Investigator:	**Machelle Pardue** Phone: (404) 321-6111 ext. 207342 Email: mpardue@emory.edu
Primary Research Interest:	Other
Description of Research:	Dr. Pardue's research is focused on developing life-changing treatments for people with vision loss. Steps to successful treatment require understanding mechanism(s) of the disease and characterizing temporal changes to identify therapeutic windows, with the ultimate goal of rehabilitation of visual function. She uses behavioral, electrophysiological, morphological, molecular, and imaging approaches to evaluate changes in retinal function and structure. Her research is guided by applying knowledge of retinal circuits and visual processing, often leading to studies of cognition and the interaction of retinal and visual circuits during health and disease. Dr. Pardue's studies start in animal models and move to human trials when possible. She has three main areas of focus: 1) Detection and treatment of early stage diabetic retinopathy 2) Influence of visual input on postnatal development 3) Neuroprotection to slow retinal disease and preserve visual function.
Relevance to VA:	Dr. Pardue's research is centered on understanding the mechanisms of retinal disease and developing neuroprotective or restorative treatments. She has mainly focused on animal models and pre-clinical, with the translate of several treatments to clinical trials. She is particularly focused on the three major blinding diseases: diabetic retinopathy, glaucoma and age-related macular degeneration. Her main efforts have been in developing methods for early detection of these diseases which allows for a new treatment window to prevent vision loss. The rehabilitative approaches being tested in her lab include pharmacological approaches, physical exercise, and electrical stimulation therapy. This research is designed to prevent vision loss in veterans with blinding diseases, thus increasing quality of life and reducing healthcare costs.