

Assistant Professor, Department of Pharmacology & Toxicology*Michigan State University College of Osteopathic Medicine*

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Education and Training

2012-15 **Postdoctoral Associate/Fellow** *Department of Pharmacology, University of Vermont*

Explored two aspects of urinary bladder function: (1) the relationship between bladder wall micromotions and sensory nerve outflow; and (2) the regulation of bladder blood flow in health and disease. Mentor: Dr. Mark T. Nelson.

2012 **Ph.D., Pharmacology and Toxicology** *Michigan State University, East Lansing, MI**Dissertation Title: "Endothelin-1-induced calcium signaling in arteries and veins".**Mentors: Drs. Stephanie Watts and William Jackson*2002 **B.S., Science and Technology Studies** *Lyman Briggs College, Michigan State University*

Positions

2022- **Director and Founder** *MSU Cubi³C, Michigan State University*

MSU Cubi³C is a core facility specifically geared to help scientists imagine new ideas, invent the tools required, and implement these tools to drive cutting-edge scientific discovery. Cubi³C is capable of all aspects of instrument design, fabrication, and validation. Tools include 3D printing, CNC machining, electronics design/fabrication, microcontroller programming, and data collection interfaces. Responsible for all aspects of production, management, maintenance, design, and intellectual property protection.

2024- **Associate Professor (with Tenure)** *Department of Pharmacology and Toxicology,*2019-24 **Assistant Professor (Tenure Track)** *Michigan State University*

Investigate the regulation of bladder vascular tone to uncover how changes in bladder blood flow affect micturition under normal and pathological conditions, specifically type 2 diabetes. Explore the role of transient receptor potential vanilloid type 1 (TRPV1) channels in the onset and development of progressive, stress-induced bladder dysfunction. Uncover the relationship between bladder wall biomechanics and the sensation of bladder fullness. Additional affiliations:

- Neuroscience Program
- Comparative Medicine and Integrative Biology
- Interdisciplinary Pharmacological Sciences Training Program

2015-19 **Assistant Professor (Research Track)** *Department of Pharmacology,
University of Vermont*

Investigate the regulation of bladder vascular tone to uncover how changes in bladder blood flow affect micturition under normal and pathological conditions, specifically type 2 diabetes.

2013-20 **Webmaster** *Leducq Center Against Small Vessel Disease (LCASVD)*

Design, maintain, develop, and implement a comprehensive web presence and technological infrastructure for the LCASVD - a collaboration of more than 20 researchers from three countries - investigating the pathogenesis and treatment of cerebral Small Vessel Disease and related conditions.

Employment Experience

2005 **Donor Recruitment Representative** *American Red Cross*

Responsible for event coordination and promotion for American Red Cross blood drives in six Mid-Michigan Counties, including recruiting donors and sponsor groups. Included all direct-to-consumer marketing, press releases and media contacts, business-to-business sales, donor telerecruiting, and staff/volunteer management.

2004-05 **Admissions Advisor** *Baker College of Owosso*

Responsible for recruitment, enrollment and retention of high school seniors and adults at Baker College's Owosso campus. Included college presentations to prospective students, direct-to-student marketing, and all enrollment and financial aid services.

2002-04 **Professional Sales Representative** *Altana Pharma, Inc.*

Responsible for direct-to-physician sales, route and territory planning, product promotion, sales management, and reporting functions for pharmaceutical products to general/family practice physicians, internal medicine specialists, obstetricians, and gynecologists.

Teaching Experience

Michigan State University (As Faculty)

2023- **Coordinator:** PHM 422: Fundamentals of Neuropharmacology

2022-23 **Coordinator:** PHM 980: Pharmacology of Excitable Cells

2021 **Co-Coordinator:** PHM 829: Neuropharmacology (online; asynchronous)

2019- **Lecturer:** PHM 564: Medical Pharmacology – Cholinergic Pharmacology
 OST 525/PA 873: Genitourinary System Pharmacology – Bladder and Prostate Pharmacology; Renal Toxicology
 VM 568: Urinary System II – Urinary Bladder Pharmacology
 NEU 492: Autonomic Neuroscience – Urinary Bladder Physiology
 PHM 802: Cellular, Molecular and Integrated Systems Pharmacology: Local Anesthetics; General Anesthetics; CNS Stimulants I/II; CNS Depressants I/II; Lower Urinary Tract

University of Vermont

2016-19 **Lecturer:** PHRM 272: Toxicology – Drugs of Abuse I/II

2014-19 **Lecturer:** PHRM 290: Molecular & Cellular Pharmacology – TRP Channels; IP₃ Receptors

2014-17 **Lecturer:** MPBP 301/302: Human Physiology & Pharmacology I/II – Autonomic Physiology; Urinary Bladder Physiology; Ion Channel Physiology

Michigan State University (As Doctoral Candidate)

2011-12 **Teaching Assistant:** PHM 830 – Experimental Design and Analysis
Lecturer: PHM 450 – Introduction to Chemical Toxicology

2010 **Tutor:** PHM 350 – Introduction to Pharmacology

2009 **Teaching Assistant:** PHM 829 – Pharmacokinetics and Pharmacodynamics

Mentoring (HS: High School, UG: Undergraduate, M: Masters, D: Doctoral)**Primary Mentor**

<u>2024</u>	Jennifer German ^M <i>Thesis: Developing a Serious Video Game for Medical Education</i>	Michigan State University
<u>2024-</u>	Alexis Boron ^D	Michigan State University
<u>2024-</u>	Ashika Goel ^D	Michigan State University
<u>2023-</u>	Marlene Masino ^D	Michigan State University
<u>2023</u>	Chelsea Benton ^{UG}	Spelman College (Summer Scholar)
<u>2023</u>	Johnae Walker ^{UG}	Fayetteville State University (Summer Scholar)
<u>2022-</u>	Insiyah Shakir ^{UG}	Michigan State University
<u>2022-24</u>	MacKenzie Brasseur ^{UG}	Michigan State University
<u>2021-24</u>	Osvaldo J. Vega Rodríguez ^M	Michigan State University
<u>2020-21</u>	Roman Grossi ^{UG}	Michigan State University
<u>2019-24</u>	Pragya Saxena ^D <i>Dissertation: Mas-related G Protein-Coupled Receptor B2 Activation Mediates Bladder Wall Biomechanics</i>	Michigan State University
<u>2019-23</u>	B. Malique Jones ^D <i>Dissertation: Mast Cell-Independent Pseudoinflammatory Contractions of Urinary Bladder Smooth Muscle</i>	Michigan State University
<u>2019-21</u>	Kat Ebert ^{UG}	Michigan State University
<u>2018</u>	Cameron Lamphere ^{HS}	University of Vermont
<u>2017-22</u>	Ryan T. Shields ^M <i>Thesis: The Role of Vascular Myogenic Tone in Bladder Dysfunction</i>	University of Vermont
<u>2016-17</u>	Connor Devoe ^{UG}	University of Vermont
<u>2015-16</u>	Stephen Shea ^{UG}	Virginia Commonwealth (Summer Scholar)

