

PREFACE

Previous Methods in Enzymology volumes on Liposomes have described methods of liposome preparation and the physicochemical characterization of liposomes (volume 367), and the use of liposomes in biochemistry, molecular cell biology (volume 372), immunology, diagnostics, gene delivery and gene therapy (volume 373). Methods involved in the production and application of antibody- or ligand-targeted liposomes, environment-sensitive liposomes, and liposomal oligonucleotides were provided in volume 387, as were methods for studying the *in vivo* fate of liposomes. Finally, volume 391 presented methods in liposomal anti-cancer, antibacterial, antifungal and antiviral agents, miscellaneous liposomal therapies and electron microscopy of liposomes. The latter volume also included a short introductory chapter on "The Origin of Liposomes: Alec Bangham at Babraham".

This new volume includes topics focusing on advances in liposome formation and characterization, and recent developments in the use of liposomes in therapeutics.

I hope that these chapters will be helpful to graduate students, post-doctoral fellows, research associates and established scientists initiating projects on liposomes, or shifting the focus of their research. Although the chapters are not written in "protocol" format, they describe the experimental methods in sufficient detail that can be adopted readily for the reader's project. In addition, the chapters provide the perspective of the authors on the field, as well as examples of results obtained with the described methods.

I would like to thank all the colleagues who graciously contributed to this volume with relatively short notice, Associate Editor Tara Hoey, Editorial Services Manager Delsy Retchagar, and Project Manager Priya Kumaraguruparan of Elsevier for their help in preparing this volume, and Shirley Light, formerly of Academic Press, for her initiation of the Liposomes volumes about a decade ago. I would also like to express my gratitude to my supportive and loving family, my wife, Diana, and my children, Avery and Maxine.

I would like to dedicate this book to the memory of my father, Orhan Düzgüneş, formerly Professor of Genetics and Statistics at the University of Ankara, and my mother, Zeliha Düzgüneş, formerly Professor of Entomology at the same university. I still appreciate their enthusiasm for their fields of study and their dedication to scientific research and teaching.

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