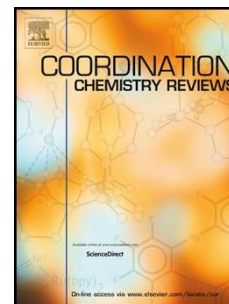


# Accepted Manuscript

Title: Engineering of relevant photodynamic processes through structural modifications of metallotetrapyrrolic photosensitizers

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PII: S0010-8545(16)30165-5  
DOI: <http://dx.doi.org/doi: 10.1016/j.ccr.2016.06.007>  
Reference: CCR 112272

To appear in: *Coordination Chemistry Reviews*

Received date: 18-4-2016

Accepted date: 9-6-2016

Please cite this article as: Janusz M. Dąbrowski, Barbara Pucelik, Anna Regiel-Futyr, Małgorzata Brindell, Olga Mazuryk, Agnieszka Kyzioł, Grażyna Stochel, Wojciech Macyk, Luis G. Arnaut, Engineering of relevant photodynamic processes through structural modifications of metallotetrapyrrolic photosensitizers, *Coordination Chemistry Reviews* (2016), <http://dx.doi.org/doi: 10.1016/j.ccr.2016.06.007>.

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## Engineering of relevant photodynamic processes through structural modifications of metallotetrapyrrolic photosensitizers

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**Keywords:** Metal complexes, Porphyrin, Chlorin, Bacteriochlorin, Phthalocyanine, Photodynamic Therapy

**Abbreviations:** AMD, age-related macular degeneration; CrEL, Cremophor EL<sup>®</sup>, ROS, reactive oxygen species; SOD, superoxide dismutase; Por, porphyrin; TPPS, tetraphenylporphyrin; PS, photosensitizer; DLI, drug-to-light interval; IL, interleukins; TNF, tumor necrosis factor; IFR, interferon; Pc, phthalocyanine; PET, positron emission tomography; F<sub>2</sub>PMet, meso-tetrakis(2,6-difluoro-5-N-methylsulfamylphenyl)porphyrin; WST9 (padaporfin), palladium derivatives of bacteriochlorophyll; PDT, photodynamic therapy; V-PDT, vascular target PDT; C-PDT, cellular target PDT; S\* , excited sensitizer; CT29, colon carcinoma cell line; A549, human lung cancer cell line; LED, light-emitting diode; HOMO, the highest occupied molecular orbital; LUMO, the lowest unoccupied molecular orbital; NIR, near infrared radiation; FRET, the Förster resonance energy transfer mechanism; TET, triplet energy-transfer process; ISC, intersystem crossing, IC, internal conversion,; VR, vibrational relaxation.

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