

Enhancing Bacterial Photodynamic Inactivation through Combined Action of Potassium Iodide and Cationic Phthalocyanines

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Infectious diseases remain a leading cause of death all around the world. Over the last three decades, the alarming and escalating emergence of antibiotic-resistant bacterial strains has caused some concern among the scientific community [1,2]. Photodynamic inactivation (PDI) emerges as an alternative for inactivating microorganisms, including bacteria [1–3]. The use of phthalocyanine (Pc) derivatives as photosensitizers (PS) in PDI has already proven effectiveness against various microorganisms [4]. Moreover, the addition of KI as a coadjuvant can, in certain circumstances, enhance the efficiency of neutral, negative, and positively charged PS against Gram-negative and Gram-positive bacteria [2,4]. In this study will be demonstrated the effect of KI in PDI of *E. coli* and *S. aureus* with cationic Pcs bearing tris(trimethylammoniummethyl) or pyridinium-pyrazolyl groups [1].

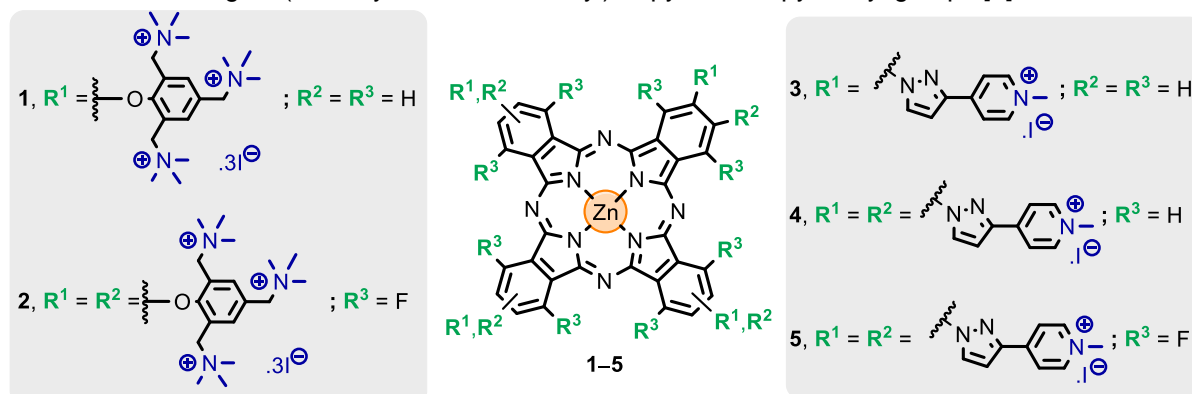


Fig. 1. Cationic zinc(II) phthalocyanines biologically assessed in this PDI study.

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