

## **CURRICULUM VITAE**

**NAME:** Jie Wu  
Division of Neurology  
Barrow Neurological Institute  
St. Joseph's Hospital and Medical Center  
350 W. Thomas Rd, Phoenix AZ 85013

**EDUCATION:**  
1978 – 1983 M.D., Xuzhou Medical College, China (Medicine)  
1985 - 1990 Ph.D., Sun Yat-Sen University of Medical Sciences, China (Physiology)

**POSTGRADUATE TRAINING:**  
1993.1 – 1994.9 Postdoctoral Fellow with Dr. Norio Akaike  
Dept. of Neurophysiology, Tohoku University School of Medicine  
1994.9 – 1996.9 Research Associate with Dr. Yoshio Okada  
Dept. of Neurology, New Mexico University School of Medicine

**ACADEMIC APPOINTMENTS:**  
1983 - 1985 Assistant Lecture  
Dept. of Physiology, Xuzhou Medical College, Xuzhou, China  
1990 - 1991 Lecture  
Dept. of Physiology, Sun Yat-Sen University of Medical Sciences, China  
1991 - 1993 Associate Professor  
Dept. of Physiology, Sun Yat-Sen University of Medical Sciences, China  
1996 - 1997 Research Scientist  
Dept. of Neurology, New Mexico University School of Medicine, USA  
1997 - 1998 Assistant Professor  
Dept. of Neurology, New Mexico University School of Medicine, USA  
1998 - 2000 Assistant Staff Scientist (equivalent to Assistant Professor)  
Division of Neurology, Barrow Neurological Institute, St. Joseph's Hospital  
and Medical Center, USA  
2000 - 2009 Associate Staff Scientist (equivalent to Associate Professor)  
Division of Neurology, Barrow Neurological Institute, St. Joseph's Hospital  
and Medical Center, USA  
2009 - present Senior Staff Scientist/Full Professor  
Division of Neurology, Barrow Neurological Institute, St. Joseph's Hospital  
and Medical Center, USA

## **HONORS AND AWARDS:**

1988 Guangdong Province Natural Scientific Excellent Thesis Prize, China  
1989 Young Scientist Excellent Thesis Prize in Sun-Yat Sen Univ. of Med. Sci., China  
1990 Young Scientist Excellent Thesis Prize in Sun-Yat Sen Univ. of Med. Sci., China  
1991 Guangdong Province Natural Scientific Excellent Thesis Prize, China  
1992 Xi-Jun Zhang Foundation, National Young Physiologist Excellent Thesis Prize, China  
2005 Beijing Science and Technique Advance Prize, Beijing, China  
2006 Chinese National Nature and Science Award, China  
2008 Excellent Presentation Award in "International Meeting for Nicotinic Receptor Study", UK  
2010 Acta Phamacologica Sinica Outstanding Contribution Award, Shanghai, China

## **PATENTS:**

1. "Method for decreasing nicotine and other substance use in human" approved in March 11, 2008.  
Inventor: Jie Wu
2. "A new method for smoking cessation" allowed in 2010. Inventor: Jie Wu
3. "Method for decreasing blood glucose level". Inventor: Jie Wu, filed in 2006 (pending).
4. "Using cholesterol reducing drugs for smoking cessation" Inventor: Jie Wu, filed in 2008 (pending).
5. "A novel target mediates amyloid toxicity" Inventor: Jie Wu, filed in 2008 (pending).
6. "Developing native drugs for treating diabetes" Inventor: Jie Wu, filed in 2010 (pending).

**SCIENTIFIC SOCIETIES:**

1988 – 1993	Society for Chinese Physiology
1988 – 1993	International Association for the Study of Pain (IASP)
1995 – present	Society for Neuroscience
1995 – 1998	New York Academy of Sciences
1995 – present	Chinese-American Neuroscientist Society
1999 – present	American Epilepsy Society
2003 – 2004	American Chemistry Society
2004 – present	American Society for Pharmacology and Experimental Therapeutics
2007 – present	American Physiology Society
2009 – present	Translational Neuroscience Society (Chinese in USA)

**TEACHING AND STUDENT TRAINING**

**1983-1985:** Department of Physiology, Xuzhou Medical College, Jiangsu, China.

**Assistant Lecturer:** Teaching Human Physiology to undergraduate medical students.

**1990-1991:** Dept of Physiology, Sun Yat-Sen University of Medical Sciences, Guangzhou, China.

**Lecturer:** Teaching Human Physiology to undergraduate medical students.

**1991-1992:** Dept of Physiology, Sun Yat-Sen University of Medical Sciences, Guangzhou, China

**Associate Professor:** Teaching Human Physiology to undergraduate medical students.

Advising two postgraduate students (Medical Master Student).

