STANDARDIZED CURRICULUM VITAE FORMAT
COLLEGE OF MEDICINE, THE UNIVERSITY OF TOLEDO (UT)

PERSONAL INFORMATION

Xin Wang, MD, PhD

EDUCATION AND TRAINING

1995: Medical Bachelor Degree (MD equivalent) Department of Clinical Medicine, Tianjin Medical University, Tianjin, China

2000: Master of Medical Science Department of Anesthesia, Tianjin Medical University, Tianjin, China

2006: Ph.D Department of Neuroscience, University of Toledo, Toledo, Ohio, U.S.A.

POSTGRADUATE MEDICAL EDUCATION (RESIDENCIES, FELLOWSHIPS)

1995 - 2000: Residency Department of Anesthesia, Tianjin Medical University General Hospital, Tianjin, China

PRE AND POST-DOCTORAL FELLOWSHIPS

8/2000 - 06/2006: Ph.D Department of Neurosciences, University of Toledo (former Medical University of Ohio), Toledo, Ohio

12/2005 - 11/2007: Postdoctoral Research Associate Department of Neurosciences, University of Toledo, Toledo, Ohio

06/2006 - 07/2007: Collaborator Department of Physiology, Northwestern University Feinberg School of Medicine, Chicago, IL

11/2007 - 11/2009: Postdoctoral Fellow Department of Psychiatry, University of Toledo, Toledo, Ohio

11/2007 - 11/2009: **Visiting Research Investigator** Department of Psychiatry, University of Michigan, Ann Arbor, Michigan

EMPLOYMENT

1995 - 2000: Anesthesiologist/Clinical Lecturer Department of Anesthesiology, Tianjin Medical University General Hospital, Tianjin, China; Full time

2009 – Present: Assistant Professor Department of Psychiatry, Neurosciences, and Radiology, University of Toledo, Toledo, Ohio; Full time

Visiting Professorship

2009 - 2010: Visiting Research Investigator Department of Psychiatry, University of Michigan, Ann Arbor, Michigan

2010 – Present: Visiting Adjunct Assistant Professor of Psychiatry Department of Psychiatry, University of Michigan, Ann Arbor, Michigan

CERTIFICATIONS/LICENSURES

1996: Junior Professional Rank Certificate: Specialty: Medicine
Licensure: Tianjin Municipal Personnel Bureau, China, Certificate No.: 064142

1997: People's Republic of China Teacher's Qualification Certificate:
Qualification: Teacher of Colleges and Universities
Licensure: Tianjin Education Committee, China, Certificate No.: 971210070013437

1999: People's Republic of China Qualification Certificate of Physician:

Specialty: Anesthesiology; Licensure: Tianjin Public Health Bureau, China, Certificate No.: 19981211012010171081120l

MILITARY SERVICE

N/A

AWARDS AND COMMENDATIONS

1. **2000 International Travel Fellowship,** The 12th World Congress of Anesthesiologists, Montreal, Québec, Canada
2. **2003 Young Investigator Travel Award,** 22nd Annual Scientific Meeting of American Pain Society, Chicago, Illinois, U.S.A
3. **2013 - 2014 Inter-Professional Student Research Award, University of Toledo.** Funding ($1200) to promote cross-professional collaborations among 10 students who are working on my project of PTSD development. Student team: Ateka Contractor, Tracey Biehn, Andrew S. Cotton, Bryan Lubomirsky, Christine Sutu, Maureen P. Converse, Shazli P Khan, Ahmed S Al-Khudhair, Maisa Alafyouni, John Luckoski.

SERVICE

COMMITTEES, THE UNIVERSITY OF TOLEDO:

2011, 2012 member: Administrator Search Committee, Department of Psychiatry
2012 – present member, Research Committee, Department of Psychiatry
2013 interviewer, University of Toledo Medical School applicants (2 applicants)

COMMUNITY SERVICE AND ORGANIZATIONS:

REGIONAL, NATIONAL AND INTERNATIONAL PROFESSIONAL SOCIETIES AND ACTIVITIES:

International Professional Societies

2001 - Present: Society for Neurosciences
2003 - 2007: American Pain Society
2005 - 2006: Sigma Xi the Scientific Research Society
2012: Organization of Human Brain Mapping

