

As an example, here is an abstract from a study using PBM for experimentally-induced renal damage in diabetic rodents.

<https://www.ncbi.nlm.nih.gov/pubmed/27624783>

Effect of photobiomodulation on ischemia/reperfusion-induced renal damage in diabetic rats.

Abstract: "This study was designed to investigate the possible effect of photobiomodulation (PBM) on renal damage induced by ischemia reperfusion (IR) in diabetic rats. Twenty streptozotocin-induced diabetic rats were randomly distributed into two groups, containing ten rats each: IR group (G1) and IR + PBM group (G2). After the right nephrectomy, the ischemia was produced in the left kidney for 30 min, followed by the reperfusion for 24 h. Then, a 685-nm **laser** diode with an output power of 15 mW (spot size = 0.28 cm² and energy density = 3.2 J/cm²) was employed. PBM was carried out by irradiating the rats over six points on the skin over the left kidney region three times, i.e., immediately after skin suturing and 1 and 2 h after initiating reperfusion for 6 min. At the end of reperfusion period, the rats were anesthetized, and blood samples were collected and used for the estimation of renal function (blood urea nitrogen (BUN) and creatinine). Then, the left kidney was harvested for histological and biochemical examination. The serum levels of BUN and creatinine were significantly higher in G1 compared to G2 ($P < 0.05$). G1 had higher renal malondialdehyde (MDA) levels compared to G2 ($P < 0.05$). Renal IR in diabetic rats (G1) resulted in a significant decrease in renal tissue glutathione (GSH) ($P < 0.05$) when compared to **laser**-treated rats (G2). A significant restoration was observed in the levels of superoxide dismutase (SOD) ($P < 0.05$) and catalase (CAT) ($P < 0.05$) in G2 as compared to G1. The levels of nitric oxide (NO) were increased in G1 in comparison to G2 ($P < 0.05$). The myeloperoxidase (MPO) activity was significantly higher in the renal tissue of G1 than that of G2 ($P < 0.05$). In addition, specimens from the G1 had a significantly greater histological injury than those from the G2 ($P < 0.05$). The results of present investigation revealed that PBM attenuated kidney damage induced by renal IR in diabetic rats."