**UNIVERSITY OF COLORADO, SCHOOL OF MEDICINE**

**CURRICULUM VITAE**

**Alison Xiaoqiao Xie, Ph.D.**

1. **Current Position** Associate Professor

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1. **Education**

1997/9-2002/7 B.S. University of Science and Technology of China, Hefei, Anhui, P. R. China (biophysics)

2003/9-2005/7 M.Sc. University of Science and Technology of China, Hefei, Anhui, P. R. China (neurobiology and biophysics)

2006/8-2011/8 Ph.D. University of California Riverside, Riverside, CA, USA (neuroscience)

2011/9-2016/8 Postdoctoral Research Associate, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

1. **Academic Appointments**

2016/9-2017/2 Research Assistant Professor, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC

2017/8-2019/9 Instructor, Division of Urology, Department of Surgery, School of Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO

2019/10-2025/6 Assistant Professor, Division of Urology, Department of Surgery, School of Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO

2025/7-present Associate Professor, Division of Urology, Department of Surgery, School of Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO

1. **Professional Positions**

2001/9-2002/7 Undergraduate research assistant, Department of Biology, University of Science and Technology of China, Hefei, Anhui, P. R. China

2002/8-2003/8 Professional Research Assistant, Department of Biology, University of Science and Technology of China, Hefei, Anhui, P. R. China

2003/9-2005/7 Graduate Research and Teaching Assistant, Department of Biophysics, School of Life Sciences, University of Science and Technology of China, Hefei, Anhui, P. R. China

2006/8-2011/8 Graduate Research and Teaching Assistant, Neuroscience Graduate Program, University of California Riverside, Riverside, CA, USA

1. **Honors and Awards**

2005 Dong-gang Scholarship

University of Science and Technology of China

2014 Excellence in Mentoring Undergraduates

University of North Carolina at Chapel Hill

2016 Young Investigator Travel Award

Federation of American Societies for Experimental Biology (FASEB) Maximizing Access to Research Careers (MARC) Program

2022 Best Poster Award

American Urological Association (AUA)

2023 Young Investigator Award

Society of Basic Urologic Research (SBUR)

2024 Faculty Professionalism Award

Department of Surgery, School of Medicine, University of Colorado, Anschutz Medical Campus

1. **Professional Affiliations**

2007-2011 Member, Society of Neuroscience (SfN)

2007- Member, American Society of Neurochemistry (ASN)

2017- Faculty Member, Colorado Clinical & Translational Sciences Institute (CCTSI), Aurora, CO

2017- Faculty Member, Center for NeuroScience (CNS), Aurora, CO

2018- Member, American Urological Association (AUA)

2018- Member, South Central Section (SCS) of the American Urological Association (AUA)

2019- Member, Society for Basic Urologic Research (SBUR)

2021- Faculty Member, Neuroscience Graduate Program, University of Colorado, Anschutz Medical Campus

2023- Faculty Member, Ludeman Family Center for Women's Health Research

2024- Faculty Member, Medical Scientist Training Program, University of Colorado, Anschutz Medical Campus

2024- Faculty Member, Integrated Physiology Program, University of Colorado, Anschutz Medical Campus

2024- Member, American physiological Society (APS)

1. **Professional Leadership and Service**

***Departmental and interdepartmental***

University of North Carolina at Chapel Hill

2013-2016 Mentor, Undergraduate Research

2013, 2015 Mentor, Carolina Summer Fellowship Program, Department of Pharmacology, School of Medicine

University of Colorado, Anschutz Medical Campus

2022 Member, The Uro Social Media Workgroup, Department of Surgery

2022- Research Advisor, Urology resident research Program, Department of Surgery

2022- Mentor, Women in STEM (WiSTEM) Mentorship Program

2022, 2024 Judge, Undergraduate Summer Research Symposium

2024 Co-chair, Neuroscience Graduate Program Retreat

2024 Steering Committee, Neuroscience Graduate Program

2024 Steering Committee, Academy of Research Mentoring Educators (ARME), Graduate School, CU-AMC

2024 Admission Committee, Neuroscience Graduate Program

2025 Chair, Neuroscience Graduate Program Retreat

2025 Basic science judge, Annual Department of Surgery

Research Symposium

2024, 2025 Judge, Postdoc Research Day, School of Medicine

***National and international***

2019/05 Member, Neuroscience in Urology Thank Tank, NIH/NIDDK, Rockville, MD

2022/09 Moderator, Reconstruction/Neuro-urology Poster Session, South Central Section of the American Urological Association Meeting, Coronado, CA

2024/04 Co-chair, Foundational Science Session “Peripheral glia take center stage in autonomic functions”, American Physiological Society Summit. Long Beach, CA

2024/04 Chair, Scientific symposium “The roles of satellite glial cells during development and diseases”. American Society of Neurochemistry meeting, Portland, OR.

***Local/community***

2010-2017 TED translator (English, Mandarin)

* Served as volunteer transcriber and translator (from English to Chinese) for scientific talks of TED conferences.
* Subtitled 55 talks, translated 18 talks, and reviewed translation for 37 talks.

2018-2024 Judge, Denver Metro Regional Science and Engineering Fair, Denver, CO

* Served as a judge for junior high and high school poster competition annually.

2024 Ludeman Center Girls Career Day, Aurora, CO

2025 Ludeman Center Youth Career Day, Aurora, CO

***Professional development and leadership training***

2022 Leadership, Empower & Engage, Authenticity & Awareness, Diversity (LEAD) training, University of Colorado, Department of Surgery

* This training program helps DOS members to develop their leadership identity.

2022-2023 Women’s Leadership training, University of Colorado, School of Medicine

* Selected from all women Assistant Professors with primary appointments in the School of Medicine to receive professional development training.