**Adjunct Professor:** Advanced Physiology course (experiments) for postgraduate students, Arizona State University, ASU (2002, 2004, 2006)

**Associate Professor:** Lecture for Medical students, University of Arizona School of Medicine (Phoenix Campus), USA (2007-2009)

**Student Training (2000-present):**

Visiting Scientist:	4
Summer Internship Student:	5
High-School Research Student:	5
Undergraduate Research Student (ASU):	1
PH.D. Student (ASU-Barrow Neuroscience PhD program):	3
PH.D. Student (China):	3
Postdoctoral Fellow:	9
Clinician Investigator:	1

**PH.D. Thesis Advisor (mentor):**

Jun Hu, Nangjing Medical University, P.R. China	2006
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Ke-Chun Yang, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai 201203, China, P.R. China	2008
Yu Jin, Nangjing Medical University, P.R. China	2010
<b>MS Thesis Committee Member:</b> Mallika H, Arizona State University, USA	2003
<b>MS Thesis Advisor (mentor):</b> Qiang Liu, Nanjing Medical University, P.R. China	2007
<b>Undergraduate Thesis Advisor/Committee Member:</b> Michael Treiman, Arizona State University, USA	2006

## **JOURNAL REVIEWS**

J. Neurochemistry  
 Life Science  
 J Pharmacol Exp Thera  
 Brain Res  
 Neuroscience  
 J Neurosci Methods  
 J Neurosci Res  
 Neurosci Lett  
 Acta Pharmacologica Sinica  
 American Journal of Physiology  
 Biophy Biochem Res Communication  
 Pesticide Biochemistry and Physiology  
 Cancer Letter  
 Cancer Res  
 Biochem Pharmacol  
 Neuropsychopharmacology  
 Eur J Neurosci  
 Exp. Neurol  
 Auto Neuroscience: Basic and Clinic  
 Hippocampus  
 Neurobiology of Disease

## **EDITOR IN BOARD**

Acta Pharmacologica Sinica (2008 - 2012)  
 Journal of Biomedical Research (2009 – 2013)

## **GRANT REVIEWS:**

American Alzheimer's Association Research Grant (2005)  
 American Alzheimer's Association Research Grant (2007)  
 Chinese Nature and Science (CNSF) Central Research Grant (2007, 2009, 2010)  
 Hong Kong Government Research Grant (2007)  
 Austria National Academy Research Grant (2010)

