



Morika D. Williams



Clinician Scientist

CMI Associate Member

B.S. Laboratory Animal Science,  
B.S. Animal Science,  
North Carolina Agricultural &  
Technical State University,  
Greensboro, NC

D.V.M. North Carolina State  
University, Raleigh, NC

ACLAM-board eligible

**Mentor:** B. Duncan X. Lascelles

**Address:**

Department of Clinical Sciences  
North Carolina State University  
College of Veterinary Medicine  
1060 William Moore Drive  
Raleigh, NC 27607

**Phone:** 919-513-6019

**Email:** mdwill11@ncsu.edu

### Long-Term Effects of Early Life Injury on Chronic Pain in Adults

#### Research emphasis:

Dr. Williams' main research interests are the mechanisms of neurobiology and neurophysiology of pain processing. She studies the long-term effects of early life injury on chronically painful conditions later in life. In particular, she is using a translational rat model of repetitive tissue injury to mimic the most common procedure performed in the neonatal intensive care unit (NICU), the heel stick. This coupled with the induction of osteoarthritis in adulthood allows her to evaluate long-lasting chronic changes that result in central sensitization due to untreated, early tissue injury. She strives to better understand, recognize, and alleviate pain in the newborn to improve the quality of life in adulthood.

#### Publications and Abstracts:

**Williams MD**, Thomson AE, Lascelles BDX. 2017. PS89 Long-Term Consequences of Untreated Repetitive Needle Prick Injury in a Neonatal Rat Model. AALAS 68th National Meeting Final Program Abstracts, 153.

**Williams MD**, Long CT, Durrant JR, McKeon GP, Shive HR, Griffith EH, Messenger KM, Fish RE. 2017. Oral Transmucosal Detomidine Gel in New Zealand White Rabbits (*Oryctolagus cuniculus*). JAALAS 56(4), 436–442.

**Williams MD**, Kirkpatrick AE, Griffith EH, Benito J, Hash J, Lascelles BDX. Feasibility and Repeatability of Thermal Quantitative Sensory Testing in Normal Dogs and Dogs with Hind Limb Osteoarthritis-Associated Pain. *Vet J.* 2014 Jan;199(1):63-7.

Briley JD, **Williams MD**, Freire M, Griffith EH, Lascelles BDX. Feasibility and repeatability of cold and mechanical quantitative sensory testing in normal dogs. *Vet J.* 2014 Feb;199(2):245-50.

#### Applications:

- Neurophysiology
- Pain processing
- Rodent model of pain
- Central sensitization

#### Research Strengths:

- Quantitative Sensory Testing
- Behavioral Assay
- Gait Analysis
- Microscopic surgery