## CONTENTS

Preface		ix
RE	GULATION OF PRESQUALENE STEPS	
1.	Biosynthesis and Utilization of Isoprenoids : Overview of Research Directions	2
2.	Regulation of Monoterpene Biosynthesis in Conifer Defense	8
3.	Natural Rubber Biosynthesis: A Branch of the Isoprenoid Pathway in Plants	18
4.	Production of Natural Carotenoids : Influence and Impact of Biotechnology	27
5.	Prenylated Amino Acid Composition of Tissues	38
6.	Isoprenylation of Low Molecular Mass Guanine Nucleotide-Binding Proteins in	
	Mammalian Cells	48
7.	Potent, Rationally Designed Inhibitors of Squalene Synthase	65
8.	Oxysterol Regulation of Cholesterol biosynthesis	81
9.	Dual-Action Inhibitors of Cholesterol Biosynthesis: Lanosterol Analongs That	
	Inhibit Lanosterol 14α-Methyl Demethylase and Suppress 3-Hydroxy-3-methylglutaryl-	
	Coenzyme A Reductase Activity	94
RE	GULATION OF POSTSQULENE STEPS	
10.	Regulation of Sterol biosynthesis and Its Phylogenetic Implications	110
11.	Biosynthesis of Oxysterols in Plants, Animals, and Microorganisms	146
12.	Enxyme Systems : Use in the Development of Sterol Biosynthesis Inhibitors as	
	Agrochemicals	162
13.	2,3-Oxidosqualene Cyclase and Squalene Epoxidase as Target Enzymes for the	
	Development of New Sterol Biosynthesis Inhibitors	174
14.	Squalwnw Epoxidase Inhibitors : Structural Determinants for Activity and Selectivity	
	of Allylamines and Related Compounds	192
15.	Inhibition of Sterol Metabolism in Insects and Nematodes	205
16.	Cytochrome P450-Dependent $14\alpha$ -Demethylase : Target for Antifungal Agents	
	and Herbicides	219
17.	Effect of Tridemorph on Sterol Synthesis in Algae	231
СН	OLESTEROL HOMEOSTASIS AND MOLECULAR BIOLOGY	
18.	Role of Sphingomyelin in Cellular Cholesterol Homeostasis	238
19.	Genetics and Molecular Biology of the Genes Functioning Late in the Sterol	
	Biosynthetic Pathway of Saccharomyces	246
Aut	hor Index	260
Aff	Affiliation Index	
Sub	Subject Index	