

Preface

Most people will agree with me that one of their greatest fears is losing their eyesight. Eye diseases affect the quality of life of hundreds of millions of individuals around the world. Scientists continue their search for the ideal ocular drug delivery system but they are still being faced with challenges due to the complex nature of the eye. This global observation and my research into ocular drug delivery gave birth to this book “Ocular Drug Delivery: Advances, Challenges, and Applications”.

This book has detailed chapters that are comprised of various topics and issues pertinent to ocular therapeutic and drug delivery systems. It describes the anatomy of the eye with the barriers affecting the delivery of drug to it. The physiological barriers to drug delivery and the targeted delivery to specific compartments of the eye have also been discussed. Topical and systemic drug delivery to the eye has been compared. The delivery of proteins and peptides into the ocular cavity through novel delivery systems such as nano- and microparticles, nano micelles, and others that have been used to deliver drugs especially to the posterior segment of the eye has also been discussed with a detailed method of evaluating these novel systems *in vivo*, *in vitro*, and *ex vivo*. With all these novel drug delivery systems, scientists are still researching advanced drug delivery systems, some of which are described in this book.

My appreciation to all the authors for their outstanding job, and their dedication in contributing to this book, and Springer Protocols for their encouragement and patiently working with all of us and making this dream come through.

Jackson, USA

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