

Autoimmune drug may help prevent kidney disease caused by diabetes

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A drug currently used to treat autoimmune disease may also help prevent the kidney-damaging effects of diabetes, according to a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology (JASN)*. The findings suggest that clinical trials should be designed to test the drug in diabetic patients.

Kidney disease is one of the most serious complications of diabetes. Diabetics who develop [kidney disease](#), or [diabetic nephropathy](#), due to high blood glucose levels may eventually require dialysis or a kidney transplant.

Paolo Fiorina, MD, PhD (Boston Children's Hospital/Harvard Medical School) and his colleagues have discovered that a receptor called B7-1 is expressed by kidney cells during the progression of diabetic nephropathy. Furthermore, targeting this receptor with an available drug called CTLA4-Ig, or abatacept, helped to maintain kidney function in mice with diabetic nephropathy. Abatacept is currently being used to treat autoimmune disease due to its ability to target B7-1 expressed on immune cells.

"The next steps will be to test anti-B7-1 drugs in individuals with diabetes and diabetic nephropathy to see if they can abrogate the progression of the disease in humans as well," said Dr. Fiorina.

More information: The article, entitled "Role of Podocyte B7-1 in Diabetic Nephropathy," will appear online at jasn.asnjournals.org/ on March 27, 2014.

Provided by American Society of Nephrology
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