# Compounds to treat diabetic complications

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## Technology description

Prevention of diabetes and its complications are an increasing focus of public health efforts. One of the key problems is that few treatments for diabetes other than insulin are effective, and there is little that can be done to treat complications arising from diabetes.
Investigators at the Weill Medical College of Cornell University and SUNY have found that elevated glucose levels scavenge NO and cause premature vascular senescence, leading directly to complications such as diabetic retinopathy and other vasculopathies.
The investigators have demonstrated a direct NO-scavenging capacity of D-glucose. Thus rapid chemical inactivation of NO by glucose may be an important contributor to the dampened NO bioactivity observed in blood vessels from diabetic patients. They have also demonstrated both in vitro and in vivo that the vascular endothelium becomes prematurely senescent in the presence of elevated levels of glucose and advanced glycation end-products (AGEs) of proteins.

## Application area

Methods to treat disorders associated with elevated levels of glucose and AGEs, which include chronic renal disease, end stage renal disease, poorly controlled diabetes mellitus, systemic lupus erythernatosus, and Alzheimer's disease and other neurodegenerative diseases.

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