Volume Preface

Photodynamic therapy, a light-activated process, is now an approved treatment modality for a variety of diseases. Of the various photosensitizers in clinical practice or in the process of development, one stands out as rather unique. Protoprophyrin IX is a natural photosensitizer that can be made by the human body. It is possible to induce the biochemical production of photosensitizing amounts of this natural compound in diseased tissues by the introduction of a small and simple amino acid, namely 5-aminolevulinic acid (ALA). Owing to its small molecular weight, ALA is easily introduced to the body by several routes, including topical (dermal) application.

The application of ALA to a patient in order to induce the biochemical production of excess protoporphyrin IX for the purpose of photodynamic therapy (ALA-PDT) has become a widespread procedure, especially for dermatological purposes. It is easy to use, has a large error margin, and is not dangerous. While it certainly has limitations, this novel approach to photodynamic therapy has proven to be so popular that it deserves to be thoroughly discussed in a separate book.

This monogram on ALA-PDT is primarily aimed at a clinical audience. The introductory chapter is written by the person who first used ALA-PDT on patients. Separate chapters have been written by other clinicians who have considerable and valuable experience in the use of ALA-PDT in their respective fields. Chapter 2, on the other hand, does contain an in-depth coverage of the basic science involved in the process of photosensitization, including an up-to-date review of the possible mechanistic details that are believed to govern all aspects of ALA-PDT. Thus, while most of the chapters are written for the benefit of clinicians who wish to examine ALA-PDT as a possible addition to their treatment arsenal, it also includes one fundamental science chapter so as to hopefully meet the needs of a wide audience.

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