

# CURRICULUM VITAE

## Yi Chen

Addresses: Laboratory of Neural Injury and Repair  
Wadsworth Center  
New York State Department of Health  
Department of Biomedical Sciences  
School of Public Health, State University of New York at Albany  
P.O. Box 509  
Empire State Plaza  
Albany, NY 12201-0509

Telephone: (518)474-7993 (office), (518)331-0528 (home)

E-mail: [chenyi@wadsworth.org](mailto:chenyi@wadsworth.org)

### **PROFESSIONAL EXPERIENCE**

2000-2006 Graduate Research Associate, Department of Physiology and Cell Biology, The Ohio State University

2002 Visiting Graduate Research Assistant, Dr. Wolpaw' lab, Wadsworth Center, New York State Dept Health and State University of New York

2004 Spinal Cord Injury Training Course (sponsored by National Institute of Neurological Disorders and Stroke)

2005-2006 Research Assistant, Laboratory of Nervous System Disorders, Wadsworth Center, New York State Dept of Health & Sate University of New York

2006-2008 Postdoctoral Fellow, Laboratory of Nervous System Disorders, Wadsworth Center, New York State Dept of Health & State University of New York

2008-current Research Scientist, Laboratory of Neural Injury and Repair, Wadsworth Center, New York State Dept of Health & State University of New York

### **EDUCATION**

2000-2006 Ph.D. Department of Physiology and Cell Biology, The Ohio State University

2004 Spinal Cord Injury Training Course (sponsored by National Institute of Neurological Disorders and Stroke)

1998-1999 Clinic Internship                      Bayi Hospital, Nanjing, China

1994-1999 Bachelor of Medicine Clinical Medicine Program, Nanjing  
Medical University, Nanjing, China

### **HONORS AND AWARDS**

Graduate Scholarship, The Ohio State University, 2000-2006

The Title of Excellent Internship Doctor, awarded by Bayi Hospital, July 1999

The Excellent Student Scholarship, awarded by Nanjing Medical University, 1994-1997

Second Prize of the University Computer Contest, awarded by Nanjing Medical  
University, 1996

Winner of the Campus English Speech Competition, awarded by Nanjing Medical  
University, 1994

### **SUPERVISING EXPERIENCE**

2008-2013	Rongliang Liu	Technician
2010-2011	Ting Fan	Consultant
2010	Derrick Chu,	Summer Internship
2011	Ryan Hogan	Summer Internship
2011	Jessica Gracias	Graduate Student
2012	Matthew Choinski	Graduate Student
2012	Laura Tang	Summer Internship
2012	Jimmy Ding	Summer Internship
2012	Jia Gu	Summer Internship

### **TECHNICAL TRAINING**

Rat surgery: vertebral laminectomy, craniotomy, dorsal spinal hemisection, anterograde cortical labeling, EMG recording electrode implantation

Behavioral evaluation: motor scoring, grid walk and runway analysis, locomotion EMG analysis, VICON motion analysis

Quantitative immunohistochemistry

Light microscopy

Image analysis

## **CURRENT RESEARCH INTERESTS**

Neuropathology of spinal cord injury, neuroinflammation, neural regeneration/plasticity, recovery of locomotor function, physiology and pharmacology of the neurotrophins, spinal reflex (esp. H-reflex) conditioning

## **SCHOLARLY ACTIVITY**

### **Peer-Reviewed Articles**

Chen, Y., Chen X.Y., Jakeman, L.B., Schalk, G., Stokes, B.T., Wolpaw, J.R. The interaction of a new motor skill and an old one: H-reflex conditioning and locomotion in rats. *Journal of Neuroscience* 25:6898-6906, 2005.

Chen, X.Y., Chen, Y., Chen, L., Wolpaw, J.R. Operant conditioning of reciprocal inhibition in rat soleus muscle. *Journal of Neurophysiology* 96:2144-2150, 2006.

Chen, X.Y., Chen, Y., Chen, L., Tennissen, A.M., Wolpaw, J.R. Corticospinal tract transection permanently abolishes H-reflex down-conditioning in rats. *Journal of Neurotrauma* 23:1743-1750, 2006.

Chen, Y., Chen, X.Y., Jakeman, L.B., Chen, L., Stokes, B.T., Wolpaw, J.R. Operant conditioning of H-reflex improves locomotion after spinal cord injury in rats. *Journal of Neuroscience* 26:12537-12543, 2006.

English, A., Chen, Y., Carp, J.S., Wolpaw, J.R., Chen, X.Y. Recovery of electromyographic activity after transection and surgical repair of the rat sciatic nerve. *Journal of Neurophysiology* 97:1127-1134, 2007.

