



Xiang Qian

Stanford Medicine Endowed Director
Anesthesiology, Perioperative and Pain Medicine
Neurosurgery

CLINICAL OFFICE (PRIMARY)

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ACADEMIC CONTACT INFORMATION

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Bio

BIO

Xiang Qian, MD, PhD, is a Pain Management Physician and Clinical Professor of Anesthesiology, Perioperative and Pain Medicine at Stanford University. He is also the inaugural Stanford Medicine Endowed Director.

Dr. Qian is highly respected for his work on developing novel therapies for various chronic pain conditions, and he lectures internationally for those work and topics. Dr. Qian's clinical interests include the treatment of acute and chronic pain, with special interest in migraine, headache, trigeminal neuralgia, glossopharyngeal neuralgia, hemifacial spasm, atypical facial pain, cancer pain, back pain, joint pain, nerve pain, and others. At Stanford, Dr. Qian developed many advanced surgical and interventional technologies for his patients, and he currently leads the CT-guided interventional pain program and is the recipient of Translational and Clinical Innovation Award at Stanford.

With his deep interest in clinical innovation and translational medicine, Dr. Qian is the faculty professor and Co-Director of Stanford Wearable Electronics Initiative (eWEAR) and has been working with colleagues from engineering school to develop mini implantable nerve stimulator, powered by wireless energy. Similar to a pacemaker for the heart, nerve stimulators are modulators for the nerves.

Due to his passion for global health and leadership experience, Dr. Qian was appointed as the Medical Director of Stanford International Medical Services (IMS) since 2016, where he has been working in collaboration with faculty members from all subspecialties and hospital administrations to help deliver care for international patients and promote international collaborations. His vision is to help Stanford become the leader in international medicine by providing its physicians and faculty the opportunities to expand their practice internationally and spread knowledge globally.

Dr. Qian completed his residency and fellowship training at Stanford. Prior to that, he received his PhD degree in Physiology and Biophysics from University of Miami Miller School of Medicine, and went through Postdoc fellowship training in Neuroscience at UCSF. Outside of the work he does at Stanford, Dr. Qian founded the Chinese American Physicians' Society to foster his efforts in bringing medical knowledge internationally. Today, the society has more than 800 physician members from 50 states of the US, across over 40 different subspecialties.

In his free time, Dr. Qian enjoys reading, running, hiking and exploring the mountains and beaches of Northern California.

CLINICAL FOCUS

- Pain Management
- Facial pain
- Migraine and headache
- Trigeminal Neuralgia and Glossopharyngeal neuralgia
- Hemifacial Spasm
- Cancer Pain
- Spine and Back Pain
- Neuropathic Pain
- Interventional Surgery
- CT-guided Procedure
- Pain Medicine

ACADEMIC APPOINTMENTS

- Clinical Professor, Anesthesiology, Perioperative and Pain Medicine
- Clinical Professor (By courtesy), Neurosurgery
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Co-faculty Director, Stanford eWEAR Initiative, (2022- present)
- Co-Director, Stanford Facial Pain Program, (2018- present)
- Medical Director, International Medical Services-Stanford Health Care, (2016- present)
- Committee, Stanford Clinical Competency Committee, Pain Medicine, (2014- present)
- Associate Medical Director, International Medical Services-Stanford Health Care, (2014-2016)

HONORS AND AWARDS

- Faculty Teaching Award, Stanford (2021)
- Fok Ying-Tung Medal, WACD (2019)
- Translational and Clinical Innovation Award, Stanford Medicine (2017)
- Injectable Electrostimulators, Stanford-Coulter Translational Research Grants (2014)
- HHMI Postdoc fellowship, UCSF (2008)
- Award of MDA Grant for Neurotransmission Study, Muscular Dystrophy Association (2004)
- Award of Academic Merit, University of Miami School of Medicine (2003)
- First Prize Award, The 11th Annual Neuroscience Research Day, University of Miami (2002)
- Predoctoral Fellowship Grant Award, American Heart Association (AHA) (2001-2003)

PROFESSIONAL EDUCATION

- Residency: Stanford University Anesthesiology Residency (2012) CA
- Board Certification: Pain Medicine, American Board of Anesthesiology (2013)

