# **CURRICULUM VITAE**

# Guoyi Gao, M.D., PhD.

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#### **EDUCATION**

#### **Visiting fellow**

02/2012-03/2012

Department of Neurosurgery, University hospital Antwerp

#### Postdoctoral research fellow

04/2007-08/2008

Dept of Anatomy and Neurobiology, Virginia Commonwealth University, Medical center

#### Ph.D.

08/1997-07/2002 Department of Neurosurgery, Shanghai Changzheng Hospital Major: Neurosurgery Advisor: Yicheng Lu M.D., Ph.D.

#### **Bachelor of Science**

09/1988-07/1994

Major: Medicine Shanghai Second Military University, shanghai China

# **RESEARCH / WORKING EXPERIENCE**

## Attending and Associate Professor

08/2009 - 06/2015

Department of Neurosurgery, Renji Hospital, Shanghai Jiaotong University School of University

Shanghai Institute of Head

# Trauma Resident and

## Attending 08/1994 -

07/2009

Department of Neurosurgery, Shanghai Changzheng Hospital

# LABORATORY SKILLS

# Moleculobiology

- Separation of proteins and amino acids via gel electrophoresis and analysis via Western blot, Immunoblot analysis, Immunoprecipitation.
- DNA Protein Interaction and Immunoblot Analysis— Electrophoretic mobility shift assays (EMSAs)

# **Animal Experiments**

- Proficient in animal ordering, handling, and training..
- Skilled in a wide range of neurobehavioral tests including mechanical allodynia and thermal allodynia in rats and mice.
- Expert in surgical techniques including fluid percussion injury model, weigh drop injury model.
- Delivering drug to subarachnoid space by puncture in rats and mice.

# **Cell Culture and Histology Techniques**

- Passing and maintaining cell lines including HEK and P19 and PC12 cells.
- Capture high quality histochemical images from fluorescence microscope and perform image analysis
- Apoptosis Tunnel method.

• In situ hybridization.

### **MEMBERSHIP IN PROFESSIONAL SOCIETY**

Member of neurotraumatology committee, WFNS

### 2017-now

Member of advisory board, INTS

#### 2012-now

Member of governor, IBIA

#### 2014-now

Member of Chinese Traumatology Society

#### 2016-now

Youth member of Chinese Neurosurgeon Society

## 2015-now

Vice Chairman of Youth Member Committee of Chinese Traumatology Society

# 2015-2017

Vice Chairman of Neurotrauma Committee of Chinese Traumatology Society

#### 2014-now

Board member of Traffic injury Committee, Chinese Traumatology Society

# 2008-2017

Board member of Education Committee, Chinese Neurosurgeon Society

#### 2011-2016

Board member of Neuroscience, Chinese Nuclear Medicine Society

# 2012-now

# **HORNORS AND AWARDS**

Excellent Student of the year, Shanghai Second Military University 1994 Excellency in International Hypothermia Research , Miami 2008 Shanghai Scientific Progress Award First Class, In Group, 2009 National Scientific Progress Award, Second Class, In Group 2010 International Neurotrauma Society Excellent Leadership Award, 2011 Wang Zhongcheng Young Neurosurgeon Award 2014

## **GRANTS**

National Nature Science Foundation Grant: 2004-2007 Nestin Expression of Neural Stem Cell National Nature Science Foundation Grant: 2009-2011 Mechanism of Traumatic Coma Awakening National Nature Science Foundation Grant: 2017-2020 PRx and TBI coma Chinese Ministry of Education Grant: 2010-2013 Traumatic Stress of Intracranial Hypertension Shanghai Pujiang Talent Grant: 2010-2012 Profile Microarray of mesencephalon in rat following TBI Shanghai Education Committee Grant 2015 Research Clinician program Shanghai Shenkang Group Grant Right median nerve stimulation on traumatic coma National Nature Science Foundation Grant: 2017-2020 Pathway exploration of Traumatic coma **BOOK AND CHAPTERS** 

Editor: Diagnosis and Treatment of Traumatic Coma, Shanghai Press, 2008 Chapter Editor: Modern Neurotraumatology, First and Second Edition, Shanghai Press, 2000 and 2005

# **ORIGINAL ARTICLES/ABSTRACTS**

Tang Q, Zhang C, Wu X, Duan W, Weng W, Feng J, Mao Q, Chen S, Jiang J, Gao G.

Comprehensive Proteomic Profiling of Patients' Tears Identifies Potential Biomarkers for the Traumatic Vegetative State. Neurosci Bull. 2018 Aug;34(4):626-638. doi: 10.1007/s12264-018-0259-x. Epub 2018 Jul 18. PubMed PMID:30019218.

You W, Tang Q, Wu X, Feng J, Mao Q, Gao G, Jiang J. Amplitude-Integrated

Electroencephalography Predicts Outcome in Patients with Coma After Acute Brain Injury.

Neurosci Bull. 2018 Aug;34(4):639-646. doi: 10.1007/s12264-018-0241-7. Epub 2018 Jun 9.

PubMed PMID: 29948839.

Wu X, Gao G, Feng J, Mao Q, Jiang J. A Detailed Protocol for Physiological Parameters Acquisition and Analysis in Neurosurgical Critical Patients. J Vis Ex. 2017 Oct 17;(128). doi: 10.3791/56388. PubMed PMID: 29155778.

Wu X, Zhang C, Feng J, Mao Q, Gao G, Jiang J. Right median nerve electrical stimulation for a cute traumatic coma (the Asia Coma Electrical Stimulation trial): study protocol for a randomised controlled trial. Trials. 2017 Jul 10;18(1):311. doi: 10.1186/s13063-017-2045-x. PubMed PMID: 28693604; PubMed Central PMCID: PMC5504835.

