Photosensitizing properties of compounds related to benzophenone.

Abstract: Benzophenone is a phototoxic compound with absorption maxima in the ultraviolet A (UVA) and ultraviolet B (UVB) range. Many benzophenone derivatives are known to be photosensitizing. On the other hand, 2-hydroxy-4-methoxybenzophenone is used as a photoprotective agent. The aim of the present study was to analyse a range of benzophenone derivatives and thus examine the effects of molecular changes in the benzophenone molecule on phototoxic behaviour. Phototoxicity was tested by an in vitro photohaemolysis test. The tested compounds were benzophenone itself and the derivatives 2-hydroxybenzophenone, 2-aminobenzophenone, 2-benzoylbenzonic acid, 3-hydroxybenzophenone, and 4-hydroxybenzo-phenone, as well as the structurally similar compounds 9-fluorenone, 9-fluorenone-2-carboxylic acid, cyclohexyl phenyl ketone, and 1,4-naphtho-quinone. It was shown that minor changes in molecular structure can result in highly different phototoxic characteristics.
Sprache: eng
Print-ISSN: 0001-5555
TUM Einrichtung: Klinik und Poliklinik für Dermatologie und Allergologie
Occurences:

· Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Klinik und Poliklinik für Dermatologie und Allergologie > 2013

entries: