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## Cardiorenal Syndrome: The long road from Kidney to Heart

The number of individuals with kidney disease increases every year and is a major concern in several countries. Once the kidney is not functioning properly, with a deficit in glomerular filtration rate, several hemodynamic factors are altered, and toxins and molecules start to accumulate in the bloodstream. Among others, several cytokines and chemokines increase during kidney disease, consequently impairing other organs function and leading to renal and cardiac diseases. In this sense, Cardiorenal Syndrome (CRS) is characterized by different clinical conditions with an overlap of cardiac and renal dysfunctions. One subtype of this pathology involves cardiac hypertrophy and cardiac failure after acute renal injury (AKI). AKI frequently leads to the development of chronic kidney disease and may be associated with ischemia followed by reperfusion (I/R). The knowledge of the cellular mechanisms involved in CRS are not fully known but permeate molecular, cellular and functional factors. In this sense, the present conference aims to contextualize this topic as well as to present some results regarding the participation of the immune system in the cardiovascular alterations observed in the CRS.

### Speaker Biography

Marcela Sorelli Carneiro Ramos is graduated in Biomedicine (2001), completed a PhD (2006) and Post-Doctoral (2008) in the Department of Cell Biology and Development of the Institute of Biomedical Sciences of the University of São Paulo. The research developed in this period, addressed the role of the Renin-Angiotensin System in the thyroid hormone-induced cardiac hypertrophy, as well the effect of thyroxine on global gene expression modulation. Nowadays, the research line aims to study the impact of the inflammatory response and immune system on the cardiovascular changes observed in the cardiorenal syndrome. She is an Associate Professor at the Federal University of ABC and has experience in cell and molecular biology, cardiovascular physiology, inflammation and renal failure.

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