2024 Mentoring Academy, Center for the Improvement of Mentored Experiences in Research (CIMER) facilitator training, University of Colorado, School of Medicine.

* Selected from all School of Medicine faculty to receive mentoring facilitators training. The trainees in this program are expected to implement mentorship training at their institution or organization, and therefore increase the capacity for research mentor training offered at colleges and universities, research institutes, and organizations.

2024-2025 Striving Towards Excellence Program (STEP) training, Department of Surgery, CU Anschutz.

* Aligned with the departmental mission of “Enlightening Tomorrow’s Leaders,” this 10-module training program assist faculty in developing five essential skills: Communication, Collaboration, Coaching, Change Management and Credibility.

1. **Review, Referee and Editorial Activities**

***Editorial board***

2022- Review Editor, Frontiers in Pain Research

2022- Review Editor, Frontiers in Systems Neuroscience

***Ad hoc manuscript reviewer***

Journal of Visualized Experiments (JoVE)

Journal of Pain research

Frontiers in Molecular Neuroscience

Cell Reports

***Grant review committees and study sections***

2019-2021 Reviewer, Colorado Clinical and Translational Sciences Institute (CCTSI) Pilot Grant Program

2022 Reviewer, NIH/CSR Renal/Urological Sciences Small Business Activities Special Emphasis Panel

2023 Reviewer, NIH/NIDDK Kidney and Urological Systems Function and Dysfunction study section

2024 Reviewer, NIH/CSR Neurobiology of Pain and Itch study section

1. **Invited Lectures, Presentations, Workshops**

2014/07 Cold Spring Harbor Laboratory Glia in Health & Disease meeting, Cold Spring Harbor, NY. “Ganglionic GFAP+ glia regulate cardiovascular function via Gq-GPCR activation”

2016/03 American Society of Neurochemistry Meeting, Denver, CO. “Gq-GPCR Signaling in Sympathetic Satellite Glial Cells Regulate Cardiovascular Functions in vivo”

2016/04 Department of Pharmacology Retreat, University of North Carolina at Chapel Hill, Chapel Hill, NC. “Gq-GPCR Signaling in Sympathetic Satellite Glial Cells Regulate Cardiovascular Functions in vivo”

2016/09 Department of Pharmacology, University of North Carolina at Chapel Hill, Chapel Hill, NC. “Targeting sympathetic satellite glial cells for treating cardiovascular diseases.

2016/04 Duke Neuroimmunology and Glia Group Annual Retreat, Duke University, Durham, NC. “Gq-GPCR Signaling in Sympathetic Satellite Glial Cells Regulate Cardiovascular Functions in vivo”

2017/10 Integrative Physiology Program, University of Colorado Boulder, Boulder, CO. “DREADD the Glia: Pharmacogenetic Approaches for Studying the Role of GFAP+ Glia in Physiology and Disease”

2018/05 American Urological Association Meeting, San Francisco. “VEGF-induced bladder nerve remodeling and visceral hyperalgesia in bladder pain”

2020/10 South Central Section of the American Urological Association Meeting, Virtual. “Lumbar-sacral neuromodulation alleviates visceral pain and improves lower urinary tract symptoms in animal model of urological chronic pelvic pain syndrome”

2021/09 American Urological Association Meeting, Virtual. “Sensory glial Gq-GPCR signaling alleviates visceral pain and improves micturition function in an animal model of urological chronic pelvic pain syndrome”

2021/10 Department of Anesthesiology, University of Colorado, Anschutz Medical Campus, Aurora, CO. “The analgesic role of peripheral GFAP+ glia in vivo”

2022/01 Neuroscience Graduate Program, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Peripheral glia modulation of autonomic control: from heart to bladder”

2022/09 South Central Section of the American Urological Association Meeting, Coronado, CA. “Modulation of Sensory Glia Gq-GPCR Signaling in vivo Affects Spontaneous Voiding and Bladder Function in an Animal Model of Chronic Pelvic Pain”

2023/05 American Urological Association Meeting, Chicago, IL . “Manipulating peripheral glial signaling to treat pelvic pain”

2023/10 Department of Surgery Retreat, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Satellite Glial Cells Regulate Bladder Functions and Pain”

2023/11 Department of Biology, Johns Hopkins University, Baltimore, MD. “Probing the roles of satellite glial signaling in vivo and in physiology”

2023/11 Department of Surgery, Urology resident research seminar, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Research strategies and experimental models used in basic and translational urology research”

2024/01 Department of Surgery, Research seminar series, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Peripheral Glial Signaling Modulates Micturition and Bladder Pain”

2024/03 Division of Urology Grand Rounds, Department of Surgery, University of Colorado, Anschutz Medical Campus, Aurora, CO. “The neural (and glial) regulation of bladder functions”

2024/04 American Physiological Society Summit, Long Beach, CA. "Satellite glial regulation of bladder function and pain"

2024/04 American Society of Neurochemistry Meeting, Portland, OR. “The analgesic role of satellite glial signaling in bladder sensory ganglia and chronic pelvic pain”

2024/09 Integrative Physiology Program, University of Colorado, Anschutz Medical Campus, Aurora, CO. “The Role of GFAP+ Glia in bladder functions”

2024/10 Neuroscience Program Retreat, University of Colorado, Anschutz Medical Campus, Estes Park, CO. “Satellite glial regulation of bladder functions”

2025/03 CIMER training to CU Anschutz faculty, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Entering mentoring”

2025/04 Department of Anesthesiology Research seminar, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Molecular and cellular sexual dimorphism in dorsal root ganglia and its implications for visceral pain”

2025/08 CU-CSU Summit, Colorado State University, Fort Collins, CO. “A pelvic ganglia-bladder ex vivo model for studying neural control of micturition”

