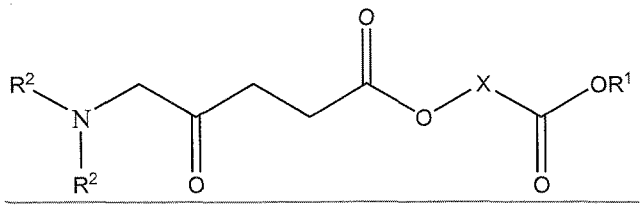
an ester thereof are in clinical use for PDT and photodynamic diagnosis (PDD). One of them is Metvix®, a dermal product in the form of a cream comprising 5-ALA methyl ester (developed by Photocure ASA, Norway, and now sold by Galderma, Switzerland), for the photodynamic treatment of actinic keratosis and basal cell carcinoma. Another one is Levulan Kerastick® (DUSA Pharmaceuticals, Canada), a product for the photodynamic treatment of actinic keratosis which contains 5-ALA. Hexvix® (developed by Photocure ASA) is an aqueous solution which comprises 5-ALA hexyl ester for instillation into the bladder for diagnosis of bladder cancer.

However, a need still exists for alternative photosensitisers or precursors thereof. The present invention addresses this need by providing precursors of photosensitisers according to general formula I below.

Summary

In one aspect, there is provided a compound of general formula I, or a pharmaceutically acceptable salt thereof:



(I)

wherein

R^1 represents a hydrogen atom or an optionally substituted alkyl or cycloalkyl group;

R^2, each of which may be the same or different, represents a hydrogen atom or an optionally substituted alkyl group; and

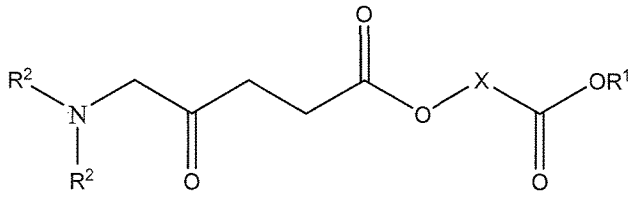
X is a linking group.

In another aspect, there is provided a composition comprising a compound of formula I, or a pharmaceutically acceptable salt thereof as disclosed herein, together with at least one pharmaceutically acceptable or cosmetically acceptable carrier or excipient.

In a further aspect, there is provided a compound or a composition as disclosed herein for use in photodynamic treatment or diagnosis, preferably for the treatment or diagnosis of a disorder or abnormality of an external or internal surface of the body which is responsive to photodynamic treatment or diagnosis.

Description

Thus, viewed from a first aspect, the invention provides a compound of general formula I, or a pharmaceutically acceptable salt thereof:



(I)

wherein

R^1 represents a hydrogen atom or an optionally substituted alkyl or cycloalkyl group;

R^2, each of which may be the same or different, represents a hydrogen atom or an optionally substituted alkyl group; and

X is a linking group.

In the compounds of formula I, it is preferred that the $-X-CO_2R^1$ portion is hydrophilic in nature. The term "hydrophilic" means that the $-X-CO_2R^1$ portion of the molecule has a tendency to interact with or be dissolved by water or other polar solvents and/or substances. The hydrophilic nature of this portion of the molecule may arise from the nature of group X and/or from the nature of the $-CO_2R^1$ group.