Eric J. Gonzalez, Ph.D.

EDUCATION

Ph.D., Neuroscience	University of Vermont, May, 2016 Dissertation: A role for TGF-β in urinary bladder dysfunction with cystitis Mentor: Margaret Vizzard, Ph.D.
B.S., Neuroscience	Muhlenberg College, May, 2010 Sr. Research: Neural substrates of learning and memory Mentor: Gretchen Gotthard, Ph.D.

POSITIONS

2019 – 2023	Research Scientist Department of Biomedical Engineering, Duke University Mentor: Warren Grill, Ph.D.
2016 – 2019	Postdoctoral Associate Department of Biomedical Engineering, Duke University Mentor: Warren Grill, Ph.D.
2012 – 2016	Graduate Research Assistant Department of Neuroscience, University of Vermont Mentor: Margaret Vizzard, Ph.D.
2010 – 2011	Laboratory and Research Technician Department of Neuroscience, University of Vermont Mentor: Rae Nishi, Ph.D.
2008 – 2010	Senior Research Assistant Department of Neuroscience, Muhlenberg College, Mentor: Gretchen Gotthard, Ph.D.

HONORS AND AWARDS

2022	Second Place, Translational Science Presentation, Duke University
2021	Second Place, Basic Science Presentation, Duke University
2015	Trainee Professional Development Award, Society for Neuroscience
2013 – 2015	Research Supplement to Promote Diversity in Health-Related Research, NIDDK
2011 – 2012	N.E. Alliance for Graduate Education and Professoriate, University of Vermont
2011	The Academy for Future Science Faculty, Northwestern University
2009	Neuroscience Collaborative Research Grant, Muhlenberg College

GRANTS

ACTIVE

2019 – 2023	Principal Investigator, “Underactive Bladder: Mechanisms and Recovery of Sensation and Function” NIH K01 DK120632, 05/20/2019-04/30/2023, $399,200

COMPLETED

2016 – 2019 Fellow, "Duke KURe Program"
NIH K12 DK100024, 05/20/2016-05/19/2019, $251,074

PUBLICATIONS

Total Citations: 327, h-index: 8, i10-index: 8 (Google Scholar, July 2022)

JOURNAL PAPERS

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Dysfunctional voiding behavior and impaired muscle contractility in a rat model of detrusor underactivity. *Neurourol Urodyn.* 2021; 40(8):1889-1899. PMID: 34453858. PMCID: PMC8556276.

McKee DC*, **Gonzalez EJ***, Amundsen CL, Grill WM. Randomized controlled trial to assess the impact of high concentration intraurethral lidocaine on urodynamic voiding parameters. *Urology* 2019; 133:72-77. PMID: 31465791. PMCID: PMC6842692. *co-first authors

Kisby CK, **Gonzalez EJ**, Visco AG, Amundsen CL, Grill WM. Randomized controlled trial to assess the impact of intraurethral lidocaine on urodynamic voiding parameters. *Female Pelvic Med Reconstr Surg* 2019; 25(4):265-270. PMID: 29300256. PMCID: PMC6034990.

Gonzalez EJ, Grill WM. Sensory pudendal nerve stimulation increases bladder capacity through sympathetic mechanisms in cyclophosphamide-induced cystitis rats. *Neurourol Urodyn* 2019; 38(1):135-143. PMID: 30350879. PMCID: PMC6529182.

Gonzalez EJ, Grill WM. The effects of neuromodulation in a novel obese-prone rat model of detrusor underactivity. *Am J Physiol Renal Physiol* 2017; 313(3):F815-F825. PMID: 28637788. PMCID: PMC5625106.

Gonzalez EJ, Heppner TJ, Nelson MT, Vizzard MA. Purinergic signalling underlies transforming growth factor-beta mediated bladder afferent nerve hyperexcitability. *J Physiol* 2016; 594(13):3575-3588. PMID: 27006168. PMCID: PMC4929319.

Gonzalez EJ, Peterson A, Malley S, Daniel M, Lambert D, Kosofsky M, Vizzard MA. The effects of tempol on cyclophosphamide-induced oxidative stress in rat micturition reflexes. *The Scientific World Journal*, *2015*:545048. PMID: 25973443. PMCID: PMC4417973.

Gonzalez EJ, Girard BM, Vizzard MA. Expression and function of transforming growth factor-beta isoforms and cognate receptors in rat urinary bladder following cyclophosphamide-induced cystitis. *Am J Physiol Renal Physiol* 2013; 305(9):F1265-F1276. PMID: 23926183. PMCID: PMC3840223. Comment in: *J Urol.* 2014; 192(1):275.

COMMENTARY / BOOK REVIEWS / EDITORIALS

Merrill L, **Gonzalez EJ**, Girard BM, Vizzard MA. Receptors, channels, and signalling in the urothelial sensory system in the bladder. *Nat Rev Urol* 2016; 13(4):193-204. PMID: 26926246. PMCID: PMC5257280.

Gonzalez EJ, Merrill L, Vizzard MA. Bladder sensory physiology: neuroactive compounds/receptors, sensory transducers and target-derived growth factors as targets to improve function. *Am J Physiol Regul Integr Comp Physiol* 2014; 306(12):R869-R878. PMID: 24760999. PMCID: PMC4159737.

Gonzalez EJ, Arms L, Vizzard MA. The role(s) of cytokines/chemokines in urinary bladder inflammation and dysfunction. *Biomed Res Int*, 2014:120525. PMID: 24738044. PMCID: PMC3971501.

BOOK CHAPTERS

Gonzalez EJ, Girard BM, Braas KM, May V, Vizzard MA. Neuroplasticity of PACAP expression and function in micturition reflex pathways. In D. Reglodi & A. Tamas (Eds.), Pituitary Adenylate Cyclase Activating Polypeptide – PACAP (Part 5). Cham, Switzerland: Springer International Publishing AG, 2016.