2025/10 Glia Gathering, University of Colorado, Anschutz Medical Campus, Aurora, CO. “Peripheral glia in health and diseases”

1. **Teaching and Mentoring Record**

***Courses and lectures***

University of Science and Technology of China

2004 Teaching Assistant, Zoology Experiments

University of California, Riverside

2008-2009 Teaching Assistant, Introduction to Cell and Molecular Biology Lab

2010 Teaching Assistant, Genetics

2010 Teaching Assistant, Introduction to Neuroscience

2009-2011 Instructor, Neuroscience Laboratory

2010-2011 Teaching Assistant, Cellular Neuroscience: Membrane and Synaptic Phenomena

2009, 2011 Instructor, Human Reproduction and Sexual Behavior

***Teaching certificate***

University of California, Riverside

2011 University Teaching Certificate

University Teaching Program, the Graduate Division, University of California, Riverside

***Mentorship for students and postdoctoral fellows***

University of North Carolina at Chapel Hill

2013 **Shailja Admin**, Undergraduate Student, Department of Biology.

2013/06-07 **Jakovin J. Lee**, Undergraduate Student, Department of Biology.

[Carolina Summer Fellowship Program](https://www.med.unc.edu/pharm/summer-undergraduate-research/)

2013-2014 **Jakovin J. Lee**, Undergraduate Student, Department of Biology.

2014-2016 **Jakovin J. Lee**, B.S., Professional Research Assistant. Department of Pharmacology.

2014 **Brook Teffera**, Undergraduate Student, Department of Biology.

2014 **Miles Herr**, Undergraduate Student, Department of Biology, Department of Music, and Department of Computer science.

2015/06-07 **David Reich**, Undergraduate Student, Department of Biochemistry and Molecular Biology, Brown University.

[Carolina Summer Fellowship Program](https://www.med.unc.edu/pharm/summer-undergraduate-research/)

2015 **Stephanie K. Yu**, Undergraduate Student, Department of Computer science, Department of Biology, and Department of Physics.

2016 **Esther Y. Lee**, Undergraduate Student, Department of Biology.

2016 **Dante N. Duncan**, Undergraduate Student, Department of Chemistry.

2016 **Tanya Qureshi**, Undergraduate Student, Department of Biology.

2016 **Angelo Chaia**, Undergraduate Student, Department of Chemistry.

University of Colorado

2018-2019 **Kelly P. Smith**, B.S., Master Student, Department of Bioengineering, College of Engineering, Design and Computing, Anschutz Medical Campus

2022- **Sathish Kumar Yesupatham**, Ph.D., Postdoctoral Research Associate, Department of Surgery, School of Medicine, Anschutz Medical Campus

2022-2023 **Jin Cha**, B.S., Professional Research Assistant, Department of Surgery, School of Medicine, Anschutz Medical Campus

2024/06-07 **Alyssa Granley**, Undergraduate student research assistant, Department of Molecular, Cellular, and Developmental Biology, University of Colorado Boulder.

Alyssa worked in the lab via the [Colorado Research Experiences (CORE) program](https://www.cu-srtp.com/), Anschutz Medical Campus

2024/09-12 **Alyssa Granley**, Undergraduate student research assistant, Department of Surgery, School of Medicine, Anschutz Medical Campus

2024/09- **Emmett Spreitzer**, Undergraduate student research assistant, Department of Neuroscience, University of Colorado Boulder.

2025/01- **Trinity Wright**, Undergraduate student research assistant, Department of Psychology and Neuroscience, Regis University

2025/04- **Sara Sherman**, T32 “Integrative Physiology of Aging”. Postdoctoral Research Fellow, Linda Crnic Institute for Down Syndrome. Anschutz Medical Campus

[Women in STEM (WiSTEM) Mentorship Program](https://www.cuanschutz.edu/services/women-in-stem/mentorship)

2022-2023 **Kayla Janevski**, B.S., PA-II.

2022-2023 **Ester Oh**, Ph.D., Postdoctoral Fellow, Division of Renal Diseases and Hypertension

2023-2024 **Aubrianna Gholar**, B.A., Master student, Master of Science in Modern Human Anatomy (MHA) Program

2023-2024 **Aurélie Ledreux**, Ph.D., Associate Professor, Department of Neurosurgery, School of Medicine

2024-2025 **Emma Shelby**, B.S., MD Program, Class of 2027

2024-2025 **Isabella Tyler**, B.S., 1st year Graduate Student, Neuroscience Graduate Program

***Thesis Committee***

2024 **Garcia Gonzalez, Paola**

Toxicology PhD student, the Skaggs School of Pharmacy

Thesis mentor: Manisha Patel, Ph.D. Associate Dean for Research and Graduate Studies, Professor of CU School of Pharmacy

2024 **Lowe, Samantha**

Biomedical Engineering Master student, University of Colorado - Boulder

Thesis mentor: Sarah Calve, Ph.D. Associate Professor of Mechanical Engineering, Materials Science and Biomedical Engineering University of Colorado Boulder University of Colorado - Boulder

***Mentorship awards and nominations***

2014 Excellence in Mentoring Undergraduates

Office for Postdoctoral Affairs, University of North Carolina at Chapel Hill

2023 Outstanding Mentorship Award (nomination)

[Women in STEM (WiSTEM) Mentorship Program](https://www.cuanschutz.edu/services/women-in-stem/mentorship), University of Colorado, Anschutz Medical Campus

1. **Research Grants**

***Ongoing research funding***

1. NIH/NIDDK R01 DK129260

“Activating Peripheral Glia to Relieve Visceral Pain in Animal Models of Urological Chronic Pelvic Pain Syndrome (UCPPS)”

Role: Principal Investigator

08/05/2021-05/31/2026

Total direct cost: $1,100,000

* This project is the first study on the roles of sensory GFAP+ glia in bladder function and disease.