Thesis/Dissertation Committees

<u>2024</u>	Daniela Anderson Morales ^D	Neuroscience	Michigan State University
<u>2024</u>	Khaled Eid Almutairi ^D	Experimental Medicine	University of British Columbia
<u>2024</u>	Afolashade Onunkun ^D	Pharmacology & Toxicology	Michigan State University
<u>2023</u>	Ariana Zimmerman ^D	Neuroscience/Physiology	Michigan State University
<u>2022</u>	Manoj Ghosh ^M	Mechanical Engineering	Michigan State University
<u>2022</u>	Dillon McClintock ^D	Mechanical Engineering	Michigan State University
<u>2021</u>	Eli J. Broemer ^D	Mechanical Engineering	Michigan State University
<u>2020</u>	Jariel Y. Ramirez-Virella ^D	Neuroscience	Michigan State University
<u>2019</u>	Laura Chambers ^D	Pharmacology & Toxicology	Michigan State University

Pending Research Funding

<u>R01-DK119615 (Renewal)</u>	<i>NIH NIDDK Research Project Grant</i>	<u>5/1/2024 - 4/30/2029</u> <i>Role: Co-Primary Investigator (20%)</i>
“Mast Cell-Independent Sensitization of TRPV1 Drive Stress-Induced Bladder Dysfunction and Remodeling”. The goal of this project is to investigate how TRPV1 channels in sensory nerves and fibroblasts interact with each other to drive the progression of stress-induced bladder dysfunction.		

Current Research Funding

<u>R01-DK135696</u>	<i>NIH NIDDK Research Project Grant</i>	<u>12/1/2023 - 11/31/2027</u> <i>Role: Co-Primary Investigator (30%)</i>
“Bladder Wall Stiffness Drives Sensation of Fullness”. This project seeks to understand how the mechanical properties of the urinary bladder wall influence sensory outflow to the brain during bladder filling.		

R01-DK119615 6/19/2019 – 4/30/2025

NIH NIDDK Research Project Grant *Role: Co-Primary Investigator (20%)*
 "TRPV1 Mediates Progressive Stress-Induced Bladder Dysfunction". This project investigates how the duration/intensity of social stress causes bladder dysfunction and determine the role TRPV1 channels play in the progression of stress-induced bladder dysfunction.

P01-HL152951 1/1/2022 – 12/31/2027

NIH NHLBI Program Project Grant *Role: Co-Director, Core D (20%)*
 "Perivascular adipose tissue (PVAT) as a central integrator of vascular health". This project will determine the roles of perivascular adipose tissue (PVAT) as a central integrator of vascular health.

TL1-DK136046 8/1/2022 – 7/31/2027

NIH NIDDK Institutional Network Award *Role: Co-Investigator and IAC Member (5%)*
 "University of Michigan Kidney, Urology and Hematology Research Training Network". This Research Training Program (U2C/TL1) was developed with the primary goal of recruiting and preparing diverse trainees (predoctoral to physician scientists to PhD postdoctoral fellows) for careers in academics.

R01-DK125543 7/1/2020 – 6/30/2025

NIH NIDDK Research Project Grant *Role: Other Significant Contributor (0%)*
 The major goal of this project is to understand how the bladder senses fullness, as this is a key issue to understanding normal bladder function and will provide new insights into bladder pathology.

Completed Research Funding

P20-DK127554 12/1/2021-11/30/2023

NIH NIDDK Exploratory Centers for Benign Urology *Role: Co-Investigator (5%)*
 This project establishes the Michigan Interdisciplinary Center for Urology Research and Education (MI-CURE). This collaboration between Michigan State University, Oakland University, and Beaumont Hospital, investigates the cause of – and treatments for – underactive bladder.

R01-DK119615 (Supplement) 3/1/2021 – 2/28/2023

NIH NIDDK Research Project Grant Supplement *Role: Mentor/Primary Investigator*
 This Administrative Supplement funds the graduate studies of B. Malique Jones, to promote diversity and inclusion in scientific research.

MSU Molecular Discovery Grant 1/1/2022 – 12/31/2022

Pilot Grant Program *Role: Primary Investigator*
 The goal of this pilot project is to develop an assay to test the affinity of compounds for both the MrgprB2 receptor and its human ortholog, the MrgprX2 receptor. These test compounds will then be used as a framework for future development of novel analogs to treat changes in wall compliance that underly LUTS without affecting the ability of the bladder to fully empty.

K01-DK103840 7/1/2015 – 6/30/2021

NIH NIDDK Mentored Scientist Development Award *Role: Primary Investigator (75%)*
 This project investigates how alterations in urinary bladder blood flow and vascular contractility affect bladder function, both normally and in diabetes.

T32-HL007647 8/1/2013 – 7/31/2014

NIH NHLBI Postdoctoral Cardiovascular Research Training Program *Role: Trainee (100%)*
 This project allows postdoctoral trainees to observe how clinicians, basic scientists, engineers, and mathematicians collaborate effectively to gain an understanding of both the normal and diseased states of the cardiovascular system.

Patents

- "Pentaplanar Reflected Image Macroscopy System". US Patent No. 10,585,270.

Professional Activities and Service

Member:	American Physiological Society (APS) American Society of Pharmacology and Experimental Therapeutics (ASPET) The Microcirculatory Society (MCS) Society for Basic Urological Research (SBUR)
Reviewer:	Advances in Physiology Education American Journal of Physiology: Heart and Circulatory Physiology American Journal of Physiology: Renal Physiology British Journal of Pharmacology European Journal of Pharmacology Frontiers in Physiology Heliyon Journal of Clinical Investigation: Insight Journal of Computational Neuroscience Journal of General Physiology Journal of Neurophysiology Journal of Physiology Journal of Proteome Research Journal of Vascular Research Microcirculation Naunyn-Schmiedeberg's Archives of Pharmacology Pharmacological Research Physiological Reports Proceedings of the National Academy of Sciences (PNAS) Research Reports in Urology Science Scientific Reports Translational Andrology and Urology
Editor:	Frontiers in Bioengineering and Biotechnology (guest Editor)
Editorial Boards:	American Journal of Physiology: Renal Physiology Frontiers in Physiology: Vascular Physiology
Grant Reviewer:	NIDDK DDK-G Study Section (Standing Member, 2023-2027) NIDDK KUH/DDK-D Study Section (<i>ad hoc</i> , 2023) NIDDK ISAC: Innovative Science Accelerator Program (2022 - Present) Wyoming INBRE: IDeA Networks of Biomedical Research Excellence (2021) American Heart Association Pre/Postdoctoral Fellowships (2021) Veterans Affairs Biomedical Laboratory R&D Surgery Panel (2021 - Present) Veterans Affairs Rehabilitation R&D SPiRE Panel (2021) ZGM1 RCB-2(C1): NIH-NIGMS COBRE Phase I SEP (2020) ZRG1 DKUS-B (90): NIH-NIDDK Urology and Urogynecology SEP (2019) DiaComp: Diabetic Complications Consortium (2018 - 2021)
Dept. Committees:	Faculty Advisory Committee (Chair, 2024) Faculty Advisory Committee (Member, 2021 - 2024) Inclusion, Diversity, Equity, and Accessibility Committee (2020 -) Professionalism Committee (2019 - 2020) Undergraduate Education Committee (2019 -)
Univ. Committees:	Integrated Pharmacological Sciences T32 Steering Committee (2023 - 2025) Neuroscience Program Executive Committee (2023 - 2026)

Society Committees: APS Cardiovascular Section Communications Committee (2016 – 2020)
Speaker: Skype-A-Scientist Program (2016 – 2018)
Meeting Organizer: 2023 CAIRIBU Annual Meeting; Kansas City, MO.
 2022 Society for Basic Urological Research Annual Meeting; Orlando, FL.
 2022 NIDDK Neuro-Urology Think Tank; Bethesda, MD.
 2019 Smooth Muscle UnderGround Meeting; Orlando, FL.
 2016 Nelson Symposium on Ion Channels; Burlington, VT.