Chen, X.Y., Pillai, S., Chen, Y., Wang, Y., Chen, L., Carp, J.C., Wolpaw, J.R. Spinal and supraspinal effects of long-term stimulation of sensorimotor cortex in rats. *Journal of Neurophysiology* 98:878-887, 2007.

Chen, X.Y., Segal, R., Chen, Y., Wang, Y., Thompson, A., Carp, J.S., Wolpaw, J.R. Reflex conditioning: A new strategy for improving motor function after spinal cord injury. *Annals of The New York Academy of Sciences*, 1198: E12-E21, 2010. PubMed Central PMCID: PMC2925434.

Chen, Y., Wang, Y., Chen, L., Sun, C., English, A.W., Wolpaw, J.R., Chen, X.Y. H-reflex up-conditioning encourages recovery of EMG activity and H-reflexes after sciatic nerve transection and repair in rats. *Journal of Neuroscience*, 30:16128-16136, 2010. PubMed PMID:21123559.

Chen, Y., Chen, L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Operant conditioning of rat soleus H-reflex oppositely affects another H-reflex and changes locomotor kinematics. *Journal of Neuroscience*, 31:11370-11375, 2011. PubMed Central PMCID: PMC3156437.

Wang, Y., Chen, Y., Chen, L., Wolpaw, J.R., Chen, X.Y. Cortical stimulation causes long-term changes in H-reflexes and spinal motoneuron GABA receptors. *Journal of Neurophysiology*, 108:2668-2678, 2012.

Chen, Y., Chen, L., Liu, R.L., Wang, Y., Chen, X.Y., Wolpaw, J.R. Locomotor impact of beneficial or non-beneficial H-reflex conditioning after spinal cord injury. *Journal of Neurophysiology*, submitted.

### **Abstracts for Presentations and Posters at Scholarly Conferences**

Chen, X.Y., Jakeman, L.B., Chen, Y., Wolpaw, J.R., Stokes, B.T. H-reflex conditioning in spinal cord-injured rats after NT-3 treatment. Program No. 66.18. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002. Online

Tennissen, A.M., Chen, X.Y., Chen, L., Schalk, G., Wolpaw, J.R., Jakeman, L.B., Chen, Y., Stokes, B.T. H-reflex conditioning effects on reflexes during locomotion in normal and spinal cord-injured rats. Program No. 66.17. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002. Online

Chen, Y., Chen, L., Liu, R.L., Schalk, G., Jakeman, L.B., Stokes, B.T., Chen X.Y., Wolpaw, J.R. The effect of H-reflex conditioning on soleus reflex function and EMG activity during locomotion in normal rats and in rats with right lateral column transection. BMS Conference, 2003.

Chen, Y., Chen, L., Jakeman, L.B., Stokes, B.T., Chen, X.Y., Wolpaw, J.R. The effect of H-reflex up-conditioning on soleus function during locomotion in rats with right lateral column transections. Program No. 497.07. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2003. Online

Chen X.Y., Chen, L., Chen, Y., Liu, R.L., Schalk, G., Jakeman, L.B., Stokes, B.T., Wolpaw, J.R. Down-conditioning of soleus H-reflex reduces the H-reflex and affects soleus activity during locomotion. Program No. 497.05. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2003. Online

Chen, L., Chen, Y., Liu, R.L., Chen, X.Y., Wolpaw, J.R. Up-conditioning of H-reflex appears to affect soleus reflex function during locomotion in rats. Program No. 497.06. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2003. Online

Chen, Y., Jakeman, L.B., Stokes, B.T., Chen, X.Y, Liu, R.L., Wolpaw, J.R. H-reflex conditioning may modify locomotion after lateral column transection in rats. Program No. 417.06. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2004. Online

Chen, L., Chen, Y., Liu, R.L., Chen, X.Y, Wolpaw, J.R. Bilateral globus pallidus ablation in rats prevents down-conditioning of H-reflex. Program No. 417.03. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2004. Online

Chen, X.Y., Jakeman, L.B., Stokes, B.T., Chen, Y., Liu, R.L., Wolpaw, J.R. H-reflex conditioning may modify locomotion after lateral column transection in rats. BMS Conference, 2004.

Chen, X.Y., Chen, L., Chen, Y., Liu, R.L., Schalk, G., and Wolpaw, J.R. H-reflex conditioning affects soleus function during locomotion in rats with lateral column transection. Christopher Reeve Paralysis Foundation Spinal Cord Symposium: A dialogue between grant holders and the community they serve. March 21-23, Oak Brook Hills, IL, P. 49, 2004.