***Completed research funding (Principal Investigator)***

1. Colorado Pilot Program Mentored Award, Colorado Clinical and Translational Sciences Institute

“Beyond the neurons: the role of peripheral glia in neurogenic bladder dysfunction”

Role: Principal Investigator

03/01/2019-02/29/2020

Total direct cost: $30,000

* This project supported our investigation on how satellite glial Gq-GPCR activation modulates visceral afferent sensitivity in vivo. Pharmacogenetic method was used to remotely activate satellite glial Gq-GPCR signaling in awake mice. This project also included investigations of changes in glial transcriptome and translatome in sensory glia innervating the lower urinary tract.

1. Academic Enrichment Fund, Department of Surgery, School of Medicine

“The role of mechanosensitive TREK-1 channels in detrusor overactivity and voiding dysfunction in patients with overactive bladder (OAB)”

Role: Principal Investigator

09/01/2020-08/30/2021

Total direct cost: $40,000

* This project investigated the cellular and molecular mechanisms of aberrant mechano-sensitivity in idiopathic detrusor overactivity and identify molecular targets and signaling pathways associated with increased sensory activity in overactive LUTS.

1. Ludeman Center Early Career Faculty Research Development Awards

“Sex differences in sympathetic glial regulation of blood pressure”

Role: Principal Investigator

09/01/2023-10/31/2024

Total direct cost: $25,000

* This project studies the sexual dimorphism in sympathetic glial regulation of blood pressure.

1. Translational Methods Pilot Award, Colorado Clinical and Translational Sciences Institute (CCTSI)

“Development of a murine pelvic ganglia-bladder preparation for the study of glial control of micturition”

Role: co-Principal Investigator

08/01/2024-07/31/2025

Total direct cost: $30,000

* This project established an MPG-bladder ex vivo experimental model enabling optogenetic manipulation in ganglionic neurons and glia.

***Completed research funding (Key Personnel)***

University of North Carolina at Chapel Hill

1. NIH/NINDS R21 NS081589 (McCarthy)

Role: Key Personnel

9/01/2012 – 8/31/2014

Total direct cost: $270,000

* This project identified the cellular mechanism of glial modulation of cardiovascular functions.

1. NIH/MH RO1 MH099564 (McCarthy)

“Function of Astrocytic GPCR Signaling Cascades in Physiology and Mental Illness“

Role: Key Personnel

6/01/2013 – 5/31/2017

Total direct cost: $1,368,000

* The proposal for this project was submitted in response to a Request for Applications entitled New Tools for Examining Astrocyte Heterogeneity. The goal was to develop new mouse models expressing engineered GPCRs driven by intersectional gene activation.

University of Colorado, Anschutz Medical Campus

1. NIH/NIDDK R01 DK121506 (Malykhina)

“Regulation of pelvic pain and micturition reflex by VEGF in urological chronic pelvic pain syndrome”

Role: Key Personnel

08/01/2019-07/30/2022

Total direct cost: $600,000

* This work evaluated the role of bladder VEGF signaling pathways in neurogenesis and neural plasticity of the neural pathways innervating the lower urinary tract.

1. NIH/NIDDK R01 DK116648 (Malykhina)

“Mechanisms of neurogenic voiding dysfunction in a viral murine model of multiple sclerosis”

Role: Key Personnel

09/08/2020-8/30/2023

Total direct cost: $600,000

* The project investigated the neural mechanisms of lower urinary tract symptoms in an animal model of multiple sclerosis induced by mouse hepatitis virus (MPV).

1. **Bibliography**

***Thesis***

2022 Bachelor of Science, Biophysics

“Effects of different stimulation modes on short-term synaptic plasticity of visual cortex in adult rats”

2005 Master of Science, Neurobiology and Biophysics

“The function of visual cortex neurons of different age rats”

2011 Doctor of Philosophy, Neuroscience

“Bidirectional scaling of astrocytic metabotropic glutamate receptor signaling following long-term changes in neuronal synaptic transmission”

***Peer-reviewed publications***

Research as trainee

2004 Jia F, **Xie X**, Zhou Y. “Short-term depression of synaptic transmission from rat lateral geniculate nucleus to primary visual cortex in vivo”. Brain Research. doi: 10.1016/j.brainres.2004.01.001

2005 **Xie X**, Wang H, Chen B, Zhou Y. “Neural response characteristic of neuron to flashing stimulus in visual cortex of young rats”. Progress in Biochemistry and Biophysics. 2005,32(11):1088-1092

2005 Jia F, Wei H, Li X, **Xie X**, Zhou Y. “Short-term synaptic plasticity in the rat geniculo-cortical pathway during development in vivo”. Neuroscience Letters. doi: 10.1016/j.neulet.2005.12.054

2006 Wang H, **Xie X**, Li X, Chen B, Zhou Y. “Functional degradation of visual cortical cells in aged rats”. Brain Research. doi: 10.1016/j.brainres.2006.09.010

2009 Carson MJ, Crane J, **Xie AX**. “Modeling CNS microglia: the quest to identify predictive models”. Drug Discovery Today: Disease Models. Doi: 10.1016/j.ddmod.2008.07.006

2012 **Xie AX**, Sun MY, Murphy T, Lauderdale K, Tiglao E, Fiacco TA. “Bidirectional scaling of astrocytic metabotropic glutamate receptor signaling following long-term changes in neuronal firing rates”. PLoS One. doi: 10.1371/journal.pone.0049637

2013 Sun MY, Devaraju P, **Xie AX**, Holman I, Samones E, Murphy TR, Fiacco TA. “Astrocyte calcium microdomains are inhibited by bafilomycin A1 and cannot be replicated by low-level Schaffer collateral stimulation in situ”. Cell Calcium. doi: 10.1016/j.ceca.2013.10.004