You WD, Tang QL, Wang L, Lei J, Feng JF, Mao Q, Gao GY, Jiang JY. Alteration of microRNA expression in cerebrospinal fluid of unconscious patients after traumatic brain injury and a bioinformatic analysis of related single nucleotide polymorphisms. Chin J Traumatol. 2016;19(1):11-5. PubMed PMID: 27033266; PubMed Central PMCID: PMC4897835.

You W, Feng J, Tang Q, Cao J, Wang L, Lei J, Mao Q, Gao G, Jiang J.Intraventricular intracranial pressure monitoring improves the outcome of older adults with severe traumatic brain injury: an observational, prospective study. BMC Anesthesiol. 2016 Jul 11;16(1):35. doi: 10.1186/s12871-016-0199-9. PubMed PMID: 27401211; PubMed Central PMCID: PMC4940906.

Lei J, Gao G, Feng J, Jin Y, Wang C, Mao Q, Jiang J. Glial fibrillary acidic protein as a biomarker in severe traumatic brain injury patients: a prospective cohort study. Crit Care. 2015 Oct 12;19:362. doi: 10.1186/s13054-015-1081-8.PubMed PMID: 26455520; PubMed Central PMCID: PMC4601141.

Weng W, Gao W, Zhao X, Mao Q, Gao G, Feng J. Bilateral Mydriasis secondary to Propofol Administration in a Patient With Hypertensive Cerebellar hemorrhage. J Neurosurg Anesthesiol. 2017 Feb 20. doi: 10.1097/ANA.0000000000000411. [Epub ahead of print] PubMed PMID: 28225468.

Tang Q, Lei J, Gao G, Feng J, Mao Q, Jiang J. Prevalence of persistent vegetative state in patients with severe traumatic brain injury and its trend during the past four decades: A meta-analysis. NeuroRehabilitation. 2017;40(1):23-31. doi: 10.3233/NRE-161387. PubMed PMID: 27814303.

Lei J, Gao G, Feng J, Jin Y, Wang C, Mao Q, Jiang J. Glial fibrillary acidic protein as a biomarker in severe traumatic brain injury patients: a prospective cohort study. Crit Care. 2015 Oct 12;19:362. doi: 10.1186/s13054-015-1081-8. PubMed PMID: 26455520; PubMed Central PMCID: PMC4601141. Jin Y, Lin Y, Feng JF, Jia F, Gao G, Jiang JY. Attenuation of Cell Death in

Injured Cortex After Post-Traumatic Brain Injury Moderate Hypothermia: Possible Involvement of Autophagy Pathway. World Neurosurg. 2015 Aug;84(2):420-30.

doi:10.1016/j.wneu.2015.03.039. Epub 2015 Mar 31. PubMed PMID: 25839396.

Lei J, Wang L, Gao G, Cooper E, Jiang J. Right Median Nerve Electrical Stimulation for Acute Traumatic Coma Patients. J Neurotrauma. 2015 Oct 15;32(20):1584-9. doi:

10.1089/neu.2014.3768. Epub 2015 May 7. PubMed PMID:25664378.

Lei J, Gao G, Mao Q, Feng J, Wang L, You W, Jiang J; LTH-1 trial collaborators. Rationale, methodology, and implementation of a nationwide

multicenter randomized controlled trial of long-term mild hypothermia for severe traumatic brain injury (the LTH-1 trial). Contemp Clin Trials. 2015 Jan;40:9-14. doi:

10.1016/j.cct.2014.11.008. Epub 2014 Nov 12. PubMed PMID: 25460339.

Jin Lei; Guo-Yi Gao; Ji-Yao Jiang. Is management of acute traumatic brain injury effective? A literature review of published Cochrane Systematic Reviews. Chin. J. Traumatol. 15, 17 (2012) Guoyi Gao, Yasutaka Oda, Enoch P Wei, John T Povlishock. The adverse pial arteriolar and axonal consequences of traumatic brain injury complicated by hypoxia and their therapeutic modulation with hypothermia in rat. Journal of Cerebral Blood Flow & Metabolism 30, 628-637. 2009

Yasutaka Oda, Guoyi Gao, Enoch P Wei , John T Povlishock. Combinational therapy using hypothermia and the immunophilin ligand FK506 to target altered pial arteriolar reactivity, axonal damage, and blood-brain barrier dysfunction after traumatic brain injury in rat. Journal of Cerebral Blood Flow & Metabolism 31, 1143-1154 ,2010

Ying-Hui Bao; Yu-Min Liang; Guo-Yi Gao; Ji-Yao Jiang. Lack of effect of moderate hypothermia on brain tissue oxygenation after acute intracranial hypertension in pigs. J. Neurotrauma 27, 433 (2010)

Ying-hui Bao; Yu-min Liang; Guo-yi Gao; Yao-hua Pan; Qi-zhong Luo; Ji-yao Jiang. Bilateral decompressive craniectomy for patients with malignant diffuse brain swelling after severe traumatic brain injury: a 37-case study. J. Neurotrauma 27, 341 (2010)

Ji-Yao Jiang; Wei Xu; Peng-Feng Yang; Guo-Yi Gao; Yong-Gun Gao; Yu-Min Liang; Xiao-Lu Yin; Cheng Zhu. Marked protection by selective cerebral profound hypothermia after complete cerebral ischemia in primates. J. Neurotrauma 23, 1847 (2006)

Ji-Yao Jiang; Wei Xu; Wei-Ping Li; Guo-Yi Gao; Ying-Hui Bao; Yu-Min Liang; Qi- Zhong Luo.

Effect of long-term mild hypothermia or short-term mild hypothermia on outcome of patients with severe traumatic brain injury. J. Cereb. Blood Flow Metab. 26, 771 (2006)