# *The Department of Chemistry and Biochemistry*

# Seminar Series

## *Presents a Seminar Titled:*

## *"Rebalancing the Autonomic Nervous System"*

***Presented By***


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It has long been recognized that CAN increases morbidity and mortality in diabetes and may have greater predictive power than traditional risk factors for cardiovascular events. Significant morbidity and mortality can now be attributable to autonomic imbalance between the sympathetic and parasympathetic nervous system regulation of cardiovascular function. There appear to be genetic determinants of disturbed autonomic balance. Obesity and the overproduction of inflammatory cytokines have also been implicated in the induction of numerous pathogenic mechanisms that can be responsible for autonomic imbalance impacting deleterious processes that increase and perpetuate cardiovascular risk. In addition hyperleptinemia and a deficiency of adiponectin favor sympathetic overactivity and the inflammatory cascade is enhanced in the presence of sleep apnea a frequent partner in diabetes and the metabolic syndrome. Restoration of autonomic balance is possible and has been shown with therapeutic lifestyle changes, increased physical activity, β adrenergic blockers, ARIs, ACE inhibitors, ARBs, potent antioxidants such as alpha-lipoic acid and in animal models using inhibitors of peroxynitrite formation and its decomposition. There are exciting new prospects for pathogenesis-oriented intervention.


## Friday, March 7, 2014 at 3:00 p.m. in OCNPS 100