Regional Professional Activities

12/12/2012 member, Biomarker Workgroup, Alliance for Human Effectiveness and Advancement (AHEAD), Dayton, Ohio
1/15/2013 member, Neurosciences Workgroup, Alliance for Human Effectiveness and Advancement (AHEAD), Dayton, Ohio
4/8/2013-10/2013 Representative of Institute in the panel discussion, Neurosciences 5 year Plan Meeting, Alliance for Human Effectiveness and Advancement (AHEAD), Dayton, Ohio
2012, 2013 contributed to meeting preparation, 19th, 20th University of Toledo - Bowling Green State University - University of Michigan-Dearborn Annual Symposium on Research in Psychiatry, Psychology and Behavioral Science.

GROUPS OTHER THAN PROFESSIONAL SOCIETIES:

N/A

EDUCATION ACTIVITIES

TEACHING

11/3/2011: Neurochemistry Lecture: Genetics of Post-Traumatic Stress Disorder (PTSD) Lecture (1 hour) (4 Child Psychiatry fellows), Lecturer

11/3/2011: Neuroscience laboratory: 4 hours (40 Physician Assistant students), Lab instructor

10/19/2012: Neuroscience: Lecture (2 hours) (45 Physician Assistant students), Lecturer

4/5/2013: 4 Neuroanatomy laboratories (4 hours/laboratory) (75 Medical students), Lab instructor

4/17/2013: Neuroscience: Lecture (1 hour) (3 Neurosciences and Neurological Disorders Program PhD students), Lecturer

5/1/2013: Clinical Decision Making: Group study (2 hours) (12 students), faculty facilitator

3/2013 - Present: Psychiatric clinical research writing
Lecture / individual tutoring (2 hour lecture and 2 hour/week tutoring on manuscript preparation) (18 Psychiatry residents), Course organizer / Lecturer

8/2013: Medical Student Elective Course -Research in Biomedical Sciences UT COURSE #: PSCH750 (4-week) / PSCH751 (2-week), Laboratory instruction (10 hour/week) (1 student (Ryan Adam Rosenberger)), advisor (co-advisor Marijo Tamburrino)

MENTORING

1. **2010 – 2012 Advisor, Master of Science Biomedical Science students, University of Toledo. Total 7 students.** Degree awarded: Master of Medical Science
   Co-Advisor, Austin Kosier (2010), Robert Roether (2010), Sameep S. Dhillon (2011), John Luckoski (2012)
   Major Advisor, 2012: Maisa Alafyouni, Seyed Sahand Banisadr, Carol A. Angel
2. **2010 – 2013 Committee Member:** Andrew S. Cotton (Major Advisor: Michael Dennis)
   Degree awarded: Master of Medical Physics
   Current position: graduate student, University of Toledo
3. **2011 – 2013 Advisor** (co-advisor: Marijo Tamburrino), **Medical Student Summer Research Program, University of Toledo. Total 9 students.** 2011: Alexander D. Dzurik, Alex B. Blair; 2012: Bryan Lubomirsky, Christine Sutu, Kristopher M. Carbone; 2013: Kevin D Stromberg, Laura Prince, Vikram Ramanujam, Elizabeth F Olds
4. **2011 - 2013 Co-Advisor, Biomedical Research Summer Undergraduate Research Fellowship (SURF).** Jennifer Haupricht (2011), Anjali Naik (2013)
5. **2011- 2012 Co-Advisor** (advisor: Michael Dennis) **National Science Foundation Research Experiences for Undergraduates in Physics and Astronomy NSF-REU Grant.** Jacob Buenger (2011), Kathleen Connolly (2012)
6. **2012 Co-Advisor, University of Toledo Sullivan Honors Fellowship.** Jennifer Haupricht
7. **2010 – 2013 Advisor, Medical Student Research Volunteers. Total 8 students.** 2010: Dennis Kountouris; 2012: Joseph Chen; 2013: Benjamin D Duncan, Steven P Zadora, Christopher B Traner, Julia Elinor Roberts, Marissa Nichole Watson, Hiten Patel
8. **2012 – 2013 Advisor, Medical Graduate Research Volunteers. Total 3 trainees.** 2012: Satwant Singh; 2013: (ProMedica) Leelasri Vanguru, Udita Bhavsar

