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Metabolomics study of the fruits of *Alpinia oxyphylla* as an effective treatment for chronic renal injury in rats

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Alpinia oxyphylla (Zingiberaceae) is a well-known medicinal plant. Its fruit ("Yi-Zhi-Ren" in Chinese) is used as an anti-diuretic and traditionally used for the treatment of enuresis and reduce urination. Chronic kidney disease (CKD) is a disease with the characteristic of the slowly loss of kidney function and has a prevalence of up to 7-10% in adults. Recent advances in its etiology and pathogenesis are providing more speculative hypotheses focused on integral systems. Using a UPLC-QTOF-MS/MS-based metabolomics platform, we explored the changes of metabolic profiling in plasma/urine simultaneously between chronic kidney disease (CKD) induced from adenine excess and the protective effects of *A. oxyphylla* extract (AOE). The total 21 metabolites (12 in urine and 9 in plasma), up-regulated or down regulated, were identified and contributed to CKD progress. Among these biomarkers, agmatine, CAMP, 7-methylguanine, hippuric acid, indoxyl sulfate, asparagines, kynurenic acid and p-cresol sulfate were restored back to the control-like level after the treatment of AOE ($p < 0.05$ or 0.01), these findings may be promising to yield a valuable insight into the pathophysiology of CKD and serve as characteristics to explain the mechanisms of AOE.

Biography

Y H Li has completed his MD from Shanghai Institute of Pharmaceutical Industry and Post-doctoral studies from China Academy of Chinese Medical Sciences. He has published more than 20 papers in reputed journals.

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