Academic and Professional Honors

2023 Invited Exhibitor, MSU Innovation Celebration
2022-23 Dean's Research Facilitation Awardee, Michigan State University College of Osteopathic Medicine
2020 Early Promise of Research Excellence Award, Michigan State University College of Osteopathic Medicine
2019 Faculty Award, 5th International Congress on Underactive Bladder (CURE-UAB 5.0)
2019 First Place, Early-Career Investigator Research Showcase, American Urological Association Conference
2018 Best Basic Science Poster Award, Society for Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) Annual Conference
2017 Fellow, *Journal of General Physiology* Junior Faculty Networking Cohort
2013 Best Postdoctoral Poster Presentation, 16th Annual Pharmacology Research Retreat
2012 Student of the Year, Pharmacology and Toxicology, Michigan State University
 ASPET Travel Award, Experimental Biology Conference
2011 Third Place in Oral Presentations, 38th Annual Pharmacology Research Colloquium
2009 Travel Scholarship, Keystone Symposium: Dissection the Vasculature – Function, Molecular Mechanisms and Malfunction
2008 Recipient, Michigan State University Graduate School Summer Research Fellowship
2007 Travel Award, 6th Hypertension Summer School

Publications (§: authors contributed equally. Corresponding author: underlined)

Peer-Reviewed Journal Articles

- Inyang KE, Evans CE, Heussner M, Petroff M, Reimers M, Vermeer PD, Tykocki NR, Folger JK, Laumet G (2023) HPV1⁺ head and neck cancer-derived small extracellular vesicles communicate with TRPV1⁺ neurons to mediate cancer pain. *Pain* 165(3):608-620. PMID: 37678566.
- Hennig G, Saxena P, Broemer E, Herrera GM, Roccabianca S, Tykocki NR (2023) Quantifying Whole Bladder Biomechanics Using the Novel Pentaplanar Reflected Image Macroscopy System. *Biomech Mod Mechanobiol* 22(5):1685-1695. PMCID: PMC10511590.
- Jones BM, Mingin GC, Tykocki NR (2023) Mast cell stimulator Compound 48/80 causes urothelium-dependent increases in murine urinary bladder contractility. *Am J Physiol Renal Physiol* 325(1): F50-F60. PMCID: PMC10292985.
- Saxena P, Broemer E, Herrera GM, Mingin GC, Roccabianca S, and Tykocki NR (2023)

Compound 48/80 increases murine bladder wall compliance independent of mast cells. *Sci Rep* 13(1): 625.

- Kowalewska PM[§], Fletcher J[§], Jackson WF, Brett SE, Kim MSM, Mironova GY, Haghbin N, Richter DM, **Tykocki NR**, Nelson MT, Welsh DG (2022) Genetic ablation of smooth muscle Kir2.1 is inconsequential to the function of mouse cerebral arteries. *J Cereb Blood Flow Metab* 42(9): 1693-1706. PMID: PMC9441723.
- Jones BM, Mingin GC, **Tykocki NR** (2022) Histamine receptors rapidly desensitize without altering nerve-evoked contractions in murine urinary bladder smooth muscle. *Am J Physiol Renal Physiol* 322(3): F268-F279. PMID: PMC8858670.
- Tuttle TG, Lujan HL, **Tykocki NR**, DiCarlo SE, Roccabianca SA (2022) Remodeling of extracellular matrix in the urinary bladder of paraplegic rats results in increased compliance and delayed fiber recruitment 16 weeks after spinal cord injury. *Acta Biomater* 141: 280-289. PMID: PMC8898290.
- Miron TR, Flood ED, **Tykocki NR**, Thompson JS, Watts SW (2021) Identification of Piezo1 channels in perivascular adipose tissue (PVAT) and their potential role in vascular function. *Pharmacol Res* 175: 105995. PMID: 34818570.
- Turco AE, Oakes SR, Keil Steitz KP, Dunham CL, Joseph DB, Chaturvedula TS, Girardi NM, Schneider AJ, Gawdzik J, Sheftel CM, Wang P, Wang Z, Bjorling DE, Ricke WA, Tang W, Hernandez LL, Keast JR, Bonev AD, Grimes MD, Strand DM, **Tykocki NR**, Tanguay RL, Peterson RE, and Vezina CM (2021) A neuroanatomical mechanism linking perinatal TCDD exposure to lower urinary tract dysfunction in adulthood. *Dis Mod Mech* 14(7): dmm049068. PMID: PMC8326766.
- **Tykocki NR**, Heppner TJ, Dalsgaard T, Bonev AD, Nelson MT (2019) The Kv7 channel activator retigabine suppresses urinary bladder afferent nerve activity without affecting detrusor smooth muscle K⁺ channel currents. *J Physiol* 597(3): 935-950. PMID: PMC6355639.
- **Tykocki NR**, Heppner TJ, Erickson CS, van Batavia J, Vizzard MA, Nelson MT, Mingin GC (2018) Development of stress-induced bladder insufficiency requires functional TRPV1 channels. *Am J Physiol Renal Physiol* 315(6): F1583-F1591. PMID: PMC6336983.
- Longden TA, Dabertrand F, Koide M, Gonzales AL, **Tykocki NR**, Brayden JE, Hill-Eubanks D, Nelson MT (2017) Capillary K⁺-sensing initiates retrograde hyperpolarization to increase local cerebral blood flow. *Nat Neurosci* 20(5): 717-726. PMID: PMC5404963.
- **Tykocki NR**, Bonev AD, Longden TA, Heppner TJ, Nelson MT (2017) Inhibition of vascular smooth muscle inward-rectifier K⁺ channels restores myogenic tone in mouse urinary bladder arterioles. *Am J Physiol Renal Physiol* 312(5): F836-F847. PMID: PMC5451557.
- Heppner TJ[§], **Tykocki NR**[§], Hill-Eubanks D, Nelson MT (2016) Transient contractions of urinary bladder smooth muscle are drivers of afferent nerve activity during filling. *J Gen Physiol* 147(4): 323-35. PMID: PMC4810069.
- Moon TM, **Tykocki NR**, Sheehe JL, Osborne BW, Tegge W, Brayden JE, Dostmann WR (2015) Synthetic peptides as cGMP-independent activators of cGMP-dependent protein kinase I α . *Chem Biol* 22(12): 1653-61. PMID: PMC4703045.
- Mingin G, Heppner TJ, **Tykocki NR**, Erickson C, Vizzard M, Nelson MT (2015) Social stress in mice induces urinary bladder overactivity and increases (TRPV1) dependent afferent nerve activity. *Am J Physiol Regul Integr Comp Physiol* 309(6): R629-638. PMID: PMC4591369.
- Petersen-Jones HG, Johnson KB, Hitomi K, **Tykocki NR**, Thompson JM, Watts SW (2015) Transglutaminase activity is decreased in large arteries from hypertensive rats, compared to normotensive controls. *Am J Heart Circ Physiol* 308(6): H592-602. PMID: PMC4360056.

