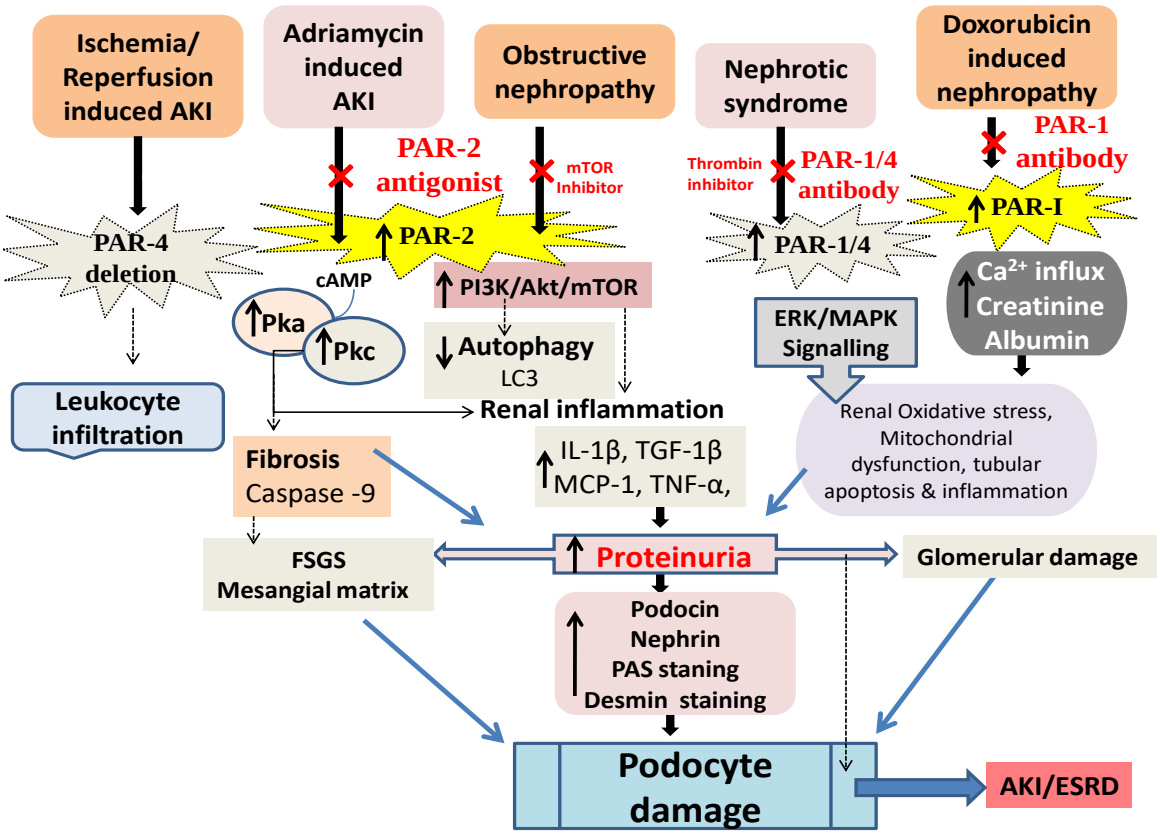

Figure 02: Role of PAR1 and PAR2 in kidney injury from different etiological basis. In I/R injury, deletion of PAR4 leads to infiltration of leukocytes. In the adriamycin-induced AKI and UUO model of rats, the levels of PAR2 were increased which resulted in reduced autophagy accompanied with increased proteinuria, inflammation, and fibrosis via upregulated PKA/PKC/cAMP signaling and PI3K/Akt/mTOR pathway that collectively contributed to podocyte damage. Administration of PAR2 antagonist significantly corrected these events. In nephrotic syndrome, levels of PAR-1/PAR-4 were increased via upregulated ERK/MAPK signaling. This resulted in renal oxidative stress, mitochondrial dysfunction, tubular apoptosis leading to glomerular damage and in turn podocyte injury. However, antibodies of PAR1/PAR4 and thrombin inhibitor resolved the respective pathological features. In drug-induced nephropathy, PAR1 antagonist reduced the increased levels of PAR1 along with increased calcium influx and prevented renal functional parameters that further lead to oxidative stress, glomerular damage, and podocyte damage. All these renal pathophysiological features contribute to AKI to CKD transition.