Chen, Y., Chen, X.Y, Jakeman, L.B., Chen, L., Stokes, B.T., Wolpaw, J.R. Reeducating the injured spinal cord by operant conditioning of a reflex pathway. Program No. 175.04. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online

Chen, Y., Wolpaw, J.R., Jakeman, L.B., Chen, L., Stokes, B.T., Chen, X.Y. Using reflex conditioning to restore spinal cord function. CRPF's Spinal Cord Symposium: A Dialogue Between CRPF Grant Holders and the Community They Serve. Boston, 2005.

Chen, L., Chen, X.Y., Chen, Y., Liu, R.L., Wolpaw, J.R. Operant conditioning of reciprocal inhibition in freely moving rats. Program No. 175.05. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online

Chen, X.Y., Carp, J.S., Chen, L., Chen, Y., Pillai, S., Wang, Y., Wolpaw, J.R. Effects of sensorimotor cortex stimulation on soleus H-reflex in rats: initial studies. Program No. 175.07. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online

Pillai, S., Wang, Y., Chen, Y., Chen, L., Wolpaw, J.R., Chen, X.Y. Chronic sensorimotor cortex stimulation gradually increases the stimulus amplitude needed to produce a constant descending output. Program No. 175.08. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online

Tennissen, A.M., Chen, X.Y., Chen, Y., Chen, L., Liu, R.L., Wolpaw, J.R. Abolition of H-reflex down conditioning by corticospinal tract transection in rats is permanent. Program No. 175.03. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online

Chen, Y., Chen X.Y., Carp, J.S., Liu, R.L., English, A., Wolpaw, J.R. Recovery of EMG activity after sciatic nerve transection and surgical repair. Program No. 146.02. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2006. Online

Tennissen, A.M., Chen, X.Y., Chen, Y., Chen, L., Wolpaw, J.R. Effects of soleus H-reflex conditioning on the gastrocnemius h-reflex. Program No. 146.03. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2006. Online

Chen, L., Chen, X.Y., Chen, Y., Liu, R.L., Wolpaw, J.R. Effects of ipsilateral sensorimotor cortex ablation on H-reflex conditioning in rats. Program No. 146.04. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2006. Online

Chen, X.Y., Chen, L., Chen, Y., Pillai, S., Wang, Y., Wolpaw, J.R. Effects of chronic sensorimotor cortex stimulation on soleus H-reflex in rats. Program No. 146.05. 2006 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2006. Online

Chen, Y., Chen, L., Liu, RL., Wolpaw, JR., Chen, XY. Effects of chronic sensorimotor cortex stimulation on spinal cord reflexes and on locomotion in spinal cord-injured rats. Program No. 404.05. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online

Chen, L., Chen, XY., Chen, Y., Liu, RL., Wolpaw, JR. Elicitation and conditioning of quadriceps H-reflex in freely moving rats: initial studies. Program No. 404.01. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online

Tennissen, AM., Pillai, S., Wang, Y., Chen, Y., Carp, JS., Chen, L., Wolpaw, JR., Chen, XY. Chronic sensorimotor cortex stimulation in rats appears to induce activity-dependent plasticity in the brain. Program No. 404.02. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online

Wolpaw, JR., Wang, Y., Pillai, S., Chen, Y., Chen, L., Liu, RL., Chen, XY. Chronic sensorimotor cortex stimulation may reduce GABA<sub>B</sub> receptor expression in spinal cord. Program No. 404.03. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online

Chen, Y., Chen, L., Liu, RL., English, AW., Wolpaw, JR., Chen, XY. Operant conditioning of spinal reflexes to modify functional recovery after peripheral nerve injury. Program No. 73.01. 2008 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2008. Online

Chen, X.Y., Chen, Y., Liu, R.L., Wang, Y., ; Guan, Z., Popovich, P.G., Wolpaw, J.R. H-reflex up-conditioning and locomotion in rats with a lateral column contusion injury. Program No. 73.10. 2008 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2008. Online

Wang, Y., Pillai, S., Chen, Y., Wolpaw, J.R., Chen, X.Y. Up-conditioning of Soleus H-reflex Reduces GABA-B Receptor Expression on Soleus Motoneurons. Program No. 73.07. 2008 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2008. Online

Chen, L., Chen, X.Y., Chen, Y., Liu, R.L., Wolpaw, J.R. Impact of Soleus H-reflex Conditioning on Vastus Lateralis H-reflex and Locomotor Behavior in Freely Moving Rats: Initial Studies. Program No. 73.02. 2008 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2008. Online