- Jespersen B, **Tykocki NR**, Watts SW, Cobbett PJ (2015) Measurement of Smooth Muscle Function in the Isolated Tissue Bath-Applications to Pharmacology Research. *J Vis Exp* (95): 52324. PMID: PMC4354551.
- **Tykocki NR**, Wu B, Jackson WF, Watts SW (2015) Divergent signalling mechanisms for venous versus arterial contraction as revealed by endothelin-1. *J Vasc Surg* 62(3): 721-33. PMID: PMC4193972.
- **Tykocki NR**, Thompson JM, Jackson WF, Watts SW (2013) Ryanodine receptors are uncoupled from contraction in rat vena cava. *Cell Calcium* 53(2): 112-119. PMID: PMC4049347.
- Davis RP, Szasz T, Garver H, Burnett R, **Tykocki NR**, Watts SW (2013) One-month serotonin infusion results in a prolonged fall in blood pressure in the deoxycorticosterone acetate (DOCA) salt hypertensive rat. *ACS Chem Neurosci* 4(1): 141-148. PMID: PMC3547487.
- **Tykocki NR**, Jackson WF, Watts SW (2012) Reverse-mode Na⁺/Ca²⁺ exchange is an important mediator of venous contraction. *Pharmacol Res* 66(6): 544-554. PMID: PMC3502721.
- **Tykocki NR**, Gariepy CE, Watts SW (2009) Endothelin ET_B receptors in arteries and veins: multiple actions in the vein. *J Pharmacol Exp Ther* 329(3): 875-881. PMID: PMC2683769.

Reviews and Commentaries

- Jones BM and **Tykocki NR** (2019) Editorial Focus: New Direct Evidence that Histamine Augments Bladder Sensory Outflow During Filling is Nothing to Sneeze At. *Am J Physiol Renal Physiol* 318(2): F455-456. PMID: PMC7052655.
- **Tykocki NR**, Boerman EM, Jackson WE (2017) Smooth muscle ion channels and regulation of vascular tone in resistance arteries and arterioles. *Comprehensive Physiol* 7(2): 485-581. PMID: PMC5575875.
- **Tykocki NR**, Nelson MT (2015) Location, Location, Location: Juxtaposed calcium-signaling microdomains as a novel model of the vascular smooth muscle myogenic response. *J Gen Physiol* 146(2): 129-132. PMID: PMC4516781.
- **Tykocki NR**, Watts SW (2010) The Interdependence of Endothelin-1 and Calcium: A Review. *Clinical Sci* 119(9): 361-372. PMID: PMC3960801.

Book Chapters

- Jackson WF, **Tykocki NR** (2023) "Exploring Urinary Bladder Neural Circuitry through Calcium Imaging." *Neuro-Urology Research*. AM Versteegen (Ed.). Cambridge, MA: Elsevier Academic Press. [In Press].
- Monson FW, **Tykocki NR** (2020) "Excitability and Contractility in Arterioles and Venules from the Urinary Bladder." *Current Topics in Membranes: Ion Channels and Calcium Signaling in the Microcirculation*. WF Jackson (Ed.). Cambridge, MA: Elsevier Academic Press. 85: 301-326. PMID: PMC7716117.

Abstracts

- Flood ED, Jones BM, **Tykocki NR**. Compound 48/80 causes overactive bladder without altering urothelial permeability in mice [Abstract]. In: American Physiological Society Summit; 2024 Apr 4 - Apr 7; Long Beach, CA. [In Press].
- Jones BM, Mingin GC, **Tykocki NR**. Social stress causes the emergence of functional Histamine H₃ Receptors in urinary bladder smooth muscle [Abstract]. In: American Society of Pharmacology and Experimental Therapeutics Conference; 2023 May 18 - May 21; St. Louis, MO. *J Pharm Exp Ther* 385 (S3). 30. <https://doi.org/10.1124/jpet.122.228970>.

- Saxena P, Roccabianca R, **Tykocki NR**. Compound 48/80 increases bladder wall mechanical compliance via activation of MMP-2 [Abstract]. In: American Society of Pharmacology and Experimental Therapeutics Conference; 2023 May 18 – May 21; St. Louis, MO. *J Pharm Exp Ther* 385 (S3). 32. <https://doi.org/10.1124/jpet.122.263340>.
- Jones BM, Mingin GC, **Tykocki NR**. The Urothelium Drives Changes to Urinary Bladder Smooth Muscle Contractility That Mimic Neurogenic Inflammatory Signaling [Abstract]. In: American Physiological Society Summit; 2023 Apr 20 – Apr 23; Long Beach, CA. *Physiology* 38(Supp 1). <https://doi.org/10.1152/physiol.2023.38.S1.5733543>.
- Saxena P, Roccabianca R, **Tykocki NR**. Alteration in Mechanical Compliance via Mast Cell Activation in Juvenile and Adult Urinary Bladder. [Abstract]. In: American Physiological Society Summit; 2023 Apr 20 – Apr 23; Long Beach, CA. *Physiology* 38(Supp 1). <https://doi.org/10.1152/physiol.2023.38.S1.5734261>.
- Broemer E, Saxena P, **Tykocki NR**, Zwaans B, Chancellor M, Bartalone S, Roccabianca S. Mechanical Characterization of Murine Bladder During 3D Ex Vivo Filling [abstract]. In: Society for Basic Urological Research Annual Meeting; 2022 Nov 10-Nov 13; Virtual. *Am J Clin Exp Urol* 10(Supp 1). 55.
- Saxena P, Roccabianca S, Zwaans B, Chancellor M, Bartalone S, Ward E, **Tykocki NR**. Bladder Wall Biomechanics Differ between Male and Female Mice [abstract]. In: Society for Basic Urological Research Annual Meeting; 2022 Nov 10-Nov 13; Virtual. *Am J Clin Exp Urol* 10(Supp 1). 73.
- Jones BM, Mingin GC, **Tykocki NR**. Social Stress Upregulates Histamine H3 Receptor mRNA in Murine Urinary Bladder Smooth Muscle [abstract]. In: *Experimental Biology*; 2022 Apr 2-Apr 5; Philadelphia, PA. *FASEB J* 36(Supp 1). 963.2.
- Saxena P, Roccabianca S, **Tykocki NR**. Compound 48/80 increases bladder wall compliance independent of mast cells [abstract]. In: *Experimental Biology*; 2022 Apr 2-Apr 5; Philadelphia, PA. *FASEB J* 36(Supp 1). 963.6.
- Laumet G, Inyang KE, Evans CM, Heussner M, Petroff M, Reimers M, **Tykocki NR**, Vermeer PD, Folger JK. Head and Neck Cancer-derived Small Extracellular Vesicles Activate TRPV1⁺ neurons to Mediate Cancer Pain [abstract]. In: *Experimental Biology*; 2022 Apr 2-Apr 5; Philadelphia, PA. *FASEB J* 36(Supp 1). 948.3.
- Jones BM, Mingin GC, **Tykocki NR**. Contraction and desensitization to histamine require cholesterol in urinary bladder smooth muscle [abstract]. In: Society for Basic Urological Research Annual Meeting; 2021 Nov 4-Nov 7; Virtual. *Am J Clin Exp Urol* 9(Supp 1). 50.
- Saxena P, Roccabianca S, **Tykocki NR**. Calculation and analysis of bladder wall biomechanics during ex vivo filling [abstract]. In: Society for Basic Urological Research Annual Meeting; 2021 Nov 4-Nov 7; Virtual. *Am J Clin Exp Urol* 9(Supp 1). 51.
- Vega Rodríguez OJ, **Tykocki NR**. Histamine causes endothelium-independent dilation of mouse bladder feeder arterioles [abstract]. In: *Experimental Biology*; 2021 Apr 27-Apr 30; Virtual. *FASEB J* 35(Supp 1).
- Saxena P, Roccabianca S, **Tykocki NR**. The mast cell activator Compound 48/80 causes phasic urinary bladder smooth muscle contractions independent of histamine release [abstract]. In: *Experimental Biology*; 2021 Apr 27-Apr 30; Virtual. *FASEB J* 35(Supp 1).
- Jones BM, Mingin GC, **Tykocki NR**. The mast cell activator Compound 48/80 causes phasic urinary bladder smooth muscle contractions independent of histamine release [abstract]. In: *Experimental Biology*; 2021 Apr 27-Apr 30; Virtual. *FASEB J*

