Vardenafil is a centrally-acting phosphodiesterase 5 (PDE5) inhibitor that is clinically used to treat erectile dysfunction. Vardenafil also exhibits antioxidative and antihypertensive activities and shows some potential for synergistic chemotherapeutic ability through its modulation of cGMP-NO signaling. This compound increases expression of NO and eNOS as well as activity of superoxide dismutase, decreasing oxidative stress, pulmonary vascular resistance, and right ventricular hypertrophy and increasing cardiac output in animal models of pulmonary arterial hypertension (PAH). Vardenafil decreases proteinuria and glomerular damage in animal models of diabetic nephropathy-induced cGMP pathway dysfunction. In cellular models, vardenafil decreases secretion of IL-8 and expression of oxidative LDLR (LOX-1), suggesting potential benefit in the treatment of benign prostatic hyperplasia/low urinary tract syndrome (BPH/LUTS).

References


Caution: This product is intended for laboratory and research use only. It is not for human or drug use.