## INVITED TALKS:

1. "Genesis of MEG signals". Sixth International Evoked Potential Symposium. National Institute for Physiological Sciences, Okazaki, Japan. March 21-25, 1998
2. "Hyperthermia-induced spreading depression in rat hippocampal slices". Hirosaki University School of Medicine, Department of Physiology, Hirosaki, Japan, 2000.8 (Invited by M. Wakui, M.D., Professor and Department Chair)
3. "Molecular mechanisms of 2-APB modulation of intracellular IP<sub>3</sub> receptors and intracellular Ca<sup>2+</sup> signals". Tokyo University, Department of Molecular Neurobiology, Tokyo, Japan, 2001.9 (Invited by K. Mikoshiba, Professor and Department Chair)
4. "Functional, pharmacological and molecular properties of nAChR activation and desensitization". New Jersey Medical and Dentist University, Pain Research Center, USA, 2001.11 (Invited by Dr. J.H. Ye, Professor, Director, Receptor/Ion Channel Laboratory)
5. "Hyperthermia-induced spreading depression: An *in vitro* model of febrile seizures". Georgetown University Medical Center, Department of Physiology & Biophysics, USA, 2001 (Invited by Dr. JY Wu, Associate Professor).
6. "Cellular and molecular mechanisms of hyperthermia-induced spreading depression". Hirosaki University School of Medicine, Department of Physiology, Hirosaki, Japan, 2002.8 (Invited by M. Wakui, M.D., Professor and Department Chair).
7. "Acute dissociation of single neurons from brain: A powerful approach to study neuronal function". Medical Research Seminar, Hirosaki University School of Medicine, Department of Physiology, Hirosaki, Japan, 2004.8 (Invited by M. Wakui, M.D., Professor and Department Chair, and Vice Dean of Medical School)
8. "Nicotinic acetylcholine receptors in the VTA and nicotine dependence". Hirosaki University School of Medicine, Department of Physiology, Hirosaki, Japan, 2004.8 (Invited by M. Wakui, M.D., Professor and Department Chair, and Vice Dean of Medical School)
9. "Cellular mechanisms of iptakalim and protection of DA neurons against neurotoxin-induced degeneration". Nanjing Medical University, P.R. China, 2004.11 (Invited by G. Hu, Professor and Vice President of Nanjing Medical University).
10. "Human nicotinic acetylcholine receptors: from molecular levels to overall function". Beijing Pharmacology and Toxicology Institute, P.R. China, 2004.11 (Invited by H. Wang, Professor and Vice President of Institute)
11. "Midbrain nicotinic acetylcholine receptors and pharmacology". Shanghai Institute of Materia Medica, Chinese Academy Science, P.R. China, 2004.11 (Invited by GZ Jin, Professor, and member of Chinese Academy Science)
12. "Gene-engineering manipulations of human neuronal nicotinic acetylcholine receptor  $\alpha 4$  subunits in the SH-EP1 cell line: function, pharmacology and biophysics". Shanghai International Conference on Physiological Biophysics, Shanghai, P.R. China, 2004.11. (Chair, mini-symposium 7)

13. "Novel mechanisms of iptakalim on pancreatic beta-cell K-ATP channels". Hirosaki University School of Medicine, Department of Physiology, Hirosaki, Japan, 2005.7 (Invited by M. Wakui, Professor and Department Chair, and Vice Dean of Medical School).
14. "GABAergic excitation in human hamartoma neurons: A novel hypothesis for gelastic seizure epileptogenesis". Phoenix, BNI, Epilepsy Month Meeting. 2006.3.17.
15. "Heteromeric  $\alpha 7 \beta 2$ -nAChR in forebrain cholinergic neurons, a selective target to mediate beta-amyloid neurotoxicity". Phoenix, BNI Alzheimer's Disease Month Meeting. 2006.5.17.
16. "The switch of nicotinic acetylcholine receptor subunits in brain reward center after chronic exposure to nicotine." Phoenix, BNI Neuroscience Seminar. 2006.6.27.
17. "Iptakalim study: from pharmacology to diseases". Chinese Pharmacology University, P.R. China, 2006.9 (Invited by Professor You, dean of Pharmacology College).
18. "New concept, pharmacology and application of iptakalim". Nanjing Medical University, P.R. China, 2006.9 (Invited by G. Hu, Professor and Vice President of Nanjing Medical University).
19. "Role of MPP<sup>+</sup> in GABA<sub>A</sub> receptor: A new hypothesis for MPP<sup>+</sup>-induced acute dopamine neuron degeneration". 6<sup>th</sup> International symposium: Molecular and cellular mechanisms of neurodegeneration, Qingdao, P.R. China, Sep 21-22, 2006.
20. "Gene-engineering manipulation of human nicotinic receptors: The model for novel nicotinic drug discovery". Shanghai Institute of Materia Medica, P.R. China, 2006.9. (Invited by Professor Guozhang Jin, a Member of Chinese Academy Science).
21. "Nicotinic acetylcholine receptors and nicotine dependence" Beijing Pharmacology Institute, P.R. China, 2006.9 (Invited by Hai Wang, professor and Vice President of Institute).
22. "ATP-sensitive K<sup>+</sup> channels and neuronal protection" Shanghai Institute of Materia Medica, 05-13-2007. (Invited by Professor Guozhang Jin, a Member of Chinese Academy Science).
23. "Novel pharmacological mechanisms of iptakalim" Nanjing Medical University, P.R. China, 05-17-2007. (Invited by G. Hu, Professor and Vice President of Nanjing Medical University).
24. "Why are forebrain cholinergic neurons selectively lost in Alzheimer disease?" Beijing Institute of Pharmacology and Toxicology, P.R. China, 05-23-2007. (Invited by Hai Wang, professor and Vice President of Institute).
25. "Iptakalim, a novel compound for diabetic therapy" University of Wollongong, School of Health Science, Australia, 07-19-2007. (Invited by Professor Xufeng Huang, Director of Neurobiology Research Center).
26. "Heteromeric  $\alpha 7 \beta 2$  nAChRs", UNIVERSITÄTSMEDIZIN, BERLIN 03-28-2008. (Invited by Dr. Congjian Zhao).
27. "Epileptogenesis of human gelastic seizures with hypothalamic hamartoma" Landeskrankenhaus Universitätsklinikum, Graz, 05-01-2008. (Invited by Hans G. Eder, Professor for Neurosurgery and Dr. Michael Feichtinger, Head of Epilepsy Unit).
28. "Cellular Mechanisms of nicotine excites dopamine neurons in brain reward center". University of Wyoming, 02-19-2009 (Invited by Professor Sun, Qian-Quan).