35(Supp 1).

- Jones BM, Vega Rodríguez OJ, Mingin GC, **Tykocki NR**. Histamine may directly contract bladder smooth muscle [abstract]. In: Experimental Biology; 2020 (Cancelled). FASEB J 34(Supp 1). 823.4.
- Saxena P, Roccabianca S, **Tykocki NR**. Smooth muscle tone contributes to bladder wall stiffness during filling [abstract]. In: Experimental Biology; 2020 (Cancelled). FASEB J 34(Supp 1). 823.3.
- Zwaans BM, Grobbel M, Ward EP, Bartolone SN, Chancellor MB, **Tykocki NR**, Roccabianca S, Lamb LE. Bladder remodeling post-radiation increases fibrosis and decreases distensibility: implications for pelvic cancer survivors [abstract]. In: 2020 AUA Annual Meeting; May 15-May 18; Washington, DC. J Urology 203(Supp 4): e675-e676.
- Koide M, Dabertrand F, Longden TA, Harraz OF, **Tykocki NR**, Wellman GC, Nelson MT. Crippled capillary-to-arteriole electrical signaling impairs functional hyperemia in a mouse model of chronic hypertension [abstract]. In: 29th International Symposium on Cerebral Blood Flow, Metabolism and Function; 2019 Jul 4-Jul 7; Yokohama, Japan. J Cereb Blood Flow Metab 39(Supp 1): 51.
- **Tykocki NR**, Hennig GW, Koide M, Wellman GC, Nelson MT. Phasic, Rapidly Propagating Calcium Transients Occur in a Non-Muscle Network within the Mouse Urinary Bladder Wall [abstract]. In: Experimental Biology; 2019 Apr 6-Apr 9; Orlando, FL. FASEB J 33(Supp 1): 837.5.
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- **Tykocki NR**, Hennig GW, Nelson MT. Searching for the source: macroscopic measurement of calcium signals and micromotions in the mouse urinary bladder [abstract]. In: Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction 2018 Winter Meeting; 2018 Feb 27-Mar 3; Austin, TX. Neurourol Urodyn 37(Supp 1): S518-S699.
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- **Tykocki NR**, Heppner TJ, Bonev, A, Nelson MT. Inhibition of inward-rectifier K⁺ channels in vascular smooth muscle restores myogenic tone development in mouse bladder arterioles [abstract]. In: Experimental Biology; 2016 Apr 1-Apr 6; San Diego, CA. FASEB J 30(Supp 1): 727.4.
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- Mingin GC, **Tykocki NR**, Heppner TJ, Nelson MT. The role of TRPV1 vanilloid receptor and BK calcium activated potassium channels in modifying afferent nerve activity in a bladder model of social stress [abstract]. In: Pediatric Urology Fall Congress; 2013 Sep 20-22; Las Vegas, NV.
- **Tykocki NR**, Heppner TJ, Nelson MT. TRPV1-dependent afferent nerve sensitivity is augmented during spontaneous phasic contractions in aged mouse urinary bladder [abstract]. In: Experimental Biology; 2013 Apr 20-24; Boston, MA. FASEB J (27): LB868.

- **Tykocki NR**, Wu B, Jackson WF, Watts SW. Contraction of rat vena cava by endothelin-1 is dependent on phospholipase C β , but independent of IP $_3$ receptor activation [Abstract]. In: Experimental Biology; 2012 Apr 21-25; San Diego, CA. FASEB J (26): 1049.3.
- **Tykocki NR**, Wiseman RW, Jackson WF, Watts SW. An imaging apparatus for simultaneous measurement of isometric contraction and Ca $^{2+}$ fluorescence in large blood vessels of the rat [Abstract]. In: Experimental Biology; 2012 Apr 21-25; San Diego, CA. FASEB J (26): 870.31.
- **Tykocki NR**, Jackson WF, Watts SW. Endothelin-1 increases the frequency of smooth muscle calcium waves in vena cava but not aorta [Abstract]. In: Experimental Biology; 2011 Apr 9-13; Washington, DC. FASEB J (25): 1026.2.
- **Tykocki NR**, Watts SW. Is KB-R7943 a specific inhibitor of reverse-mode NCX in the vasculature? [Abstract]. In: Experimental Biology; 2011 Apr 9-13; Washington, DC. FASEB J (25): 808.8.
- **Tykocki NR**, Watts SW. ET $_B$ receptor activation changes ET $_B$ receptor location in venous but not aortic smooth muscle cells [Abstract]. In: Experimental Biology; 2009 Apr 18-22; New Orleans, LA. FASEB J (23): 945.7.
- **Tykocki NR**, Jackson WF, Watts SW. The Complex Roles of ET $_B$ Receptors in Mediating Venous Tone [Abstract]. In: 62nd Annual High Blood Pressure Research Conference; 2008 Sep 17-20; Atlanta, GA. Hypertension (52): e109-e110.
- **Tykocki NR**, Jackson WF, Watts SW. Do Different Calcium Entry Mechanisms Mediate Endothelin-1-induced Contraction of Rat Aorta and Vena Cava? [Abstract]. In: Experimental Biology; 2008 Apr 5-9; San Diego, CA. FASEB J (22): 744.15.
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Invited Lectures/Seminars

