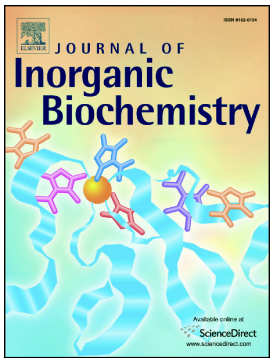

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Liposomal formulations of magnesium sulfanyl tribenzoporphyrazines for the photodynamic therapy of cancer

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Abstract

Photodynamic therapy of cancer comprises the activation of photosensitizer molecules delivered to cancer cells, to generate reactive oxygen species that mediate cytotoxicity. In this study, previously synthesized dendritic magnesium tribenzoporphyrazines were incorporated into four types of liposomes containing either 1-palmitoyl-2-oleoyl-*sn*-glycero-3-phosphocholine (POPC) or 1,2-dioleoyl-*sn*-glycero-3-phosphoethanolamine (DOPE) as the zwitterionic lipids. The addition of either L-α-phosphatidyl-DL-glycerol (PG) or 1,2-dioleoyl-3-trimethylammoniumpropane (DOTAP) imparted a negative or positive charge, respectively. Novel formulations were tested in oral squamous cell carcinoma cell lines (CAL 27, HSC-3) as well as cervical adenocarcinoma cells (HeLa). Positively charged DOTAP : POPC

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