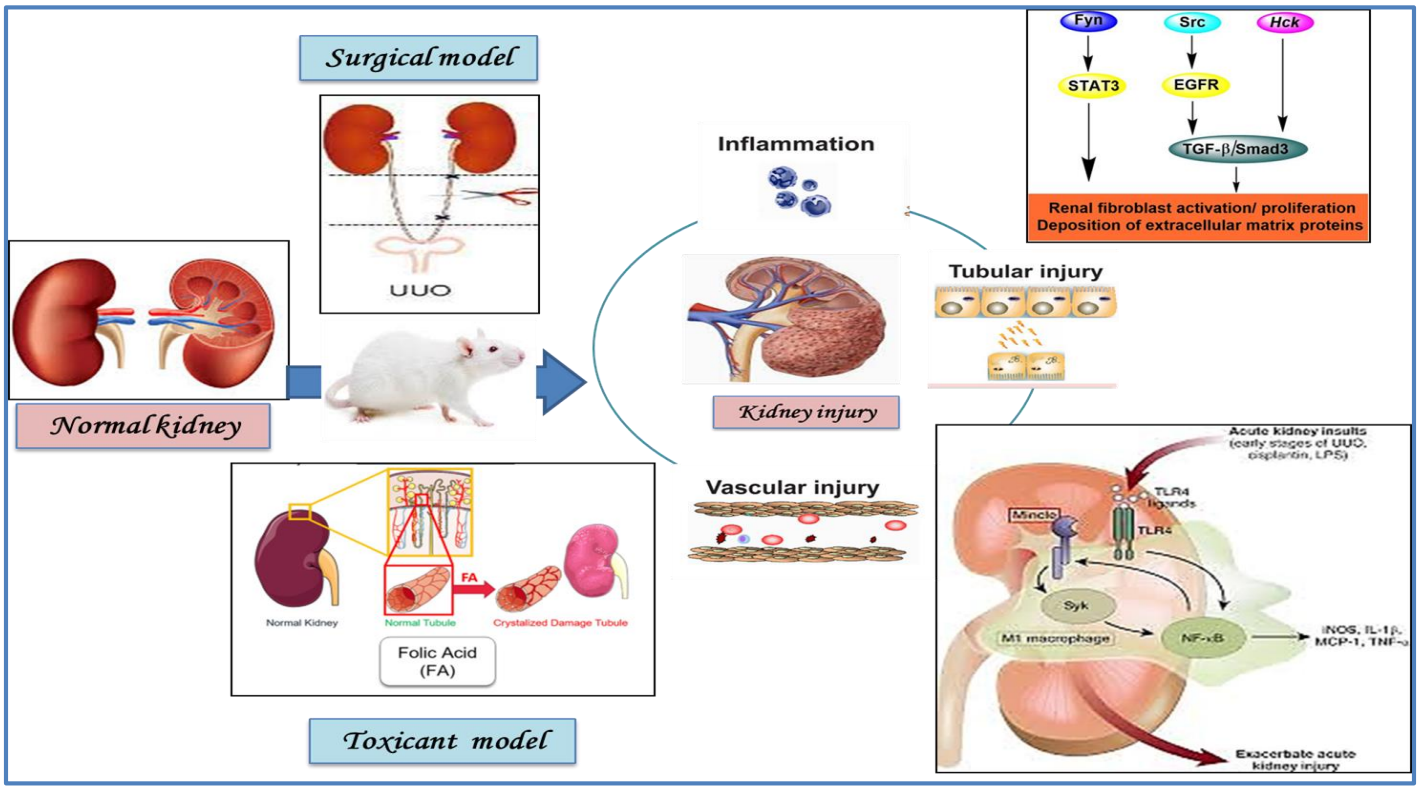
Kidney Diseases



Kidney disease including acute kidney injury (AKI), chronic renal disease (CKD), and end stage renal disease (ESRD) has been significantly growing in Egypt in recent decades. Overall CKD mortality has increased by 31.7% over the last 10 years worldwide, making it one of the fastest rising major causes of death, alongside diabetes and dementia. According to the latest WHO data published in 2018, kidney disease deaths in Egypt reached 3.29% of total deaths. The United Nations sustainable development goals aim to reduce premature mortality from non-communicable diseases, including CKD, by one-third by 2030. Therefore, **Pharmacology and Toxicology laboratory** directs its efforts towards finding new therapeutic agents that could lower the incidence of kidney disease including AKI and CKD. Compounds that target Src/STAT-3/NF-κB signaling, TGF-B/smad signaling, TWEAK/HSP-70 signaling, and TLR4/Nrf2/HO-1 signaling are under investigation as potential agents that could be promising therapeutic tools to prevent CKD and subsequently ESRD development.

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