 receptor) coupled cell signaling pathway differentially targets NR2A containing NMDARs and facilitates LTP induction. The Canadian neuroscience meeting, Vancouver, Canada, may 25-29, 2009.
8. **Yang K**, Trepanier CH, Jackson MF, Macdonald JF. The Vasoactive intestinal peptide (VIP) can modulate NMDA receptors via cAMP/PKA signaling pathway in acutely isolated CA1 hippocampal neurons. The 9th Annual Joint Meeting of the Great Lakes G Protein-Coupled Receptor Retreat, Quebec, October 16-18, 2008.
9. Trepanier CH, **Yang K**, Czerwinska E, Olah M, Jackson MF, Macdonald JF. Regulation of NMDA receptors by dopamine D1 signaling in hippocampus. The society of neuroscience annual meeting 2008, Washington DC, November 15-19, 2008.

## **Reviewer**

Molecular brain

Neuropsychiatry

Steroid Biochemistry & Molecular Biology