- Board Certification: Anesthesia, American Board of Anesthesiology (2013)
- Fellowship: Stanford University Hospital - Pain Medicine (2013) CA
- Board Certification, Pain Management, American Board of Anesthesiology , Pain Medicine (2013)
- Board Certification, American Board of Anesthesiology , Anesthesia (2013)
- Internship, Metrowest Medical Center/Harvard Medical School Affiliated Program , MA (2009)
- Postgraduate, University of California at San Francisco , Neuroscience (2008)
- Medical Education: University of Miami (2003) FL

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Clinical Interests

-Pain Medicine:

Facial pain

Migraine and headache

Trigeminal Neuralgia and Glossopharyngeal neuralgia

Cancer Pain

Spine Disease

Neuropathic pain

Interventional Surgery

CT guided Procedure

Opioid Management

-Facial Nerve neuralgia and neuropathy

Hemifacial Spasm

CT guided awake RFA of facial nerve

Research Interests:

-Medical device development

-AI based headache diagnosis and management

-CT guided intervention

-Intra-nasal endoscopy guided procedure

-Optogenetics

-Mechanisms of neuropathic pain

-Ion channel and diseases

-Neurotoxicity of anesthetics

Publications

PUBLICATIONS

- **Endoscopic transnasal sphenopalatine ganglion block for chronic craniofacial pain.** *European archives of oto-rhino-laryngology : official journal of the European Federation of Oto-Rhino-Laryngological Societies (EUFOS) : affiliated with the German Society for Oto-Rhino-Laryngology - Head and Neck Surgery*

- Liu, D. T., Roozdar, P., Chan, E., Yong, M., Barad, M. J., Qian, X., Hwang, P. H., Chang, M. T.
2026
- **Debunking myths in facial pain diagnosis for the pain practitioner.** *Regional anesthesia and pain medicine*
Schuster, N. M., Argoff, C. E., Barad, M. J., Kesayan, T., Kisson, N. R., Narouze, S., Qian, X., Romero-Reyes, M., Yuan, H.
2026
 - **High-density soft bioelectronic fibres for multimodal sensing and stimulation.** *Nature*
Khatib, M., Zhao, E. T., Wei, S., Park, J., Abramson, A., Bishop, E. S., Thomas, A. L., Chen, C. H., Emengo, P., Xu, C., Hamnett, R., Root, S. E., Yuan, et al
2025; 645 (8081): 656-664
 - **The Q2-Approach for Percutaneous Peripheral Neuromodulation Stimulator Implant Targeting C2 Dorsal Root Ganglion at C2 Lamina for Treating Intractable Headache: A Technical Note.** *Pain medicine (Malden, Mass.)*
Chen, Q., Qian, X.
2024
 - **Diagnostic Performance of a Novel Automated CT-derived FFR Technology in Detecting Hemodynamically Significant Coronary Artery Stenoses: A Multicenter Trial in China.** *American heart journal*
Li, Q., Ding, Y., Chen, Q., Tang, Y., Zhang, H., He, Y., Fu, G., Yang, Q., Shou, X., Ye, Y., Zhao, X., Zhang, Y., Li, et al
2023
 - **Continuous Ketamine Infusion as a Treatment for Refractory Facial Pain** *CUREUS JOURNAL OF MEDICAL SCIENCE*
Garcia, R., Chen, Q., Posadas, E., Tran, J., Kwon, A., Qian, X.
2023; 15 (3)
 - **Application of multidisciplinary team conference for neuromodulation candidates facilitates patient selection and optimization.** *Frontiers in pain research (Lausanne, Switzerland)*
Salmasi, V., Rasouli, M. R., Kao, M. C., Ottestad, E., Terkawi, A. S., Morris, G., Qian, X., Coleman, S., Talavera, D. C., Poupore-King, H., Slater, K., Leong, M. S.
2023; 4: 1331883
 - **Treatment Efficacy and Technical Advantages of Temporary Spinal Nerve Root Stimulation Compared to Traditional Spinal Cord Stimulation for Postherpetic Neuralgia.** *Pain physician*
Huang, M., Chen, Q., Wu, S., Huang, J., Sun, W., Yang, S., Qian, X., Xiao, L.
2022; 25 (6): E863-E873
 - **Treatment Efficacy and Technical Advantages of Temporary Spinal Nerve Root Stimulation Compared to Traditional Spinal Cord Stimulation for Postherpetic Neuralgia** *PAIN PHYSICIAN*
Huang, M., Chen, Q., Wu, S., Huang, J., Sun, W., Yang, S., Qian, X., Xiao, L.
2022; 25 (6): E863-E873
 - **The Molecular Basis and Pathophysiology of Trigeminal Neuralgia.** *International journal of molecular sciences*
Chen, Q., Yi, D. I., Perez, J. N., Liu, M., Chang, S. D., Barad, M. J., Lim, M., Qian, X.
2022; 23 (7)
 - **Awake CT-guided percutaneous stylomastoid foramen puncture and radiofrequency ablation of facial nerve for treatment of hemifacial spasm.** *Journal of neurosurgery*
Huang, B. n., Yao, M. n., Chen, Q. n., Lin, H. n., Du, X. n., Huang, H. n., Zhao, X. n., Do, H. n., Qian, X. n.
2021: 1-7
 - **Efficacy and Safety of Awake CT-guided Percutaneous Balloon Compression of Trigeminal Ganglion for Trigeminal Neuralgia.** *Pain medicine (Malden, Mass.)*
Huang, B., Yao, M., Chen, Q., Du, X., Li, Z., Xie, K., Fei, Y., Do, H., Qian, X.
2021
 - **A Narrative Review on Perioperative Pain Management Strategies in Enhanced Recovery Pathways-The Past, Present and Future.** *Journal of clinical medicine*
Chen, Q., Chen, E., Qian, X.
2021; 10 (12)