- “Maximizing You Summer Research Experience”. *University of Wisconsin Summer Program for Undergraduate Urology Research*; Virtual (2024).
 - “Mast Cells, Shmast Cells: The Urothelium as an Inflammation Instigator”. *Society for Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) Meeting*; Fort Lauderdale, FL (2024).
 - “Our Friend, the Urothelium: A Regulator of Inflammation and Remodeling”. *NIDDK Collaborating for the Advancement of Interdisciplinary Research in Benign Urology (CAIRIBU) Annual Meeting*; Kansas City, MO (2023).
 - “Get Up and Stretch – Compliance, Remodeling, and the Sensation of Pressure”. *University of Vermont Pharmacology Seminar Series*; Burlington, VT (2023).
 - “Get Up and Stretch: Compliance Drives Sensation in the Urinary Bladder”. *NIDDK KUH Summer Undergraduate Research Symposium*; Madison, WI (2023).
 - “Get Up and Stretch: How Long Does It Take for Inflammation to Drive Remodeling in the Urinary Bladder?”. *Society for Basic Urological Research Spring Meeting at the American Urological Association Conference*; Chicago, IL (2023).
 - “Managing the Transition: Maximizing Success”. *NIDDK K Awardee Workshop*; Bethesda, MD (2023).
 - “Managing a Basic Science Team”. *NIDDK K Awardee Workshop*; Bethesda, MD (2023).
 - “Navigating Scientific Collaborations”. *NIDDK K Awardee Workshop*; Bethesda, MD (2023).
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- “Get Up and Stretch: Compliance, Sensation, and Inflammation in the Urinary Bladder”. *University of Texas Southwestern Urology Grand Rounds*; Dallas, TX (2022).
- “3D Printing, Fabrication and Design for Scientists Part 2: From Idea to Instrument – A Case Study in In-House Instrument Fabrication”. *NIDDK Collaborating for the Advancement of Interdisciplinary Research in Benign Urology (CAIRIBU) Catalyst Conversations*; Virtual (2022).
- “3D Printing, Fabrication and Design for Scientists Part 1: 3D Printing for Smarties (That Know Nothing about 3D Printing)”. *NIDDK Collaborating for the Advancement of Interdisciplinary Research in Benign Urology (CAIRIBU) Catalyst Conversations*; Virtual (2022).
- “Physiology and Pathophysiology of Urinary Bladder Sensory Circuits”. *NIDDK Neuro-urology Think Thank Symposium*; Virtual (2022).
- “Get Up and Stretch: Compliance, Sensation, and Inflammation in the Urinary Bladder”. *University of Pittsburgh Department of Urology Seminar Series*; Pittsburgh, PA (2022).
- “Scientists are to be Seen and Heard: Use of Audio-Visual Equipment (for the sake of) Your Audience”. *NIDDK Collaborating for the Advancement of Interdisciplinary Research in Benign Urology (CAIRIBU) ARTICS Community Forum*; Virtual (2021).
- “Smooth Muscle Calcium Signaling in Bladder and Prostate”. *O’Brien Center Innovative Idea Incubator (i3) Seminar Series*; Madison, WI (2021).
- “Get Up and Stretch: Compliance, Sensation, and Inflammation in the Urinary Bladder”. *3rd Annual CRepHS Symposium: Determinants of Urogenital Tract Homeostasis in Aging*; St. Louis, MO (2021).
- “When Spice Isn’t Nice: TRPV1 Channels as the Linchpin of Progressive Bladder Dysfunction”. *Michigan State University Neuroscience Program Seminar Series*; East Lansing, MI (2020).
- “When Spice Isn’t Nice: TRPV1 Channels as the Linchpin of Progressive Bladder Dysfunction”. *University of Tennessee Health Sciences Seminar Series*; Memphis, TN (2020).
- “When Spice Isn’t Nice: TRPV1 Channels as the Linchpin of Progressive Bladder Dysfunction”. *5th International Congress on Underactive Bladder (CURE-UAB 5.0) Meeting*; East Lansing, MI (2019).
- “Central Nervous System Integration of Sensory and Motor Function”. *NIDDK Collaborating for the Advancement of Interdisciplinary Research in Benign Urology (CAIRIBU) Meeting*; Kansas City, MO (2019).
- “When Spice Isn’t Nice: TRPV1 Channels in Bladder Physiology and Dysfunction”. *University of Wisconsin O’Brien Center for Benign Urologic Research Seminar Series*; Madison, WI (2019).
- “When Spice Isn’t Nice: TRPV1 Channels as the Linchpin of Progressive Pediatric Bladder Dysfunction”. *Society for Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) Meeting*; Miami, FL (2019).
- “Communication of Bladder Fullness to the Central Nervous System”. *NIDDK Collaborating for the Advancement of Interdisciplinary Research in Benign Urology (CAIRIBU) Meeting*; Ellicott City, MD (2018).
- “Going Through the (micro)Motions: Decoding the Sensors of Bladder Fullness”. *Michigan State University Department of Pharmacology and Toxicology Seminar*; East Lansing, MI (2018).
- “Going Through the (micro)Motions: Decoding the Sensors of Bladder Fullness”. *O’Brien Center for Benign Urologic Research Seminar Series*; Madison, WI (2017).
- “Going Through the (micro)Motions: Decoding the Sensors of Bladder Fullness”. *University of Maryland School of Medicine Seminar*; Baltimore, MD (2017).

- “Searching for the Source: Macroscopic Measurement of Calcium Signals and Micromotions in the Mouse Urinary Bladder”. *O’Brien Center for Benign Urologic Research Spring Symposium*; Madison, WI (2017).
- “Into the Void: Why the Science of Going ‘Number One’ is my Priority #1”. *Radio Bean School Lunch Lecture Series*; Burlington, VT (2015).

Webinars and Podcasts

- Tykocki NR and Schosserer M. “How to Manage your Data with an Electronic Lab Notebook – Takeaways from Academia” [Webinar]. Hoted by: SciNote; <https://tinyurl.com/2bfvetu3> (2023).
- Tykocki NR. “When the Whole World Suddenly Cared About PPE” [Webinar]. Hosted by: Lab Manager; <https://tinyurl.com/yxncrwtk> (2021).
- Tykocki NR. “The Mysteriously Twitching Bladder” [Podcast]. Hosted by: The Natural Philosopher; <https://tinyurl.com/e9wdfuxt> (2017).
- Tykocki NR, Herrera G. “Accurately Measuring Mouse Urinary Voiding Frequency and Volume Using the UroVoid System” [Webinar]. Hosted by: *InsideScientific*; <https://tinyurl.com/79t5xyfs> (2017).

