Renin Activity as a Biomarker for Heart Failure and Other Related Diseases

**Title:** Renin Activity as a Biomarker for Heart Failure and Other Related Diseases

**Invention:** This technology is a method of measuring plasma renin activity and treating patients at risk of developing heart disease. This technology looks to stratify patients with heart failure, or potential heart failure, to determine the appropriate medication as well as the appropriate level of medication to use to help treat further progression of heart failure.

**Background:** Each year one in every four deaths in the United States is caused by heart disease, leading to approximately 610,000 deaths. Currently, heart disease is treated with lifestyle changes, medications or surgery. There is a need for a method for early detection of heart disease and a treatment that is personalized to the condition of the patient that can prevent the progression of other ailments that result from heart disease, including heart failure. It is increasingly recognized that there are disparities in treatment outcomes related to a variety of factors such as sex, race, geographic location, disease etiology, and genetic causes. This technology takes in to account this disparities to help identify particular populations that could benefit from particular medications that may not benefit all patients with heart disease or heart failure.

**Applications:**
- Cardiovascular disease detection and treatment
- Personalized medicine
- Precision therapy

**Advantages:**
- Prevents the progression of heart disease
- Treats heart disease
- Personalized for optimal individual treatment

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