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**Proteomics and uremia and renal disease**

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Proteomics has emerged as a powerful technology to decipher biological processes. One of the main goals of proteomics is the identification of biomarkers for diseases from tissues and body fluids. However, the complexity and wide dynamic range of protein expression presents an enormous challenge. This review gives an overview of the different technologies used, their potentials and limitations, focusing on capillary electrophoresis coupled to mass spectrometry (CE-MS). CE-MS is discussed from an application point of view, evaluating its merits and vices for biomarker discovery and clinical applications in chronic kidney disease. Finally, several examples on the application of CE-MS to determine biomarkers for disease diagnosis, prognosis, and therapy evaluation are presented.