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Non-Confidential Description - PSU No. 3508
"Netrin-1 as a Biomarker of Kidney Injury"

Keywords:

Netrin-1, biomarker, kidney injury,
diagnostic marker, urine biomarker,
ischemia reperfusion injury

Links:

Inventor Website
Related Article
US Patent 8,052,960

Inventors:

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Background

A rapid and accurate diagnosis of acute kidney injury (AKI) or acute renal failure (ARF) is critical, as a timely intervention will greatly reduce irreversible organ damage and/or death. Current methods of detecting ARF and AKI are constrained by their reliance on the accumulation of serum creatinine and other biomarkers in the bloodstream. Despite advances in nephrology in the last 50 years, blood work aimed at diagnosing AKI and ARF may still take up 72 hours to yield actionable results. Consequently, the mortality rate of ARF sufferers remains high (approximately 50%).

Invention Description

We have developed a superior diagnostic and prognostic biomarker of kidney injury. In comparison to current methodologies which rely upon blood withdrawal and analysis, our urine test is non-invasive and allows for a superior, timely, diagnosis of AKI and ARF.

Advantages/Applications

- Provides an earlier indication of tissue injury in comparison to KIM-1, NGAL or creatinine
- Inexpensive
- Precise and reliable
- Non-invasive measurement (measurable in urine)
- Simple assay
- Excellent correlation with organ dysfunction

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