Conferences and Presentations

- Brasseur MC, Vega Rodríguez OJ, Tykocki NR. Voiding Data Collection Affects Unrestrained Voiding Behavior in Mice. Poster Presentation; *University Undergraduate Research & Arts Forum [UURAF]*; East Lansing, MI (2024).
- Flood ED, Jones BM, Tykocki NR. Compound 48/80 causes overactive bladder without altering urothelial permeability in mice. Poster Presentation; *American Physiological Society Summit*; Long Beach, CA (2024).
- Walker J, Jones BM, Tykocki NR. Does compound 48/80 increase urinary bladder smooth muscle contractility to muscarinic agonists? Poster presentation; *Mid-Michigan Symposium for Undergraduate Research Experiences [Mid-SURE]*; East Lansing, MI (2023).
- Fular M, Tykocki NR, Roccabianca S. Novel force transducer for biaxial biomechanical characterization of murine arteries. Poster presentation; *Mid-Michigan Symposium for Undergraduate Research Experiences [Mid-SURE]*; East Lansing, MI (2023).
- Benton C, Vega Rodríguez OJ, Tykocki NR. Does compound 48/80 affect the functions of matrix metalloproteinases? Poster presentation; *Mid-Michigan Symposium for Undergraduate Research Experiences [Mid-SURE]*; East Lansing, MI (2023).
- Jones BM, Mingin GC, Tykocki NR. Social stress causes the emergence of functional Histamine H₃ Receptors in urinary bladder smooth muscle. Poster Presentation, *American Society of Pharmacology and Experimental Therapeutics Conference*; St. Louis, MO (2023).
- Saxena P, Roccabianca R, Tykocki NR. Compound 48/80 increases bladder wall mechanical compliance via activation of MMP-2. Poster Presentation, *American Society of Pharmacology and Experimental Therapeutics Conference*; St. Louis, MO (2023).
- Bush S, McClintock D, Tykocki NR, Watts SW, Roccabianca R. Quantification of the Mechanical Effects of Hypertension on Thoracic Aorta and Perivascular Adipose Tissue. Poster Presentation; *University Undergraduate Research & Arts Forum [UURAF]*; East Lansing, MI (2023).
- Saxena P, Roccabianca R, Tykocki NR. Alteration in Mechanical Compliance via Mast Cell Activation in Juvenile and Adult Urinary Bladder. Poster Presentation, *American Physiological*

Society Summit; Long Beach, CA (2023).

- Jones BM, Mingin GC, **Tykocki NR**. The urothelium drives changes to urinary bladder smooth muscle contractility that mimic neurogenic inflammatory signaling. Poster and Podium Presentation, *American Physiological Society Summit*; Long Beach, CA (2023).
- Saxena P, Roccabianca R, **Tykocki NR**. Compound 48/80 increases bladder wall mechanical compliance via activation of MMP-2. Poster Presentation, *American Society for Pharmacology and Experimental Therapeutics Annual Meeting*; Saint Louis, MO (2023).
- Jones BM, Mingin GC, **Tykocki NR**. Social stress causes the emergence of functional Histamine H₃ Receptors in urinary bladder smooth muscle. Poster and Podium Presentation, *American Society for Pharmacology and Experimental Therapeutics Annual Meeting*; Saint Louis, MO (2023).
- Jones BM, Mingin GC, **Tykocki NR**. The urothelium drives changes to contractility that mimic neurogenic inflammatory signaling. Podium Presentation; *CAIRIBU: Collaborating for the Advancement of Interdisciplinary Research in Benign Urology Annual meeting*; Bethesda, MD (2022).
- Saxena P, Roccabianca S, **Tykocki NR**. Mechanism of increased detrusor contractility induced by mast cell activator compound 48/80 in murine urinary bladder. Podium Presentation; *CAIRIBU: Collaborating for the Advancement of Interdisciplinary Research in Benign Urology Annual meeting*; Bethesda, MD (2022).
- Broemer E, Saxena P, **Tykocki NR**, Zwaans B, Chancellor M, Bartalone S, Roccabianca S. Mechanical Characterization of Murine Bladder During 3D ex vivo Filling. Poster Presentation; *Society for Basic Urological Research Annual Meeting*; Virtual (2022).
- Saxena P, Roccabianca S, Zwaans B, Chancellor M, Bartalone S, Ward E, **Tykocki NR**. Bladder Wall Biomechanics Differ between Male and Female Mice Poster Presentation; *Society for Basic Urological Research Annual Meeting*; Virtual (2022).
- Jones BM, Mingin GC, **Tykocki NR**. The basic secretagogue compound 48/80 causes urothelium dependent phasic urinary bladder smooth muscle contractions independent of mast cell activation. Poster Presentation; *International Continence Society Annual Conference*; Vienna, Austria (2022).
- Saxena P, Roccabianca S, **Tykocki NR**. Mechanism of Increased Detrusor Contractility Induced by Mast Cell Activator Compound 48/80 in Murine Urinary Bladder. Poster Presentation; *International Continence Society Annual Conference*; Vienna, Austria (2022).
- Jones BM, Mingin GC, **Tykocki NR**. Social Stress Upregulates Histamine H₃ Receptor mRNA in Murine Urinary Bladder Smooth Muscle. Poster Presentation; *Experimental Biology Conference*; Philadelphia, PA (2022).
- Saxena P, Roccabianca S, **Tykocki NR**. Compound 48/80 increases bladder wall compliance independent of mast cells. Poster Presentation; *Experimental Biology Conference*; Philadelphia, PA (2022).
- Laumet G, Inyang KE, Evans CM, Heussner M, Petroff M, Reimers M, **Tykocki NR**, Vermeer PD, Folger JK. Head and Neck Cancer-derived Small Extracellular Vesicles Activate TRPV1⁺ neurons to Mediate Cancer. Poster Presentation; *Experimental Biology Conference*; Philadelphia, PA (2022).
- Jones BM, Mingin GC, **Tykocki NR**. Contraction and desensitization to histamine require cholesterol in urinary bladder smooth muscle. Oral Presentation; *MSU Alliances for Graduate Education and the Professoriate Student Success Conference*; Virtual (2021).