9. **2010- 2013 Advisor, Graduate Student Research Volunteers. Total 4 students.** Tracey Biehn (2010-2013), Ateka Contractor (2010-2013), David A Fentner (2012); Tory A. Durham (2013)
10. **2011 – 2013 Supervisor, Pre-medical Student Research Assistants. Total 10 students.** Dara Dabiri (2011), Delaney Banas (2011-2012), Robert S. D. Morgan (2012), Rachel Grey (2011-2012), Ahmed S Al-Khudhair (2013), Ryan M Dughayli (2013), Ateka Contractor (2013-present), Shazli P Khan (2013-present), Amy C. Custer (2013-present), Yasmine Zakaria Ayoub (2013-present)
11. **01/2013 – Present Mentoring Post-Doctoral Fellow:** Elizabeth Duval (Advisor: Israel Liberzon, Department of Psychiatry, University of Michigan)

SCHOLARSHIP

EDITORIAL BOARDS
N/A

JOURNAL PEER REVIEW
1. Journal of Clinical Anesthesia 2008 (1)
2. Anxiety, Stress, & Coping 2013 (1)

STUDY SECTIONS, REVIEW PANELS
N/A

INVITED LECTURES, SEMINARS, SYMPOSIA
Extramural Invited Lectures:

2006: Influences of peripheral, cortical and intrinsic inhibitory inputs on receptive fields of dorsal column nuclei neurons; Department of Psychology, Vanderbilt University, Nashville, Tennessee.

2013: Rapid dynamic changes in the adult human brain associated with improvement of mental health and academic performance; Neurosciences Workgroup, Alliance for Human Effectiveness and Advancement (AHEAD), Dayton, OH

Intramural Lectures:

2011: MRI Research on Emotion Deficits of PTSD Patients; Psychiatry Grand Rounds, University of Toledo, Toledo, OH

2011: Longitudinal MRI study of PTSD development within weeks after trauma; PanLab meeting, Department of Psychiatry, University of Michigan, Ann Arbor, MI

2012: Progressive brain changes from initial days to 12 weeks after motor vehicle accident; PanLab meeting, Department of Psychiatry, University of Michigan, Ann Arbor, MI

2012: Rapid dynamic changes in the adult human brain associated with improvement of mental health and academic performance; Neurosciences Grand Rounds, Department of Neurosciences, University of Toledo, Toledo, OH

SPECIAL/INVITED PRESENTATIONS AT NATIONAL AND INTERNATIONAL MEETINGS:
N/A

CONSULTANT ACTIVITIES;

2008 - 2009: CCMB Pilot Award, University of Michigan; Testing Models of Risk for PTSD: Gene x Environment Interaction in Emotional Neurocircuitry. PI: Anthony King; Role: Consultant
This study investigated brain functional and structural abnormalities in veterans who were diagnosed with PTSD, and explored the relationship between brain abnormalities and their genetic profiles. I designed functional MRI behavioral tasks, conducted MRI experiments, and analyzed brain functional and structural data.

2009 - 2011: National Center on Minority Health and Health Disparities 1RC2MD004767; Childhood Poverty and Brain Development: the Role of Chronic Stress and Parenting. PIs: Gray W. Evans (Cornell University), Israel Liberzon and James Swain (University of Michigan); Role: Consultant
This study investigated brain functional and structural differences between young adults who grew up in low-income families and who grew up in average-income families, and then explored the relationship between brain differences and their socioeconomical history. I contributed to the development and analysis of brain structural MRI study for this project.

9/2012 – Present: University of Michigan; Emotional Regulation and Fear Conditioning in Mild Traumatic Brain Injury. PI: Israel Liberzon; Role: Consultant
This study investigates brain functional and structural differences between traffic accident survivors who are and aren't diagnosed with mild traumatic brain injury (mTBI), and then explores the relationship between brain differences and their post-traumatic stress symptoms. I contributed to the development of study design.

MAJOR RESEARCH INTERESTS:

1. Developments of post-traumatic psychiatric and neurological disorders, particularly PTSD and pain
2. Application of neuro-plasticity concept to study the mechanisms of these psychiatric and neurological disorders
3. Using functional and structural neuroimaging techniques to study human brain abnormalities underlying these post-traumatic disorders
4. The links between pre-traumatic factors (e.g., risky genotypes) and development of post-traumatic disorders

PAST RESEARCH SUPPORT, TRAINING GRANTS:

1. 2008-2009 MRI of human cortex after limb loss
   Grantor: Translational Research Stimulation Award (TRSA), University of Toledo, Toledo, Ohio
   Amount: $40,000
   PI: John T. Wall, Department of Neuroscience, University of Toledo
   Role: co-investigator

   This project used MRI in humans to get preliminary data on whether limb amputation and related pain leads to changes in cortical thickness. I contributed to experimental design, data collection and analysis.