- **Destructive procedures of the head and face** *Deer's Treatment of Pain: An Illustrated Guide for Practitioners*
Aggarwal, A., Qian, X.
2018
- **V2 Rhizotomy** *Effective Techniques for Managing Trigeminal Neuralgia*
Campos, L., Do, H., Telischak, N., Qian, X.
2018
- **Fluoroscopic C-Arm and CT-Guided Selective Radiofrequency Ablation for Trigeminal and Glossopharyngeal Facial Pain Syndromes.** *Pain medicine (Malden, Mass.)*
Telischak, N. A., Heit, J. J., Campos, L. W., Choudhri, O. A., Do, H. M., Qian, X.
2017
- **Pharmacological Management of Chronic Pain** *Anesthesiology*
Bunch, J., Qian, X.
2017
- **CT-Guided Percutaneous Infrazygomatic Radiofrequency Neurolysis Through Foramen Rotundum to Treat V2 Trigeminal Neuralgia** *PAIN MEDICINE*
Huang, B., Yao, M., Feng, Z., Guo, J., Zereshki, A., Leong, M., Qian, X.
2014; 15 (8): 1418-1428
- **Optical control of neuronal excitation and inhibition using a single opsin protein, ChR2.** *Scientific reports*
Liske, H., Qian, X., Anikeeva, P., Deisseroth, K., Delp, S.
2013; 3: 3110-?
- **Relapse of Low Back Pain After Internal Lumbar Fixation Was Diagnosed with SAPHO Syndrome: A Case Report.** *International medical case reports journal*
Zhang, Y., Luo, Y., Ruan, Y., Qian, X., Feng, Z.
2023; 16: 591-598
- **Treatment efficacy and technical advantages of ipsilateral temporary spinal nerve root stimulation for unilateral postherpetic neuralgia** *Society for Neuroscience 2021 Annual Meeting*
Chen, Q., Huang, M., Wu, S., Sun, W., Yang, S., Xiao, L., Qian, X.
2021
- **Intravenous Ketamine as an Adjunct for Pachyonychia Congenita-Associated Pain: A Case Report.** *A&A practice*
Paul, J. M., Orlovich, D. S., Patton, J. W., Qian, X.
2019
- **Short-term ketamine infusion for acute pain flare in a patient with calciphylaxis** *The 54th Western Anesthesia Residents Conference (WARC) Annual Meeting*
Sacks, S., Qian, X.
2016
- **Ketamine Infusion: A Useful Tool for Chronic Neuropathic Pain** *AAPM American Academy of Pain Medicine Annual Meeting.*
Fujinaka, M., Bunch, J., Qian, X.
2016
- **Flat panel c-arm and ct-guided selective trigeminal and glossopharyngeal radiofrequency rhizotomy for facial pain syndromes: a step-by-step case-based instruction and multidisciplinary single center experience** *Journal of NeuroInterventional Surgery*
Telischak, N., Heit, J., Choudhri, O., Do, H., Qian, X.
2015
- **A Retrospective Study of Chronic Post-Surgical Pain following Thoracic Surgery: Prevalence, Risk Factors, Incidence of Neuropathic Component, and Impact on Quality of Life.** *PloS one*
Peng, Z., Li, H., Zhang, C., Qian, X., Feng, Z., Zhu, S.
2014; 9 (2)
- **Optogenetic modulation of nociceptive C-fibers.** *The 50th Western Anesthesia Residents Conference The 50th Western Anesthesia Residents Conference (WARC) Annual Meeting*