- Saxena P, Roccabianca S, **Tykocki NR**. Calculation and analysis of bladder wall biomechanics during ex vivo filling. Poster Presentation; *MSU Alliances for Graduate Education and the Professoriate Student Success Conference*; Virtual (2021).
- Jones BM, Mingin GC, **Tykocki NR**. Contraction and desensitization to histamine require cholesterol in urinary bladder smooth muscle. Poster Presentation; *Society for Basic Urological Research Annual Meeting*; Virtual (2021).
- Saxena P, Roccabianca S, **Tykocki NR**. Calculation and analysis of bladder wall biomechanics during ex vivo filling. Poster Presentation; *Society for Basic Urological Research Annual Meeting*; Virtual (2021).
- Vega Rodríguez OJ, **Tykocki NR**. Histamine causes endothelium-independent dilation of mouse bladder feeder arterioles. Poster Presentation; *Experimental Biology Conference*; Virtual (2021).
- Saxena P, Roccabianca S, **Tykocki NR**. The mast cell activator Compound 48/80 causes phasic urinary bladder smooth muscle contractions independent of histamine. Poster Presentation; *Experimental Biology Conference*; Virtual (2021).
- Jones BM, Mingin GC, **Tykocki NR**. The mast cell activator Compound 48/80 causes phasic urinary bladder smooth muscle contractions independent of histamine release. Poster Presentation; *Experimental Biology Conference*; Virtual (2021).
- Sattler K, **Tykocki NR**, and Moriarty J. “How the Coronavirus Turned an Entire Community Into a Makerspace”. Multimedia Oral Presentation; *Makerspaces for Innovation and Research in Academics (MIRA) Conference*; Virtual (2021).
- Jones BM, Vega Rodríguez OJ, Mingin GC, **Tykocki NR**. “Histamine does not directly contract urinary bladder smooth muscle”. Poster presentation; *5th International Congress on Underactive Bladder [CURE-UAB 5.0] Meeting*; East Lansing, MI (2019).
- Saxena P, Roccabianca S, **Tykocki NR**. “Smooth muscle tone contributes to bladder wall stiffness during filling”. Poster presentation; *5th International Congress on Underactive Bladder [CURE-UAB 5.0] Meeting*; East Lansing, MI (2019).
- Ebert K, Vega Rodríguez OJ, **Tykocki NR**. “Ketamine Directly Alters Vascular Tone in the Rat Urinary Bladder”. Poster presentation; *5th International Congress on Underactive Bladder [CURE-UAB 5.0] Meeting*; East Lansing, MI (2019).
- Jones BM, Vega Rodríguez OJ, Mingin GC, **Tykocki NR**. “Histamine does not directly contract urinary bladder smooth muscle”. Oral presentation; *Society of Pelvic Research Conference*; Charleston, SC (2019).
- **Tykocki NR**, Hennig GW, Nelson MT. “New techniques to measure coordinated calcium signals, micromotions, and transient pressure events in the mouse urinary bladder”. Poster and Oral Presentation; *American Urological Association Conference*; Chicago, IL (2019).
- **Tykocki NR**, Hennig GW, Koide M, Wellman GC, Nelson MT. “Phasic, Rapidly Propagating Calcium Transients Occur in a Non-Muscle Network within the Mouse Urinary Bladder Wall”. Poster Presentation; *Experimental Biology Conference*; Orlando, FL (2019).
- **Tykocki NR**, Hennig GW, Koide M, Wellman GC, Nelson MT. “Phasic, Rapidly Propagating Calcium Transients Occur in a Non-Muscle Network within the Mouse Urinary Bladder Wall”. Oral Presentation; *Smooth Muscle Underground Conference*; Orlando, FL (2019).
- **Tykocki NR**, Hennig GW, Nelson MT. “Searching for the source: macroscopic measurement of Ca²⁺ signals and micromotions in the mouse urinary bladder”. Poster and Oral Presentation; *Society for Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction Winter Meeting*;

Austin, TX (2018).

- **Tykocki NR**, Heppner TJ, Bonev, AD, Nelson MT. "In Mice, KCNQ Channel Modulators Affect Afferent Nerve Activity and Not Urinary Bladder Smooth Muscle Contractility Directly". Poster Presentation; *Experimental Biology Conference*; Chicago, IL (2017).
- **Tykocki NR**, Heppner TJ, Bonev, A, Nelson MT. "Inhibition of inward-rectifier K⁺ channels in vascular smooth muscle restores myogenic tone development in mouse bladder arterioles". Poster Presentation; *Experimental Biology Conference*; San Diego, CA (2016).
- **Tykocki NR**, Heppner TJ, Bonev, A, Nelson MT. "Inhibition of inward-rectifier K⁺ channels in vascular smooth muscle restores myogenic tone development in mouse bladder arterioles". Poster Presentation; *Smooth Muscle Underground Conference*; San Diego, CA (2016).
- **Tykocki NR**, Heppner TJ, Bonev, A, Nelson MT. "Inward-rectifier K⁺ channels in vascular smooth muscle prevent myogenic tone development in mouse bladder arterioles". Poster Presentation; *O'Brien Urology Center of Excellence Symposium*; New York, NY (2015).
- **Tykocki NR**, Heppner TJ, Bonev, A, Nelson MT. "Inward-rectifier K⁺ channels in vascular smooth muscle prevent myogenic tone development in mouse bladder arterioles". Poster Presentation; *Experimental Biology Conference*; Boston, MA (2015).
- Heppner TJ, **Tykocki NR**, Nelson MT. "Afferent activity is greatly increased by spontaneous phasic contractions in mouse ex vivo urinary bladder". Poster Presentation; *Experimental Biology Conference*; Boston, MA (2015).
- **Tykocki NR**, Heppner TJ, Nelson MT. "TRPV1-dependent afferent nerve sensitivity is augmented during spontaneous phasic contractions in aged mouse urinary bladder". Poster Presentation; *Experimental Biology Conference*; Boston, MA (2013).
- **Tykocki NR**, Wu B, Jackson WF, Watts SW. "Contraction of rat vena cava by endothelin-1 is dependent on phospholipase C β , but independent of IP₃ receptor activation". Poster Presentation; *Experimental Biology Conference*; San Diego, CA (2012).
- **Tykocki NR**, Wiseman RW, Jackson WF, Watts SW. "An imaging apparatus for simultaneous measurement of isometric contraction and Ca²⁺ fluorescence in large blood vessels of the rat". Poster Presentation; *Experimental Biology Conference*; San Diego, CA (2012).
- **Tykocki NR**, Jackson WF, Watts SW. "Endothelin-1 increases the frequency and amplitude of calcium waves in rat vena cava". Oral Presentation; *38th Annual Pharmacology Research Colloquium*; Toledo, OH (2011).
- **Tykocki NR**, Jackson WF, Watts SW. "Endothelin-1 increases the frequency of smooth muscle calcium waves in vena cava but not aorta". Poster Presentation; *Experimental Biology Conference*; Washington, DC (2011).
- **Tykocki NR**, Watts SW. "Is KB-R7943 a specific inhibitor of reverse-mode NCX in the vasculature?". Poster Presentation; *Experimental Biology Conference*; Washington, DC (2011).
- **Tykocki NR**, Watts SW. "ET_B receptor activation changes ET_B receptor location in venous but not aortic smooth muscle cells". Poster Presentation; *Experimental Biology Conference*; New Orleans, LA (2009).
- **Tykocki NR**, Watts SW. "Contractile and Relaxant Mechanisms of ET_A and ET_B Receptors in Rat Aorta and Vena Cava". Poster Presentation; *Keystone Symposium - Dissecting the Vasculature: Function, Molecular Mechanisms, and Malfunction*; Vancouver, BC Canada (2009).
- **Tykocki NR**, Jackson WF, Watts SW. "The Complex Roles of ET_B Receptors in Mediating Venous Tone". Poster Presentation; *62nd Annual High Blood Pressure Research Conference*; Atlanta, GA (2008).

- **Tykocki NR**, Jackson WF, Watts SW. "Do Different Calcium Entry Mechanisms Mediate Endothelin-1-induced Contraction of Rat Aorta and Vena Cava?". Poster Presentation; *Experimental Biology Conference*; San Diego, CA (2008).
- **Tykocki NR**, Jackson WF, Watts SW. "Do Different Calcium Entry Mechanisms Mediate Endothelin-1-induced Contraction of Rat Aorta and Vena Cava?". Oral Presentation; *35th Annual Pharmacology Research Colloquium*; Ann Arbor, MI (2008).
- Boerman EM, **Tykocki NR**, Jackson WF. "Ryanodine Receptors and Calcium Activated K⁺ Channels are Not Coupled in the Microcirculation". Poster Presentation; *61st Annual High Blood Pressure Research Conference*; Tucson, AZ (2007).

Professional References

- Available upon Request.