29. "Cellular mechanisms of nicotine excites dopamine neurons in brain reward center" Wuan-Nan Medical College, 05-13-09 (Invited by Professor Wang, Meng-Ya).
30. "Why are base forebrain cholinergic neurons selectively degenertaed in Alzheimer's disease?" Shantou University School of Medicine, China, 05-16-09 (Invited by Professor Shi, Gon-Gon).
31. "Developing new compounds for smoking cessation" First Pearl River International Biopharmaceutical Forum, Guangzhou, China, Invited speaker, July 18-21, 2009.
32. "A novel type of nicotinic receptor in basal forebrain cholinergic neurons" University of Alberta, Canada 09-09-09 (Invited by Professor Jack Jhamanda).
33. "Epileptogenesis of gelastic seizures with hypothalamic hamartomas" University of California in Los Angeles. 08-24-10 (Invited by Professor C. Cepeda).
34. "Do  $\alpha 7$  type nicotinic receptors mediate amyloid toxicity?" University of Second Army Medicine, Shanghai, China. 09-01-10 (Invited by Professor Su, Dingfeng).
35. "Mechanisms of nicotine reward" APS 30<sup>th</sup> Anniversary Pharmacology Symposium (Invited speaker, 08/31/2010 – 09/01/2010, Shanghai).

## INSTITUTE SERVICE

Senior Research Consul Committee, BNI  
 Promotion Committee, BNI  
 BNI high-school student research program  
 BNI summer research program  
 BNI-ASU Neuroscience Ph.D. program

## RESEARCH GRANT SUPPORT

### Past

- |   |                  |                     |
|---|------------------|---------------------|
| 1. Barrow Neurological Institute Start Fund   | <b>1998-2000</b> |                     |
| 2. National Institute of Health Grant NS40417<br><u>Homomeric nicotine acetylcholine receptors</u><br><b>Co-investigator</b> (PI: Ronald. Lukas, PH.D.)<br><b>Wu portion:</b> 20% salary, 100% postdoctoral fellow, and one patch-clamp system and lab supplement | 2000-2005        | \$1,300,000 (total) |
| 3. Barrow Neurological Foundation Women's Board<br><u>Mechanisms of febrile seizures</u><br><b>Principal Investigator</b>   | 2000-2001        | \$25,000 (direct)   |
| 4. Barrow Neurological Foundation Women's Board<br><u>Two-channel thermic pen recorder and tissue culture microscope</u><br><b>Principal Investigator</b>   | 2001-2002        | \$13,000 (direct)   |
| 5. Bioengineering Seed Funding, Arizona State University  | 2002-2003        | \$20,000 (direct)   |

