

## **Towards the prevention of chronic kidney progression with potassium restriction: the PINT-CKD study**

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Chronic kidney disease is a major public health issue which affects already 10% of the world population. This gradual loss of kidney function leads to severe complications, such as high blood pressure and arteriosclerosis. There is no cure and present therapeutic strategies remain focused on limiting the progression, controlling complications and replacing kidney function. Dietary approaches like sodium restriction and potassium supplementation are recognized to decrease blood pressure. They might be beneficial to chronic kidney disease patients, but their efficiency remains to be proved.

We discovered in recent experiments with two mouse models that high dietary potassium intake strongly increases the extent of kidney fibrosis in both obstructive and glomerular CKD models. Encouraged by these preliminary results, we designed this specific project to unravel the effect of dietary potassium restriction on chronic kidney disease progression in human.

In CKD patients, we will investigate the effect of dietary potassium restriction (60 mmol/day) compared to normal potassium intake (120 mmol/day) on the evolution of glomerular filtration rate, blood pressure, proteinuria, Renin-Angiotensin-Aldosterone-System activity, cardiovascular events and death. For this purpose, we will recruit 70 diabetic and non-diabetic stage III CKD patients who will be randomly assigned to either normal or low potassium diets. The patients will be followed for 3 years at 3 months interval.

This project may have a strong impact on the treatment of chronic kidney disease and pave the way to an effective and low-cost dietary approach able to prevent disease progression.