



## Evaluation of *In Vitro* Activity of Magnesium Protoporphyrin IX for Use in Photodynamic Therapy

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**SUMMARY.** The photodynamic activity of magnesium protoporphyrin IX (MgPpIX) was evaluated. Biomolecule photooxidation and erythrocyte photohemolysis assays were performed. The activities were evaluated using MgPpIX, oxygen and visible light. The results showed that this protoporphyrin caused the photooxidation of biomolecules and the photohemolysis of red blood cells. However, the efficiency of MgPpIX was likely diminished by the aggregate formation, as evidenced by the high value of  $k_d$  [ $2.56 \pm 0.46$  ( $k_d/10^5$ )]. These factors should stimulate interest in further studies, with the goal of transforming MgPpIX into another alternative for the treatment of cancer and other diseases.

**KEY WORDS:** Aggregation, Magnesium protoporphyrin IX, Photodynamic activity, Photohemolysis, Photooxidation.

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