



**Cardiovascular Function  
and Clinical Trials**

# Nephrology

## The Chen Lab: Clinical Trials in Kidney & CV Disease

Dr. **Jing Chen**'s research sits at the intersection of Hypertension/Cardiovascular Disease and Chronic Kidney Disease, as they are often linked clinically. Her lab is focused on developing treatment combinations and preventative strategies that address this clinical problem.

The lab is searching for urinary blood markers in patients with chronic kidney disease – as they are indicative of an increased risk for cardiovascular disease. After first identifying these markers, the next step will be to develop them into a clinically relevant test that can be used to better inform personalized medicine treatment options for individual patients.

There is a focus on identifying biomarkers that indicate which patients would most benefit from a low sodium diet to improve both kidney and cardiovascular health. This urinary biomarker study is currently in progress with over 2000 samples, and has a strong potential for downstream collaboration with Tulane's first-in-class Goldring Center for Culinary Medicine.

In addition to biomarker discovery, the lab is currently engaged in a clinical trial exploring a combination treatment targeting both kidney and cardiovascular disease. The treatment regime, featuring sodium nitrate to reduce inflammatory processes in the kidney, is unique in that it treats these two mutually-exacerbating conditions simultaneously instead of in isolation.



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### Translational Sciences Institute: Clinical Trials Core

In addition to conducting her own clinical research, Dr. Chen helps to manage the Tulane University Translational Sciences Institute (TUTSI). Designed as a core resource for junior investigators, the Institute provides infrastructure support for clinical trials. The TUTSI resources include clinical and lab space, dedicated staff to support investigator studies, and expertise in quality control and IRB approval procedures.

Buttressing the strengths of clinical research at Tulane, the focus of the clinical trials core is systemic metabolic diseases. These include chronic kidney disease, cardiovascular disease, and diabetes. The collaborative nature of this core and its specific diseases studied are emblematic of the broader research ethos and areas of expertise at both Tulane's School of Medicine and School of Public Health and Tropical Medicine.

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