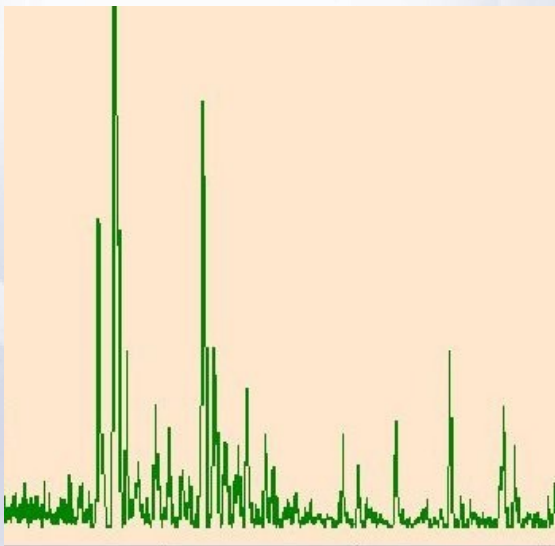


Licensing Opportunity (BioT-1155-UMG) Novel Biomarkers for the Diagnosis of Diabetic Nephropathy

Diabetes has become the most common single cause of end-stage renal disease in the U.S., Europe and Japan with up to 40 per cent of diabetics developing diabetic nephropathy. In the U.S. the incidence of diabetic nephropathy has increased by 150% in the past 10 years. In particular, incidence and prevalence of type 2 diabetes have increased, with a disproportionate increase in prevalence. Among patients who require dialysis, those with diabetes have a significantly higher mortality risk. Estimated dialysis treatment costs for a diabetes patient are approximately more than \$50.000 per year, which was about 25 percent more than the cost for a non-diabetic patient.

In type 1 diabetes, microalbuminuria is the best predictor of subsequent development of nephropathy, with approximately 50% of patients with microalbuminuria progressing to overt nephropathy. Conversely, microalbuminuria has less predictive value in type 2 diabetes because these patients are older and their microalbuminuria is often induced by arterial hypertension or heart failure. Thus, it is an urgent challenge to identify biomarkers to **identify diabetes patients at the highest risk** for developing diabetic nephropathy.



Scientists at the University of Göttingen developed a robust procedure for the identification and characterization of proteins differentially excreted in the urine of diabetic patients. Particularly they identified 3 different biomarkers based on proteomics. This 3 proteins could be **used for the diagnosis and prognosis of diabetic nephropathy.** These indicators of tissue injury have been identified in urine and may result in **clinical applications for early diagnosis of diabetes mellitus-related nephropathy.**

Ref.: Clin. Chem. 2007, 53, 1636.