Engineering a novel GABA sensor to study the role of GABA<sub>A</sub> receptor abnormalities in absence epilepsy

**Principal Investigator**

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|-----|--|-----------|---|
| 6.  | Bioengineering Seed Funding, Arizona State University<br><u>Dynamics of hyperthermia-induced seizures in immature rat hippocampal slices</u><br><b>Co-Investigator</b> (PI: Leon Iasemidis, PH.D.)<br><b>Wu portion:</b> | 2002-2003 | \$20,000 (direct)<br><br>\$8,000 (direct) |
| 7.  | Alzheimer's Disease Pilot Research Grant<br><u>β-amyloid directly modulates α4 nicotinic acetylcholine receptor function</u><br><b>Principal Investigator</b>  | 2002-2004 | \$31,000 (total)                          |
| 8.  | Barrow Neurological Foundation Women's Board<br><u>Role of GABA<sub>A</sub> receptors in MPP<sup>+</sup>-induced DA neuron degeneration</u><br><b>Principal Investigator</b>   | 2002-2003 | \$25,000 (direct)                         |
| 9.  | New Vision Company<br><u>Effects of jojoba meal on rat body weight, food intake and blood cells</u><br><b>Principal Investigator</b>   | 2002-2003 | \$31,000 (direct)                         |
| 10. | Barrow Neurological Foundation Women's Board<br><u>Nicotinic antagonist allosterically enhances α4α2-nAChR function: A new strategy for Alzheimer's disease therapy</u><br><b>Principal Investigator</b>                 | 2003-2004 | \$40,000 (direct)                         |
| 11. | Barrow Neurological Foundation<br><u>Cellular basis of epileptogenesis in human hypothalamic hamartoma</u><br><b>Principal Investigator</b>  | 2004-2005 | \$32,375 (direct)                         |
| 12. | Barrow Neurological Foundation Women's Board<br><u>Epileptogenesis of human hypothalamic hamartoma</u><br><b>Principal Investigator</b>  | 2004-2005 | \$40,000 (direct)                         |
| 13. | Institute for Mental Health Research Foundation<br><u>VTA nicotinic acetylcholine receptors and nicotine dependence</u><br><b>Principal Investigator</b>   | 2005-2006 | \$25,000 (direct)                         |
| 14. | Barrow Neurological Foundation Women's Board<br><u>ATP-sensitive K<sup>+</sup> channels in human temporal lobe epilepsy</u><br><b>Principal investigator</b>   | 2007-2008 | \$40,000 (direct)                         |
| 15. | Barrow Neurological Foundation Women's Board<br><u>Iptakalim, a novel nicotinic receptor antagonist, selectively blocks VTA α4β2-nAChRs--- A new compound for smoking cessation</u><br><b>Principal Investigator</b>     | 2006-2008 | \$40,000 (direct)                         |
| 16. | Arizona Biomedical Research Commission (ABRC) Phase I<br><u>VTA nicotinic acetylcholine receptors and nicotine dependence</u><br><b>Principal Investigator</b>   | 2005-2008 | \$147,850 (direct)                        |