CONFERENCE ABSTRACTS (≤1 PAGE)

Abbott EM, **Gonzalez EJ**, Grill WM. Glycinergic neural pathways mediate stimulation-evoked inhibition of the bladder in urethane-anesthetized rats. San Diego, CA: Society for Neuroscience, 2022.

Abbott EM, **Gonzalez EJ**, Grill WM. Glycinergic neural pathways mediate stimulation-evoked bladder inhibition in rats. Virtual: Multidisciplinary Benign Urology Research Symposium, 2022.

Gonzalez EJ, Grill WM, Amundsen CL. AMPLIFY: Amplifying sensation in underactive bladder (work in progress). Virtual: Multidisciplinary Benign Urology Research Symposium, 2022. *Second Place, Translational Science Presentation.

Gonzalez EJ, Grill WM, Amundsen CL. AMPLIFY: Amplifying sensation in underactive bladder (work in progress). Virtual: Collaborating for the Advancement of Interdisciplinary Research in Benign Urology, 2021.

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Voiding and muscle contractility dysfunction in a rat model of detrusor underactivity. Virtual: Multidisciplinary Benign Urology Research Symposium, 2021.

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Voiding and muscle contractility dysfunction in a rat model of detrusor underactivity. Virtual: Collaborating for the Advancement of Interdisciplinary Research in Benign Urology, 2020.

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Voiding and muscle contractility dysfunction in a rat model of detrusor underactivity. Virtual: Society for Neuroscience, 2020.

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Chronic monitoring of voiding function in a novel model of detrusor underactivity. Virtual: Multidisciplinary Benign Urology Research Symposium, 2020.

Gonzalez EJ, Grill WM. The role of KCC2 in overactive bladder and central sensitization. Chicago, IL: Society for Neuroscience, 2019.

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Chronic monitoring of voiding function in a novel model of detrusor underactivity. Miami, FL: Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction, 2019.

Gonzalez EJ, Odom MR, Hannan JL, Grill WM. Chronic monitoring of voiding function in a novel model of detrusor underactivity. Durham, NC: Multidisciplinary Benign Urology Research Symposium, 2019.

McKee DC, **Gonzalez EJ**, Amundsen CL, Visco AG, Grill WM. Randomized controlled trial to assess the impact of high concentration intraurethral lidocaine on urodynamic voiding parameters. Durham, NC: Multidisciplinary Benign Urology Research Symposium, 2019.

Gonzalez EJ, Grill WM. Neuromodulation evokes distinct sympathetic mechanisms following cyclophosphamide-induced cystitis. San Diego, CA: Society for Neuroscience, 2018.

Gonzalez EJ, Grill WM. Neuromodulation evokes distinct sympathetic mechanisms following cyclophosphamide-induced cystitis. Durham, NC: Multidisciplinary Benign Urology Research Symposium, 2018.

Gonzalez EJ, Grill WM. Nerve stimulation increases voiding efficiency in a novel model of detrusor underactivity. Austin, TX: Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction, 2018.

Gonzalez EJ, Grill WM. Nerve stimulation increases voiding efficiency in a novel model of detrusor underactivity. Washington, DC: Society for Neuroscience, 2017.

Gonzalez EJ, Grill WM. Detrusor underactivity in an obese-prone rat model. Boston, MA: American Urological Association, 2017.

Gonzalez EJ, Grill WM. Detrusor underactivity in an obese-prone rat model. Durham, NC: Multidisciplinary Benign Urology Research Symposium, 2017.

Gonzalez EJ, Kisby CK, Visco AG, Amundsen CL, Grill WM. Randomized controlled trial to assess the impact of intraurethral lidocaine on urodynamic voiding parameters. Durham, NC: Multidisciplinary Benign Urology Research Symposium, 2017.

Gonzalez EJ, Vizzard MA. Mechanism(s) of transforming growth factor-beta (TGF-β) mediated bladder afferent nerve hyperexcitability. Chicago, IL: Society for Neuroscience, 2015.

Gonzalez EJ, Heppner TJ, Nelson MT, Vizzard MA. The contribution(s) of transforming growth factor-beta to bladder afferent nerve hyperexcitability with cyclophosphamide-induced cystitis. Washington, DC: Society for Neuroscience, 2014.

Gonzalez EJ, Vizzard MA. Functional role for transforming growth factor-beta (TGF-β) signaling following cyclophosphamide (CYP)-induced cystitis in female rats. San Diego, CA: Society for Neuroscience, 2013.

Gonzalez EJ, Girard BM, Malley S, Vizzard MA. Transforming growth factor beta 1, 2, and 3 (TGF-β1, TGF-β2, and TGF-β3) and receptors in rat urinary bladder and plasticity with cyclophosphamide (CYP)-induced cystitis. New Orleans, LA: Society for Neuroscience, 2012.

Carstens K, **Gonzalez EJ**, Eckenstein FP, Miwa J, Nishi R. Morphology of the cholinergic system in the CNS of lynx1 and lynx2 null mice: An immunohistochemical study. Washington, DC: Society for Neuroscience, 2011.

Gotthard GH, **Gonzalez EJ**, Block J. Effects of cycloheximide on retrained odor discrimination memory in rats. Chicago, IL: Midwestern Psychological Association, 2010.

TEACHING

Summer 2014	Teaching Assistant, Medical Neural Science, University of Vermont
Summer 2013	Teaching Assistant, Medical Neural Science, University of Vermont

SERVICE

2013 – 2015	Upward Bound, University of Vermont
2012	Vermont Regional Brain Bee, University of Vermont