Dr. Kelly’s current research focuses on lower urinary tract symptoms for patients with diabetes. With the increasing number of children being diagnosed with diabetes, known complications of this disease are now being identified in ever-younger patients. Lower urinary tract symptoms are a known complication of diabetes and Dr. Kelly is investigating the prevalence of these symptoms in children with diabetes and is evaluating possible treatment and prevention options. This work will affect the identification of patients at risk for developing lower urinary tract symptoms and how they are managed.

As part of the Duke KURe program, Tanya focuses on the problem of antibiotic resistant uropathogens. She applies her basic research background to analyze ability of the clinical pathogens to contribute to the spreading of drug resistance traits. Her KURe project aims to understand the mechanisms and regulation of gene exchange by uropathogens in context of human lower urinary tract environment and its commensal microbiome. This project sets a stage for future studies with the far-reaching goal of developing strategies to curb the spread of multidrug resistant urinary tract infections.
Eric J. Gonzalez, PhD
Postdoctoral Associate
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Dr. Gonzalez earned his BS in Neuroscience from Muhlenberg College. He subsequently completed his PhD in Neuroscience at the University of Vermont where he investigated the mechanisms underlying the development of lower urinary tract symptoms following urinary bladder inflammation. In 2016, Dr. Gonzalez joined the laboratory of Dr. Warren Grill, PhD at Duke University as a postdoctoral associate.

Dr. Gonzalez’s current research explores novel methods of neuromodulation to improve bladder function. His studies include evaluating a device-based solution to stimulate peripheral nerve discharge and restore efficient bladder emptying. He is also determining the role of urethral sensory feedback in maintaining voiding efficiency in humans.