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- Qian, X., Towne, C., Lyer, S., Montgomery, K., Liske, H., Delp, S., Mackey, S.
2012
- **Deep Vein Thrombosis and Pulmonary Embolism** *Manual of Clinical Anesthesiology*
Cosmin, G., Qian, X.
2011; 470-475
 - **Low-dose spinal anesthesia for an elderly woman with severe Hypertrophic Obstructive Cardiomyopathy (HOCM) and several co-morbidities for an urgent orthopedic procedure** *American Society of Anesthesiologists Annual Meeting*
Qian, X., Serfass, E., Jackson, E., Malott, K.
2010
 - **G protein-activated inwardly rectifying potassium channels mediate depotentiation of long-term potentiation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Chung, H. J., Ge, W., Qian, X., Wisner, O., Jan, Y. N., Jan, L. Y.
2009; 106 (2): 635-640
 - **Neuronal activity regulates phosphorylation-dependent surface delivery of G protein-activated inwardly rectifying potassium channels** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Chung, H. J., Qian, X., Ehlers, M., Jan, Y. N., Jan, L. Y.
2009; 106 (2): 629-634
 - **SK channels mediate NADPH oxidase-independent reactive oxygen species production and apoptosis in granulocytes** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Fay, A. J., Qian, X., Jan, Y. N., Jan, L. Y.
2006; 103 (46): 17548-17553
 - **Intra- and intersubunit cooperativity in activation of BK channels by Ca²⁺ (vol 128, pg 389, 2006)** *JOURNAL OF GENERAL PHYSIOLOGY*
Qian, X., Niu, X., Magleby, K. L.
2006; 128 (5): 629-629
 - **Intra- and intersubunit cooperativity in activation of BK channels by Ca²⁺ (vol 128, pg 389, 2006)** *JOURNAL OF GENERAL PHYSIOLOGY*
Qian, X., Niu, X., Magleby, K. L.
2006; 128 (5): 629
 - **K⁺ channel selectivity depends on kinetic as well as thermodynamic factors** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Grabe, M., Bichet, D., Qian, X., Jan, Y. N., Jan, L. Y.
2006; 103 (39): 14361-14366
 - **Modulation of basal and receptor-induced GIRK potassium channel activity and neuronal excitability by the mammalian PINS homolog LGN NEURON**
Wisner, O., Qian, X., Ehlers, M., Ja, W. W., Roberts, R. W., Reuveny, E., Jan, Y. N., Jan, L. Y.
2006; 50 (4): 561-573
 - **Linker-gating ring complex as passive spring and Ca²⁺-dependent machine for a voltage- and Ca²⁺-activated potassium channel (vol 42, pg 745, 2004)** *NEURON*
Niu, X. W., Qian, X., Magleby, K. L.
2005; 45 (4): 637-637
 - **Both intra- and inter-subunit cooperativity contribute to the activation of BK channels by calcium**
Qian, X., Niu, X., Magleby, K.
2005
 - **Sodium-activated K⁺ channels are also calcium-activated K⁺ channels**
Qian, X., Butler, A., Salkoff, L., Magleby, K.
2004
 - **Mechanism for mechanical coupling between the gate and the gating ring in BK channels**
Qian, X., Niu, X., Magleby, K.

2004

- **beta 1 subunits facilitate gating of BK channels by acting through the Ca²⁺, but not the Mg²⁺, activating mechanisms** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Qian, X., Magleby, K. L.
2003; 100 (17): 10061-10066
- **Slo1 tail domains, but not the Ca²⁺ bowl, are required for the beta 1 subunit to increase the apparent Ca²⁺ sensitivity of BK channels** *JOURNAL OF GENERAL PHYSIOLOGY*
Qian, X., Nimigean, C. M., Niu, X. W., Moss, B. L., Magleby, K. L.
2002; 120 (6): 829-843
- **Role of fragile X mental retardation protein in chronic pain.** *Molecular pain*
Mei, X. n., Yang, Y. n., Zhao, J. n., Wang, Y. n., Chen, Q. n., Qian, X. n., Li, X. n., Feng, Z. n.
; 16: 1744806920928619