**Investigating FGF23 as a modulator of renal hypertrophy**

In living kidney donors, cells in their remaining kidney enlarge after the surgery. This process leads to partial recovery of their kidney function. It is not yet understood what process triggers the growth of the kidney cells. After donating a kidney, the size of the donor’s heart also increases. In their blood, the levels of a hormone that controls blood calcium and phosphate levels, fibroblast growth factor 23 (FGF23), also increases. FGF23 levels increase markedly in patients with chronic kidney disease, and high FGF23 levels are linked to increased risk of heart disease and death in these patients. In mice, direct injection of FGF23 induced the growth of heart muscle cells. We would like to investigate whether adding FGF23 would cause healthy human kidney cells to growth under laboratory conditions, and ultimately whether these cells’ response to FGF23 protects or worsens the functions of the kidney.