2013 Agulhon C, Boyt KM, **Xie AX**, Friocourt F, Roth BL, McCarthy KD. “Modulation of the autonomic nervous system and behaviour by acute glial cell Gq protein-coupled receptor activation in vivo”. Journal of Physiology. doi: 10.1113/jphysiol.2013.261289

2014 **Xie AX**, Lauderdale K, Murphy T, Myers TL, Fiacco TA. “Inducing plasticity of astrocytic receptors by manipulation of neuronal firing rates”. Journal of Visualized Experiments. doi: 10.3791/51458

2015 **Xie AX**, Petravicz, J, McCarthy KD. “Molecular approaches for manipulating astrocytic signaling in vivo”. Frontier in Cellular Neuroscience. doi: 10.3389/fncel.2015.00144

2016 Annis RP, Swahari V, Nakamura A, **Xie AX**, Hammond SM, Deshmukh M. “Mature Neurons Dynamically Restrict Apoptosis via Redundant Pre-Mitochondrial Brakes”. the FEBS Journal. dio: 10.1111/febs.13944

2017 **Xie AX\***, Lee JJ, McCarthy KD. “Ganglionic GFAP+ Glial Gq-GPCR Signaling Enhances Heart Functions in vivo”. **\*Corresponding author**. Journal of Clinical Investigation Insight. 2017;2(2):e90565. doi: 10.1172/jci.insight.90565.

2017 **Xie AX\***, Chaia A, McCarthy KD. “Targeting sympathetic glia for treating cardiovascular diseases”. **\*Corresponding author**. Receptors and Clinical Investigation. 2017;4:e1572. doi: 10.14800/rci.1572.

PI-led and Collaborative Research

2019 **Xie AX†**, Pan XQ†, Meacham RB, Malykhina AP. “The Expression of Transcription Factors Mecp2 and CREB Is Modulated in Inflammatory Pelvic Pain”, Frontiers in Systems Neuroscience. †Equal contribution. doi: 10.3389/fnsys.2018.00069.

2020 **Xie AX\***, Madayag A, Minton SK, McCarthy KD, Malykhina AP. “Sensory Satellite Glial Gq-GPCR Activation Alleviates Inflammatory Pain via Peripheral Adenosine 1 Receptor Activation”. **\*Corresponding author**. Scientific Reports. Sci Rep. 2020 Aug 25;10(1):14181. doi: 10.1038/s41598-020-71073-z

2021 **Xie AX†\*,** Taves S†, McCarthy KD. “Nuclear factor Kappa B-COX2 pathway activation in non-myelinating Schwann cells is necessary for the maintenance of neuropathic pain in mice”. **\*Corresponding author**. †Equal contribution. Frontiers in Cellular Neuroscience. doi: 10.3389/fncel.2021.782275

2021 Iguchi N, Carrasco A Jr, **Xie AX**, Pineda RH, Malykhina AP, Wilcox DT. (2021) Functional constipation induces bladder overactivity associated with upregulations of Htr2 and Trpv2 pathways. Scientific Reports. doi: 10.1038/s41598-020-80794-0.

2022 Clarkson TC, Iguchi N, **Xie AX**, Malykhina AP. Differential transcriptomic changes in the central nervous system and urinary bladders of mice infected with a coronavirus. PLoS ONE. doi: 10.1371/journal.pone.0278918

2022 **Xie AX**, Iguchi N, Clarkson TC, Malykhina AP. “Pharmacogenetic inhibition of lumbosacral sensory neurons alleviates visceral hypersensitivity in a mouse model of chronic pelvic pain”. PLoS ONE. doi: 10.1371/journal.pone.0262769

2024 **Xie AX†**, Iguchi N†, Malykhina AP\*. “Long-term follow-up of TREK-1 KO mice reveals the development of bladder hypertrophy and impaired bladder smooth muscle contractility with age”. American Journal of Physiology, Renal Physiology. †Equal contribution. doi: 10.1152/ajprenal.00382.2023.

2025 Yesupatham SK, Malykhina AP, **Xie AX\***. “Transcriptome Analysis in Lumbosacral Dorsal Root Ganglia Reveals Molecular Changes in Animal Models of Urological Chronic Pelvic Pain Syndrome (UCPPS)”. **\*Corresponding author**. Physiological Genomics, in revision.

***Competitive abstracts***

2016 **Xie AX**, McCarthy KD. “Chemogenetic Activation of Satellite Glial Gq-GPCR Signaling Regulates Cardiovascular Functions in vivo”. Arteriosclerosis, Thrombosis and Vascular Biology and Peripheral Vascular Disease (ATVB/PVD) Meeting, May 5 - 7, 2016. Nashville, TN. Moderated Poster Presentation

2018 **Xie AX**, Nedumaran B, Meacham RB, Malykhina AP. “Vascular Endothelial Growth Factor (VEGF) induces bladder nerve remodeling and visceral hyperalgesia in mouse model of bladder pain”. American Urological Association Meeting, May 17 - 21, San Francisco, CA. Oral Presentation

2018 **Xie AX**, Meacham R, Malykhina AP. “VEGF-induced bladder nerve remodeling and visceral hyperalgesia in bladder pain”. South Central Section of the American Urological Association Meeting, September 26 – 29, 2018. Nashville, TN. Moderated Poster Presentation

2019 **Xie AX**, Meacham RB, Malykhina AP. “Pharmacogenetic inhibition of afferent excitability alleviates VEGF-induced visceral allodynia and hyperalgesia in a mouse model of urological chronic pelvic pain syndrome (UCPPS)”. South Central Section of the American Urological Association Meeting, September 25 - 28, 2019. Colorado Springs, CO. Moderated Poster Presentation

