Synthesis, Characterization, and *in vitro* Photodynamic Activities of Novel Glycosylated Phthalocyanines

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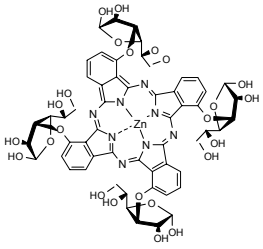
Abstract

Photodynamic therapy (PDT) is a promising approach for the treatment of a range of cancer and wet age-related macular degeneration.[1] To enhance the overall efficacy and reduce undesirable side effects, various receptor-mediated delivery systems such as antibodies, albumins, and lipoproteins have been explored to improve the selectivity and cellular uptake of the photosensitizers.[2] Owing to the fact that various types of glucose transporters are over-expressed in tumors,[3] conjugation of saccharides to photosensitizers provides an alternative and promising strategy for targeted PDT. As part of our endeavor to develop efficient phthalocyanine-based photosensitizers, we report herein the synthesis, characterization, and photophysical properties of a series of glycoconjugated zinc phthalocyanines (e.g. **1**-**3**). Their preliminary *in vitro* photocytotoxicities against HepG2 human hepatocarcinoma and HT29 human colorectal adenocarcinoma cells will also be reported.



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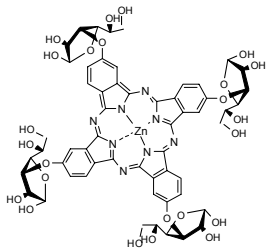

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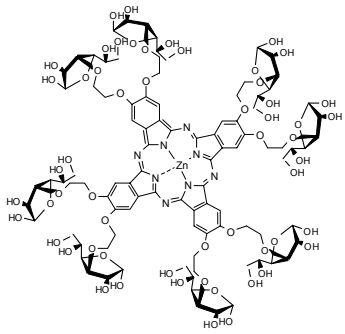

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