2. 2007-2009 Ohio Army National Guard Mental Health Initiative - Risk and Resilience Factors for Combat-Related Posttraumatic Psychopathology and Post-Combat Adjustment
   Grantor: Department of Defense Congressionally-Directed Medical Research Program: W81XHW- 07-1-0409

Amount: $50,000 / year
PIs: Joseph Calabrese, Department of Psychiatry, Case West Reserve University
Marijo Tamburrino, Department of Psychiatry, University of Toledo
Role: Postdoctoral Fellow

3. 2010-2011 The neural activity underlying persistent fear responding in Post Traumatic Stress Disorder
Grantor: Michigan Institute for Clinical and Health Research (MICH-R) Pilot Grant of University of Michigan, UL1RR024986
Amount: $49,981
PI: Sarah N. Garfinkel, Department of Psychiatry, University of Michigan
Role: co-principal investigator

This project investigates the neural activity associated with fear conditioning in veterans with or without PTSD.

4. 2011-2013 Response of neurotrophic factors and cerebral imaging to current exercise recommendations
Grantor: Interdisciplinary Research Initiation Award, Grant NO:
Amount: $75,000
PIs: Barry W. Scheuermann, Department of Kinesiology, University of Toledo
David L. Weldy, Department of Family Medicine, University of Toledo
Role: co-investigator

This study explored the neurobiological mechanisms of exercise to improve learning using neuroimaging and neuro-endocrine analyses. I designed, conducted and analyzed neuroimaging components of the study, and explored the relationship between brain changes and physiological or cognitive changes after exercises.

CURRENT RESEARCH SUPPORT, TRAINING GRANTS;

1. 11/2010-present A preliminary neuroimaging study of the development of PTSD following a motor vehicle accident
Grantor: Start-Up Funding, University of Toledo
Amount: $73,000
Role: principal investigator

This study is to develop the experimental design and MRI techniques to study the changes in the neural responses to emotional stimuli and brain structure changes from acute to chronic post-accident periods. The differences in the changes between PTSD and non-PTSD survivors may identify the mechanisms that underlying development of PTSD after traffic accidents.

2. 11/2011-11/2013 A preliminary neuroimaging study of the development of PTSD following a motor vehicle accident
Grantor: Translational Research Stimulation Award (TRSA), Grant NO: N-122930-01, ProMedica Health System
Amount: $25,000
Role: principal investigator

This study developed the collaborations in order to extend the preliminary study of development of PTSD after traffic accidents from the University of Toledo Medical Center to the Emergency Departments of ProMedica Health System.

3. 04/2013-03/2015 Longitudinal MRI study of PTSD development from days to weeks after trauma
   Grantor: NIMH: 1 R21 MH098198-01A1
   Amount: $150,000 for first year
   Role: principal investigator

   This study is to compare the progressive changes in brain functional and structural changes over initial three months of post-accident periods between PTSD and non-PTSD survivors to explore development of PTSD after traffic accidents.

4. 05/2013-05/2014 Neuroimaging and Genetic Investigation of Resilience and Vulnerability to PTSD
   Grantor: Translational Research Stimulation Award (TRSA), ProMedica Health System
   Amount: $25,000
   PI: Marijo Tamburrino, Department of Psychiatry, University of Toledo
   Role: co-investigator

   This study explores the convergent effects of risky genetic profiles and childhood abuse experiences on the development of adulthood PTSD after military deployment in Ohio National Guard soldiers. I contributed to experimental design, data collection and analysis.

5. 2011-present Development of MRI Research
   Grantor: William Bauer fMRI Research Fund, Grant NO: 2401957
   Amount: $20,000 (total)
   Role: principal investigator

   This donation is to support Dr. Wang's MRI research.

