

Proteomic studies in renal transplant patients

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Routine surveillance of kidney dysfunction after kidney transplantation is vital in prolonging kidney allograft survival. While nonspecific serum biomarkers such as creatinine are typically used to screen for allograft dysfunction, changes occur only after significant injury to the allograft. Proteomics, the study of complex protein profiles, may offer an opportunity to discover biomarkers that detect injury earlier than currently available methods. Proteomic studies have been focused on serum or urine specimens to predict kidney injury in both native and transplant kidney diseases. In native kidney disease, protein profiling has been successful in differentiating kidney disease and monitoring responses to treatment. In transplant kidney disease, profiling of acute rejection, viral nephropathies, and chronic allograft injury have been reported. While these studies have yielded potential biomarkers, very few, if any, have yielded clinically ready biomarkers due to lack reproducibility or complexity in routine clinical care. Continuing improvements in technology and methods could lead to improved biomarker discovery and clinically relevant, noninvasive biomarkers

Biography

Sanjeev Akkina is an Assistant Professor of Medicine at the University of Illinois at Chicago and transplant nephrologist. His research interests include kidney donor and recipient outcomes, biomarker discovery, and bioinformatics.

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