17. Institute for Mental Health Research Foundation 2007-2008 \$25,000 (direct)  
Hippocampal gamma oscillations in nicotine- and katamine-treated rats  
**Principal Investigator**
18. National Institutes of Health, DA015389 2003-2008 \$1,540,000(total)  
Molecular mechanisms of nicotine dependence (No cost extend to 2009)  
**Co-investigator.** (PI: Ronald J. Lukas, PH.D.)  
**Wu portion:** 25% salary, 100% postdoctoral and lab supplement:
19. Philip Morris External Research Grant 2005-2008 \$965,860 (total)  
Nicotinic receptors involved in mood and reward (No cost extend to 2009)  
**Co-Principal investigator** (PI: Ronald J. Lukas, PH.D.)  
**Wu portion:** 15% salary, 100% postdoctoral and lab supplement:
20. National Institutes of Health, NIH RO1 2007-2008 \$119,874 (total)  
Chemistry and Pharmacology of New Nicotine Ligands  
**Co-Investigator,** PI: Alan P. Kozikowski, Ph.D. (University of Illinois)
21. Barrow Neurological Foundation Women's Board 2008-2009 \$93,000 (direct)  
 $\alpha 7\beta 2$  nAChRs in forebrain cholinergic neurons are highly sensitive to beta amyloid  
**Principal investigator**
22. National Institutes of Health, NS056104 2006-2009 \$385,443 (total)  
GABAergic excitation in human hypothalamic hamartoma (No cost extend to 2009)  
**Principal Investigator**
23. ADCC Pilot Grant 2007-2009 \$31,000 (direct)  
Heteromeric  $\alpha 7\alpha 2$ -nicotinic receptors in forebrain cholinergic neurons are highly susceptible to A $\beta$  peptides  
**Co-Investigator** (Mentor), PI: Qiang Liu (Postdoctoral in Wu Lab)
24. CHW Marketing-associate Seed Foundation 2008-2009 \$20,000 (direct)  
 Effects of iptakalim on nicotine-induced locomotor sensitization  
**Principal Investigator**
25. National Institutes of Health, U19-DA019377 2005-2010 \$980,000 (total)  
Development of pharmacotherapies for nicotine addiction  
**Co-investigator** (PI: Ronald J. Lukas, PH.D., in project 2)  
**Wu portion:** 20% salary, 50% postdoctoral plus lab supplement

### Current active

1. Barrow Neuroscience Foundation 2010-2011 \$230,000 (direct)  
Mechanism of nicotine-induced glutamatergic synaptic plasticity in VTA DA neurons  
**Principal investigator**
2. Philip Morris External Research Grant 2007-2012 \$704,000 (total)  
Remodeling of nicotinic receptor subunits and nicotine dependence  
**Principal Investigator**
3. CHW Marketing-associate Seed Foundation 2009-2010 \$20,000 (direct)

## Effects of U18666A on nicotine-induced locomotor sensitization

### Principal Investigator

4. CHW Marketing-associate Seed Foundation 2010-2011 \$25,000 (direct)  
Developing new compounds for diabetic therapy  
**Principal Investigator**
5. National Institutes of Health DA026627 2009-2011 \$43,000 (total)  
Construction and expression of concatemeric  $\alpha 6\beta 2^*$  nicotinic acetylcholine receptors  
**Co-investigator** (PI: Paul Whiteaker)  
**Wu portion:** 10% salary, 50% postdoctoral plus lab supplement
6. National Institutes of Health U01 MH085193 2009-2014 \$3,510,000 (total)  
Design and study of new nicotine analogs for use in depression  
**Co-investigator** (PI: Ronald J. Lukas, project leader)  
**Wu portion:** 12.5% salary, 50% postdoctoral plus lab supplement
7. Arizona Biomedical Research Commission (ABRC) Phase II 2009-2011 \$125,000 (direct)  
Develop a new Ratt animal model  
**Co-investigator** (PI: Vinodh Narayanan)  
**Wu portion:** 50% postdoctoral plus lab supplement

### Pending

1. American Alzheimer's Association, Initial Research Grant 2010-2013 \$240,000 (direct)  
Mechanisms of amyloid beta induces neuronal hyperexcitation  
**Principal Investigator**
2. National Institutes of Health, RO1 2011-2016 \$1,844,859  
Nicotinic acetylcholine receptors and amyloid toxicity  
**Principal Investigator**
3. National Institutes of Health, RO1 2011-2016 \$1,640,000  
Signaling and molecular basis of GABAergic excitation in human hypothalamic hamartoma  
**Principal Investigator**
4. National Institutes of Health, RO21 2011-2013 \$440,300 (total)  
 $\alpha 6$ -nAChR on GABAergic boutons in the VTA dopamine neurons and nicotine dependence  
**Principal Investigator**
5. National Institutes of Health, RO1 2011-2015 \$1,844,859  
Interaction of nicotinic acetylcholine receptors and anesthetics  
**Co-Investigator**

## PUBLICATIONS

### Peer-Reviewed Manuscripts (\* means corresponding author):

1. **Wu, Jie\*** & Zhang Jian-Fu, Effect of magnetized oral rehydration salts (MORS) on gastrointestinal propulsive motility in mouse. *J. Chinese Physical Med.* 1985; 7:230-231.

