

## **Novel Role for Adiponectin-enhancing Drugs for Asthma in the Obese**

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### **Description**

Asthma is a chronic lung disease that affects 8.2% of all American adults, particularly obese individuals. Recent research has shown that low serum concentrations of adiponectin, a unique anti-inflammatory product of adipose tissue, predict both incident asthma and worse clinical severity of asthma in some populations. In addition, low adiponectin is similarly associated with depression and ischemic cardiovascular disease. Potent adiponectin-enhancing drugs include the antidiabetic drug class of thiazolidinediones (TZD) and antihypertensive drug class of angiotensin receptor blockers (ARB). The overarching hypothesis in this study is that use of adiponectin-enhancing drugs among obese adults can help prevent or treat asthma as well as depression and ischemic cardiovascular disease among obese subjects with concomitant diabetes and/or hypertension.

### **Specific Aims**

1. Examine the role that anti-adiponectin drugs have on asthma.
2. Examine the role that anti-adiponectin drugs have on depression or ischemic cardiovascular disease.
3. Examine the effect of gender on the effect of anti-adiponectin drugs on above diseases.

### **Main Objective**

Develop novel strategies for preventing and treating asthma as well as depression and ischemic cardiovascular disease in the obese

### **Chronic Conditions Considered**

Asthma, depression, ischemic cardiovascular disease

### **Study Design, Data Sources & Sample Size**

A longitudinal cohort of veteran Americans over two decades, using the Veterans Administration (VA) National Data System

### **Strategies Addressed from the HHS Strategic Framework on Multiple Chronic Conditions**

- 4.B. Understand the epidemiology of multiple chronic conditions.
- 4.C. Increase clinical health research.