PENDING RESEARCH SUPPORT, TRAINING GRANTS:

1. Neurobehavioral Moderators of Post-traumatic Disease Trajectories: Prospective MRI Study of Recent Trauma Survivors
   Grantor: NIMH
   Submission: 06/2013
   Amount: 2.5 million
   PI: Arieh Shalev, Department of Psychiatry, New York University
   Role: co-investigator

   This international collaboration is to examine progressive changes in psychological conditions, brain function and structure during the initial year after traumatic experiences to examine the neuro-plasticity mechanisms of the development of PTSD. My on-going study on the changes in the initial post-accident months provided preliminary results for the design of this grant.

PUBLICATIONS

Articles published in peer-reviewed scientific journals

1. **Wang X**, Wang G. Application of porpofol anesthesia in the operation of rental insufficiency patients. Journal of Anesthesia and Relative Clinical Medicine. 4(1):27-8 (in Chinese); 1996.
2. Wang G, Xie H, **Wang X**, Yu Y. Reptilase enhances coagulation during anesthesia. Chinese Pharmacy. 8 (supplement):144-5 (in Chinese); 1997.
3. Wall JT, Xu J, **Wang X**. Human brain plasticity: an emerging view of the multiple substrates and mechanisms that cause cortical changes and related sensory dysfunctions after injuries of sensory inputs from the body. Brain Research Reviews. 39(2-3):181-215; 2002.
4. Xie H, **Wang X**, Liu G, Wang GL. Analgesic effects and pharmacokinetics of a low dose of ketamine preoperatively administered epidurally or intravenously. Clinical Journal of Pain. 19(5):317-22; 2003.
5. **Wang X**, Wall JT. Cortical influences on sizes and rapid plasticity of tactile receptive fields in the dorsal column nuclei. Journal of Comparative Neurology. 489(2):241-8; 2005.
6. **Wang X**, Wall JT. Cortical influences on rapid brainstem plasticity. Brain Research. 1095:73-84; 2006.
7. **Wang X**, Xie H, Wang GL. Improved postoperative analgesia with coadministration of preoperative epidural ketamine and midazolam. Journal of Clinical Anesthesia. 18(8):563-9; 2006.
8. Xie H, Dong ZQ, Ma F, Bauer WR, **Wang X**, Wu GC. Involvement of serotonin 2A receptors in the analgesic effect of tramadol in mono-arthritic rats. Brain Research. 1210:76-83; 2008.
9. Geha PY, Baliki MN, **Wang X**, Harden RN, Paice JA, Apkarian AV. Brain dynamics for perception of tactile allodynia (touch-induced pain) in postherpetic neuralgia. Pain. 138(3):641-56; 2008.
10. **Wang X**, Bauer W, Chiaia N, Dennis M, Gerken M, Hummel J, et al. Longitudinal MRI evaluations of human global cortical thickness over minutes to weeks. Neuroscience Letters. 441(2):145-8; 2008.
11. **Wang X**, Gerken M, Dennis M, Mooney R, Kane J, Khuder S, Xie H, Bauer WR, Apkarian AV, Wall JT. Profiles of precentral and postcentral cortical mean thicknesses in individual subjects over acute and subacute time-scales. Cerebral Cortex. 20(7):1513-22; 2010.
12. **Wang X**, Garfinkel SN, King AP, Angstadt M, Dennis MJ, Xie H, Welsh RC, Tamburrino MB, Liberzon I. A multiple-plane approach to measure the structural properties of functionally active regions in the human cortex. Neuroimage. 49(4):3075-85; 2010.
13. Kim P, Leckman JF, Mayes LC, Feldman R, **Wang X**, James E. Swain. The plasticity of human maternal brain: longitudinal changes in brain anatomy during the early postpartum period. Behavioral Neuroscience. 124(5):695-700; 2010.
14. Sripada RK, King AP, Garfinkel SN, **Wang X**, Sripada C, Welsh RC, Liberzon I. Altered resting-state amygdala functional connectivity in PTSD. Journal of Psychiatry Neuroscience 37(4):241-9; 2012
15. Sripada RK, King AP, Welsh RC, Garfinkel SN, **Wang X**, Sripada CS, Liberzon I. Neural dysregulation in posttraumatic stress disorder: evidence for disrupted equilibrium between salience and default mode brain networks. Psychosomatic Medicine 74(9):904-11; 2012.
16. Xie, H, Kane, J, Dennis, MJ, Mooney R, Bauer WR, **Wang X**, Wall JT. Case series evidence for changed interhemispheric relationships in cortical structure in some amputees. Journal of Clinical Neuroscience. 20(4):523-6; 2013
17. Lubomirsky B, **Wang X (co-first author and corresponding author)**, Xie H, Smirnoff JB, Biehn TL, Contractor AA, Elhai JD, Sutu C, Brickman KR, Liberzon I, McLean SA, Tamburrino MB. Preliminary study on the relationship between visitation in the emergency department and post-traumatic mental health. Social Work in Mental Health (accepted 8/24/2013)