2019 **Xie AX**, Meacham RB, Malykhina AP. “Pharmacogenetic inhibition of afferent excitability alleviates VEGF-induced visceral allodynia and hyperalgesia in a mouse model of UCPPS”. Society for Basic Urologic Research meeting, November 7–10, 2019. New Orleans, LA. Poster Presentation

2020 **Xie AX**, Meacham RB, Malykhina AP. “Pharmacogenetic inhibition of lumbosacral spinal and sensory neurons alleviates visceral pain and improves lower urinary tract symptoms in animal model of urological chronic pelvic pain syndrome”. American Urological Association Meeting (cancelled due to COVID-19). Accepted for Moderated Poster Presentation

2020 **Xie AX**, Meacham RB, Malykhina AP. “Lumbar-sacral neuromodulation alleviates visceral pain and improves lower urinary tract symptoms in animal model of urological chronic pelvic pain syndrome”. South Central Section of the American Urological Association Meeting, October 10, 2020. Virtual. Oral Presentation

2020 **Xie AX**, Meacham RB, Malykhina AP. “Adeno-associated viral vector (AAV)-mediated pharmacogenetic inhibition of lumbosacral sensory neurons alleviates visceral hypersensitivity in a mouse model of urological chronic pelvic pain syndrome (UCPPS)”. Society for Basic Urologic Research meeting, Virtual. Poster Presentation

2021 **Xie AX**, Meacham RB, Malykhina AP. “Sensory glial Gq-GPCR signaling alleviates visceral pain and improves micturition function in an animal model of urological chronic pelvic pain syndrome”. American Urological Association Meeting, September 10 – 13, 2021. Virtual. Oral Presentation

2022 **Xie AX**, Meacham RB, Malykhina AP. “Modulation of Sensory Glia Gq-GPCR Signaling in vivo Affects Spontaneous Voiding and Bladder Function in an Animal Model of Chronic Pelvic Pain”. American Urological Association Meeting, May 13 – 16, 2022. New Orleans, LA. Moderated Poster Presentation

This poster presentation was awarded the **"2022 AUA Best Poster"**.

2022 **Xie AX**, Meacham RB, Malykhina AP. “Modulation of Sensory Glia Gq-GPCR Signaling in vivo Affects Spontaneous Voiding and Bladder Function in an Animal Model of Chronic Pelvic Pain”. South Central Section of the American Urological Association Meeting, September 7 - 10, 2022. Coronado, CA. Oral Presentation

2023 **Xie AX**. “Manipulating peripheral glial signaling to treat pelvic pain”. American Urological Association Meeting, April 28 – May 1, 2023. Chicago, IL. Oral Presentation

2023 **Xie AX**, Iguchi N, Malykhina AP. “The Lack of Mechanosensitive TREK-1 Channel Mimics the Development of Aging-related Bladder Phenotypes in Mice”. American Urological Association Meeting, April 28 – May 1, 2023. Chicago, IL. Moderated Poster Presentation

2023 Yesupatham SK, **Xie AX**. “Transcriptome Analysis in Lumbosacral Dorsal Root Ganglia Reveals Key Molecular Changes in Animal Models of Urological Chronic Pelvic Pain Syndrome (UCPPS)”. American Urological Association Meeting, April 28 – May 1, 2023. Chicago, IL. Moderated Poster Presentation

2023 Yesupatham SK, **Xie AX**. “Transcriptome Analysis in Lumbosacral Dorsal Root Ganglia Reveals Key Molecular Changes in Animal Models of Urological Chronic Pelvic Pain Syndrome (UCPPS)”. South Central Section of the American Urological Association Meeting, September 6 - 9, 2023. Austin, TX. Moderated Poster Presentation

2024 Yesupatham SK, **Xie AX**. “Targeted Purification of Polysomal mRNA Sequencing reveals satellite glial cells-specific translatome changes during in animal models of urological chronic pelvic pain syndrome”. American Urological Association Meeting, May 3 – May 6, 2024. San Antonio, TX. Moderated Poster Presentation

2024 Yesupatham SK, **Xie AX**. “Targeted Purification of Polysomal mRNA Sequencing reveals satellite glial cells-specific translatome changes during in animal models of urological chronic pelvic pain syndrome”. South Central Section of the American Urological Association Meeting, October 30 - November 2, 2024. Colorado Springs, CO. Moderated Poster Presentation

2024 **Xie AX**, Yesupatham SK. “A new approach to neuromodulation: how to use pharmacogenetic activation in non-neuronal cells to promote micturition and alleviate visceral pain”.

South Central Section of the American Urological Association Meeting, October 30 - November 2, 2024. Colorado Springs, CO. Moderated Poster Presentation

2024 Yesupatham SK, **Xie, AX**. “Sex-specific sympathetic satellite glial regulation of resting blood pressure”. National Conference on Women's Health and Sex Differences Research - Sex Differences Across the Lifespan: Focusing on Cardiometabolism and Mental Health. October 23 - 25, 2024. Colorado Springs, CO.

