Investigator:	**Tamas Alexy** Phone: (404) 727-3754 Email: talexy@emory.edu
Primary Research Interest:	Internal Medicine
Description of Research:	The endothelium, the innermost layer of cells in a vessel, is the primary transmitter of signals from the circulating blood to the cells deeper in the vascular wall. The ability of endothelial cells to communicate these signals is critical to vascular health. We aim to characterize a new means of communication between vascular cells. Our preliminary studies indicate that endothelial cells are able to release small RNA molecules, called microRNAs, into the blood, which can ultimately be taken up by distant cells. We hypothesize that the release of microRNAs is determined by local blood flow conditions. Our work will: 1) provide insight into how vascular cells communicate; 2) identify new blood markers for disease; 3) potentially lead to the development of novel therapeutic strategies for disease prevention.
Relevance to VA:	Our studies are aimed at investigating intercellular communication between endothelial cells, to identify new blood markers for atherosclerosis and, ultimately, to develop novel therapeutic strategies to reduce the incidence of cardiovascular diseases. While atherosclerotic vascular diseases are the leading cause of death nationwide, they are especially prevalent in the Veteran population. When successful, the project is expected to have a significant impact on the cardiovascular health of Veterans.