

[DOI: 10.20472/IAC.2015.015.193](https://doi.org/10.20472/IAC.2015.015.193)

**PEEPATTRA WANTANASIRI**

Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand

**PORNANONG ARAMWIT**

Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand

## **CORRELATION OF URINE PERIOSTIN LEVEL AND RENAL FUNCTION IN LUPUS NEPHRITIS PATIENTS**

### **Abstract:**

Lupus nephritis is one of the most serious complications occurring in systemic lupus erythematosus patients. It is involved in renal function impairment presented by abnormalities of urinalysis. No specific biomarker was used to monitor this condition in clinical practice. Periostin is an extracellular matrix protein involved in kidney development and several types of kidney injury in animal studies. However, the role of periostin in human studies is scant. From our previous study, we found that the degree of periostin staining in kidney tissues from lupus nephritis patients are well correlated with chronic kidney injury. Moreover, periostin staining was commonly found in tubular epithelial cells in most patients. In this study, we further evaluated urine periostin levels in lupus nephritis patients compared to healthy controls. Urine was collected at the biopsy date and measured for periostin level by enzyme-linked immunosorbent assay. The results showed that urine periostin levels were statistically significant higher in lupus nephritis patients compared to healthy controls. Moreover, the urine periostin level significantly correlated with the worsening of renal functions. Positive correlation was observed between urine periostin level and serum creatinine or blood urea nitrogen. In contrast, urine periostin level negatively correlated with estimated glomerular filtration rate. We suggested that urine periostin may be used as a novel biomarker for monitoring the renal function in lupus nephritis patients.

### **Keywords:**

Urine periostin, Lupus nephritis, Renal function