Chapters in books

1. **Wang X**. Transfusion treatment of burns. In: Li. W, editor. Transfusion Treatment. Beijing, China: Chinese Medical Science Press. p232-40, (in Chinese); 1999
2. **Wang X**. Tabular lexicon of cytokine structure and function. In: Du B, editor. Biologic Therapeutics. Tianjin: Tianjin Science & Technology Translation & Publication Corporation. p31-48 (Translation from English to Chinese); 2002
3. Liberzon I, **Wang X**. Structural Brain Abnormalities in PTSD . Ed. Vermetten E. Sleep and Combat-related Post-Traumatic Stress Disorders. Springer–Verlag. (in press)

Abstracts and presentations

1. Xie H, **Wang X**, Wang G. The effect of administering reptilase preoperatively on coagulation in aged patients. 12th World Congress of Anesthesiologists; Montreal, Canada: World Foundations of Societies of Anesthesiologists (WFSA). Program No. p6.4.21; 2000.
2. **Wang X**, Xie H, Yu S, Zhu J, Wang G. Preemptive intrathecal ketamine suppresses formalin-induced both nociceptive behavior and increasing in spinal cord NGF, TrkA, P75 mRNA. 12th World Congress of Anesthesiologists; Montreal, Canada: World Foundations of Societies of Anesthesiologists (WFSA). Program No. p4.1.33; 2000
3. Xie H, **Wang X**, Liu G, Chen K, Wang G. Analgesic effects and pharmacokinetics of a low dose of ketamine preoperatively adminstered epidurally or intravenously. Abstract Viewer and Itinerary Planner; Washington, DC: Society for Neuroscience; Abstract No. 842.9; 2002.
4. **Wang X**, Wall JT. Evidence that sensory input disruption triggers brainstem disinhibition. Society for Neuroscience Abstract Viewer and Itinerary Planner; Washington, DC: Society for Neuroscience. Abstract No. 256.7; 2002.
5. Xie H, Ma F, Dong Z, Wang Y, Wu G, **Wang X**, Chen K. Chronic tramadol attennuates thermal hyperalgesia and inhibit PKA activity of inflammatory rats maybe via opioid and 5 - HT receptor subtypes. Abstract Viewer and Itinerary Planner; New Orleans, LA: Society for Neuroscience. Abstract No. 909.9; 2003.
6. **Wang X**, Wall JT. Evidence that decreased inhibition contributes to rapid brainstem plasticity after nerve injury. Abstract Viewer and Itinerary Planner; New Orleans, LA: Society for Neuroscience. Abstract No. 479.13; 2003.
7. **Wang X**, Xie H, Yu S, Wang G. NMDA receptors up-regulate NGF expression in dorsal horn neurons during peripheral inflammatory hyperalgesia. American Pain Society 22nd Annual Scientific Meeting;. Program No. 475. The Journal of Pain. 4(2, supplement 1):37; 2003.
8. Niranjan S, **Wang X**, Wall JT. Structural and functional convergences of digit inputs. 2004 Abstract Viewer/Itinerary Planner; Washington, DC: Society for Neuroscience. Program No. 640.12; 2004.
9. **Wang X**, Wall JT. Cortical inputs effects on receptive field sizes in the dorsal column nuclei. 2004 Abstract Viewer/Itinerary Planner; San Diego, CA: Society for Neuroscience. Program No. 640.13; 2004.
10. Niranjan S, **Wang X**, Wall JT. Relationships of structural and functional inputs to the cuneate nucleus. Abstract Viewer and Itinerary Planner; Washington, DC: Society for Neuroscience. Program No. 624.2; 2005.
11. **Wang X**, Wall JT. Effects of cortical inhibition on cortical reorganization after nerve injury. Abstract Viewer/Itinerary Planner; Washington, DC: Society for Neuroscience. Program No. 173.20; 2005.

