Abstract:
Myeloperoxidase (MPO) is an important enzyme that catalyzes the reaction between hydrogen peroxide and chloride to generate hypochlorous acid, which oxidizes a range of biomolecules and has been associated with inflammatory diseases. The synthetic compounds N-phenylmaleimide (NFM) and 4-methyl-N-phenylmaleimide (Me-NFM) increased the MPO activity in vitro (of isolated enzyme and in isolated cells after animal treatment) and in vivo assays. MPO-induction may represent a good model system to investigate the molecular and cellular mechanisms of oxidative cell injury induced by activated neutrophils, and the interactions between damaging species involved in the respiratory burst.

Key words:
N-phenylmaleimides, myeloperoxidase, inflammation, neutrophils, hypochlorous acid