Chen, L., Chen, X.Y., Chen, Y., Liu, R.L., Wang, Y., Wolpaw, J.R. Conditioning of soleus H-reflex is accompanied by an opposite change in vastus lateralis H-reflex in freely moving rats. Program No. 79.01. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online

Chen, Y., Chen, L., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Soleus H-reflex conditioning may change locomotor EMG and kinematics. Program No. 79.02. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online

Wang, Y., Chen, L., Chen, Y., Liu, R.L., Wolpaw, J.R., Chen, X.Y. C-terminals and muscarinic acetylcholine receptor 2 on motoneurons after operant conditioning of the soleus H-reflex. Program No. 79.03. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online

Chen, X.Y., Chen, Y., Chen, L., Liu, R.L., Wang, Y., Carp, J.S., English, A.W., Wolpaw, J.R. Soleus H-reflex up conditioning may improve soleus function after peripheral nerve injury. Program No. 79.04. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online

Pillai, S., Wang, Y., Chen, L., Chen, Y., Wolpaw, J.R., Chen, X.Y. Long-term sensorimotor cortex (SMC) stimulation alters GABAergic terminals and receptors on rat spinal cord motoneurons. Program No. 79.05. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online

Sun, C., Wang, Y., Chen, L., Chen, Y., Wolpaw, J.R., Chen, X.Y. Reflex conditioning and the precision of functional recovery after peripheral nerve injury: initial studies. Program No. 79.08. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online

Wang, Y., Chen, L., Chen, Y., Liu, R.L., Wolpaw, J.R., Chen, X.Y. Effects of long-term sensorimotor cortex (SMC) stimulation on spinal cord ventral horn GABAA immunoreactivity in rats: Preliminary results. Program No. 82.10. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online

Chen, L., Chen, Y., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Effects of H-reflex up-conditioning in rats with lateral column contusion injury. Program No. 82.12. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online

Chen, X.Y., Wang, Y., Sun, C., Chen, L., Chen, Y., Wolpaw, J.R., English, A.W. Up-conditioning of rat soleus H-reflex after sciatic nerve transection and regeneration may increase motoneuron VGLUT1 terminals and GluR2/3 immunoreactivity. Program No. 82.17. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online

Liu, R.L., Chen, Y., Chen, L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Effects of soleus H-reflex conditioning on hip, knee, and ankle extensor and flexor muscles: methods and initial results. Program No. 82.18. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online

Chen, Y., Chen, L., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Effects of soleus H-reflex conditioning on locomotor EMG and kinematics. Program No. 286.02. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online

Chen, L., Chen, Y., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Effects of soleus H-reflex conditioning on the reflexes of other leg muscles. Program No. 917.07. 2011 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2011. Online

Chen, X.Y., Chen, Y., Chen, L., Liu, R.L., Wang, Y., Yao, L.H., Wolpaw, J.R. The inferior olive is important for long-term maintenance of H-Reflex down-conditioning. Program No. 917.08. 2011 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2011. Online

Wang, Y., Yao, L.H., Chen, L., Chen, Y., Liu, R.L., Wolpaw, J.R., Chen, X.Y. Metabotropic glutamate (mGluR1) receptors appear to increase with operantly conditioned H-reflex increase in rats. Program No. 917.11. 2011 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2011. Online

Chen, Y., Chen, L., Fan, T., Wang, Y., Wolpaw, J.R., English, A.W., Chen, X.Y. Soleus H-reflex up-conditioning after sciatic nerve transection and regeneration may improve locomotion. Program No. 917.14. 2011 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2011. Online



Chen, L., Chen, Y., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. The more things change the more they remain the same: the effects of H-reflex conditioning on locomotion. Program No. 475.12. 2012 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2012. Online

Chen, Y., Chen, L., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. H-reflex up-conditioning in spinal cord-injured rats and the associated locomotor improvement persist for at least 100 days after conditioning ends. Program No. 475.14. 2012 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2012. Online

Chen, X.Y., Chen, Y., Chen, L., Liu, R.L., Wang, Y., Yao, L.H., Wolpaw, J.R. Inferior olive ablation prevents acquisition and long-term maintenance of soleus H-reflex down-conditioning in rats. Program No. 475.17. 2012 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2012. Online

Wang, Y., Yao, L.H., Chen, L., Chen, Y., Wolpaw, J.R., Chen, X.Y. H-reflex conditioning affects GABAB receptors in rat soleus motoneurons. Program No. 475.16. 2012 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2012. Online

