Investigator:	**Anh Le** Phone: (404) 321-6111 ext. 202732 Email: anh.le@va.gov
Primary Research Interest:	Physiology
Description of Research:	Plasma lipoproteins are responsible for the transport and distribution of lipids as nutrients to tissues throughout the body. We hypothesize that as part of their interactions with the arterial wall, lipoproteins are natural biosensors of the oxidative and inflammatory status of the endothelium. By monitoring the acute changes in oxidative properties of plasma lipoproteins, specifically triglyceride-rich lipoproteins, we have demonstrated relationship between oxidative characteristics of lipoproteins and disease severity. In view of the short half-lives of many biomarkers of oxidation, our research have moved beyond fasting levels and focused on acute response to specific physiologic stress, including meal consumption, quality of sleep, physical activity, and certain clinical procedures such as hemodialysis. In addition to these research projects, our laboratory provides a full battery of research quality analysis of lipids, glucose and oxidative status for investigators in clinical and basic research. In collaboration with Dr. Charles Searle of the Atlanta VAMC we have noted that microRNA profile may be acutely affected by meal consumption. This may prove to be a novel mechanism for the regulation of protein expression.
Relevance to VA:	One of the underlying features of chronic diseases, from cardiovascular, renal, obstructive sleep apnea to type 2 diabetes mellitus is oxidative stress. These metabolic conditions are highly prevalent in veterans. Our research focus on the metabolic basis of oxidative stress, in particular, meal-induced oxidative stress in humans.