2. **Wu, Jie\*** & Chen Pei-Xi, Averaged evoked potentials in cerebellar cortex elicited by A- and C-fiber inputs of saphenous nerve. *Guangdong Physiol. Bull.* 1988; 1-5.
3. **Wu, Jie\*** & Chen Pei-Xi, Slow pain response in cat cerebellar cortex. *Res. Acupuncture* 1989; 14:23-26.
4. **Wu, Jie\*** & Chen Pei-Xi, Effect of rotation magnetic field on cerebral evoked potentials in cat. *Chinese Biomagnetic J.* 1988; 2:20-25.
5. **Wu, Jie\*** & Chen Pei-Xi, Effect of permanent magnetic potential on conduction velocities of different types peripheral nerve fiber in cat. *Chinese Biomagnetic J.* 1989; 3:51-55.
6. **Wu, Jie\*** & Chen Pei-Xi, Effect of Electro-acupuncture (EA) on slow pain response in cerebellar cortex of cat. *Res. Acupuncture* 1989; 14:328-332.
7. **Wu, Jie\*** & Chen Pei-Xi, Electrical responses evoked by C-fiber input from saphenous nerve in cat cerebellar cortex. *Acta Physiologica Sinica* 1989; 41:529-535.
8. **Wu, Jie\*** & Chen Pei-Xi, Interaction between descending impulse of somatosensory cortex and peripheral C-fiber input on cerebellar cortex. *Acad. J. SUMS* 1990; 11:33-37.
9. **Wu, Jie\*** & Chen Pei-Xi, Cerebellar evoked potentials elicited by stimulation of C-fiber in saphenous nerve in cat. *Brain Res.* 1990; 522:144-146.
10. **Wu, Jie\*** & Chen Pei-Xi, Power spectrum analysis on spontaneous and driven firing activities of cerebellar Purkinje cells. *Guangdong Physiol. Bull.* 1991; 8:12-17.
11. **Wu, Jie\*** & Chen Pei-Xi, Effect of stimulation of cerebellar dentatus nucleus on responses of cerebral cortex to slow pain stimulation. *Acad. J. SUMS* 1992; 13:22-25.
12. **Wu, Jie\*** & Chen Pei-Xi, Effect of C-fiber input on inter-spike interval of cerebellar Purkinje cells. *Acad. J. SUMS* 1992; 13:8-14.
13. **Wu, Jie\*** & Chen Pei-Xi, Simple spike response of cerebellar Purkinje cell to stimulation of C-fiber in saphenous nerve in cat. *Acta Physiologica Sinica* 1992; 13:22-25.
14. **Wu, Jie\*** & Chen Pei-Xi, Discharge response of cerebellar Purkinje cell to stimulation of C-fiber in saphenous nerve. *Brain Res.* 1992; 581:269-272.
15. **Jie Wu**, Nobutoshi Harata & Norio Akaike\*, Sevoflurane-induced ionic currents in acutely dissociated rat hippocampal CA1 pyramidal neurons of rat. *Brain Res.* 1994; 645:303-308.
16. **Jie Wu\***, Nobutoshi Harata & Norio Akaike, Potentiation by sevoflurane of the GABA<sub>A</sub>-induced Cl<sup>-</sup> current in acutely dissociated CA1 pyramidal neurons from rat hippocampus. *Br. J. Pharmacol.* 1996; 119:1013-1021.
17. **Jie Wu\***, Pei-Xi Chen & Guo-Zhang Jin, Dopamine-induced ion currents in acutely dissociated neurons from the CNS, *Acta Pharmacologica Sinica* 1996; 17:23-27.
18. **Jie Wu\*** & Guo-Zhang Jin, Tetrahydroberberine suppresses dopamine-induced K<sup>+</sup> current in acutely dissociated hippocampal CA1 pyramidal neurons of rat. *Neurosci. Lett.* 1996; 207:155-158.

