Studies on the pathogenesis of chronic kidney disease

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propositions accompanying the thesis

Studies on the Pathogenesis of Chronic Kidney Disease

1. Oxidative stress increases *CLU* mRNA expression in podocytes. (*This thesis*)

2. The overexpression of hCN1 accelerates and aggravates diabetic nephropathy in BTBR *ob/ob* mice. (*This thesis*)

3. Disruption of the *lepb* gene results in diabetes and diabetic nephropathy in zebrafish. (*This thesis*)

4. The renal histopathological features of *ctns* mutant adult zebrafish resemble that of human nephropathic cystinosis. (*This thesis*)

5. The recombinant clusterin protein can bind to the podocytes via the LDL receptor and prevent PKC activation in membranous glomerulonephritis. (*Adapted from Rastaldi et al. Kidney Int. 2006*)

6. The genetic variations resulting in lower CN1 enzyme activity are associated with a lower risk of diabetic nephropathy. (*Adapted from Peters et al. Curr Med Chem. 2020*)

7. Leptin has direct effects on renal pathophysiological characteristics. (*Adapted from Wolf et al. Am J Kidney Dis. 2002*)

8. The zebrafish glomerulus and its podocytes are highly conserved across mammals, indicating that the zebrafish models are suitable for studying glomerular diseases. (*Adapted from Poureetezadi et al. Kidney Int. 2016*)

9. Investigation of the renal tissue from zebrafish larvae is a big challenge.

10. Being a researcher is like being a good chef; you need a wealth of ingredients, and you need to understand the characteristics of each ingredient separately.

11. Sometimes, it is better to put a problem aside when you are stuck because putting the problem in a different perspective to find a solution takes time.

12. The PhD period is a journey that teaches you to be patient with yourself.

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