

LIST OF FIGURES

PART - I

	<u>Page</u>
Fig. 1. Gas chromatogram of sterols mixture	47
Fig. 2. Gas chromatogram of acetate derivative of sterols mixture	48
Fig. 3. Mass spectrum of stigmasterol	49
Fig. 4. Mass spectrum of stigmasterol from GC-MS	50
Fig. 5. Mass spectrum of stigmasteryl acetate from GC-MS	51
Fig. 6. Mass spectrum of β -sitosterol from GC-MS	52
Fig. 7. Mass spectrum of β -sitosteryl acetate from GC-MS	53
Fig. 8. Mass spectrum of stigmast-7-en-3 β -yl acetate from GC-MS	54
Fig. 9. Mass spectrum of campesterol from GC-MS	55
Fig. 10. Mass spectrum of campesteryl acetate from GC-MS	56
Fig. 11. IR spectrum of leucolactone, <u>1</u>	62
Fig. 12. PMR spectrum of leucolactone, <u>1</u>	63
Fig. 13. IR spectrum of leucolactone acetate, <u>2</u>	72
Fig. 14. PMR spectrum of leucolactone acetate, <u>2</u>	73
Fig. 15. ^{13}C NMR spectrum of leucolactone acetate, <u>2</u>	74
Fig. 16. ^{13}C NMR spectrum of leucolactone acetate, <u>2</u> , (off resonance CW decoupled)	75
Fig. 17. ^{13}C NMR spectrum of leucolactone acetate, <u>2</u> , (off resonance CW decoupled)	76
Fig. 18. IR spectrum of diketo leucolactone, <u>3</u>	77
Fig. 19. PMR spectrum (400 MHz) of diketoleucolactone, <u>3</u>	78

	<u>Page</u>
Fig. 20. PMR spectrum of ciketoleucoleactone, <u>3</u>	91
Fig. 21. PMR spectrum of diketoleucoleactone, <u>3</u> (plot expansion)	92
Fig. 22. PMR spectrum of ciketoleucoleactone, <u>3</u> , (plot expansion)	93
Fig. 23. PMR spectrum of diketoleucoleactone, <u>3</u> , (decoupled methyl at 1.18 ppm)	94
Fig. 24. ¹³ C NMR spectrum of diketoleucoleactone, <u>3</u>	95
Fig. 25. 2D - NMR spectrum of ciketoleucoleactone, <u>3</u>	96
Fig. 26. Mass spectrum of leucoleactone, <u>1</u>	97
Fig. 27. Mass spectrum of leucoleactone acetate, <u>2</u>	98

PART - II

Fig. 1. PMR spectrum of lup-1-en-3-one	163
Fig. 2. Mass spectrum of lup-1-en-3-one	164
Fig. 3. PMR spectrum of lup-1(2)-en-3-one-2-selenide	165
Fig. 4. ¹³ C NMR spectrum of lup-1(2)-en-3-one-2-selenide	166
Fig. 5. Mass spectrum of lup-1(2)-en-3-one-2-selenide	167
Fig. 6. PMR spectrum of lup-1(2)-en-3-one-2-bisselenide	171
Fig. 7. ¹³ C NMR spectrum of lup-1(2)-en-3-one-2-bisselenide	172
Fig. 8. Mass spectrum of lup-1(2)-en-3-one-2-bisselenide	173
Fig. 9. IR spectrum of 1,3-dihydroxy-3-carboxy-A-nor-lupane	179
Fig. 10. PMR spectrum of 1,3-dihydroxy-3-carboxy-A-nor-lupane	180
Fig. 11. Mass spectrum of 1,3-dihydroxy-3-carboxy-A-nor-lupane	181

	<u>Page</u>
Fig. 12. PMR spectrum of 1,3-diacetoxy-3-carboxy-A-nor-lupane	182
Fig. 13. ¹³ C NMR spectrum of 1,3-diacetoxy-3-carboxy-A-nor-lupane	183
Fig. 14. Mass spectrum of 1,3-diacetoxy-3-carboxy-A-nor-lupane	184
Fig. 15. PMR spectrum of A-nor-lupane anhydride	187
Fig. 16. Mass spectrum of A-nor-lupane anhydride	188
Fig. 17. IR spectrum of 1-hydroxy-lupane anhydride	193
Fig. 18. PMR spectrum of 1-hydroxy-lupane anhydride	194
Fig. 19. ¹³ C NMR spectrum of 1-hydroxy-lupane anhydride	195
Fig. 20. Mass spectrum of 1-hydroxy-lupane anhydride	196
Fig. 21. PMR spectrum of 1-hydroxy-A-nor-lup-2-carb-4-olide	201
Fig. 22. ¹³ C NMR spectrum of 1-hydroxy-A-nor-lup-2-carb-4-olide	202
Fig. 23. Mass spectrum of 1-hydroxy-A-nor-lup-2-carb-4-olide	203
Fig. 24. PMR spectrum of 1 α , 2 α -epoxy-lup-3-one	206
Fig. 25. Mass spectrum of 1 α , 2 α -epoxy-lup-3-one	207

PART- III

Fig. 1. IR spectrum of oxime derivative of friedelin	236
Fig. 2. IR spectrum of compound <u>A</u>	237

	<u>Page</u>
Fig. 3. UV spectrum of compound <u>A</u>	238
Fig. 4. PMR spectrum of compound <u>A</u>	239
Fig. 5. PMR spectrum of friedelin-2,3-dione	240
Fig. 6. ¹³ C NMR spectrum of compound <u>A</u>	241
Fig. 7. Mass spectrum of compound <u>A</u>	242
Fig. 8. IR spectrum of compound <u>B</u>	247
Fig. 9. PMR spectrum of compound <u>B</u>	248
Fig. 10. ¹³ C NMR spectrum of compound <u>B</u>	249
Fig. 11. Mass spectrum of compound <u>B</u>	250