19. **Jie Wu\***, N. Kamimura, T. Takeo, J. Wada, S. Suga, Y. hoshina & M. Wakui, Thimerosal modulates agonist-specific cytosolic  $Ca^{2+}$  oscillatory patterns in single pancreatic acinar cells isolated from the mouse. *FEBS Lett.* 1996; 390:149-152.
20. Y.X. Zen, **J. Wu**, S.T. Yee, H. & N. Hirokawa\*, Abnormality in the early signal transduction pathway is responsible for the impaired proliferative response and low  $K^+$  current in a T-cell clone by stimulation with anti-CD3 antibody. *Cell. Signal.* 1996; 8:263-267.
21. Nobutoshi Harata, **Jie Wu**, Tetsuya Kira, Hitoshi Ishibashi, Kyushu Ono & Norio Akaike\*, Rundown of  $GABA_A$  response under experimental ischemia in acutely dissociated CA1 pyramidal neurons of the rat. *J. Physiol.* 1997; 500:673-688.
22. **Jie Wu\*** & Guo-Zhang Jin, Tetrahydroberberine blocks the  $K^+$  channels underlying the inhibition of intracellular message-mediated outward currents in acutely dissociated hippocampal CA1 pyramidal neurons of rat. *Brain Res.* 1997; 775:214-218.
23. **Jie Wu\*** & Guo-Zhang Jin, Tetrahydroberberine inhibits accetylcholine-induced  $K^+$  current in acutely dissociated hippocampal CA1 pyramidal neurons of rat. *Neurosci. Lett.* 1997; 222:115-118.
24. Yoshio C. Okada\*, **Jie Wu** & Shinichi Kyuhou, Genesis of MEG signals in a mammalian CNS structure. *Electroenceph. Clini. Neurophysiol.* 1997; 103:474-485.
25. **Jie Wu\*** & L. Donald Partridge, Dissociated dopaminergic neurons from substantia nigra zone compacta in young rat lack functional NMDA receptors. *Pflug. Arch.* 1998; 435:699-704.
26. T. Takeo, S. Suga, **Jie Wu\***, N. Kamimura, J. Wada, Y Hoshina & M. Wakui, Kinetics of  $Ca^{2+}$  release by photolysis of caged  $InsP_3$  in rat submandibular gland cells. *J. Cell. Physiol.* 1998; 174: 387-397.
27. **Jie Wu** & Yoshio C. Okada\*, Physiological bases of the synchronized population spikes and slow wave of the magnetic field generated by a guinea-pig longitudinal CA3 slice preparation. *Electroenceph. Clini. Neurophysiol.* 1998; 107:361-373.
28. Takahiro Kanno, Sechiko Suga, **Jie Wu**, Masao Kimura and Makoto Wakui\*, Intracellular cAMP potentiates voltage-dependent activation of L-type  $Ca^{2+}$  channels in rat islet  $\beta$ -cells. *Pflug. Arch.* 1998; 435:578-580.
29. **Jie Wu\***, YiXin Zen & K. Hirokawa, Signal pathway of Mitogen-induced  $Ca^{2+}$ -activated  $K^+$  currents in young and aged T-cell clones of C57BL/6 mice. *Cell. Signal.* 1999; 11:391-398.
30. **Jie Wu** & Yoshio C. Okada\*, Roles of a potassium afterhyperpolarization current in generating neuromagnetic fields and field potentials in longitudinal CA3 slices of the guinea-pig. *Clini. Neurophysiol.* 1999; 110:1858-1867.
31. **Jie Wu** & Yoshio C. Okada\*, Roles of calcium- and voltage-sensitive potassium currents in the generation of neuromagnetic signals and field potentials in CA3 longitudinal slice of the guinea-pig. *Clini. Neurophysiol.* 2000; 111:150-160.
32. **Jie Wu** & Robert S. Fisher\*, Hyperthermic spreading depressions in the hippocampal slice. *J. Neurophysiol.* 2000; 84:1355-1360.
33. **Jie Wu\***, Noritaka Kamimura, Teruko Takeo, Sechiko Suga, Makoto Wakui, Takayuki Maruyama & Katsuhiko Mikoshiba. 2-Aminoethoxydiphenyl borate (2APB) modulates kinetics of intracellular  $Ca^{2+}$

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