Baxter, W.T., Chen, Y., Carp, J.S., Chen, X.Y., Wolpaw, J.R. Long-term single-neuron data from behaving rats undergoing operant conditioning of the H-reflex: Development of automated data collection and analysis methods. Program No. 645.21. 2013 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2013. Online

Chen, L., Chen, Y., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Down-conditioning of soleus H-reflex in rats with right lateral column injury weakens the soleus H-reflex pathway but does not further impair locomotion. Program No. 645.22. 2013 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2013. Online

Chen, Y., Chen, L., Liu, R.L., Wang, Y., Wolpaw, J.R., Chen, X.Y. Locomotor effects of H-reflex conditioning in rats with transection of the dorsal column ascending tract. Program No. 645.04. 2013 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2013. Online

Chen, X.Y., Wang, Y., Chen, Y., Chen, L., Liu, R.L., Wolpaw, J.R. Protein kinase C may be involved in the spinal cord plasticity produced by H-reflex conditioning. Program No. 645.15. 2013 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2013. Online

Wang, Y., Chen, L., Chen, Y., Wolpaw, J.R., Chen, X.Y. Effects of soleus H-reflex conditioning on the motoneuron GABAA receptor, G-protein-activated inwardly-rectifying potassium channel 3.2, and voltage-gated sodium channels. Program No. 645.19. 2013 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2013. Online

## **Project Involvement**

### Ongoing Research Support

R01 HD36020 (CHEN) 5/1/97 – 7/31/13  
NIH/NICHHD  
Supraspinal Control of Spinal Cord Plasticity  
The goal of this research is to clarify the complementary roles of cortex and cerebellum in reflex conditioning and to show that conditioning can be targeted to modify specific aspects of motor function.  
Role: Co-Investigator

R01-NS061823 (CHEN & WOLPAW) 2/1/08 – 1/31/12  
NIH/NINDS  
Spinal Reflex Conditioning and Locomotion  
The goal of this project is to evaluate the complex motor effects of reflex conditioning protocols.  
Role: Co-Investigator

PO1 HD32571 (English, A / Wolpaw, J & Chen XY) 6/1/12-5/31/17  
NIH/NICHHD  
Spinal circuits and the musculoskeletal system  
Project IV: Regulation of Spinal-Musculoskeletal Interactions  
The major goal of this Program Project Grant is to evaluate the effects of therapeutic interventions on the relationship between spinal circuits generating movements and the musculoskeletal system after this relationship has been reconstituted following peripheral nerve injury.  
Role: Co-Investigator

R01 NS22189 (WOLPAW) 4/1/85 – 4/30/13  
NIH/NINDS  
Adaptive Plasticity in the Spinal Stretch Reflex  
The goal is to delineate the complex pattern of brain and spinal cord plasticity that underlies spinal reflex conditioning.  
Role: Co-Investigator

### Research Support Completed During the Last Three Years

SCIRB-26, Contract #C020932 (Chen) 1/1/06 -12/31/10  
The New York Spinal Cord Injury Research Program  
Using Reflex Conditioning to Restore Spinal Cord Function  
The goal of this research is to develop reflex conditioning as a new therapeutic approach and demonstrate its clinical value in humans with spinal cord injuries.  
Role: Co-Investigator

3R01HD036020-11S1 (Chen)

9/1/09-9/30/10

NIH/NICHHD

Supraspinal control of spinal cord plasticity (Supplement)

The goal of this supplement support is to characterize the anatomical substrates of the neuronal and synaptic plasticity in the spinal cord that is induced by the CST and underlies H-reflex conditioning.

Role: Co-Investigator

3R01 NS061823-2S1 (Chen & Wolpaw)

9/30/09-9/29/10

NIH/NINDS

Spinal Reflex Conditioning and Locomotion (Supplement)

The goal of this supplement support is to delineate the changes in GABAergic terminals on soleus, VL, and TA motoneurons and ventral horn interneurons that accompany soleus, VL, or TA H-reflex up- or down-conditioning.

Role: Co-Investigator

5R01 NS22189-20S1 (WOLPAW)

9/30/09-9/29/10

NIH/NINDS

Adaptive Plasticity in the Spinal Stretch Reflex (Supplement)

The goal of this supplement support is to greatly expand the quantity and quality of the data collection.

Role: Co-Investigator

## **MEMBERSHIPS**

Society for Neuroscience, USA

International Brain Research Organization

American Association for the Advancement of Science

Hudson/ Berkshire Chapter of the Society for Neuroscience