

CONTENTS

1. Introduction	5
2. Metabolism of cholesterol precursors	5
2.1 Nomenclature and structure of sterols	5
2.2 Biosynthetic pathway of cholesterol	7
2.3 Sources of cholesterol precursors	7
2.4 Metabolic significance of cholesterol biosynthetic pathway	8
2.5 Metabolism of some cholesterol precursors	13
3. 5 α -Cholestanol	16
3.1 Metabolism of 5 α -cholestanol	16
3.2 High levels of 5 α -cholestanol	17
4. Absorption of sterols	18
5. Plant sterols	23
5.1 Role and biosynthesis of plant sterols in plant cell	23
5.2 Metabolism of plant sterols	26
5.3 Effects of plant sterols	28
6. Unusual sterols	33
6.1 Marine sterols	34
7. Noncholesterol sterols in clinical practice	35
7.1 Pathophysiology of cholesterol precursors	36
7.1.1 Genetic defects	36
7.1.2 Signalling molecules	39
7.1.3 Changes in cholesterol biosynthesis	39
7.2 Phytosterols in pathophysiological states	46
8. Clinical findings	48
8.1 Noncholesterol sterols in anorexia nervosa	48
8.2 Noncholesterol sterols in protein-energetic malnutrition	52
8.3 Fat content in low energy diet and sterol metabolism	57
9. General discussion	63
10. Conclusion	65
11. References	66
List of abbreviations	90
Abstract	92
Tables	93
Figures	94
Appendix	95