***Non-competitive abstracts***

2007 **Xie X**, Carson M. “Microglial activation in the cuprizone model of adult demyelination and remyelination”. Society for Neuroscience Meeting, November 3 - 7, 2007. San Diego, CA. Poster Presentation

2008 **Xie X**, Carson M. “TLT2 has both constitutive and inducible patterns of expression in the healthy and inflamed CNS”. American Society for Neurochemistry meeting, March 1 - 5, 2008. San Antonio, Texas. Poster Presentation

2008 **Xie X**, Carson M. “TLT2 has both constitutive and inducible patterns of expression in the healthy and inflamed CNS”. La Jolla Immunology Conference, October 21 - 23, 2008. La Jolla, CA. Poster Presentation

2009 **Xie X**, Fiacco TA. “Homeostatic scaling of astrocyte glutamate receptors and transporters”. Gordon Conference, Glial Biology: Functional Interactions among Glia & Neurons, March 15 - 20, 2009. Ventura, California. Poster Presentation

2009 **Xie AX**, Fiacco TA. “Homeostatic scaling of astrocyte glutamate receptors and transporters”. Society for Neuroscience Meeting, October 17 – 21, 2009. Chicago, IL. Poster Presentation

2010 **Xie AX**, Fiacco TA. “Homeostatic scaling of astrocyte glutamate receptors and transporters”. Society for Neuroscience Meeting, November 13 – 17, 2010. San Diego, CA. Poster Presentation

2011 **Xie AX**, Fiacco TA. “Homeostatic plasticity of astrocytic metabotropic glutamate receptors”. Gordon Conference, Glial Biology: Functional Interactions among Glia & Neurons, March 6-11, 2011. Ventura, California. Poster Presentation

2011 **Xie AX**, Fiacco TA. “Bidirectional scaling of astrocytic metabotropic glutamate receptor signaling following long term changes in neuronal synaptic transmission”. Society for Neuroscience Meeting, November 12 – 16, 2011. Washington, DC. Poster Presentation

2013 **Xie AX**, Boyt K, Agulhon C, McCarthy KD. "Studying the Role of Glial Gq Signaling in the Regulation of the Cardiovascular System". Gordon Conference, Glial Biology: Functional Interactions among Glia & Neurons, March 3 - 8, 2013. Ventura, California. Poster Presentation

2013 **Xie AX**, Boyt K, Agulhon C, McCarthy KD. "Studying the Role of Glial Gq Signaling in the Regulation of the Cardiovascular System". Department of Pharmacology Retreat, University of North Carolina at Chapel Hill. March 26, 2013. Chapel Hill, NC. Poster Presentation

2013 **Xie AX**, McCarthy KD. “Elimination of neuronal driven Ca2+ Activity in astrocytes in IP3R2 knock-out (IP3R2 KO) mice”. Society for Neuroscience Meeting, November 9 – 13, 2013. San Diego, CA. Poster Presentation

2014 **Xie AX**, Lee JJ, McCarthy KD. “Ganglionic glia regulate cardiovascular function via Gq-GPCR activation”. UNC’s Integrative Vascular Biology (IVB) T32 Training Program and the McAllister Heart Institute (MHI) joint Research Symposium, March 11, 2014. Chapel Hill, NC. Poster Presentation

2014 **Xie AX**, Lee JJ, McCarthy KD. “Chemogenetic activation of GFAP+ glia  
localizes a new regulatory unit of sympathetic output”. Cold Spring Harbor Laboratory Glia in Health & Disease meeting, July 17 – 21, 2014. Cold Spring Harbor, NY. Oral Presentation

2015 **Xie AX**, Lee JJ, McCarthy KD. “Ganglionic GFAP+ glia regulate cardiovascular function”. Gordon-Kenan Research Seminar and Gordon Conference, Glial Biology: Functional Interactions among Glia & Neurons, February 28 - March 1, 2015. Ventura, CA. Poster Presentation

2015 **Xie AX**, Lee JJ, McCarthy KD. “Ganglionic GFAP+ glia regulate cardiovascular function”. Glial Biology Across Taxonomy – Implications for Function & Dysfunction symposium at Duke, March 25, 2015. Durham, NC. Poster Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Gq-GPCR Signaling in Sympathetic Satellite Glial Cells Regulate Cardiovascular Functions in vivo”. American Society of Neurochemistry Meeting, March 19 - 23, 2016. Denver, CO. Oral Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Chemogenetic Activation of Satellite Glial Gq-GPCR Signaling Regulate Cardiovascular Functions in vivo”. American Society of Neurochemistry Meeting, March 19 - 23, 2016. Denver, CO. Poster Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Chemogenetic Activation of Satellite Glial Gq-GPCR Signaling Regulate Cardiovascular Functions in vivo”. UNC’s Integrative Vascular Biology (IVB) T32 Training Program and the McAllister Heart Institute (MHI) joint Research Symposium, March 8, 2016. Chapel Hill, NC. Poster Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Gq-GPCR Signaling in Sympathetic Satellite Glial Cells Regulate Cardiovascular Functions in vivo”. Department of Pharmacology Retreat, University of North Carolina at Chapel Hill, April 1, 2016. Chapel Hill, NC. Oral Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Gq-GPCR Signaling in Sympathetic Satellite Glial Cells Regulate Cardiovascular Functions in vivo”. Duke Neuroimmunology and Glia Group Annual Retreat, April 11, 2016. Durham, NC. Oral Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Sympathetic ganglionic GFAP+ Glia Regulate Cardiovascular Functions in vivo”. Weinstein Cardiovascular Development and Regeneration Conference, May 19 – 21, 2016. Durham, NC. Poster Presentation

2016 **Xie AX**, Lee JJ, McCarthy KD. “Chemogenetic activation of satellite glial Gq-GPCR signaling enhances cardiovascular function in vivo”. International Conference on Glial Biology in Medicine, October 16 – 18, 2016. Roanoke, VA. Poster Presentation

2018 **Xie AX**, Taves S, Madayag A, McCarthy KD, Malykhina AP. “Targeting Satellite Glial Signaling for the Treatment of Chronic Pain”. American Society of Neurochemistry Meeting, March 24 - 28, 2018. Riverside, CA. Poster Presentation

2018 **Xie AX**, Taves S, Madayag A, McCarthy KD, Malykhina AP. “Targeting Satellite Glial Signaling for the Treatment of Chronic Pain”. Rocky Mountain Regional Neuroscience Group Annual Meeting, May 11, 2018. Aurora, CO. Poster Presentation

