

Special Issue

Natural Products in Photodynamic Therapy

Message from the Guest Editors

When light is combined with specific chemicals, it can cause the death of cells. Acridine, eosin, and haematoporphyrin were the first natural products employed as photosensitizers (PS) in photodynamic therapy (PDT). PS, light, and oxygen are the three main elements of PDT and are required to selectively generate reactive oxygen species in therapeutic targets, leading the cell to die with less invasiveness, low toxicity, and side effects. From 1999 onwards, first- and second-generation PS, like porphyrin, chlorin, and cyanine, and other dyes, such as methylene blue, rose bengal, and hypericin, were used in the design of drugs for use in PDT, with some of these being approved by the FDA. Despite increasing amounts of research in the last decade focusing on PDT, its effects and applications, to date, less attention has been paid to plant extracts or molecules of natural origin and the study of their phototoxic activity. In this Special Issue, we aim to receive original research articles and review articles regarding the use of natural products as PS and/or bioactive compounds in association with photodynamic therapy for application as combination therapy.

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