12. Bauer WR, Xie H, **Wang X**, Wang G. Plasma concentrations and postoperative analgesia of midazolam epidural injections. American Pain Society 26th Annual Scientific Meeting; Program No. 786. The Journal of Pain S47; 2007.
13. **Wang X**, Apkarian AV, Bauer WR, Chiaia NL, Dennis MJ, Hummel JC, Kane JT, Kenmuir CL, Lane RD, Mooney RD, Wall JT. An initial approach to use MRI to assess structural changes in the brain after limb loss. Neuroscience Meeting Planner; San Diego, CA: Society for Neuroscience. Program No. 825.3; 2007.
14. Geha PY, Baliki MN, **Wang X**, Harden RN, Paice JA, Apkarian AV. Brain dynamics for perception of tactile allodynia (touch-induced pain) in postherpetic neuralgia. Neuroscience Meeting Planner; San Diego, CA: Society for Neuroscience; Program No. 70.17; 2007.
15. Ho SH, Taylor SF, Ochsner K, **Wang X**, Abelson J, Gonzalez R, Wager TD, Smith EE, Liberzon I. Neurocircuitry of cortisol and cognition modulations on implicit emotional processing. 63rd Annual Convention of the Society of Biological Psychiatry; Washington, DC; Abstract No. 220. Biological Psychiatry 7(S): 74S; 2008
16. Wall JT, Bauer WR, Dennis MJ, Kane JT, Mooney RD, **Wang X**, Gerken M, Khuder SA, Bazeley PS, Apkarian AV, Chiaia NL, Lane RD. Longitudinal MRI evaluation of human global cortical thickness over minutes to weeks. Neuroscience Meeting Planner; Washington, DC: Society for Neuroscience. Program No. 649.16; 2008.
17. Garfinkel SN, Ho S-H, **Wang X**, Abelson JL, Taylor SF, Gonzalez R, Wager TD, Young EA, Ochsner KN, Liberzon I. Modulatory effects of cortisol on the neurocircuitry predictive of memory accuracy. Neuroscience Meeting Planner; Washington, DC: Society for Neuroscience. Program No. 786.21; 2008.
18. Ho SH, Taylor SF, Ochsner K, **Wang X**, Abelson JL, Gonzalez R, Wager TD, Smith EE, Liberzon I. Neurocircuitry underlying cortisol modulation of emotion regulation. Neuroscience Meeting Planner; Washington, DC: Society for Neuroscience. Program No. 786.22; 2008
19. Garfinkel SN, Sripada C, **Wang X**, Kaufman R, Shire E, Lee KU, Giardino N, King AP, Liberzon I. Neurocircuitry Underlying the Reinstatement and Renewal of Fear Responding in PTSD. Society of Biological Psychiatry 64th Annual Meeting; Vancouver, Canada, Abstract No. 412. Biological Psychiatry 65(8): 124S; 2009.
20. **Wang X**, Garfinkel SN, King AP, Angstadt M, Welsh RC, Dennis MJ, Xie H, Tamburrino MB, Liberzon I. Measurements of structural properties of functionally active regions. Neuroscience Meeting Planner; Chicago, IL: Society for Neuroscience. Program No. 894.4; 2009.
21. Wall JT, **Wang X**, Xie H, Dennis MJ, Kane JT, Mooney RD, Khuder SA, Apkarian AV, Bauer WR. Longitudinal variation in thicknesses of the pre-central and post-central cortical areas over acute and subacute time-scales. Neuroscience Meeting Planner; Chicago, IL: Society for Neuroscience. Program No. 363.22; 2009.
22. Garfinkel SN, Kaufman R, Sripada C, **Wang X**, Lee K-UK, Giardino N, King AP, Liberzon I. Neurocorrelates underlying fear reinstatement in PTSD patients. Neuroscience Meeting Planner; Chicago, IL: Society for Neuroscience; Program No. 778.21; 2009.
23. King AP, Garfinkel SN, **Wang X**, Kaufman R, Sripada C, Taylor A, Podduturi V, Liberzon I. Neurocircuitry of emotional regulation in returning veterans with PTSD: Effects of diagnosis and genotype. 48th Annual Meeting of the American College of Neuropsychopharmacology (ACNP); Hollywood, Florida; 2009.
24. Kaufman RE, King AP, **Wang X**, Giardino N, Garfinkel SN, Roller B, Liberzon I. Mindfulness in combat PTSD: effect of mindfulness-based therapy in vietnam veteran and neural correlates of self-

report "mindfulness" in OEF/OIF veteran PTSD patients. Society of Biological Psychiatry 65th Annual Meeting; New Orleans, LA; Program No. 125.731. Biological Psychiatry 67(9): 208S; 2010