2021 **Xie AX**, Malykhina AP. “Pharmacogenetic inhibition of afferent excitability alleviates VEGF-induced visceral hypersensitivity in a mouse model of UCPPS”. American Society of Neurochemistry Meeting, June 28 - July 1, 2021. Virtual. Poster Presentation

2023 Yesupatham SK, **Xie AX**. “Transcriptome Analysis in Lumbosacral Dorsal Root Ganglia Reveals Key Molecular Changes Underlying Nociceptive Sensitization in Animal Models of Urological Chronic Pelvic Pain Syndrome”. American Society of Neurochemistry Meeting, March 18 - 22, 2023. Lexington, KY. Poster Presentation

2024 **Xie AX**. " Satellite Glial Regulation of Autonomic Function". American Physiological Society Summit, April 4 – 7, 2024. Long Beach, CA. Oral Presentation

2024 **Xie AX**. “The analgesic role of satellite glial signaling in bladder sensory ganglia and chronic pelvic pain”. American Society of Neurochemistry Meeting, April 14 - 18, 2024. Portland, OR. Oral Presentation

2024 Yesupatham SK, **Xie, AX**. “Targeted Purification of Polysomal mRNA Sequencing reveals satellite glial cells-specific translatome changes during in animal models of urological chronic pelvic pain syndrome”. American Society of Neurochemistry Meeting, April 14 - 18, 2024. Portland, OR. Poster Presentation

2024 Granley A, Yesupatham SK, **Xie, AX**. “TRAP and glia: Revealing Translational Change in Sensory Glia during the Pathogenesis of Visceral Pain” Undergraduate Summer Research Symposium, July 26, 2024. Aurora, CO. Poster Presentation

2024 Granley A, Yesupatham SK, **Xie, AX**. “Revealing Translatome Changes in Sensory Glia using Translating Ribosome Affinity Purification & RNA Sequencing” Neuroscience Graduate Program Retreat, October 24 - 26, 2024. Esters Park, CO. Poster Presentation

2025 Yesupatham SK, **Xie AX**. “Polysomal mRNA sequencing reveals sex differences in satellite glial cell-specific translatome changes during urological chronic pelvic pain syndrome”. Ludeman Family Center, Women's Health Research Day. Poster Presentation

2025 Yesupatham SK, **Xie AX**. “Polysomal mRNA sequencing reveals sex differences in satellite glial cell-specific translatome changes during urological chronic pelvic pain syndrome”. Postdoc Research Day. Poster Presentation

2025 Yesupatham SK, **Xie AX**. “Transcriptome Analysis in Lumbosacral Dorsal Root Ganglia Reveals Key Molecular Changes Underlying Nociceptive Sensitization in Animal Models of Urological Chronic Pelvic Pain Syndrome”. CU-CSU summit. Poster Presentation

2025 Spreitzer EJ, Deuel D, Calve S, **Xie AX**. “A pelvic ganglia-bladder ex vivo model for studying neural control of micturition”. CU-CSU summit. Poster Presentation

2025 Yesupatham SK, **Xie AX**. “Polysomal mRNA sequencing reveals sex differences in satellite glial cell-specific translatome changes during urological chronic pelvic pain syndrome”. International Society of Neurochemistry Meeting, August 19-22, New York City, NY. Poster Presentation

1. **Citations and Highlights of Work in Media**

2017 UNC School of Medicine, News. “Ganglionic GFAP+ glial Gq-GPCR signaling enhances heart functions in vivo”.

<https://www.med.unc.edu/pharm/ganglionic-gfap-glial-gq-gpcr-signaling-enhances-heart-functions-in-vivo/>

2022 *AUA* News, November issue. “Sensory Glia Gq-GPCR Activation In Vivo Modulates Micturition Functions in an Animal Model of Chronic Pelvic Pain”.

<https://auanews.net/issues/articles/2022/november-2022/aua2022-best-posters-sensory-glia-gq-gpcr-activation-in-vivo-modulates-micturition-functions-in-an-animal-model-of-chronic-pelvic-pain>

2023 *AUA* Daily News. “New approaches to understanding and treating pelvic pain”.

<https://www.auadailynews.org/aua-2023/article/22860473/new-approaches-to-understanding-and-treating-pelvic-pain>

2023 University of Colorado, Anschutz Medical Campus, Department of Surgery, News. “Studying the Role of Glial Cells in Regulating Blood Pressure”.

<https://news.cuanschutz.edu/department-of-surgery/role-of-glial-cells-in-regulating-blood-pressure>

2023 The John Hopkins Newsletter. “Alison Xie describes analgesic effects of glial-neuron interactions”.

<https://www.jhunewsletter.com/article/2023/10/alison-xie-describes-analgesic-effects-of-glial-neuron-interactions>

2023 University of Colorado, Anschutz Medical Campus, Department of Surgery, News. “Alison Xie, PhD, Named SBUR Young Investigator for 2023”.

<https://news.cuanschutz.edu/department-of-surgery/alison-xie-phd-named-sbur-young-investigator-for-2023>

2024 American Journal of Physiology-Renal Physiology, “First Author Highlights”. <https://journals.physiology.org/doi/full/10.1152/ajprenal.2024.326.6.AU>

2024 University of Colorado, Anschutz Medical Campus, Department of Surgery, News. “CCTSI Grant Funds New Model for Bladder Research”.

<https://news.cuanschutz.edu/department-of-surgery/cctsi-grant-funds-new-model-for-bladder-research>

2025 University of Colorado, Anschutz Medical Campus, Department of Surgery, News. “CU Department of Surgery Researcher Looking for Better Way to Treat Pelvic Pain”. https://news.cuanschutz.edu/department-of-surgery/researcher-looking-for-better-way-to-treat-pelvic-pain