**Abstract**

Paraoxonase-1 (PON1) is an HDL-associated enzyme with anti-atherogenic properties. Reduced PON1 activity has previously been observed in Nippostrongylus brasiliensis-infected rats. However, the effect of chronic zoonotic nematode infections on serum PON1 activity has not yet been studied. Therefore, we evaluated the effect of Trichinella spiralis infection on serum PON1 activity, the lipid profile, and oxidative stress in rats. There were significant reductions in serum PON1 activities (Day 2-Week 7 post-infection) in rats infected with T. spiralis, and these reductions were associated with significant increases in the serum levels of triglyceride and LDL/VLDL, as well as a significant reduction in the level of HDL. Moreover, T. spiralis infection was associated with a status of oxidative stress indicated by increased concentrations of superoxide dismutase and malondialdehyde. Given the zoonotic prevalence of T. spiralis and the cardioprotective role of PON1, further mechanistic research in this area is warranted.