

**EMBARGOED FOR RELEASE until March 27, 2014 – 5:00 PM (ET)**

**Contacts:** Tracy Hampton • (312) 339-9067 • [thampton@nasw.org](mailto:thampton@nasw.org)  
Adrienne Lea • (202) 503-6560 • [alea@asn-online.org](mailto:alea@asn-online.org)

## **AUTOIMMUNE DRUG MAY HELP PREVENT KIDNEY DISEASE CAUSED BY DIABETES**

*Abatacept protects kidney health of diabetic mice*

### **Highlights**

- A receptor called B7-1 is expressed by kidney cells during the progression of kidney disease in diabetic mice and humans.
- Targeting this receptor with an available drug called CTLA4-Ig, or abatacept, helps to maintain kidney function in mice.

*Diabetes is the leading cause of kidney failure.*

**Washington, DC (March 27, 2014)** — 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.

Study co-authors include Andrea Vergani, MD, Roberto Bassi, MD, Monika A. Niewczas, MD, PhD, Mehmet M. Altintas, PhD, Marcus G. Pezzolesi, PhD, Francesca D'Addio, MD, PhD, Melissa Chin, Sara Tezza, Moufida Ben Nasr, PhD, Deborah Mattinzoli,

Masami Ikehata, MD, Domenico Corradi, MD, Valerie Schumacher, PhD, Lisa, Buvall, PhD, Chih-Chuan Yu, Jer-Ming Chang, MD, Stefano La Rosa, MD, Giovanna Finzi, PhD, Anna Solini, MD, PhD, Flavio Vincenti, MD, Maria Pia Rastaldi, MD, PhD, Jochen Reiser, MD, PhD, Andrzej S. Krolewski, MD, PhD, Peter H. Mundel, MD, and Mohamed H. Sayegh, MD.

Disclosures: Jochen Reiser has pending or issued patents on novel kidney protective therapies, and he stands to receive royalties from their future commercialization. The other authors reported no financial disclosures.

The article, entitled “Role of Podocyte B7-1 in Diabetic Nephropathy,” will appear online at <http://jasn.asnjournals.org/> on March 27, 2014.

*The content of this article does not reflect the views or opinions of The American Society of Nephrology (ASN). Responsibility for the information and views expressed therein lies entirely with the author(s). ASN does not offer medical advice. All content in ASN publications is for informational purposes only, and is not intended to cover all possible uses, directions, precautions, drug interactions, or adverse effects. This content should not be used during a medical emergency or for the diagnosis or treatment of any medical condition. Please consult your doctor or other qualified health care provider if you have any questions about a medical condition, or before taking any drug, changing your diet or commencing or discontinuing any course of treatment. Do not ignore or delay obtaining professional medical advice because of information accessed through ASN. Call 911 or your doctor for all medical emergencies.*

*Founded in 1966, and with more than 14,000 members, the American Society of Nephrology (ASN) leads the fight against kidney disease by educating health professionals, sharing new knowledge, advancing research, and advocating the highest quality care for patients.*

# # #

Tweet: Autoimmune drug may also help prevent the kidney-damaging effects of diabetes.  
<http://www.bit.ly/ASN-XXXX>

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

\*&\*“

Andrea Duggan

Media Relations Associate

P: 617-919-3104 | F: 617-919-3034

E: [andrea.duggan@childrens.harvard.edu](mailto:andrea.duggan@childrens.harvard.edu)

The American Society of Nephrology®, ASN®, Kidney Week®, CJASN®, JASN®, NephSAP®, and ASN Kidney News® are registered trademarks of ASN