25. King AP, Garfinkel SN, **Wang X**, Kaufman RE, Sripada C, Taylor A, Liberzon I. Neurocircuitry of emotional regulation in OEF/OIF veterans with PTSD: effects of diagnosis and 5-HTTLPR genotype. Society of Biological Psychiatry 65th Annual Meeting; New Orleans, LA; Program No. 125.733 Biological Psychiatry 67(9): 209S; 2010.
26. Wall JT, Xie H, Kane JT, Dennis MJ, Mooney RD, Khuder SA, Bauer WR, **Wang X**. Does cerebral cortical thickness vary in a healthy adult human over short times? Single subject variation analyses. Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, Program No. 804.4/JJJ15; 2010.
27. Garfinkel SN, King AP, **Wang X**, Kaufman RE, Adams J, Sripada C, Lee KU, Liberzon I. Neurocircuitry underlying fear reinstatement in patients with post traumatic stress disorder. Society of Biological Psychiatry 65th Annual Meeting; New Orleans, LA; Program No. 030.110. Biological Psychiatry 67(9): 35S; 2010.
28. King AP, Garfinkel SN, Sripada R, **Wang X**, Taylor AB, Liberzon I. Neurocircuitry of Emotional Regulation in Returning OEF/OIF Veterans with PTSD: Effects of Diagnosis and Genotype. Society of Biological Psychiatry 66th Annual Meeting; San Francisco CA. Program No. 255. Biological Psychiatry 69(9): 74S; 2011.
29. Sripada RK, King AP, Garfinkel SN, **Wang X**, Sripada CS, Liberzon I. Resting-State Connectivity of the Amygdala is Altered in PTSD. Society of Biological Psychiatry 66th Annual Meeting; San Francisco CA. Program No. 265. Biological Psychiatry 69(9): 78S; 2011.
30. **Wang X**, Garfinkel SN, King AP, Kaufman RE, Liberzon I. Effects of trauma exposures on cortical thickness of veterans with and without Post traumatic stress disorder. Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience. Program No. 160.12/U10; 2010.
31. Dennis MJ, Wall JT, Xie H, Cotton A, Mooney R, Kane JT, **Wang X**. Freesurfer MRI data analysis of brain cortical thickness variations in individuals. Joint American Association of Physicist in Medicine/Canadian Organization of Medical Physicists Meeting, Vancouver, Canada. Medical Physics, 38(6):2431; 2011.
32. **Wang X**, Tamburino MB, Dennis MJ, Cotton AS, Elhai JD, Smirnoff JB, Xie H, Brickman KR, Phan KL, Liberzon I. Brain activation associated with reappraising negative emotion two weeks after a motor vehicle accident. Neuroscience Meeting Planner; Washington, DC: Society for Neuroscience. Program No. 616.11; 2011.
33. Xie H, Tamburrino MB, Dennis MJ, Elhai JD, Brickman KR, Liberzon I, McLean SA, Bauer WR, Kosier A, **Wang X**. Relationship between brain structural properties and acute pain and stress after a motor vehicle accident. Neuroscience Meeting Planner; Washington, DC: Society for Neuroscience. Program No. 616.10; 2011.
34. Wall JT, Xie H, Kane JT, Dennis MJ, Mooney RD, **Wang X**. Does limb amputation change interhemispheric structural symmetry of human postcentral cortex? Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, Program No. 784.06/CC3; 2011.
35. Swain JE, Kim P, Feldman R, **Wang X**, Mayes L, Leckman J. Emotions and behavior affect the brain according to parenting, gender, delivery and breastfeeding. Society of Biological Psychiatry 66th Annual Meeting; San Francisco CA. Program No. 585. Biological Psychiatry 69(9): 176S; 2011.
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