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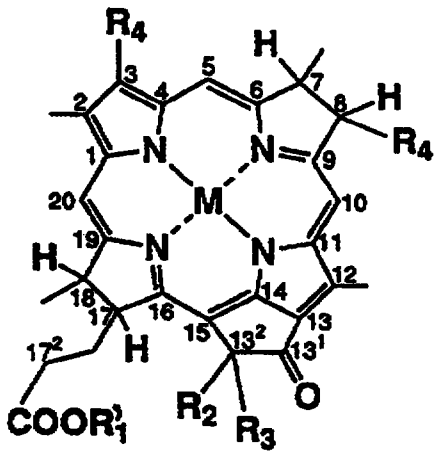
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(54) Title: SYNTHETIC METAL-SUBSTITUTED BACTERIOCHLOROPHYLL DERIVATIVES AND USE THEREOF

(57) Abstract

Metalated bacteriochlorophylls of the formula [M]-BChl, wherein M is a metal atom selected from divalent Pd, Co, Ni, Cu, Zn and Mn, trivalent Fe, Mn and Cr, and tetravalent Sn and Pt, and Bchl represents the residue of a demetalated natural or synthetic bacteriochlorophyll derivative, are prepared by transmetalation of the corresponding [Cd]-BChl derivatives carrying at position 17^3 a group $COOR_1$, wherein R_1 is a C_1 - C_{25} hydrocarbyl residue, and further optional transesterification of the 17^3-$COOR_1$ of the obtained [M]-BChl. The compounds are for use in photodynamic therapy and diagnosis and for killing cells and infectious agents, e.g. bacteria and viruses, both in biological products and in living tissue. Preferred compounds are those of formula (I') wherein R'_1 is a residue selected from (i) optionally substituted hydrocarbyl; (ii) hydroxy-containing amino acid or peptide or a derivative thereof; and (iii) hydroxy-containing peptide or a cell-specific ligand, e.g. peptide or protein, linked to the COO-group via a spacer as defined in (i).



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