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## **BLOOD AND URINE PROTEIN PREDICTS CHRONIC KIDNEY DISEASE PROGRESSION**

*Measurement of Neutrophil Gelatinase-Associated Protein Could be Valuable Screening Tool*

**Washington, DC (January 26, 2009)** — Measuring a small protein in the blood and urine can predict which patients with non-advanced chronic kidney disease (CKD) will progress to a more serious form of the disease, according to a study appearing in the February 2009 issue of the *Clinical Journal of the American Society Nephrology* (CJASN). The findings could be used to devise a new screening method for identifying which patients should receive aggressive therapies to prevent the progression of their disease.

The blood and urine of some individuals with impaired kidney function have increased levels of a small protein called Neutrophil Gelatinase-Associated Lipocalin (NGAL). NGAL is released from injured renal tubular cells, which are cells crucial for proper functioning of the kidneys. Preliminary research has also shown that individuals with high levels of NGAL experience worsening of their kidney function within one year, compared with individuals with lower levels of NGAL. However, no definitive study has demonstrated the potential of NGAL measurements for predicting how a patient's CKD will progress.

To accomplish this, Michele Buemi, MD, of the University of Messina in Messina, Italy and her colleagues examined the predictive value of blood and urinary NGAL measurements for the progression of CKD in a wide variety of patients with non-advanced CKD.

The investigators evaluated the blood and urine levels of NGAL in 96 patients with non-terminal CKD who were followed for an average of 18.5 months. By the end of the study, 31 patients experienced significant progression of their disease, in some cases developing end-stage renal disease. The researchers noted that at the start of the study, these patients had increased NGAL levels compared with patients whose disease did not progress. Both urinary NGAL and blood NGAL levels each predicted worsening of CKD. Therefore, "NGAL... represents a strong and independent risk marker for progression of CKD," the authors concluded.

The findings could be used to screen patients with CKD to determine their risk of worsening disease and to indicate which patients should receive aggressive treatments. "Our study offers a great new

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tool for prevention of renal failure progression,” said Dr. Buemi. The results are particularly important today as CKD has become a severe public health problem and incidence rates continue to rise.

The article, entitled “Neutrophil Gelatinase-Associated Lipocalin (NGAL) and Progression of Chronic Kidney Disease,” will appear online at <http://cjasn.asnjournals.org/> on January 28, 2009, and in the February 2009 print issue of CJASN.

ASN is a not-for-profit organization of 11,000 physicians and scientists dedicated to the study of nephrology and committed to providing a forum for the promulgation of information regarding the latest research and clinical findings on kidney diseases. ASN publishes the *Journal of the American Society of Nephrology* (JASN), CJASN, the *Nephrology Self-Assessment Program* (NephSAP), and *ASN Kidney News*.

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